1. The enclosed Allied Joint Publication AJP-4.10, Edition B, Version 1, ALLIED JOINT DOCTRINE FOR MEDICAL SUPPORT, which has been approved by the nations in the Military Committee Medical Standardization Board, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2228.

2. AJP-4.10, Edition B, Version 1, is effective upon receipt and supersedes AJP-4.10, Edition A, which shall be destroyed in accordance with the local procedure for the destruction of documents.

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4. This publication shall be handled in accordance with C-M(2002)60.

Edvardas MAŽEIKIS
Major General, LTUAF
Director, NATO Standardization Office
RESERVED FOR NATIONAL LETTER OF PROMULGATION
# RECORD OF RESERVATIONS

<table>
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Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.
# RECORD OF SPECIFIC RESERVATIONS

<table>
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<th>[nation]</th>
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<tr>
<td>CAN</td>
<td>Page 9-4 para 2 cannot be implemented by Canada. Although Canadian military dentists deployed on missions and trained in forensic odontology can perform forensic examinations and therefore play a significant role towards helping with the identification of fatalities, forensic odontologists do not have the jurisdiction to &quot;identify&quot;. Identification requires the legal authority which in Canada rests with a provincial coroner or medical examiner;</td>
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<td>ESP</td>
<td>Spain will not implement Par.1.2.12 item 7d).</td>
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<tr>
<td>FRA</td>
<td>Regarding Medical intelligence, the French doctrine separates the assessment of health risks from intelligence of a medical nature. French health professionals contribute to medical intelligence in compliance with the ethical principles of international humanitarian law (including the Geneva Conventions), the law of armed conflict and professional secrecy, and for the sole purpose of enabling the optimal prevention and management of medical problems in the forces that they support, and not with the aim of helping forces to dominate the enemy. Regarding paragraph 5.8.4, to date, environmental analyses, except for water intended for human consumption, are not the responsibility of the Armed Forces medical services’ deployable capabilities. To date, the Armed Forces medical services (SSA, service de santé des armées) do not have a deployable laboratory capability to carry out all the analyses required in this paragraph.</td>
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| GBR      | • The UK uses the 10.1.2(+2) medical planning guideline and not 10-1-2 to highlight the requirement for patient access to in-theatre surgery.  
• The UK uses the term in-theatre surgery (vice primary surgery) to describe the surgical procedures that are conducted in theatre beyond damage control surgery.  
• The UK describes a Major Medical Incident (MMI) is an incident where the number, severity, or type of live casualties, or by its location, requires extraordinary resources resources. A MMI is declared ‘bottom up’, with each level of command considering whether it also needs to make the same declaration. A Mass |
Casualty Incident (MASCAL) is an MMI which, despite the use of extraordinary measures, has or will result in an overwhelming of the available medical capability and/or capacity. This is declared ‘top down’ by the Theatre Commander Medical and is cascaded down the chain-of-command. This definition is not included in AJP 4-10(B).

- UK medical rules of eligibility use the term ‘life, limb and eyesight’ as an eligibility description v the NATO ‘eye and limb’.

- UK joint medical doctrine uses the term prolonged care to describe the application of additional techniques in order to sustain the casualty if any component of the 10.1.2(+2) medical planning guideline is likely to be exceeded. Delivery of prolonged care will require the medical techniques, skills and capabilities required to hold a patient for a protracted period of time. Prolonged care includes the sub-categories: prolonged pre-hospital care (covering those techniques suitable for use in the pre-hospital emergency care clinical phase) and prolonged hospital care (covering those techniques suitable for use in the deployed hospital care clinical phase). This concept is not included in AJP 4-10(B).

- The UK uses the term pre-hospital care to describe all aspects of health service support forward of deployed hospital care. This includes: core functions of primary health care; pre-hospital emergency care and forward medical evacuation; and force health protection. The use of this definition differs from that used in AJP 4-10(B).

- The UK views damage control surgery as a component of damage control resuscitation, this procedure is not a separate function to resuscitation as described in AJP 4-10(B).

<table>
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<tr>
<th>NLD</th>
<th>Chapter 8,8.4.1.2.: The Netherlands will add separate decontamination facilities to their MTF. Chapter 9, 9.5.4.: The Netherlands will not use the Medical Warning Tag in accordance with STANAG 2347 / AMEDP-34</th>
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<tr>
<td>USA</td>
<td>The US ratifies AJP-4.10(NB) with the following reservations: (1) Page 2-5, 2-6, para. 2.3.2, sub-para 7.a-c: The U.S. does not concur to a specific clinical timelines indicated. This reservation may be removed if the para is revised. (2) Page 1-5, para. 1.1.5, sub-para. 6: The U.S. does not routinely</td>
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provide damage control surgery in Role 2 care. This reservation may be removed if the second line in the para is revised to read “repair may be sacrificed”.

(3) Page 1-6, para. 1.1.6, sub-para. 2.a-c. The U.S. does not concur with, nor subscribe to, specific timeframes for the indicated care. This reservation may be removed if the sub-para 2.a-c is revised as follows:

(a). 2.a: Change “10 minutes” to “as soon as practical.”
(b). 2.b: Change “1 hour” to “as soon as practical.
(c). 2.c: Change “within 1 hour, but no later than 2 hours of wounding” to “as soon as practical.”

(4) Page 1-17, para. 1.2.8, sub-para. 5: This reservation may be removed if “must provide a surgical capability” is removed from line one. U.S. does not have this capability. The USA does not provide a surgical capability unless the unit is augmented by a forward surgical team. The USA does not routinely provide damage control surgery in Role 2 units (damage control surgery is limited to Role 2+ units).

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.
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Preface

1. **Character of Doctrine.** Doctrine is defined by the North Atlantic Treaty Organization (NATO) as fundamental principles by which the military forces guide their actions in support of objectives. It is authoritative but requires judgement in application. The clear understanding and acceptance of doctrine by allied joint forces is a prerequisite for the successful conduct of operations. It evolves as its political and strategic foundation changes and in the light of new technology, lessons identified and the insights of operational analysis.

2. **Scope.** NATO doctrine for medical support is primarily intended for NATO forces. It could also be applied multinationally within the framework of an allied joint force. This can include, with adaptations agreed by participating nations where necessary, its utilization for operations under other international mandates, or as part of a coalition of NATO and non-NATO nations, when such utilization would not be against NATO’s interests. Interoperability between NATO nations in these instances will be based upon NATO standardization agreements, other policy documents and publications. Allied Joint Publication (AJP) 4.10 focuses on the fundamental principles of medical support to operations. It builds on the key themes set out in AJP-01(D) Allied Joint Doctrine and provides an authoritative basis for medical support to NATO operations.

3. **Meeting the Security Challenge.** The Alliance continues to adapt to the security situation it faces. The security environment contains a broad and evolving set of challenges for NATO, the territory of its Nations and their populations. Alliance security strategy remains focused on three core tasks: collective defence; crisis Management, and; cooperative security. Today, the Euro-Atlantic area is at peace and the threat of a conventional attack against NATO territory is low. However, the conventional threat cannot be ignored. Many regions and countries around the world are witnessing the acquisition of substantial, modern military capabilities with consequences for international stability and Euro-Atlantic security that are difficult to predict. The proliferation of nuclear weapons and other weapons of mass destruction, and their means of delivery, threatens incalculable consequences for global stability and prosperity. Terrorism poses a direct threat to the security of the citizens of NATO countries, and to international stability and prosperity more broadly. Extremist groups continue to spread to, and in, areas of strategic importance to the Alliance, and modern technology increases the threat and potential impact of terrorist attacks, in particular if terrorists were to acquire nuclear, chemical, biological or radiological capabilities. Instability or conflict beyond NATO borders can directly threaten Alliance security, including by fostering extremism, terrorism, and transnational illegal activities such as trafficking in arms, narcotics and people. All countries are increasingly reliant on the vital communication, transport and transit routes on which international trade, energy security and prosperity depend. They require greater international efforts to ensure their resilience against attack or disruption. Thus, Operations are likely to be conducted at some distance from the allies’ home bases, and the demands of expeditionary operations will continue to be
a significant cause of change. Key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs will further shape the future security environment in areas of concern to NATO and have the potential to significantly affect NATO planning and operations.

4. **Transforming NATO Medical Support.** This edition of Allied Joint Doctrine for Medical Support takes account of the changes that have taken place in NATO since the last edition was published in March 2006. It reflects developments in the area of medical support, taking into account the key role that medical support plays in the conduct of joint operations and draws upon the hard won experience gained on recent NATO deployments. It also looks to the future and this edition includes a number of key developments. Most notably, the clinical timelines for medical planning, multinational healthcare provision and modular medical support capability.

5. **Purpose.** This publication sets out the fundamental principles required to plan and conduct medical support to NATO operations in all its aspects. Medical support remains a national responsibility, but in practise NATO commanders have come to share this responsibility during recent operations. This brings with it a range of additional responsibilities ranging from the treatment of casualties in different operating environments to the implementation of force health protection measures, interactions with civil organizations providing health services to affected populations, and the increased public expectations of high quality outcomes in the treatment of casualties.

6. **Target Audience.** AJP-4.10 is intended primarily for use by commanders and their staffs at the operational level. It also serves a wider audience including senior officers, junior officers and senior non-commissioned officers, employed in headquarters, formations and units assigned to them. In addition it provides an essential introduction on medical support to medical personnel.

7. **Doctrine Hierarchy.** This publication is one of the supporting joint doctrine publications of AJP-4 Allied Joint Logistic Doctrine and is the major joint doctrine publication covering medical support in NATO. Subordinated and supplement to AJP-4.10 are the publications of the Allied Joint Medical Publication (AJMedP) series, which provide a greater level of detail on the different aspects of joint medical support. As such, the AJMedP series is intended for an audience of medical staff officers and subject matter experts (see Annex A Medical Doctrine Architecture). The structure of AJP-4.10(B) reflects the subjects covered by these AJMedPs, with a separate chapter dedicated to each. The aim being to provide non-medical personnel with the key information from each area. Bracketing these chapters within AJP-4.10 are an opening chapter on the fundamental principles of medical support and a closing chapter on the complex challenges of the multinational medical support environment.

8. **Application.** NATO medical support doctrine is deliberately written to allow considerable flexibility in its application. It does not deliberately reflect or exclude any particular nation’s approach to medical support. It does, however, constitute a
basic framework upon which to base Alliance operational medical support should be based. Fundamentally, it encourages close cooperation to be undertaken between member Nations, even if some differences in national doctrines exist.

9. **Amendment.** AJP-4.10 is subject to regular review and can be amended and reissued as required. Guided by the tasking authority of the Committee of the Chiefs of Military Medical Services in NATO (COMEDS), the Allied Command Transformation (ACT) Medical Branch, with project management by the Military Medical Structures, Operations and Procedures (MMSOP) Working Group, will review the contents of AJP-4.10 in order to reflect changes in NATO policy or to carry out urgent amendment to published doctrine. Therefore any recommended changes or development proposals are always welcome and should be directed to the Medical Branch of ACT.
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10.1.1. Multinational Medical Support
Chapter 1  Foundations of Medical Support

This Chapter provides an overview of key principles within NATO Medical Support. These will form the basis for the chapters that follow.

1.1. The Nature of Medical Support

1.1.1. Purpose of Medical Support

1. The ultimate purpose of medical support is to support the troops in performing their tasks by preserving and restoring their health and fighting strength. Health is a key force multiplier of fighting power. Only a healthy force can function at maximum effort and sustain it. Health in principle is not merely the absence of injury or disease. In its widest sense it includes physical and mental well-being. Thus, in an operational context, health is the ability to carry out duties unimpeded by physical or psychological problems.

2. Appropriate medical support makes a major contribution to both force protection (FP) and morale by the prevention of disease, rapid evacuation and treatment of the sick, wounded and injured and the return to duty of as many individuals as possible.

1.1.2. Responsibility for the Health of the Forces

1. Responsibilities of the Nations. At all times, nations remain the risk owners. Therefore they retain their legal duty of care as an employer of their military. However, upon Transfer of Authority (TOA), the NATO commander shares that responsibility. Increasingly, due to national capability shortfalls, medical support is delivered via multinational solutions, potentially transferring a greater responsibility to the NATO commander.1 Coupled with this is the requirement to ensure the ability of the Alliance to generate forces and their support capabilities for operations. Multinational solutions in this area are based on common risk and burden sharing and on acceptance of the Alliance's defence planning targets by the nations. Acceptance of these capability requirements results in appropriate national medical capability development plans and resource allocation in support of the Alliance's Level of Ambition. The medical personnel will advise on health matters and nations deliver the medical care required, but only the Commander can balance the health and medical risks involved in his plan and decide if they are acceptable.

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1 The level of responsibility held by the NATO commander will be governed by the agreements made by the nations establishing the units concerned. Even when a Multinational Medical Unit is not under NATO command, the NATO staff may exercise a coordinating and mediating function between the nations.
2. **Responsibilities of the Commander.** Whilst shared with the nations, the duty of care for all personnel within a command rests with the Operational Commander. This encompasses the full spectrum of health and medical issues (including clear and tailored mechanisms of activation and use of national Medical Evacuation (MedEvac) assets, Medical Treatment Facilities (MTFs) and the medical lessons learned process). Consequently, commanders need to be advised by medical staff in order to ensure their decisions and the actions of their subordinates, which may affect the health of personnel, are based on proper information. An appropriately sized medical staff element needs to be present within the operational headquarters, in order to be fully aware of the operational situation and to be able to respond in a timely manner to ensure optimal health and treatment outcome. Direct access of the Medical Advisor to the Commander is essential to ensure timely intervention in all health and medical support matters that require the Commander’s attention, decision or action.

**1.1.3. Fundamental Principles of Medical Support**

Medical support should provide the best possible standard of care to the force it supports. However, the environment in which medical support to NATO operations has to be provided differs significantly from those within the national home base. Thus, whilst medical support will strive to fulfill the laws, rules and requirements set out in national systems or by international organisations, operational circumstances may necessitate the implementation of changes in order to achieve the most appropriate level of care for a deployed force. The Committee of the Chiefs of Military Medical Services in NATO (COMEDS) has established the following set of fundamental principles to deal with this challenge inherent in such situations:

1. **Compliance with the Law of Armed Conflict (LoAC) and Humanitarian Conventions.** The conduct of medical activities will comply with the rules and spirit laid down by the LoAC.² In circumstances where specific provisions of these conventions may not be directly applicable, the principles expressed in the LoAC nevertheless define the minimum acceptable standard. Primarily, within the framework of established mission population at risk³, without discrimination, all sick, injured, shipwrecked or wounded shall be treated solely on the basis of clinical need and the availability of medical resources.⁴

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² In this context, law of armed conflict includes the provisions of the Hague and Geneva Conventions that are in force, as well as other applicable conventions. The Geneva Conventions of 1949 are widely accepted as customary international law. Not all NATO Member States have accepted the Additional Protocols to the Geneva Conventions of 1977. However, a number of Articles in both Additional Protocols are considered to be customary international law binding on all nations regardless of ratification of Protocols I and II. NATO personnel must follow their respective national law in determining the applicable international law binding on their actions.

³ This military interpretation/application of the general guideline assures mission oriented effective use of the available medical capabilities, and reflects the military restraints that no dedicated military assets are for purely civilian purposes.

⁴ Depending on the mission the PAR may include the local population (partial or in total) as well as members of IOs, GOs or NGOs. The access to medical treatment by allied forces needs to be determined by the MEDDIR on behalf of the Operational Commander and outlined in Medical Rules of Eligibility.
2. **Medical Ethics and Legal Constraints.** Whilst all military personnel are bound by military laws and regulations, medical personnel also have additional individual responsibilities to the ethical and national legal requirements of their own clinical profession. Coordinated national and NATO Standing Operating Procedures will outline the legal framework for the safe and secure activity of medical personnel on operations in accordance with all applicable law.

3. **Best Medical Practice.** The standards of care available can have a permanent effect upon the outcome of treatment for the patient and the effects of poor quality can rarely be reversed later. Every effort should be made to ensure that medical care is based on internationally accepted best medical practice. Compliance with this principle has to be ensured by a quality assurance system in order to achieve Continuous Improvement in Healthcare Support on Operations (CIHSO). A valuable tool in defining, distributing and implementing improved medical practice is the medical lessons learned process.

4. **Patient Welfare.** Medical care is important but it is not the only element of health care. In addition to physical well-being the general welfare of patients is almost equally as important. Other military staff functions such as J1, J3 and J4 also have important responsibilities. For example, communication with command staff and relatives, for the management of personal affairs and provision of, psychological support, social and spiritual welfare.

5. **Timeliness of Treatment.** Time is a fundamental factor in the effectiveness of medical care. The time taken until the receipt of appropriate medical intervention will affect the general outcome of medical care, including the risk of death, the speed of recovery and the level of residual disability. Therefore, the allocation of medical resources has to ensure the timely provision of medical care. Trained non-medical first responders, capable of providing emergency life saving procedures as soon as possible within ten minutes after injury, will help to improve treatment outcomes and save lives. Clinical treatment and evacuation time-lines in operations have been incorporated as the basis for medical doctrine (see also paragraph 1.1.6. ff.). Their implementation needs to be ensured by clear command and control (C2) over MedEvac assets and the appropriate placement MTFs.

6. **Continuity of Care.** A casualty's recovery will depend on the continuance of appropriate care. Continuity of care means uninterrupted and appropriate medical attention and response to the needs of casualties throughout the chain of their medical treatment and evacuation. Patients passing through the medical system must be given continuous and relevant care. Casualties must be managed continually until they reach definitive care. Care must be available when patients are in transit during medical evacuation and the clinical condition of the individual is the key factor governing the timing, means and destination of the patient's evacuation. Medical care is normally provided in a progressive manner through the different

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5 Continuous improvement is the process by which best practice is shared, and challenges acknowledged and reflected upon, in order to learn from experience and so optimize healthcare support on deployed operations (see Paragraph 1.1.7. ff.).
response capabilities during the continuum of care – from point of injury or sickness through evacuation to specialized care and eventually to definitive treatment and rehabilitation. However, specific injuries or diseases as well as limited treatment capacity might require bypassing the nearest medical treatment facility.

7. **Compatibility of the Medical System.** Adequate medical support is a fundamental element of any force development/generation process and medical elements need to be as well prepared, equipped, trained, and readily available for deployment as the forces they support.

8. **Multinationality.** Multinational medical solutions have considerable potential to reduce the burden of medical capability provision upon individual nations. However, the existence of national differences such as varying clinical protocols, different languages and legal restrictions, means that achieving multinational cooperation in practice can be complex and challenging. Joint multinational training with a high degree of reality will pay many dividends for NATO operations by improving medical competencies supporting operational requirements and enhancing the interoperability of material, personnel and procedures of contributing nations. Multinational solutions may be extended to certain medical capabilities contracted from civilian providers to support operations for which military capabilities are either not available or not appropriate for the circumstances.

1.1.4. **Standards of Care**

1. **Military medicine is highly specialised.** Due to the environment and conditions in which it is frequently practised, the procedures will not always be the same as those in home base locations. The standards of care available can have a permanent effect upon outcome and the effects of poor quality can rarely be reversed later.

2. **The Primacy of Clinical Need.** Clinical need is to be the principal factor governing the priority, timing and means of medical care and evacuation afforded to a patient. The resulting requirements then need to be balanced with the operational objectives and their possible impact on the accomplishment of the mission.

3. **The Universal Provision of Acute Emergency Care.** Although the Operational Commander has the authority to limit the availability of military medical support to third parties, acute emergency treatment of life threatening conditions must not normally be denied within the capability/capacity of the medical resources deployed.

4. **Medical Confidentiality.** The confidentiality of the care provider-patient relationship is essential for the trust of patients in their care provider. It is often protected by national laws and thus should be respected in the military as it is in civil life. Therefore, sensitive clinical information is not to be communicated to any individual or organisation that does not have a legitimate need-to-know.

1.1.5. **Casualty Response**
1. In order to achieve the best possible outcome after injury or wounding, a continuous and flexible system of casualty response needs to be established in allied operations. This comprehensive system needs to incorporate all necessary components of medical support (as described in 1.2.), but will usually be focused on providing emergency care and surgery.

2. Emergency care (resuscitation and stabilization) including surgery when necessary render the casualty transportable to a suitable MTF for further treatment.

3. Damage Control Resuscitation (DCR). DCR is a systematic approach to dealing with major trauma combining the catastrophic bleeding, airway, breathing and circulation paradigm with a series of clinical techniques from immediate life-saving measures up to surgical interventions in order to minimise blood loss, maximise tissue oxygenation and optimise outcome.

4. Surgery is normally performed at Role 2 and Role 3 MTFs. Whenever the patient’s condition permits, it should be started ideally within the first hour of trauma management, as the delay to the initiation of surgery may lead to an increase in mortality\(^6\), morbidity\(^7\) and residual disability\(^8\).

5. Surgery at a medical treatment facility will always be fitted to the specific pattern of injury and general condition of the patient. Therefore it may not be definitive surgical treatment, rather it may be the initial effort required to save life and limb and preserve function to the greatest extent possible.

6. Damage Control Surgery (DCS). DCS is a surgical intervention where the completeness of the immediate surgical repair is sacrificed to achieve haemorrhage and contamination control, in order to avoid a deterioration of the patient’s condition.\(^9\) It consists of emergency surgical procedures and treatment to stabilize casualties, in order to save life, limb or function, including rapid initial control of haemorrhage and contamination, temporary closure, and resuscitation. These procedures depend largely on the ability to provide advanced intensive care and are therefore an interdisciplinary effort rather than a surgical challenge. They call for proper pre-operative planning as well as good perioperative coordination between the various involved specialists. DCS should be followed later on by further surgical interventions, which are delayed until the various physiological and other relevant parameters have been restored to as close to normal as possible.

7. A patient may therefore require a series of surgical interventions in different MTFs with different and generally increasing medical capabilities. This concept of a staged casualty response allows forward medical facilities to be more mobile and concentrate specialized and resource-intensive casualty care in more secure areas.

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\(^6\) Number of deaths in a given area or period, or from a particular cause.

\(^7\) Rate at which an illness occurs in a particular area or population.

\(^8\) Inability to function normally, physically or mentally.

\(^9\) The deterioration of a patient’s condition is the result of the initial trauma combined with possible physiological consequences of surgery.
where MTFs are not subject to frequent changes in location in accordance with the tactical situation. However, it also places a strong emphasis on continuity and quality of care during MedEvac, particularly between MTF Role 2 and Role 3.

1.1.6. Clinical Timelines

1. Clinical evidence shows that the risk of death or permanent impairment is significantly reduced if injured or wounded personnel are treated as soon as possible after injury or wounding.

2. Based on this evidence NATO aims to provide appropriate life, limb and functions\(^{10}\) saving treatment within specific clinical timelines. This has become known as the **10-1-2 Timeline**. It consists of:

   a. **Enhanced first aid.** Immediate life saving measures applied by personnel trained in tactical combat casualty care. Bleeding and airway control for the most severely injured casualties is to be achieved within **10 minutes** of wounding.

   b. **Damage control resuscitation.** Measures\(^{11}\) commenced by emergency medical personnel within **1 hour** of wounding.

   c. **Damage control surgery.** Depending on the specific and individual requirement the aim is to be able to provide damage control surgery (DCS) within **1 hour**, but **no later than 2 hours** of wounding.

3. The 10-1-2 Timeline emphasises the crucial importance of initial response at point of injury. The provision of bleeding and airway control for the most seriously injured must take place within 10 minutes of injury. To achieve this, sufficient NATO force personnel need to be trained and competent to deliver enhanced first aid, principally to stop bleeding and secure the airway. Medical service personnel skilled in pre-hospital care\(^{12}\) need to be placed in support of troops at risk and be able to sustain casualties until the arrival of medical evacuation.

However, for the planning of operational medical support, clinical requirements need to be set within the operational context of the specific mission. For that reason, specific medical planning timelines are described in Chapter 2 (2.3.2.7).

1.1.7. Continuous Improvement in Healthcare Support on Operations

1. Lessons identified and lessons learnt from exercises and operations are of the utmost importance for the future development of medical structures, capabilities,

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\(^{10}\) Including functions such as eye-sight, use of extremities etc.

\(^{11}\) Advanced skilled medical aid that is provided by the military medical services (e.g. doctors, nurses or paramedics), using personnel with competences that include awareness and experience of the pre-hospital environment and the equipment needed to apply those skills.

\(^{12}\) The level of pre-hospital emergency care skills required should be determined during the medical planning process, taking into account factors such as threat, likely nature of injuries, climate and environment.
organizations and procedures. Medical units and headquarters medical staffs have a key role to play by clearly identifying lessons within their routine reports and the chain of command must ensure all potential lessons are correctly staffed and contribute to the analysis process.

2. Continuous Improvement in Healthcare Support on Operations (CIHSO) is the process by which best practice is shared, and challenges acknowledged and reflected upon, in order to learn from experience and so optimize healthcare support on deployed operations. It provides assurance that the healthcare provided is meeting the standards expected.

3. CIHSO provides assurance in four ways:
   a. Risk management. Identifying and reporting risks and issues in order to communicate them and take corrective or mitigating action where necessary.
   b. Sharing best practice. Providing the opportunity to learn from the experiences of others, in order to continually improve the standard of healthcare provided.
   c. Sustaining a learning organization. Facilitating the learning of its members and continuously transforms itself. This requires co-operation between individuals and groups, free and reliable communication, and a culture of trust.
   d. Building capacity. Long term sustainability of medical support to operations essentially requires that capabilities and capacity within all the NATO nations and their partners are sustained and developed.

1.2. Components of Deployed Health Care

1.2.1. Medical Command, Control and Communication and Information Systems

1. Medical Command and Control. A dedicated and structured command and control system is the essential foundation of an efficient medical support structure. This system, supported by a reliable and secure communications and information management system must be capable of planning, executing, controlling, supporting and auditing the full spectrum of medical support functions. The medical command system should seamlessly provide all resources required to support treatment,
evacuation and flow of information from initial point of wounding, injury or sickness through evacuation to definitive treatment and final disposition.

2. **Medical Command and Control Responsibilities.** MC326/3 NATO Principles and Policies of Medical Support specifically recognises two key roles in the provision of medical command and control:

   a. **Medical Advisor.** The Medical Advisor (MEDAD) is responsible for providing appropriate medical advice to their commanders, ensuring that the commander and the commander’s staff are properly aware of the health and medical implications of their actions as well as any force health issues connected to the operation. Direct access of Medical Advisors to their commander and other key command staff elements is a prerequisite for ensuring effective medical support. Structural or organizational arrangements that separate medical staff from the commander and the commander’s staff create potential obstacles to the provision of dedicated medical advice and carry the risk of adverse casualty or health outcomes for a force deployed on operations. Medical personnel must be fully integrated into the staff and operational planning processes and appropriately represented on reconnaissance teams. The medical staff supporting the Medical Advisor must be adequate in size, equipment, training and experience, with clear and tailored authority to undertake appropriate and timely actions, including medical planning.

   b. **Medical Director.** The Medical Director (MEDDIR) is the head of the medical organization in a formation or a theatre of operations and thus responsible for timely medical planning and co-ordination. Usually the Medical Advisor to the joint force commander will be appointed as the Medical Director of that particular Joint Force. On behalf of the joint force commander, the MEDDIR will define the necessary medical support system, determining the appropriate medical requirements to be met by the attached forces for this particular operation. Further details on the role and responsibilities of the MEDDIR are stated in paragraph 10.4.3. ff.

3. **Casualty Regulation.** There are two main aspects to casualty regulation: firstly it is the management of the flow of casualties to the appropriate MTF, particularly at times when the number, type or severity of injuries is higher than normal. Secondly, casualty regulation is a function of the chain of command and should be capable of providing timely and accurate tracking information throughout the evacuation chain.

4. **Communications and Medical Information Management.** The efficient management of medical information, particularly regarding the status and location of patients, is a vital element in the effective execution of medical support. It is essential that this information is distributed rapidly to all authorised personnel. Key medical information management issues will be:
a. **Passage of Information.** Medical decision-making is dependent on the efficient processing and distribution of environmental, tactical, and casualty data. Such information is fundamental to effective medical planning, deployment health surveillance\(^{15}\) and the administration of personnel support to the deployed force.

b. **Patient Tracking and Regulation.** Both patient tracking and regulation require up to date and accurate information about individual casualties and the availability of appropriate treatment and evacuation assets.

c. **Patient Data.** In a multinational environment medical documentation should be interoperable throughout the theatre of operations and in all national contingents. Medical data must move with the patient through the evacuation system to definitive care. Clinical records, including post-mortem reports and evidence related to deaths in theatre, must be accurately maintained for the use of official national or international audit and boards of inquiry.

d. **Telemedicine.** Telemedicine uses advanced medical and communication technology to enable those responsible for provision of health care in a deployed or isolated location to access appropriate clinical advice and specialist guidance when needed. For example, enabling a healthcare provider (and potentially patients themselves) to obtain advice from specialist advice such as dermatologists, radiologists, infectious disease specialists, etc. Though it cannot replace traditional direct referrals and consultations, it does complement them. It increases the capabilities available to a deployed force and can make best use of the full range of skills within a multinational theatre of operations. The increased communications bandwidth needed to support the use of telemedicine needs to be considered during the planning of medical support to operations.

1.2.2. **Medical Intelligence\(^ {16}\)**

One of the essential requirements of medical support in the decision making process is the availability of reliable, timely, specific and applicable medical intelligence, from the initial planning stage throughout the operation as well as during and after deployment. Medical intelligence includes the assessment of hazards of operational concern such as infectious diseases, environmental and industrial health issues, other public health events, CBRN threats, as well as an assessment of the medical capabilities of host nations, other civil actors and opponents. All such factors need to

\(^{15}\) A process for the monitoring of the medical conditions of military personnel including identification of the population at risk, assessing the health of this population through pre-, during and post-deployment health assessments, identifying potential health hazards, assessing these hazards, employing specific countermeasures, and monitoring health outcomes.

\(^{16}\) Chapter 4 of this publication and AJMedP-3 *Allied Joint Medical Doctrine for Medical Intelligence* describe Medical Intelligence in more detail.
be taken into account to ensure the medical support provided meets the likely needs of the deployed force. Medical Intelligence contributes to intelligence preparation of the operational environment and the overall force protection concept.

1.2.3. Force Health Protection

1. Force Health Protection (FHP) measures are an essential element of every operational plan and critical for keeping commanders informed on the overall readiness status of the force from a health perspective. The primary aim of FHP is casualty prevention through the robust implementation of comprehensive disease and injury prevention, health protection and surveillance capabilities (including veterinary services and environmental health) that will promote, improve, or conserve the mental and physical well-being of the deployed force. An implemented health threat surveillance and assessment process will determine the full effect of health threats on the mission and provide solutions for how these effects can be eliminated or mitigated to the greatest extent possible.

2. Elements of the FHP programme, such as vaccination or food and water vulnerability assessments, may in fact be decisive factors in how quickly an operation can commence, and protective measures will frequently require implementation as soon as the decision is taken to commit to action. The plan will continue throughout the deployment and must extend well into the post-deployment period.

3. Restriction of Movement. Advising the Operational Commander on the requirements for any Restriction of Movement (RoM) measures is a medical responsibility whenever there is a suspected or confirmed outbreak of a contagious disease, environmental health or use of a contagious biological warfare agent. The commander should seek legal advice when contemplating imposition of isolation and quarantine measures.

4. Protection against the use of WMD requires a comprehensive and integrated approach including vaccination, chemoprophylaxis, collective and personal protection. Medical personnel in WMD scenarios must have all the necessary tools, equipment and assets, and be trained appropriately to be able to conduct effective consequence management, including timely casualty collection, decontamination, evacuation and treatment.

1.2.4. Medical Capabilities

1. Deployed medical capabilities must correspond to the mission, strength and composition of the force they support and the assessed environmental and health risks the deployed force will face. Operational medical support capabilities deploy alongside the forces they are tasked to support, being held at the same readiness

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17 Chapter 5 of this publication and AJMedP-4 Allied Joint Medical Force Health Protection Doctrine provide more details on Force Health Protection.
18 Actions taken to counter the effects of the environment, occupational health risks, and disease through preventive and reactive measures.
19 Disease prevention by use of chemicals or drugs.
state. They must be capable of adapting progressively as the deployed force strength or mission specific risks change and be able to meet peak casualty rates in excess of expected daily rates.

2. Medical support to NATO operations is provided by a variety of response capabilities (see Fig. 1). These response capabilities comprise all necessary medical resources and assets to conduct medical treatment, evacuation, re-supply, and other functions essential to the maintenance of the health of the force at certain, defined levels. Capability describes what kind of medical treatment a specific Medical Capability can provide, increasing from first response capability to definitive hospital response capability (Role 4).

3. All medical treatment facilities are categorised into these response capabilities, defined according to the essential clinical capabilities they comprise. In order to simplify the use of this concept in daily business they are referred to as Role 1 – 4.

4. The minimum capabilities of each MTF are in principle intrinsic to each higher MTF. That means a Role 3 facility has the ability to carry out Role 1 and Role 2 functions.

5. Increasing the clinical capabilities of MTFs generates requirements for additional complex equipment, personnel and supplies, which in turn increases movement, transport and other support requirements.

Figure 1. Medical Capabilities in the Continuum of Care
6. Under combat conditions the flow of casualties usually follows the pattern of the continuum of care. However, this is a medical organizational pattern and not a linear pathway that has to be followed in the sequence depicted in Figure 1. One or more response capabilities may be bypassed due to patients’ needs and the workload of MTFs.

### 1.2.5. Modular Approach to Medical Support

1. The Modular Approach to Medical Support\(^{20}\) is a key element of NATO’s plan to mitigate medical shortfalls by enhancing the interoperability of national assets, leading to the generation of additional medical capabilities within NATO.

2. The Modular Approach (ModA) is based on predetermined groupings of personnel and equipment defined as standardized units (modules) for ease of management and greater flexibility of employment. Each module represents a functional capability that cannot be split and is selected in line with the mission specifics and operational requirements. The individual modules can be provided from a variety of sources, both national and non-national, military as well as civilian. Their common feature will be functional interoperability for the creation of a collective capability.

3. Based on the Modular Approach and supporting the Smart Defence (SD) initiative of the NATO Secretary General, COMEDS initiated the SD Project Tier 1.15 *Pooling and Sharing of Multinational Medical Treatment Facilities (Role 2)*\(^{21}\). The project aims at the ability of groups of nations to pool and share national medical capabilities, thus creating multinational medical treatment facilities and mitigating operational shortfalls. Although the project focuses primarily on Role 2 MTFs as the most urgent capability shortfall, its principles are generally applicable to other Medical Capabilities as well and may be adopted for these capabilities in the future. Particularly in a multinational setting, the Modular Approach will lead to increased coordination and training requirements in order to overcome the challenges of multinational cooperation that are discussed in Chapter 10 of this document. The project scope will therefore involve work in three main areas:

   a. **Standardization.** Definition of medical capabilities in modular terms related to the treatment capabilities they can provide, using existing NATO definitions and standards where applicable.

   b. **Development.** Enabling participating nations to identify commonalities in their existing capabilities as a basis for agreeing individual contributions to interoperable pooled and shared capabilities.

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\(^{20}\) Enclosure 2 to IMSM-0289-2012 dated 18 Jul 2012 “*Conceptual Basis for a Modular Approach to Medical Support Capability*”

\(^{21}\) Proposed by ACT during the 36th COMEDS Plenary Session in November 2011 (Annex 1 to COMEDS(CHAIR)L(2012)0001) and endorsed by the 37th COMEDS Plenary Session in May 2012 (Annex A to COMEDS(CHAIR)L(2012)0013).
c. **Pre-deployment Training and Evaluation.** Development of the means to bring together national modular elements as part of a multinational MTF and to evaluate its readiness to deploy as an operational NATO capability.

4. Tasked with the composition of specific modules and their concept of operation, COMEDS’ Working Group on Military Medical Structures, Operations and Procedures (MMSOP WG) defined Core and Enhancing Modules which are agreed within NATO and coordinated with the European Union. MMSOP WG also proposed the Complementary Contributions that could belong to a Role 3 MTF in addition to the Core and Enhancing Modules.

5. The **7 Core Modules** are:
   
a. Emergency Area,
   b. Initial Surgery Response Capability,
   c. Specified Diagnostic Capabilities,
   d. Patient Holding Area,
   e. Post OP (high/medium dependency),
   f. C4I (including telemedicine support) and
   g. Medical Supply.

6. The **14 Enhancing Modules** are:
   
a. Imagery,
   b. CT-Scan,
   c. Surgery,
   d. Dental,
   e. Sterilization,
   f. Ward (general),
   g. Primary Healthcare,
   h. Intensive Care Unit (long-term ventilation),
   i. Pharmacy,
   j. Laboratory,
7. The proposed **Complementary Contributions** include:
   
   a. Additional Clinical Specialists.
   
   b. Specialist Surgery.
   
   c. Oxygen Production.
   
   d. Preventive Medicine.
   
   e. Hyperbaric Medicine.
   
   f. Telemedicine.
   
   g. Transient / Response Ambulances.
   
   h. Magnetic Resonance Imaging.
   
   i. Frozen Blood Product.
   
   j. Animal Care.
   
   k. Mortuary.
   
   l. CBRN (Decontamination & Treatment).
   
   m. Physiotherapy.

1.2.6. **Medical Treatment Facilities**

1. MTFs need to be as mobile and robust as the units they support. An integral part of the definitions of capabilities is the determination of its output. AJMedP-1 *Allied Joint Medical Planning Doctrine* addresses and details planning factors. Furthermore, MTFs should be described by their capabilities and capacities as detailed in AMedP-16 (Study) *Comparative Tables of Medical Treatment Facilities* and in the skill sets provided by AMedP-27 *Medical Evaluation Manual*.

2. If a MTF is set up as a multinational facility, a Lead Nation has to be identified. This nation ensures the modules chosen provide the required level of care and is ultimately responsible that all modules are sufficiently equipped, manned, trained and
evaluated in order to meet the operational requirements. Additional responsibilities of the Lead Nation include:22

a. Communication and IT.

b. Security, protection and intelligence.

c. Supply (i.e. food, water, ammunition).

d. Transportation and construction of the modules / facility.

e. Power supply, cooling and heating.

First Response Capability 23

First response capability encompasses bleeding and airway control for the most severe casualties. Sufficient non-medical forces personnel need to be trained and competent to deliver enhanced first aid, principally to stop bleeding. Where possible medical services personnel skilled in pre-hospital care should also be placed with units operating independently or in a high risk environment. This will increase the overall ability of the force to provide immediate care at point of injury, especially to members of organizations without widespread integral medical support.

During missions that involve a significant presence of international (IO), governmental (GO) or non-governmental organizations (NGO) or an increased threat, e.g. from improvised explosive devices, consideration should be given to provide basic and enhanced first aid training to non-military personnel within the theatre.

1.2.7. Role 1 MTF - Medical Response Capability

1. The Medical response capability (Role 1 MTF) is a national responsibility and focuses on provision of primary health care, specialized first aid, triage, resuscitation and stabilization.24

2. Additional elements of Role 1 medical support are usually:

a. Advice to the chain of command on basic occupational and preventative health issues,

b. Routine, daily sick parade and the management of minor sick and injured personnel for immediate return to duty and,

c. Preparation of casualties for evacuation to the higher level treatment within the continuum of care.

22 STANAG 2552 AMedP-1.3 Guidelines for a Multinational Medical Unit Edition A Version 1 provides further guidance on MN MTF.

23 Although usually not provided by a MTF, First Response Capability is listed in this section in order to emphasize the continuity of care and its immense importance for the outcome of the medical treatment.

24 For most nations it always includes a physician.
3. In accordance with the mission, the medical response capability (Role 1 MTF) may in addition include the following:
   a. Minimal patient holding capacity.
   b. Casualty collection from a casualty collection point (CCP).
   c. Emergency dental care.
   d. Basic laboratory testing.
   e. Initial stress management\(^{25}\).

4. Medical support provided by Role 1 MTF must be readily and easily available to all force personnel. Whenever a national contingent is unable to meet these criteria, extended capabilities or medical support from another contingent’s medical resources should be negotiated between the nations involved.

1.2.8. Role 2 MTF - Initial Surgery Response Capability

1. Initial surgery response capability (Role 2 MTF) is characterized by its ability to perform **surgical interventions** in addition to perform reception / triage of casualties; resuscitation and treatment of shock to a higher level than Role 1 facilities.

2. The deployment of Role 2 MTFs is mission-dependent, especially when:
   a. There are large numbers of personnel or a risk of high numbers of casualties.
   b. Geographic, topographic, climatic or operational factors may limit medical evacuation to higher levels of the continuum of care to comply with treatment timelines, especially when lines of communication are extended.
   c. The size and/or distribution of the force do not warrant the deployment of a full hospital response capability (Role 3 MTF).

3. There are two main types of Role 2 MTFs:
   a. Role 2 Basic (Role 2B) MTF and
   b. Role 2 Enhanced (Role 2E) MTF.

4. The terms “Basic” and “Enhanced” relate to clinical capabilities and do not refer to the level of mobility of the respective MTF. Depending on the mission and

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\(^{25}\) Initial Stress Management is a Chain of Command responsibility. It may be supported by the Medical Role 1 MTF. Further details are outlined in AMedP-64 **Forward Mental Healthcare (Study)**, Annex A: **Management of Potentially Traumatizing Events**.
operational requirements a Role 2B can be set up as a light and highly mobile MTF, as well as a fixed building or on a naval platform.

5. A Role 2 Basic MTF must provide the surgical capability, including damage control surgery and surgical procedures for emergency surgical cases, to deliver life, limb and function saving medical treatment. The surgical capability should be provided within medical timelines. A Role 2B MTF consists mandatorily of all the Core Modules outlined in Section 1.2.5.5.

6. A Role 2 Enhanced MTF must provide all the capabilities of the Role 2 Basic, but has additional capabilities as a result of additional facilities and greater resources, including the capability of stabilizing and preparing casualties for strategic aeromedical evacuation (AE). Depending on the mission, specific Enhancing Modules or Complementary Contributions will be added to the seven Core Modules.

7. Based on operational requirements the composition of Role 2 MTFs may differ significantly. In fact, no two may be composed the same way within a single operational area. Whatever, the specific composition, each deployed Role 2 facility must be declared to the operational commander in accordance the capability elements it contains. Definitions of these elements are contained in the AMedP-27 Medical Evaluation Manual.

8. In some circumstances, such as in support of Special Operations Forces or certain maritime operations, it will be necessary to provide a mission-tailored medical treatment facility including a surgical module, the so called Forward Surgical Element (FSE). An FSE is capable of providing DCS driven by the tactical environment. If an FSE is added to a Role 1 MTF, which will often be the case, this MTF has not the capabilities of a Role 2B MTF.

1.2.9. Role 3 MTF - Hospital Response Capability

1. A hospital response capability provides secondary health care at theatre level. A Role 3 MTF must provide all the capabilities of the Role 2E MTF and be able to conduct specialized surgery, care and additional services as dictated by mission and theatre requirements.

2. Depending on mission characteristics this includes a mission-tailored variety of clinical specialties, focussing on the provision of emergency medical care. This does not exclude nations to include other specialties as well. The provision of specialized medical care will limit the need for repatriation of patients to definitive care and, if necessary, ensure adequate survivability during evacuation to the Role 4 MTFs, where such care is provided.

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26 Enhancing Modules and Complimentary Contributions are outlined in Section 1.2.5.
27 as this facility will not have all the Core Modules
28 Complimentary Contributions are outlined in Section 1.2.5.7.
3. Clinical capabilities and holding capacity of Role 3 MTFs need to be sufficient to allow diagnosis, treatment and holding of those patients who can receive adequate treatment and be returned to duty within the Joint Operations Area (JOA) in accordance with the theatre holding policy. Dental capabilities within this setting equal secondary dental care and oro-maxillofacial (OMF) surgery.

4. The mobility of Role 3 facilities depends significantly on the operational scenario. Often it needs to be deployable only for initial entry into theatre and will not require subsequent redeployment. However, in a highly mobile operation it may be necessary to redeploy Role 3 facilities in order to continuously support the force.

1.2.10. Role 4 MTF - Definitive Hospital Response Capability

1. A definitive hospital response capability (Role 4 MTF) offers the full spectrum of definitive medical care that cannot be deployed to theatre or will be too time consuming to be conducted in theatre.

2. Role 4 MTFs normally provide definitive care specialist surgical and medical procedures, reconstructive surgery and rehabilitation.

3. This care is usually highly specialised, time consuming and normally provided in the casualty’s country of origin or the home country of another Alliance member. In many member nations military hospitals provide definitive care. Utilization of the national (civilian) health care system is another model.

1.2.11. Medical Evacuation29

1. The task of transferring casualties during military operations is influenced by factors such as the operational environment, the weather, and the length and quality of evacuation routes. The successful management of evacuation tasks along with other necessities requires the timely availability of suitable medical evacuation assets in sufficient numbers. Medical evacuation is not merely the movement of patients under medical supervision between MTFs as a part of the treatment continuum. It also includes the continuous provision of medical support to the patient during the evacuation itself. Three categories of medical evacuation apply to sea, land and air operations:

   a. forward (from point of wounding to first treatment point);

   b. tactical (within theatre) and;

   c. strategic (out-of-theatre) evacuation.

2. The evacuation plan will be closely related to the medical footprint (the location and capability of assets), the casualty rate (location, number and type of casualties) and theatre holding policy (how long casualties will be held in theatre

29 Chapter 3 of this publication and AJMedP-2 Allied Joint Doctrine for Medical Evacuation deal with medical evacuation in further detail.
before evacuation to home base). The robustness of the evacuation plan is dependent on the quantity and capability of the treatment assets available. The following principles should be applied when devising the evacuation plan:

a. **Timeliness.** (see Paragraph 1.1.3.5.).

b. **Availability.** The aim of the medical evacuation system is to evacuate casualties 24 hours a day, in all weather and sea-states, over all terrain and in any operational scenario. Accepting that operations at sea or involving Special Forces may require specific solutions.

c. **Continuity.** (see Paragraph 1.1.3.6.).

d. **Multinational Interoperability.** (see Paragraph 1.1.3.8.).

3. **Responsibilities.** It is a responsibility of command to ensure an effective medical evacuation system is in place. The Force Medical Staff will support the commander and coordinate their efforts with the operations and movement staff in theatre. The provision of resources will be coordinated by medical planning staff and may comprise assets from a number of sources, including common use theatre assets, nationally owned assets, Host Nation Support and Third Party contracted capabilities. Harmonization of the medical evacuation procedures and capabilities is the responsibility of MedEvac asset contributors. Only properly co-ordinated procedures can assure the smooth transfer of patients within a multinational medical support structure.

4. **Aeromedical Evacuation.** Aeromedical assets are an increasingly essential element to assist timeliness of medical evacuation. A centrally coordinated multinational aeromedical evacuation system (within and out of theatre) offers the opportunity to enhance the efficiency of medical support.

1.2.12. **Medical Logistics**

1. Medical supply is the process of procurement, storage, movement, distribution, maintenance and disposition of medical material and pharmaceuticals, including blood, blood components and medical gases, in order to provide effective medical support and the application of this process in planning and implementation.

2. The medical logistics system needs to ensure the sustainability of the medical support system under all operational conditions. National responsibility over planning and executing an effective medical logistics system remains the guiding principle for operational support; however the NATO Commander may exercise their authority to ensure best possible coordination of national assets and activities in this area. Economy of scale may result from coordinated supply of common items within a multinational force.

\[30\] Must not be considered as an option for forward medical evacuation.

\[31\] Tactical, forward and strategic evacuation.
3. The scale and scope of a medical supply system will be mission dependant. It must enable national contingents to be self-sufficient from deployment and throughout the duration of the mission, as specified by planning staffs. It must be straightforward and reliable, capable of delivering medical supplies rapidly, and theatre-wide. An audit system must be established, which is cost-effective, simple, and does not constrain demand or supply.

4. The unique characteristics of medical materiel set it apart from other commodities, for the following reasons in particular:

   a. **Protected Status.** Medical supplies are protected under the terms of the Geneva Conventions, when properly marked and separately stored and distributed from combat supplies.

   b. **Regulatory Aspects.** The accounting, administration and use of medical supplies, and in particular controlled drugs, are governed by national and international regulations. The consumption and controlled disposal of medical materiel must be recorded for legal, environmental and asset control reasons.

   c. **Handling Requirements.** Tight controls and specialised management are required for medical supplies due to the technical and perishable nature of the materiel, especially, its often-limited shelf life and its sensitivity to storage, transport and environmental conditions.

   d. **Importance.** Seemingly insignificant items can have genuine life and death importance. There is a complex inter-dependence between treatment capability and the availability of medical materiel; the medical logistics system must contain the knowledge and responsiveness to meet short notice clinical demands.

5. The planning and execution of medical logistics is a shared medical and logistics responsibility. Medical personnel are responsible for the identification of the requirement, the specification and quantity of medical materiel and pharmaceuticals and will advise on prioritisation of delivery. Logistic personnel are responsible for coordinating the management of medical materiel and pharmaceuticals within the overall logistic plan. Medical and logistic personnel will have shared responsibility for tracking of medical materiel and pharmaceuticals from sourcing through to final disposition.

6. NATO Allied Command Transformation is responsible for stockpile planning guidance in conjunction with nations. Medical stockpile planning, regarding the establishment and maintenance of minimum medical material and pharmaceutical levels, as well as surge production capabilities, is aimed to ensure resources and stocks of adequate medical supplies and equipment to support forces are assigned and earmarked to NATO. Guidance for medical stocks can be found in the biennial BI-SC Stockpile Planning Guidance.
7. Blood and Blood Products. The supply of blood and blood products is considered a critical function within medical logistics. Their provision at all levels at which surgery is offered is mandatory. The requirement will be for an in-theatre system with the minimum capability of:

- a. Receiving blood and blood components of a standard acceptable to all participating national contingents as established in STANAG 2939 Minimum Requirements for Blood, Blood donors and Associated Equipment.
- b. Moving, storing and distributing blood and blood components, and disposal of clinical items used in blood administration.
- c. Maintaining continuity of records from donor to recipient and vice versa.
- d. Collecting, processing and testing blood on an emergency basis.

8. Whilst national contingents are responsible for the supply of blood to their own patients, this is not always practical and feasible. Multinational support arrangements could be set up in the Joint Operations Area (JOA) for blood and blood products provision, provided that national and internationally agreed standards are met.

9. Medical Waste. A plan to fully address the handling and disposal of regulated medical and radiological waste must be incorporated in the medical logistic support plan across the theatre. This plan should consider all aspects of operations to prevent pollution, protect the environment, comply with regulatory guidance/policy, protect the deployed force and be in compliance with host nation laws.

1.3. Component Medical Support and Specific Military Situations

1.3.1. Land Operations

1. Characteristics. Land operations vary considerably both in mission type and characteristics. They can include amphibious, airmobile, airborne and follow-on force deployments. Medical support requirements derive from the overall size and nature of the JOA, along with the size and distribution of military forces and the civilian population. Account must also be taken of the likely provision for enemy prisoners of war (EPWs), detainees and other parties such as civilians or refugees. Incidental civilian casualties continue to be a feature of armed conflict. Medical care provided by local practitioners or NGOs may not be available in a hostile or high-risk environment. Where appropriate, NATO medical units may be required in cases of acute emergency to maintain a limited capability to treat non-NATO force personnel, including the elderly, pregnant women and children.

2. Lines of Communication. Medical support will be required to LOCs, which in some instances will be long or widely dispersed. The JOA may also be large enough to have two distinct support areas: the rear support area, where most operational
level support functions are performed, and; the forward support area, where tactical support functions take place. Each has different medical support requirements.

3. MTFs. In environments constrained or contested by enemy threat, terrain or weather, the supported force will require a robust, integrated and layered network of medical treatment facilities located within planning guidelines. Types of deployed MTFs will depend on the mission type and dispersion of the forces to be supported, varying from highly mobile war-fighting units to small static facilities, which may be linear or ‘hub and spoke’ in laydown. The latter being where MTF providing Role 2 or Role 3 care capability are located centrally, with the sending MTFs arranged round them in a ‘hub and spoke’ pattern along which patient treatment and evacuation are organized. Location of MTFs will be mission dependent, providing both primary and secondary health care and able to provide graduated response capabilities.

4. Medical Evacuation. Medical evacuation means will be derived from ground ambulances, maritime, or air assets. Although air evacuation assets with their ability to cover larger distances in short time may be preferred, contested or constrained environments might restrict aero medical evacuation. This will require a dynamic and integrated air-land medical evacuation system. Air evacuation assets may be assigned or dedicated, on priority call or opportune lift. Fixed wing and rotary wing air assets need to be available for evacuation throughout the continuum of care in support of land operations. This requires close coordination with the air component. Additional medical assets capable of providing advanced en-route care may be deployed in urgent cases, particularly those involving prolonged transportation times to deployed MTFs.

5. Command & Control. Key to successful medical support for land operations is the establishment of clear and responsive medical consultation command and control, which must include patient tracking and regulating capabilities. Access to robust and secure data communications is essential, which is particularly difficult during highly mobile land operations, in environments not conducive to radio communications or over long distances.

1.3.2. Air Operations

1. Characteristics. Medical support to the air component is designed to support both the intricacies of flying operations, and the other components, particularly in the specialised area of aeromedical evacuation (forward, tactical or strategic).

2. MTFs. Due to the specific nature and organization of air components, Role 3 MTFs are often not integral to the air component on joint operations. However, Role 2 MTFs are often organic to support elements of air operations. Deployed operating base (DOB) medical support must be closely coordinated to ensure national components do not unnecessarily duplicate capability.

3. Deployed Operating Bases. Emergency medical response provision within the DOB will most likely be the responsibility of the air component. If a DOB is located within the JOA of another component, such as a land component, a coordinated
approach to emergency medical response must be incorporated and proved, ensuring the most efficient and effective employment of component medical support assets through closely linked medical C3 structures.

4. Aviation Medicine. Aviation medicine specialists are required for effective 24-hour, all weather air operations. These should ideally be deployed to form an integral part of the DOB medical support structure. Support for air operations is a highly technical industrial process, therefore occupational health capabilities are required to advise and support commanders in their responsibility for ensuring related preventive health measures.

1.3.3. Maritime Operations

Nature of the Maritime Environment

1. Maritime operations differ from land and air operations in several ways. Perhaps the most significant is the fact that ships are constantly moving around the operational area. This means that the maritime medical treatment facilities are also moving, both absolutely and relative to other platforms that may require their support. Therefore medical timelines are also subject to frequent change. Additionally, maritime areas of operation are often very large with assets spread throughout them, often separated by great distances.

2. As in the land environment, the weather at sea often changes rapidly, placing severe constraints on the operation of helicopters and ships and restricting the patient transfer between platforms. The non-availability of air assets in the land environment can be mitigated to some extent by increasing reliance on ground-based evacuation. However, in the maritime environment, it is very likely that weather severe enough to preclude flying will also prevent the use of boats to transfer personnel.

3. The ship-based operating environment is a challenging one. Maritime platforms pitch and roll in accordance with the sea state and this can sometimes limit the performance of medical procedures. There are epidemiological consequences of people living in such close proximity, resulting in the potential for a higher likelihood of a disease outbreak and greater difficulty controlling it.

4. An attack on the ship is likely to result in a large number of casualties at once, as opposed to the land environment where personnel might be dispersed over a wider area when facing a threat. The likelihood of blast and subsequent fire in a confined space might lead to a larger number of severe burns, smoke inhalation burns and blast injuries, which result in a different set of casualty types than one can normally expect on operations in other environments. The necessary treatment of larger numbers of near-drowned patients exposed to the cold as a result of ship loss or significant ship damage is unique to the maritime environment as well.

5. In the maritime setting, platforms are often not dedicated exclusively to the medical role. This may create a tension between medical and military roles for the platform commander and requires careful prioritisation and re-evaluation during the various stages of the operation. Whilst their inherent mobility allows platforms hosting
MTFs to be repositioned quickly to meet medical requirements, it also allows them to move off-station rapidly for tactical or force protection reasons and this can disrupt established casualty evacuation pathways. Therefore it is important that medical staff engage with Commanders to highlight the issues.

6. MTFs on land are normally deployed under the provisions of the Red Cross / Crescent and operate in accordance with the Geneva Conventions. In the maritime environment, only a very small number of dedicated hospital ships currently have this status.

7. The employment of independently operating small units with limited medical support and thus an increased risk to the assigned personnel is a common element to all types of operational environments. Specific to maritime operations are the extended periods of time those units (e.g. submarines) might be forced to operate out of reach of adequate medical support. That may lead to an increased number of situations where the Commander has to weigh the importance of a certain mission against the personnel risk evolving from the difficulty in meeting medical treatment timelines.

8. Afloat medical support largely depends on the availability of platforms suited to accommodate the necessary medical treatment capabilities. Independent of their size and importance to the operation, a wide range of ships are restricted by their design configuration and cannot carry more than their organic medical capability. Once deployed, the reinforcement of embarked medical treatment facilities is difficult, if possible at all.

9. The same challenges apply when it comes to medical logistics related issues. Storage space is limited aboard military vessels. At the same time, large distances or temporary inaccessibility of higher level MTFs may lead to extended timeframes a patient needs to be held aboard a certain ship. The resulting higher consumption rate may influence that particular ship’s course or mission, if it is necessary to get into the range of a supply facility in order to resupply with critical medical supplies or to meet clinical timelines.

10. The availability of well-trained medical personnel is a prerequisite to conducting operations in all environments. The nature of the maritime environment endorses this in more than one way. On one hand, specific maritime requirements, like submarine rescue or hyperbaric medicine for underwater operations, demand a thorough understanding of, and proper training in, the relevant techniques and procedures. On the other hand, specialized medical expertise (e.g. aviation medicine, occupational health or force health protection) is usually limited. These limitations need to be addressed by a broadened education and training of the deployed personnel and the use of tele-consulting opportunities wherever possible.

Principles of Maritime Medical Planning.

11. Medical support to a deployed maritime force may have two facets: shore based support and afloat support. Shore support encompasses all the activities in direct support of a maritime force. Afloat support is the responsibility of the commander at sea who controls all assigned assets, including medical. The fundamental principle is to
provide shore-centralized distribution and support sites so that units, while afloat, can be self-sufficient.

12. While the concept is flexible and specific capabilities and organization will be mission dependent, generally it calls for advanced logistic support sites (ALSSs) in support of the entire force, and smaller, more mobile, forward logistic sites (FLSs) located closer to the supported force. The distribution of medical resources, assets and capabilities between the maritime force and the shore medical facilities will be scenario dependent and subject to contingency planning.

13. In principle, the medical support afloat follows the matrix of minimum medical capabilities for medical treatment facilities covered in paragraphs 1.2.6. – 1.2.10. However, there is a considerable degree of variation in the maritime environment compared to other types of operations. Based upon the various constraints caused by the nature of maritime operations COMEDS’ Medical Naval Expert Panel (MEDNEP) developed specific normative descriptions for medical care levels in maritime operations. The level requirements and their use in medical planning in a maritime environment are described in a greater detail in the maritime chapter in AJMedP-1, Allied Joint Medical Planning Doctrine.

14. Determining the capabilities and assets necessary to deliver appropriate medical support to maritime operations depends on the maritime specific challenges mentioned above as well as on estimated rates of casualties. However, since there is no reliable data for the type of maritime operations currently on going, MEDNEP developed a risk-based medical asset planning model especially for the early stages of maritime operations. In order to determine qualitative capability requirements, the type of maritime activities (ranging from single-ship-transit to opposed amphibious landing) is set against the size of the unit and the area of operation. The resulting score is then linked to the maritime level requirements. The risk-based medical asset planning model for maritime operations and its use in medical planning in a maritime environment are described in a greater detail in AJMedP-1, Allied Joint Medical Planning Doctrine.

Medical Evacuation-related Challenges

15. The maritime environment contains specific challenges to the conduct of medical evacuation. Once casualties are sustained, their management is complicated by extraction and evacuation difficulties compounded by long evacuation routes that conspire to hinder adherence to acceptable treatment timelines.

16. Removal of casualties from damaged ships will be difficult and time-consuming. It may require specialist extraction equipment and training but may be mitigated by ensuring availability of large numbers of first aid-trained personnel in the ship’s company to assist the organic medical staff.

17. Casualty Evacuation in the maritime environment can be generally conducted in two ways:

a. by Sea: Evacuation by sea from a beachhead, inter-ship transfer or rearward evacuation from Role 2/3 may all be undertaken by afloat assets,
when circumstances permit. However, this may be complicated by sea state, weather conditions, range and access difficulties to and from high-sided afloat units. In addition, the delivery of all but the most basic in-transit medical care on small boats may be impossible.

b. by Air: The preferred option for evacuation of casualties will almost always be by rotary wing assets since they are the fastest, most efficient and safest means of evacuation. To assure high quality and timely medical care support helicopters should ideally be dedicated in the casualty evacuation role. In the face of limited support helicopters assets however this may not be possible and a system of opportunistic tasking may be required. Furthermore, flying operations may be compromised by sea-state, weather conditions, type of aircraft and unavailability/unsuitability of flight decks. Ships may be widely dispersed within an area of operations (AOO) and operating long distances from land. Endurance and operating parameters of different aircraft must be understood to inform decision making and may dictate the lay-down of medical assets. Commanders should be made aware of the ‘reach’ of medical capability and possible constraints this may have on operational tasking. Where forces are required to operate outside this area of medical coverage Commanders must be advised of the increased risk of not being able to meet medical timelines.

18. The need to regulate and coordinate the flow of patients exists in all operational environments regardless of the size of the deployed force. The staff element dedicated to this task may range from a single person aboard a ship to a fully manned patient evacuation coordination cell (PECC) placed in the commander’s HQ. Maritime specific constraints may lead to solutions that are suited to the support of naval operations but may differ significantly from established models in recent operations.

Medical Intelligence Issues

19. In the maritime environment, standard information such as details of environmental and industrial hazards, communicable diseases, capabilities of local healthcare systems, must be enhanced by the inclusion of maritime specific data requirements such as the willingness of local medical treatment facilities to accept maritime casualties or the availability of recompression chamber facilities and any local Search and Rescue (SAR) / ambulance capabilities that could assist in evacuation from ship to shore.

Force Health Protection related Topics

20. Different regions of the world will present different environmental and health threats which may have a major effect on the numbers and types of diseases and non-battle injuries (DNBI) casualties and the medical capabilities required. Unlike land operations where a force is more likely to deploy directly to the AOO, a maritime task force may transit many different regions en-route to its final AOO hence maximising exposure to health hazards. Accurate and up to date information on all relevant countries should be obtained prior to deployment as part of the medical intelligence
AJP-4.10

process. As well as influencing the medical plan this process will identify important FHP measures that must be implemented both prior to deployment and on arrival in the AO. Of special concern, requiring close oversight by medical, is the acquisition and approval of local food and water sources. In some cases these force health protection measures may place significant constraints on the military Commander’s actions within the AOO.

1.3.4. Special Operations

Nature of the Special Operations environment

1. Special operations differ from conventional operations because they are frequently executed on short notice, clandestinely, and for strategic purposes where risk is assumed because of mission importance. Special Operations units require flexibility, precision, speed and agility to be successful. Likewise medical support must meet these same requirements. Medical care must move at the speed of the unit. It must be able to sustain casualties for an extended period well beyond normal perimeters because Special Operations Forces (SOF) frequently operates in areas outside the NATO medical doctrine of 1 hour to damage control surgical capability. A common misconception about SOF operations is that SOF units are essentially self-sufficient for most if not all support enablers. On the contrary, SOF frequently requires conventional force support. Whenever possible SOF will seek to link into available local conventional medical support for operations. This sometimes increases the risk to SOF because it expands the circle of knowledge about the operation jeopardizing operational security. To combat this vulnerability, SOF elements must rely heavily on available surgical and transport resources. On some occasions, SOF will have internal surgical and casualty evacuation capability, but this is the exception rather than the rule. Accordingly, SOF operators have to be trained in advanced skills for emergency treatment of casualties according to standardized protocols. SOF medics will require additional medical education and training to independently perform techniques and protocols typically reserved for medical professionals. This will often require specific waivers or endorsements by national authorities. Medical professionals assigned to SOF forces have to be trained and equipped appropriately to operate within the challenging SOF environment and may need special expeditionary medical skills.

2. Conventional operations are supported by a medical system whose foundation is found in commander and national surgeon general support. Built on this foundation, one finds pillars including leadership, planning, communication, training, treatment, evacuation, and logistics, each pillar resourced at the tactical, operational and strategic levels of command. This structure exists to save lives and enable mission success. A SOF medical system is a mirror image of a conventional medical system scaled to meet the size of the national SOF unit and specially trained and equipped to operate within the challenging SOF environment.

3. Special operations missions are divided into three classifications: Direct Action, Special Reconnaissance and Military Assistance. Each mission set has
specific environmental considerations that must be accounted for when planning and executing medical support SOF operations.

4. Direct Action (DA) missions are characterized by speed and violence of force hinging on surprise as a key combat enabler. The nature of injuries associated with direct action missions tend to be high velocity penetrating trauma or orthopaedic in nature. The use of breaching explosives and other means of entry to denied areas increase the risk of injury for SOF operators. Thus, medical support must be focused toward tactical combat casualty care principles. History has proven that frequently in combat scenarios, the SOF medic is either injured or not immediately available to treat casualties because of the tactical situation. Therefore, SOF medical support for DA missions hinges on the trained medical skills of the operator as much as it does the SOF medic. Commanders must practice casualty response as an integrated battle drill for all operators to successfully support DA missions. Because penetrating trauma is a common injury in DA missions, the availability of damage control surgery within one hour of injury is highly desirable. Unfortunately, DA missions occur where the target is, which may not be easily accessible to conventional surgical support. For this reason, some nations have developed highly mobile surgical capabilities that can insert near or on an objective to provide lifesaving surgical capability. This is the exception rather than the rule. Likewise, some SOF elements will have advanced evacuation platforms capable of providing high level en-route medical care, particularly whole blood transfusion, in direct support of the mission. Both early surgical intervention and high level en route transport are desirable elements of SOF medical support for these high risk missions.

5. Special reconnaissance missions are typically longer duration missions characterized by clandestine insertion into an area or observation point, conduct of missions without detection and extraction from the area of operations. Medically supporting these missions is limited by what the medical provider can carry and the limited ability to communicate with higher medical support. Because these missions frequently require prolonged exposure in harsh uncomfortable conditions, particularly maritime special reconnaissance, early treatment intervention for DNBI becomes mission critical. To sufficiently support these missions, medical personnel must be able to make nearly independent medical decisions and be physically capable of keeping pace with the special reconnaissance element. To be successful, SOF units require special medical protocols for their providers and operators that may extend above the usual medical authorities and skills of their conventional counterparts. Leveraging distance and telemedicine capabilities can be useful in supporting these missions.

6. Medical support of SOF Military Assistance missions typically fall into two potential categories; medical engagement and medical partnering. In medical engagement, a SOF Commander leverages medical capability to engage an area or population for both operational and medical objectives. In medical partnering, a SOF commander uses his medical assets to train a partner force in medical skills to improve interoperability and medical capability to support operations. Both branches of military assistance medical support present unique challenges.
7. Allied Command Operations Directive (ACO DIR 83-2) addresses some key elements of medical engagement using military forces to guide operational commanders. Some tenets from this document include the concept that medical engagements should be conducted in concert with the host nation medical system and should not replace it or diminish its capability in the eyes of the people. Direct care to indigenous populations by SOF units alone should be avoided as this undermines the local government’s medical system. Whenever possible, SOF units should seek to partner through the host nation healthcare system to augment, train and advise local healthcare capability rather than supplant it. For this reason, medical seminars, where SOF units assist the local health leadership by, through and with local health care providers in building capability, is a better means of engaging a population than the traditional medical activity in which SOF medical providers conduct sick call type operations in an area. The medical seminar concept requires more coordination and planning, but reaps better operational outcomes for the Commander and better medical benefits for the host nation. Another ACO DIR 83-2 tenant applicable to SOF is that medical care should never be used as a quid pro quo for information or tactical advantage. While SOF practices can sometime challenge conventional wisdom, SOF medical care should conform within appropriate medical ethics and standards.

8. Medical partnering in SOF operations entails working with a partner force to increase that forces medical capability to conduct medical support. When SOF medical elements engage in medical partnering, some key considerations include the starting capability of the partner force, the logistical supply of that force, host nation medical philosophies, laws and cultural considerations. A common misstep in NATO medical partnering is expecting a partner force to change its cultural or legal practices to conform to western standards. Another pitfall is training with equipment not common to and not sustainable by the partner force after the SOF force leaves. Thus medical partnering should be carefully conceived, tailored to the partner force and be sustainable after the SOF unit leaves.

9. SOF medical logistics can present significant challenges for medical support. Because space and weight are limited in SOF units, medical equipment and treatment supplies will compete with other operational requirements like food, water and ammunition for space. SOF medical equipment and supplies will frequently need to be dual purpose and capable of easy disposal, must withstand the extremes of temperature and field conditions and be simple to use in high pressure situations. For this reason, SOF frequently relies on off the shelf technologies specially designed for the SOF environment that are not common to the conventional medical supply distribution chains of most nations. The flexibility to procure and the authority to use these items require senior medical leadership involvement, and are critical to maintaining the edge that gives SOF units the advantage over large forces. This may be particularly true in the austere environment over prolonged evacuation timelines. SOF units may need specific waivers from national and legal authorities to use specific products or protocols, if they are to save lives in this challenging environment.
10. Since most nations do not have SOF specific logistic chains of supply, SOF medical logistics will frequently rely on the conventional medical logistics system for procurement and resupply of non-SOF specific items such as medication, bandages and other routine medical supplies.

11. The availability of well-trained medical personnel is a prerequisite to conducting operations in all environments. The nature of the SOF environment endorses this in more than one way. Because SOF may operate in air, on land, or at sea, medical providers must have a broad spectrum of understanding in highly specialized areas such as dive or hyperbaric medicine for underwater operations, aviation medicine, occupational health and preventive medicine for force health protection. These limitations need to be addressed by a broadened education and training of the deployed personnel and the use of teleconsulting opportunities wherever possible. SOF medical support personnel must be tactically proficient in the SOF environment able to shoot, move and communicate with the teams they are supporting. Otherwise, they become a burden to the unit or worse, a danger to the unit personnel, because of their lack of training and experience. SOF medical providers should maintain a high state of physical fitness in order to be able to keep pace with SOF units within the SOF environment.

**Principles of Special Operations Medical Planning**

12. Medical support to special operations forces must be flexible, precise, agile and speedy like the forces they support. A SOF operational plan is best when it maximizes six principles of SOF; Surprise, Speed, Security, Purpose, Repetition and Simplicity. A SOF plan is most likely to be successful if it is a simple plan, carefully conceived, repeatedly and realistically rehearsed and executed with surprise, speed and purpose. When considering the type and scope of medical support for such operations, medical planners must create plans that meet the most serious threats without diminishing the principles of SOF operations. Commanders must be presented, by trained SOF medical advisors, the risks and benefits of various medical support packages in order to determine where risk will be assumed in SOF operations.

13. In principle, SOF medical support should follow the matrix of minimum medical capabilities for medical treatment facilities covered in paragraphs 1.2.5. – 1.2.9. However, there is a considerable degree of variation in the SOF environment compared to other types of operations. This is an area of emerging doctrine and is controversial because by their nature, these concepts reach into Role 1 care and below concepts that are national responsibility. Many SOF units do not have a Role I capability, relying solely on the training of the medical provider at the team level and the nearest Role 1 to the team may be many miles away. On the opposite side of the spectrum, a SOF unit may have a highly specialized Special Operations Surgical Team, trained to deploy with SOF into the SOF environment to provide damage control surgery and military assistance support, providing almost Role 2 support. COMEDS’ SOF Medicine Expert Panel (SOFMEP) was created in APR 2012 to begin to develop specific normative descriptions for medical care levels in SOF operations. Additionally, the NATO Special Operations Headquarters is the proponent for AJP
3.5 Allied Joint Doctrine for Special Operations and the SOF Medical Training and Standards Directive that provide additional guidance for SOF medical planners.

14. SOF units are frequently considered as an interdiction asset available to a Commander when considering the risk of mitigating the use of Chemical, Biological and Nuclear weapons. Additionally, SOF elements may have special authority to use non-lethal chemical munitions like smoke and tear gas as part of operations. Therefore, SOF medical plans must consider these types of missions and address equipment, treatment and evacuation in these toxic environments.

Medical Evacuation related Challenges

15. The SOF environment contains specific challenges to the conduct of medical evacuation. Once casualties are sustained, their management may be complicated by extraction and evacuation difficulties compounded by long evacuation routes that conspire to hinder adherence to acceptable treatment timelines.

16. Removal of casualties from austere or clandestine locations can be difficult and time-consuming. It may require specialist extraction equipment and training or specialized extraction platforms. Frequently, SOF casualties will be extracted on any means of available transportation, requiring en route medical care to be provided by the SOF element on the objective after extraction. Ideally, SOF medical planning should include dedicated rotary wing assets capable of providing en route care to allow continued actions on the objective and further missions. Since this is not always feasible, SOF units should have easily SOF trained deployable evacuation teams capable of providing en route medical care on a variety of platforms on air, land or sea that can be place prepositioned to support the mission. Because fully trained SOF medical providers are scarce, doctrinally two per team, but frequently only one, all members of the SOF team must be first aid-trained to assist the organic medical staff. Commanders should be made aware of the ‘reach’ of medical capability and possible constraints this may have on operational tasking. Where forces are required to operate outside this area of medical coverage Commanders must be advised of the increased risk of not being able to meet medical timelines.

17. The need to regulate and coordinate the flow of patients exists in all operational environments regardless of the size of the deployed force. SOF units require a medical planner at the operational level that can integrate into the conventional medical staff element dedicated to this task such as the PECC of an Operational Commander’s HQ.

Medical Intelligence Issues

18. In the SOF environment, standard information such as details of environmental and industrial hazards, communicable diseases are particularly important because of the relatively small size of SOF units where the loss of just one soldier to disease and non-battle injury can be mission stopping. Knowledge of the capabilities of local healthcare systems must be enhanced because of the potential need to rely on them in austere or clandestine locations. Maritime specific data
requirements such as the willingness of local medical treatment facilities to accept maritime casualties or the availability of recompression chamber facilities and any local SAR/ambulance capabilities that could assist in evacuation from ship to shore are important for SOF maritime operations.

Force Health Protection related Topics

19. SOF operations can be conducted worldwide and may be highly mobile on short notice and over short periods of time. Therefore, SOF personnel, both operators and support, must maintain a high level of medical fitness. Immunizations, regular dental screenings and preventive medications must be carefully monitored to prevent loss of combat power. Because SOF personnel are frequently highly athletic, it is not uncommon for them to suffer from sport related injuries. SOF medical providers must have an intimate knowledge of SOF personnel’s current injury state and how it may relate to their operational capability. Medications typically used for prophylaxis, such as Malarone for malaria prophylaxis, may not have sufficient time to take affect or have side effect profiles that could hinder operations. Thus, the SOF medical planner must carefully understand the potential micro-effects of decisions that may have significant effects on the mission. Likewise, the unorthodox use of medications such as sleep aids to cycle sleep for a SOF operator enabling the operator to rapidly transition to night operations is not typically required for conventional force deployments. A strong case can be made for the value of considering the medical care and preparation of SOF personnel for deployment as comparable to that which is provided for professional athletes. Both the professional athletes and SOF personnel or “tactical athletes” must be ready and capable with a high level of reliability when engaging in their missions. Furthermore, injuries must be dealt with efficiently and optimally to restore capability to the Commander as soon as possible, since SOF trained personnel are limited in number. SOF units should have a SOF medical advisor that is available to provide definitive guidance to Commander’s on the medical readiness of individual team members within the organization.

1.3.5. Theatre Support Operations

1. Theatre support operations can provide support for all components, dependent on the operational scenario. It is here that reception, staging and onward movement (RSOM) of the force may occur, taking the deploying force from arrival into theatre via all the available disembarkation facilities, mainly the airport of disembarkation (APOD) and seaport of disembarkation (SPOD) and transferring it up a potentially long LOC. Depending on the mission a Joint Logistic Support Group (JLSG) may be deployed to support the operational commander with regards to theatre support operations, particularly during the RSOM phase of the operation. Medical support to the JLSG is required and may include provision of area medical

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32 Further information on the conduct of multinational joint theatre-level Logistics (with special emphasis on the JLSG) as well as the responsibilities and tasks of medical staff in a JLSG can be found in STANAG 2230 ALLIED JOINT DOCTRINE FOR THE JOINT LOGISTIC SUPPORT GROUP
coverage including access to primary health care, appropriately staffed ambulance response and graduated incident response in conjunction. Area medical coverage must also link into appropriate medical support capabilities capable of conducting secondary health care, such as Role 2 and Role 3 MTFs. To ensure medical support is available for the deploying force, necessary medical support assets must be deployed and have the appropriate level of operational capability prior to the arrival of the deploying force. Their readiness to deploy must reflect this enabling requirement.

2. Maintenance of the LOC is required throughout the operation to ensure mobility of all supported components. Area medical support linked to theatre Role 3 MTFs is essential. On subsequent redeployment of the force full medical coverage will need to be retained only reducing in size commensurate with the force reduction.

### 1.3.6. Persons Deprived of their Liberty

1. Medical care to any persons deprived of their liberty by NATO forces must be consistent with medical ethics and applicable law, including law applicable to the host nation, troop contributing nations (TCNs) and international agreements). International law requires that persons deprived of their liberty be provided with the medical care and attention required by their condition and that they be treated, evacuated and discharged from medical care using the same clinical criteria that are applied to the capturing nation’s own injured personnel.

2. Persons deprived of their liberty by NATO forces shall be treated humanely in all circumstances. Their medical care shall be consistent with the following principles:

   a. Their physical health, mental health and the integrity of their persons are not to be endangered.

   b. All necessary sanitary measures are to be taken to ensure the cleanliness and healthfulness of detention facilities and to prevent epidemics.

   c. As far as necessary, they are to be provided with an adequate diet.

   d. The state of their general health is to be examined by medical personnel as soon as possible after deprivation of liberty and thereafter at least once a month.

   e. They are not to be prevented from presenting themselves to the medical authorities for examination at any time.

   f. They are to be supplied with any apparatus necessary for their maintenance in good health, such as spectacles, dentures and other prostheses.

   g. Where their state of health requires it they are to be transferred to specialised establishments for special treatment or surgery.
3. During armed conflict, captured enemy medical facilities, medical materiel and retained enemy medical personnel may be used to provide medical care to enemy prisoners of war, internees and detained persons. This can contribute to the medical management of these persons, particularly where there would otherwise be language or cultural challenges. It can also be useful where the captured enemy medical personnel have a particular expertise of endemic disease not normally seen in the TCNs.

4. It can be difficult to calculate the holding capacity required for persons deprived of their liberty because they may not be subject to theatre holding policies that apply to TCN and may not have ready access to definitive Role 4 care capabilities. Therefore consideration should be given during planning to determine when additional MTF holding capacities may be required. Nations may also wish to cooperate to provide centralised treatment facilities for persons deprived of their liberty, although the capturing nation retains legal responsibility for the treatment of any person transferred to the custody of another nation.

5. Medical staffs need to be involved in the planning and operation of detention facilities, particularly when the persons held in them may pose a risk to those guarding them from bad hygiene practices or endemic disease. The medical authorities will need to develop a preventive medicine strategy, ensure the provision of primary health care services within the facility and ensure that the guarding force has adequate medical support.

1.3.7. International Disaster Relief Operations

1. Disaster Relief (DR) is the organised response to alleviate the situation resulting from a catastrophe (natural or manmade). The aims of DR are to save life and lessen suffering, limit damage and restore essential services to a level that enables local authorities to cope. Characteristics are fast response and unusual patient patterns. Due to their nature these operations include a large portion of medical support. In certain cases where medical assistance is in the focus of the operation the medical force might even be in the lead and therefore be supported by the components of a joint force. The World Health Organization (WHO) standards will be used as planning parameters for all assistance and support measures. As result of this, the medical care to the civilian population and livestock will be in accordance with prevailing local peacetime standards.

Comprehensive NATO guidance on disaster relief operations is already available:

a. MC 327 NATO Military Policy for Non-Article 5 Crisis Response Operations provides policy on the planning and conduct of non-Article 5 Crisis Response Operations.

b. MC 343 NATO Military Assistance to International Disaster Relief Operations (IDRO) outlines the principles of military assistance in humanitarian emergencies not connected to any NATO military operation.
c. MC 411 NATO Military Policy on Civil-Military Cooperation (CIMIC) addresses civil-military interfaces, including military support for humanitarian emergencies within the context of other operations when NATO forces are already deployed or to be deployed.

d. AJMedP-6 Allied Joint Civil-Military Medical Interface Doctrine details doctrine for the Civil-Military Medical Interface.

These principles do not change if the deployment is for humanitarian relief. The term ‘disaster relief’ is used here to include humanitarian assistance (HA), refugee care, and comparable missions not directly related to combat or peacekeeping.

2. International Disaster Relief Operations (IDROs) can either be carried out within the framework of another on-going operation, or in the form of a stand-alone humanitarian operation. In the latter case, the operation often involves a considerable degree of logistic and military protection or support, including medical support. The medical contribution can include:

a. Medical support to the NATO force

b. Replacing or supplementing existing local assets

c. Assisting with the regeneration or development of local assets in coordination with IOs/NGOs.

Coordination with IOs/NGOs is highly demanding, and exceeds purely medical support issues as it can impact on the total force mission.

3. It is most likely that these missions will be carried out in conjunction with other governmental and non-governmental agencies. It is critical that the cultures, capabilities, structures, and organizational function of these agencies be clearly understood by NATO commanders and medical staff.

4. The medical aspects of IDRO are likely to differ from other military operations, particularly concerning types of injury and illness, population mix, and structure and type of medical response required. The particular nature of the operation concerned and the geographical location will dictate the medical skill mix required, including the personnel, equipment and materiel to treat senior citizens, pregnant women and children. Clear guidance on any legal issues, such as liability of medical personnel, must be obtained prior to deployment.

5. In considering the deployment of military medical assets in HA, a clear understanding of the philosophy behind such assistance is required in order that the affected population may be best served, both in the short and longer term. The following basic tenets must be observed:

a. Other organizations are likely to be involved in addition to NATO. Care needs to be taken to define areas of responsibility, to avoid competition and either duplication of effort or gaps in the overall care provided. In
principle, medical HA by NATO will only be provided on a subsidiary basis when IOs or NGOs are unable to meet the overall requirement, or if overall capabilities are exceeded.

b. The affected population should be encouraged to help themselves and competition between their own medical structure, IOs, NGOs and NATO must be avoided. Effort should be made to place as much of a “host nation face” on care delivery so as to maintain the population’s confidence and support for the host nation (HN) government.

c. A careful balance between the extent of technically possible care and appropriate care is necessary taking into account aspects like the availability of medical follow-up capabilities, own means and capabilities and the need to have sufficient capabilities and capacities left for support of the NATO force.

d. Socio-cultural and religious customs and rules should be considered when providing HA.

e. A return to the pre-crisis status quo, in terms of self-help, must be as rapid as possible to avoid long-term aid dependence.

f. The disaster has already occurred; its affects must be mitigated by immediate medical assistance and by the application of preventive measures.

g. Short-term HA usually has long-term impact. Disengagement and the transfer to permanent or semi-permanent organizations or bodies must be ensured before considering engagement and particularly withdrawal.

6. Medical support must meet standards of medical care acceptable to both, the participating nations and the receiving country. The aim is to provide treatment outcome comparable to the normal peacetime standards of the receiving country.

7. Comprehensive and flexible medical plans are essential for an accurate and early response to the disaster situation. To properly fulfil the mission, the deployed NATO medical staff must contain personnel with training, experience and qualifications appropriate to deal with humanitarian and disaster relief operations. The requirements of which may be different to normal military operations; AMedP-17 Training Requirements for Health Care personnel in International Missions refers.

8. Expertise in preventive medicine will be required to ensure that the effects of the disaster are not made worse by the breakdown of the infrastructure in the affected area. The possibility of an epidemic is only one aspect of this; more generally, poor living conditions and an absence of basic utilities will contribute towards the breakdown of health in the population.

9. National medical support contingents must deploy with agreed quantities of medical supplies as dictated by the coordinating NATO headquarters (HQ). All
medical materials, drugs and other medical products used for DR and humanitarian assistance operations by the force are of the same quality standards as those used to medically support the force.

10. The overall responsibility for producing an effective medical evacuation system lies with the stricken country’s medical authority. Patients should not normally be removed from the country without their nation’s authority, insofar as such an authority exists.

11. Regular considerations in respect to patient confidentiality must be observed in disaster situations. Specific policies on sharing of medical information must be developed in concert with local medical authorities.

1.4. Interface between Medical and other Staff Functions

1. This section provides guidance on staff interfaces between medical and other commanders’ staff elements during NATO operations and describes the principal medical subject matters that are most closely related to those staff elements.

2. Medical staff will routinely work in close cooperation with staff functions responsible for personnel, intelligence, plans and operations, logistics, civil-military cooperation (CIMIC), legal, engineers as well as communication and information systems (CIS). Together they will execute a wide range of medical support planning, surveillance, coordination, and direct support functions. Coordination and collaboration spans both the vertical and horizontal levels of command. The list is neither exhaustive nor definitive, but demonstrates the areas and subjects where medical staffs need to work in unison with other commanders’ staffs and have access to and interact with them without intermediaries.

1.4.1. J1 – Personnel and Administration

There is a considerable interface between the functions of medical and personnel support. They both have roles to play during the initial planning stages and continue long after an operation has finished. Consequently, the working relationship between medical and personnel staffs must be well developed and relevant personnel issues should be detailed in medical plans. Common areas of interaction between J1 and medical include:

a. HQ medical staff Manning and qualifications.

b. Personnel health and fitness standards and assessment.

c. Patient tracking.

d. Casualty reporting.

e. Handling of deceased including forensic (dental) identification.

f. Patient and personnel welfare.
g. Develop medical requirements for NATO civilians prior to deployment.

1.4.2. J2 – Intelligence

Intelligence is defined by NATO as the product resulting from the processing (collection and analysis) of information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. The term is also applied to the activity that results in the intelligence product and to the organizations engaged in such activity. J2 is responsible for all intelligence activities. Medical staff is not just a recipient customer of medical intelligence information, but medical expertise could be, depending on the requirement, a significant part in intelligence preparation and force protection in particular. MEDINT collection and assessment remains a permanent secondary task of the medical staff active in the theatre of operations. Information collected will be mutually shared with J2.

1.4.3. J3 – Operations

1. The operations staff acts as a focal point through which the commander directs and maintains continuous oversight of all operations. The operational commander establishes a joint operations centre (JOC), which becomes the hub and central clearinghouse for the whole operation.

2. Force protection oversight is a lead function of the J3 staff, and they coordinate with other relevant staff, including medical, in their conduct of the FP programme, its objectives and initiatives.

3. The operations staff and medical staff often bring complementary but differing approaches and competencies to achieve health protection, treatment and promotion objectives. Provision and design of medical services to support the health of the troops is a medical staff responsibility, while the operational commander enables force protection through establishing and maintaining an adequate medical support system, and implementing/enforcing recommended preventive medicine policies. Mission-tailored medical support must reflect the operational requirements and is, with regard to both, medical capabilities and capacities, based on numerous operational and medical aspects, among which casualty estimation is the key element. Casualty Estimation usually is a task of J5 staff, in close cooperation with J2, JMed and other staff functions. However depending on the available timeframe before commencing an operation, the J3 staff may be in the lead for this task.

4. In short, the medical staff mission is directly focused on the health of the force, while the operations FP staff mission is focused on the readiness status of the medical support structure. Both staffs must work co-operatively as a team in the development, execution and evaluation of FP.

5. At any time during operational planning and execution J3 Staffs are responsible for determining whether changes in the point of main effort are required, which may be accompanied by changes in medical support arrangements. They will determine the response to any situation which may compromise medical support to
the force, and will also make decisions over allocation of scarce resources. Medical staffs are responsible for ascertaining the medical implications of the courses of action (COAs) selected by J3 staff and ensuring that they are made fully aware of these implications.

6. Critical incident management (CIM), mass casualty (MASCAL) management and disaster response planning are not just the preserve of medical staff and should have the total focus of the commander. They also remain just as relevant in non-war-fighting deployments. Therefore, medical staffs must contribute to the J3/J5-led CIM, MASCAL and disaster response planning. All aspects of the plan and its execution will be led by J3, as the resources required will come from across the theatre and many will be non-medical. During the execution phase, the medical staff will coordinate all medical activities, whilst J3 will coordinate non-medical activities.

1.4.4. J4 – Logistics

1. The J4 staff is responsible for assessing the logistics support required to achieve the commander’s campaign objectives, and for ensuring that these support requirements are met throughout the campaign. In addition to this assessment, J4 will also coordinate the overall logistic effort.

2. Coordination between medical and logistics staffs is required to ensure consistency and integration of logistics and medical missions. Timely exchange of information, flexibility in decision making, teamwork spirit and mutual trust are essential in these relationships. Amongst others, activities that require close linkage between medical and logistics staffs include:

   a. Development of the support concept and plan for the operation.
   b. Creation of the statement of requirement (SOR) and the sustainability statement.
   c. Resourcing the plan.
   d. Definition of logistics and medical C2 architecture.
   e. Deployment, employment and redeployment of MTFs.
   f. Coordination of logistic aspects of AE, planning and execution being coordinated with J3 air.
   g. Deconfliction of transport assets which might, mounted with medical equipment and personnel, be used for MedEvac.

1.4.5. J5 – Plans & Policy

1. J5 staff keeps the primary function of coordinating and consolidating planning input from all key staff elements, including medical. It also promulgates the commander’s decisions on the COAs for the campaign through planning directives,
OPLANs and contingency plans. Medical staff will provide medical input to the commander’s OPLAN via J5 staff.

2. One of the most important interactions between J5 and the medical staffs is the determination of casualty estimates for a given operation, with J5 staff in the lead for this task. The battle casualty (BC) rates provided in AJMedP-1 Allied Joint Medical Planning Doctrine are generic in nature and can only be used accordingly within planning for conventional warfare. Casualty rates for WMD are provided in in AMedP-8 Medical Planning Guide for the Estimation of NBC Battle Casualties. A large number of factors must be taken into account for the estimation of BC in contingency and operational planning. Therefore, the selection of BC planning rates should involve consultation between operations, medical, intelligence and policy staffs, even though the determination of this estimate is primarily the responsibility of the operational staff.

1.4.6. J6 – Communications

1. The primary mission of the J6 communications staff is to provide reliable and secure CIS necessary to support an operation. The principles of flexibility, reliability, security, network resilience and interoperability are crucial to the NATO framework at all levels, as is the continued emphasis on commonality of CIS procedures.

2. For the medical functional area the potential for large amounts of detailed information and data on casualties to be transmitted exists. Therefore it is essential that early operational planning includes the requirement to establish the commensurate priority for medical CIS.

3. The most important aspect of this process is to engage the CIS staffs in recognizing the need for CIS assets to provide adequate connectivity within the medical functional area, both vertically and horizontally in the C2 architecture.

4. Medical support CIS requirements must be assessed at all levels. In conjunction, medical and CIS staff will establish the medical CIS requirements for the operation and include them in the SOR. The CIS staff may also allocate the means to effect the capture of appropriate medical data.

5. Medical CIS need to include all medical support capabilities in theatre, in order to facilitate the ability to rescue, evacuate, regulate and track casualties, permit commander’s analysis and assessment of theatre medical capabilities, achieve direct interaction and information exchange on a continuous basis and should facilitate teleconsultation, telemedicine, patient tracking, medical data collection, storage and transmission, and in-transit patient monitoring. Connectivity with the JOC and commander’s staff elements must also be established and maintained for coordination purposes.

1.4.7. J7 – Exercise Planning

33 STANAG 2526 AJP-5 Allied Joint Doctrine for Operational-Level Planning Paragraph 0314. C (8)
J7 staff is responsible for exercise planning. J7 has linkages to medical staffs in order to ensure appropriate real-time medical support is available for all exercising troops, throughout the exercise and including deployment and redeployment. Additionally, medical support planning must be included in all relevant phases of any exercise. This will only be enabled by medical staffs actively engaged with J7 staffs from the outset. J7 staff is also tasked with assessing and improving operational and tactical procedures by processing and transferring recent experience through the lessons learned and evaluation process into actionable guidance. J7 therefore refers to medical staffs for all subject matters concerning the evaluation and improvement of medical support and healthcare.

1.4.8. J8 – Resources & Finance

1. At theatre level, J8 is the principal financial management advisers. J8 staffs are responsible for the correct and efficient application of all international funds approved for use in theatre in support of the operation.

2. J8 linkages to medical support are indirect and thus transparent, relating to the planning, programming, budgeting, and execution oversight of the theatre-based operation. The financial staffs are responsible for the correct and efficient utilisation of funds approved for in-theatre support of the mission. Direct theatre interaction between finance and medical staffs, however, may be necessary during the course of an operation. Some specific examples where this may be required include: memoranda of understanding (MOUs); contracting support, and; new projects or initiatives.

1.4.9. J9 – Civil-Military Cooperation

1. NATO commanders need to establish relationship with a variety of civilian authorities and organizations in their JOA. Allied commanders may have responsibilities toward civilians which are best addressed in cooperation with civilian authorities and organizations. Therefore, the primary mission of J9 staff is the establishment of a specialist interface between an allied force and the civilian authorities and organizations, in order to establish and maintain good civil-military relations and gain the greatest advantage for the commander.

2. With the approval of the commander and in accordance with the tasks assigned in the OPLAN, J9 staff may request medical staff to provide non-emergency medical assistance to the local population in accordance with the established humanitarian support concept in theatre and national regulations of the TCN. In assessing whether a military response should be provided, medical staffs must establish that the task is one that, if undertaken, will facilitate a return to normality for the local community. This assistance must be for a limited duration, with the final outcome being the re-establishment of the local civil medical infrastructure.

3. Another area of interaction between medical staffs and J9 staff is the advice that can be given on the coordination and implementation of different medical
projects promoted by the J9 staff, or IOs/GOs/NGOs, in the area of health care to the civil community. This advice will take into consideration the duplication of effort and the priority requirements of the projects. Additionally, the close relationship between the medical staff and NGOs, IOs and governmental medical and health agencies may become useful in order to support CIMIC operations.\textsuperscript{34}

1.4.10. Legal

1. Legal staff provides advice and services to commanders during all phases of an operation. For each operation, the medical staff, in conjunction with legal staff, will address issues concerning both, national and international law.

2. Many of the areas over which legal staff maintains technical supervision or key advisory input involve subjects, which include either medical functions or topics for which the medical advice to the commander is required. Key among the issues on legal advice should be sought are:

   a. Status of forces agreements (SOFAs) and host nation support (HNS) arrangements.

   b. Issues and actions pertaining to NATO support to governmental organizations, IOs, NGOs, or the local population.

   c. Claims activity within the area of operations.

   d. NATO liability regarding individual or public health, such as related to environmental contamination or other NATO operation based exposures.

   e. Visits by the International Committee of the Red Cross (ICRC).

   f. Compliance with applicable international, HN, TCN and operational law.

   g. The treatment of person deprived of their liberty by NATO forces.

   h. Medical confidentiality.

1.4.11. Public Information Operations

Public information and affairs staff has the key mission of enhancing public understanding of mission, goals, capabilities, and status of NATO operations. The public information office must coordinate all key NATO functional elements, including the medical staff, to ensure target audiences are fully and accurately informed as to the status of the operation. The need for journalists to gather and publish information as early as possible, and the increased speed of information exchange due to modern means of communication has rendered the mass media a relevant factor to be considered in planning and conducting an operation. Information on possible or

\textsuperscript{34} For further details see Chapter 7 of this publication.
existing risks and incidents affecting the health of military personnel or others is particularly sensitive and may require the involvement of medical staffs in preparing press releases and lines to take.
Chapter 2    Medical Planning

This Chapter provides an overview of Medical Planning. Detailed guidance on this subject is contained in the supporting AJMedP-1 Allied Joint Medical Planning Doctrine.

2.1.    General

Medical planning within NATO is the process of requiring, designing and acquiring medical support capabilities needed by the Alliance to meet its mission and force structure requirements in accordance with strategic political-military direction. This process is complex in nature and wide-ranging in its implications. It encompasses setting capability targets through defence planning, preparing operational capabilities through exercises and ends with their successful utilization on operations facilitated by operational planning procedures. The medical planning contributions to each of these elements are described in this Chapter.

2.2.    Defence Planning

2.2.1. NATO Defence Planning Process (NDPP)

1. Defence planning in the Alliance is a crucial tool which enables member countries to benefit from the political, military and resource advantages of working together. Within the NDPP Allies contribute to enhancing security and stability, and share the burden of developing and delivering the necessary forces and capabilities needed to achieve the Organization’s objectives. The NDPP prevents the renationalisation of defence policies, while at the same time recognizing national sovereignty.

2. The aim of NDPP is to provide a framework within which national and Alliance defence planning activities can be harmonized to meet agreed targets in the most effective way. It aims to facilitate the timely identification, development and delivery of the necessary range of forces - forces that are interoperable and adequately prepared, equipped, trained and supported - as well as the associated military and non-military capabilities to undertake the Alliance’s full spectrum of missions.

3. Through the NDPP NATO seeks to build sufficient capability to meet the Alliance’s Level of Ambition (LOA). COMEDS is responsible for the contribution of the medical domain to the overall planning effort. National military medical support and expertise to the process is provided by the COMEDS Military Medical Structures, Operations and Procedures Working Group (MMSOP WG).

4. NDPP consists of the following five functional steps, that are undertaken sequentially during each planning cycle:

a. Step 1: Establish political guidance;
b. Step 2: Determine requirements;
c. Step 3: Apportion requirements and set targets;
d. Step 4: Facilitate implementation; and
e. Step 5: Review results.

Alliance requirements are constantly evolving to take account of the latest strategic direction and identified emerging threats. As a result, as one NDPP cycle ends preparation of the next has already commenced. Whilst this adds to the complexity of the overall process, it creates a dynamic process through which the Alliance can react to the latest requirements.

2.2.2. Medical Specific Issues in the Defence Planning Process

Medical is one of NATO’s core planning domains and as such is required to provide input to each of the five Steps in NDPP.

1. Step 1 is led by NATO’s International Staff (IS). Medical-specific input is limited but COMEDS, as the senior medical committee in NATO, has the opportunity to provide input to the Political Guidance on which each planning cycle is based.

2. Step 2 determines requirements. A Capability Requirements Review (CRR) will lead to a complete set of Minimum Capability Requirements (MCR) that define the core capabilities considered necessary to meet the quantitative and qualitative ambitions set by the Alliance in its Political Guidance. Step 2 is led by Allied Command Transformation (ACT) which coordinates the work of each specialist planning domain. Step 2 ends with the approval of the completed MCR and agreement as to any Priority Shortfall Areas (PSAs) where the Alliance wants to focus additional effort to enhance current capabilities. MMSOP WG tasks in Step 2 include: expert review of Capability Codes and Statements; review of generic Case Studies, and; key modelling assumptions.

3. Step 3 apportions requirements and sets targets as well as developing targets for existing or planned capabilities against the MCR. Led by the IS, these targets are then apportioned between nations and NATO, and preliminary courses of action are developed to address any shortfalls. MMSOP WG can play an important role in Step 3 between the initial and final target allocation meetings, by conducting a specific medical Bidding and Brokering meeting to adjust allocations and targets in order to create a coherent and agreed medical position.

4. Step 4 facilitates implementation. It assists national, multinational and collective efforts to fill planning shortfalls. In the area of medical capabilities, COMEDS will be briefed on the results of the long-term planning work and may use the medical domain planning team to examine persistent shortfalls.
5. Finally, Step 5 reviews the results. The NATO CRR assesses Allies' national and collective plans to determine the degree to which the Alliance's forces and capabilities are able to meet the requirements contained in NATO Political Guidance. National offers of capability are collected through a Defence Planning Capability Survey (DPCS) and the collated responses verified at subsequent bilateral and multilateral meetings. On receipt of the national Capability Survey responses, NATO conducts a Defence Review. The two Strategic Commands (ACO and ACT), in conjunction with the IS, produce a military assessment known as the NATO Staff Analysis. This looks at each nation's force contributions and assesses its transformational progress. When completed, the NATO Staff Analysis contains both NATO's overarching assessment the detailed supporting force tables. It then forms a key part of the Secretary General of NATO's General Report to the nations.

6. The completed report is used by the Strategic Commands to generate a Suitability and Risk Assessment (SRA) that quantifies each shortfall and its potential impact on the conduct of operations. The SRA is forwarded to NATO HQ in Brussels where the participation of those nations outside the formal Defence Planning process, primarily Partner nations, is considered in relation to NATO's identified shortfalls. Any remaining capability shortages are then subject to review which may result in a political decision to either: modify the LOA; seek increased capabilities from NATO/nations, or; accept the capability shortfall and the associated risk. Following the conclusion of each planning cycle a formal lessons learned process is conducted to ensure improvements can be made to the next cycle.

2.3. Operational Planning

The primary source for medical planning within the NATO Command Structure is outlined in AJMedP-1 Allied Joint Medical Planning Doctrine. Medical planning for CBRN environments is outlined in further detail in AJMedP-7 Allied Joint Medical Doctrine for Support to CBRN Defensive Operations.

2.3.1. Operational Planning Process

1. Operational level planning is usually carried out by the Joint Force Command (JFC) HQs during the different phases of a NATO response to a crisis or as an integral part of prudent military planning to prepare the Alliance to meet a future operational situation.

2. The operational planning process is designed to allow close collaboration between military strategic and operational levels during the different phases of the NATO Crisis Management Process in accordance with political decisions made by the North Atlantic Council. The close alignment of military strategic and operational level processes ensures that operational considerations are reflected in strategic decisions and that strategic conditions are established for operational success.

3. The operational commander's decision-making process will include consideration of:
a. Assigned mission and essential actions.

b. Developing and maintaining an appreciation of the operational environment in a potential or actual crisis area.

c. Contributing to the development of military response options as part of a collective approach involving relevant actors.

d. Designing the operation in terms of operational objectives, lines of operation and decisive points/decisive conditions.

e. Activating and preparing required forces for deployment.

f. Directing the synchronisation of joint and combined operations in cooperation with non-military and other non-NATO efforts.

g. Providing operational and theatre-specific operations assessments of progress toward achievement of operational and military strategic objectives and the identified end state.

h. Providing operational advice to address changes in strategic and operational conditions.

i. Planning for transition and termination of military operations.

2.3.2. The Medical Contribution to the Operational Planning Process (OPP)

1. The nature of the medical contribution to operational planning is twofold. On the one hand is the input of medical expertise to the general planning process. On the other is the development of a Medical Concept and Medical Support Plan for the operation.

2. The early consideration of medical aspects at each stage of planning is crucial to ensure a comprehensive analysis of the mission and production of a plan that can be supported medically. Consideration of wider healthcare issues can also directly contribute to accomplishment of the mission when Stabilization and Reconstruction (S&R) operations are undertaken.

3. It is crucially important in operational planning to seek to understand the environment in which the force will be operating. Medical Intelligence is essential in this respect as it helps establish situational awareness of the climate and conditions in which personnel will be operating. This contributes to the assessment of risks, shapes COA development and determines FP measures.

4. Of all the steps in the OPP, Mission Analysis is perhaps the most important. A clear understanding of the mission to be accomplished and the higher commander’s intent are essential to ensuring the OPP produces an appropriate supporting medical plan.
5. Mission Analysis from the medical perspective will lead to the development of a Medical Mission Statement that identifies the essential tasks to be accomplished. The Medical Mission Statement concisely defines:
   a. who will conduct medical support,
   b. what is to be done,
   c. when it will take place,
   d. where it will occur and
   e. why it will be conducted.

The Medical Mission Statement should not state how medical support will be conducted, these details will follow later.

6. Early in the planning process, medical planners will also develop the Medical Concept for the plan. This collects relevant information together as a basis for analysis of a wide range of factors relevant to the medical support plan. Factors typically considered include:
   a. Environment,
   b. Opposing forces,
   c. Friendly forces (including Host Nation support, if appropriate),
   d. Casualty Rate Estimation,
   e. Medical logistics (including general logistic support),
   f. Command, control and communication,
   g. Chemical, Biological, Radiological and Nuclear (CBRN) threats,
   h. Force Protection (including Force Health Protection) and
   i. Medical reserve.

Deductions drawn from the evaluation of these factors will enable the medical staff to contribute to the development, analysis and comparison of viable COAs.

7. One of the most critical factors for medical planning is time. The clinical timelines, described in 1.1.5., put a high emphasis on providing the different levels of medical care to the wounded and injured as soon as possible. However, the clinical timelines are not the only determining factor for medical
planning in general and the appropriate placement of MTFs in particular. When developing the Medical Concept for a specific operation, the clinical timelines have to be put in the context of all the factors mentioned above. In principal, the following Planning Timelines should be applied for the time necessary for a casualty to reach an MTF:

a. Role 1 MTF:
within 1 hour from the point of wounding

b. Role 2B MTF:
within 1 hour, but not later than 2 hours, from the point of wounding

c. Role 2E MTF
within 2 hours of a Role 2B MTF

The Medical Support Plan that is created from this process should then comprise all relevant information about how medical support will be conducted on the operation. It will usually form an Annex within the commander’s overall plan and can be updated or replaced as the operation proceeds to ensure it adapts to changing circumstances and requirements.

2.3.3. Casualty Estimates

1. Estimation of casualties is an essential but challenging element of medical planning. As with all estimates, they are based upon assumptions and the results they produce need to be treated accordingly. As evidence-based models, such as operational analysis, are increasingly available, especially in mature theatres of operation and can be used if to augment the casualty estimation process. However, even these will not be definitive and military expertise and sound judgement will also be required in interpreting casualty estimation data to determine the medical support plan.

2. Casualty estimates are normally divided into two groups, battle casualties (BCs) and diseases and non-battle injuries (DNBIs). The main steps in estimating both are the same:

a. Determine the Population at Risk (PAR). The troops at risk are determined. The PAR may be taken as a whole or broken down by force element.

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35 This is especially important when considering the placement of Role 2E MTF. There is no clinical need for additional surgery after DSC within 4 hours in most cases. The time limit is rather driven by operational factors, such as the limited holding capacity of most R2B MTF, average flight time and availability of MEDEVAC Helicopters or the needs of patient regulation.

36 As outlined in Paragraph 1.4.5.2, Casualty Estimation remains a task of J5 resp. J3, in close cooperation with J2, JMed and other staff functions.

37 Depending on the mission the PAR may include the local population (partial or in total) as well as members of IOs, GOs or NGOs. The access to medical treatment by allied forces needs to be
b. **Estimate the Rate.** The rate at which casualties will occur may be estimated on a proportional basis across the PAR expressed as a rate over time, or as the total numbers of casualties expected for particular engagements. If a *proportional* rate is used, this is must be applied to the PAR as a whole to give total number of expected casualties.

c. **Estimate the Profile.** The casualty profile details the relative proportions of each of the different casualty types expected.

d. **Estimate the Casualty Flow.** Casualty flow analyses the likely location, timing and type of casualties that will be generated.

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### BCs

3. BCs are those that occur as a direct result of combat. BCs comprises four main elements:

   a. Killed in action.
   
   b. Captured and missing in action.
   
   c. Wounded in action.
   
   d. Psychological casualties.

4. J3/J5 staffs have lead responsibility for BC estimation based on their detailed knowledge of the plan and, the information and intelligence upon which it is based.\(^{38}\) As a result BC rates may be highly classified. Casualty estimates of all types have implications on force structure, J1 and medical support, and should be produced early in the planning process. Detailed BC estimation may not always be possible and in such circumstances it may be appropriate for the medical staff, in concert with the J1 staff, to suggest an initial planning figure or to use generic BC rates to allow planning to begin. Such figures should be agreed with J3/5 staff and may be amended later with rates specific to the operation as the planning process proceeds.

5. **BC Rate.** BC rates may be calculated on a proportional basis across the total number of troops in theatre and expressed as a daily rate (for example number of casualties/100 personnel/day) which may be appropriate for high intensity conflict. Different rates may be used according to the mission. For operations with typically low casualty estimates, such as Crisis Response Operations (CROs), rates may be expressed as total numbers of casualties that might occur from individual incidents rather than from the campaign as a whole. BC rates for generic planning are provided in AJMedP-1 *Allied Joint Medical Planning Doctrine.*

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\(^{38}\) See also STANAG 2526 AJP-5 *Allied Joint Doctrine for Operational-Level Planning Paragraph 0314. C (8)*
6. **BC Profile.** Different types of military operations produce different casualty profiles. For example, trench warfare of WWI produced a high proportion of head injuries whilst armoured warfare tends to produce a relatively high proportion of burn injuries. FP measures such as body armour should also be taken into account as these can significantly affect not only the number of casualties but also the location and severity of the injuries received. Estimation of an operationally specific casualty profile requires military judgement, operational analysis and examination of medical databases.

7. **BC Flow.** Estimation of Casualty Flow requires a detailed appreciation of the disposition of the force, the supporting medical plan and the operational activities being conducted. Planners will estimate when and where casualties are likely to occur and where they will be evacuated and treated. Casualty flow estimation can be crucial to the success of the medical plan as it will help manage casualty regulation and potentially prevent individual medical assets being overwhelmed during an engagement.

**DNBI**

8. DNBI is the baseline rate of disease and injury due to accidents. Although this occurs in peace and on operations, operational rates are unlikely to mirror peacetime rates exactly due to the different environments and appropriate pre-deployment preparation and selection of personnel fit for employment whilst deployed on the operation.

9. Both the incidence and the impact of DNBI are of significant operational importance due to their potential impact on the ability of a force to operate. Expressing DNBI rates in terms of number of working days lost can be a particularly effective means to highlight the effect of disease and illness.

10. Estimation is the responsibility of the medical staff based on historical evidence, environmental assessment and knowledge of the occupational risks associated with military duties. In order to establish a sound DNBI estimate, the medical planner has to take into consideration factors such as the level and nature of activity, acclimatisation, training and living conditions of the deployed personnel.

11. Accurate DNBI estimation requires close cooperation with the J2 and J3/5 staffs. A detailed analysis of expected sources of DNBI, based on historical and current data, enables medical planning staffs, with input from operational planning staffs, to produce a provisional DNBI rate for the operation. This is a technical estimation of the probable rate of diseases and injuries not resulting from combat, which can be expected in the force once deployment begins. DNBI rates for generic planning are provided in STANAG 2542 - AJMedP-1 *Allied Joint Medical Planning Doctrine*.

12. The implementation of a deployment health surveillance system on NATO deployments allows the chain of command to establish a database of health
surveillance information that assists medical support planning for both current and future operations. A comprehensive DNBI analysis can produce more effective preventive medicine measures, including recommended policy on immunisation, prophylaxis\textsuperscript{39} and personal health education. It can also be a driving factor in the size and capability of medical resources required in different scenarios.

CBRN Casualty Estimates

13. Like BC estimation, CBRN casualty estimation is led by the J3/J5 operational planning staffs, guided by CBRN subject matter experts. General guidance for the estimation of casualties from nuclear, biological and chemical (NBC) attack is given in Chapter 8. For those requiring more detailed information the following supporting publications should be referred to:

a. STANAG 2596 AJMedP-7 Allied Joint Medical Doctrine for Support to CBRN Defensive Operations (STUDY).

b. STANAG 2553 AMedP-8 (C) Planning Guidance for the Estimation of CBRN Casualties.

2.3.4. MASCAL Planning

1. A MASCAL situation is where the number, type or severity of casualties exceeds the treatment capacity and capability available. MASCALs are more likely to occur as a result of hostile action during high intensity conflict, especially if CBRN agents are involved. However, by definition they can occur on any military deployment irrespective of its nature or scale. In CROs a MASCAL situation could arise as a result of accidents (such as road traffic incident, aeroplane crash, explosions or fire), hostile actions (terrorist attack or criminal violence) or natural phenomena (flood, earthquake). In each case, the initial response of the chain of command to the MASCAL will have a crucial impact on how effectively it is handled.

2. A MASCAL is not an issue for the medical staff alone, but rather a major incident requiring the attention and resources of large parts of the operational HQ. Clearance of explosives, additional force protection, special equipment for the extraction of wounded/ injured personnel or extinction of fires might have to be initiated and coordinated before medical personnel can treat the patients. That calls for a single command authority, which will in most cases be executed on behalf of the commander.

3. Depending on the specific situation of the operation a MASCAL may have a significant impact on current operations up to a forced break in the conduct of operations. The potential impact of MASCAL situations has to be considered and contingency plans to mitigate its impact should be developed, briefed and rehearsed. This is particularly necessary on operations with low rates of expected casualties,

\textsuperscript{39} Measure taken to maintain health and prevent the spread of disease.
where the medical support structures in place may not be configured to cope with large numbers of severely injured casualties and where reserve medical capacities are typically limited.

4. A series of suitable plans should be developed for each of the scenarios assessed as likely at the tactical level. These should then be integrated into a theatre-wide MASCAL plan. FP measures require a rapid and efficient response to MASCAL situations and incidents. Their effective management shows the theatre ability to respond as a whole to a medical crisis by cross-borders mobilisation of resources and minimisation of obstacles to interoperability.

5. MASCAL exercises at theatre and local level can be invaluable in developing and testing the overall MASCAL plan. Training objectives may include amongst others:

   a. Evaluation of the ability to conduct theatre level medical regulation and AE.

   b. Identification of interoperability issues affecting multinational support.

   c. Practicing rebalancing of medical supply and holdings of critical products, such as blood and medical gases.

   d. Determining the adequacy of emergency care resources.

   e. Testing of communications connectivity.

Perhaps most important of all will be to increase awareness of MASCAL responses and plans amongst the chain of command and HQ staff in particular. The increased experience they will gain from MASCAL training will improve their ability to deal with such situations should they occur.

6. The principles of treatment may change in a MASCAL situation. Most likely during the early stages of a response they will change from focusing on the individual needs of a particular patient to achieving the greatest good for the greatest number. This means that time-consuming individual treatment and evacuation might temporarily have to be withheld from those who would place a high demand on medical resources, in order to allow the same resources to be concentrated on a larger number of other casualties instead.

7. In such a situation, the normal treatment priorities described in AJMedP-2 Allied Joint Doctrine for Medical Evacuation are replaced with the following triage priorities:

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40 As outlined in STANAG 2879 PRINCIPLES OF MEDICAL POLICY IN THE MANAGEMENT OF A MASS CASUALTY SITUATION
a. **Immediate Treatment (Group T1).** To consist of those requiring emergency care and life-saving surgery. These procedures should not be time-consuming and should concern only those patients with high chances of survival. Examples include: respiratory obstruction, accessible haemorrhage, emergency amputation.

b. **Delayed Treatment (Group T2).** To consist of those in need of surgery, but whose general condition permits delay in surgical treatment without unduly endangering life. To mitigate the effects of delay in surgery, sustaining treatment (for example: stabilising intra-venous fluids, splinting, administration of antibiotics, catheterisation, gastric decompression and relief of pain), will be required. Examples: include after large muscle wounds, fractures of major bones, intra-abdominal and/or thoracic, head or spinal injuries, uncomplicated major burns.

c. **Minimal Treatment (Group T3).** To consist of those with relatively minor injuries who can effectively care for themselves or who can be helped by untrained personnel. Examples include: minor lacerations, abrasions, fractures of small bones and minor burns.

d. **Expectant Treatment (Group T4).** This group comprises of patients who have received serious and often multiple injuries, and whose treatment would be time-consuming and complicated, with a low chance of survival. If fully treated they make heavy demands on medical manpower and supplies. Until the MASCAL situation is under control, they will receive appropriate supportive treatment. The extent of treatment will depend on available supplies and manpower and may involve the use of large doses of narcotic analgesics. For these patients every effort should be devoted to their comfort, and the possibility of survival with even alarming injuries always kept in mind. Examples include: severe multiple injuries, severe head or spinal injuries, large doses of radiation, widespread severe burns.

### 2.4. Conducting Operations and Exercises

#### 2.4.1. Operations

1. NATO defines operations as a military action or the carrying out of a strategic, tactical, service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defence and manoeuvres needed to gain the objectives of any battle or campaign.41

2. As stated in AJP-01(D) *Allied Joint Doctrine*, NATO operations will follow certain principles:

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41 NATO Terminology Management System - NATO Agreed
a. Definition of Objectives.
b. Sustainment.
c. Concentration of force.
d. Economy of effort.
e. Flexibility.
f. Initiative.
g. Maintenance of morale.
h. Surprise.
i. Security.
j. Simplicity in plans and orders.
k. Multinationality.

3. Joint operations can be conducted at the strategic, operational and tactical levels and contain a number of stages, each of which involve specialist medical expertise and capabilities. Typical stages at the operational level, which may overlap depending on the specifics of the mission or environment, include:

b. Force preparation, including build-up, assembly and pre-mission training.
c. Build-up of logistic and medical support, if possible including Host Nation Support.
d. Deployment to the area where operations are to be conducted or reinforcement of in-place forces.
e. Execution of operations.
f. Operation termination and military post-operation activities.
g. Re-deployment of forces.
h. Campaign analysis, including doctrine evaluation and lessons learned.

4. NATO force personnel deployed on operations need to be fit for duty upon arrival in the JOA. TCNs are responsible for the physical fitness of their personnel,
although the NATO commander will undoubtedly take a close high interest in the health and fitness of the force.

5. Following transfer of authority of personnel from the contributing nation, the Joint Force Commander will seek to preserve and protect the military power of the allied forces until the mission is concluded. To achieve this, the Commander will require the support of a robust and flexible medical command, led and coordinated by the Medical Director.

6. Medical support for an operation is, however, neither limited to the JOA nor to the duration of a certain operation. Preventive force health protection measures commence well in advance of the operation and healthcare provision may continue long after the subsequent redeployment to home base. This extension beyond the limits of the operational commander’s responsibility, coupled with the complex, specialist, time-critical nature of medical support, necessitate exceptionally close coordination between ACO Medical Advisor at the military strategic level, with the designated JFC Medical Advisor at the operational level and the Medical Director for the theatre of operations.

2.4.2. Exercises

1. Exercises are carried out for the purpose of training and evaluating an exercising force. Medical exercises aim to improve the medical support provided to a deployed force and seek to enhance medical cooperation and interoperability among the different services and nations that may be present. Evaluation and certification of medical capabilities prior to deployment will be conducted during such medical exercises and can be of immense value in identifying areas where additional training is required prior to deployment or areas where further monitoring is required once the force is deployed.

2. Following the principle of *Train as you intend to fight*, medical support should to be an integral part of all exercises during the pre-deployment training of allied forces. Medical support is complex as well as time critical and procedures differ considerably between nations. The deployed forces must be familiar with the tactics, techniques and procedures (TTPs) that will be used prior to deployment. The exercising medical capabilities may also be required to provide actual medical support to exercising personnel. If this is the case it should be ensured that the medical training goals are not compromised as a result.

2.4.3. LESSONS LEARNED

Lessons learned (LL) is a means by which the armed forces can institutionalise experience gained from operations and exercises. Lessons provide not only the driver but also the detail needed to amend the existing concepts, doctrine and TTPs. Every level of the chain of command should be involved and lessons can be identified at the strategic, operational or tactical level. Lessons should be clearly
identified in routine reporting and the chain of command should analyse each lesson and track the action taken.
Chapter 3  Medical Evacuation

This Chapter provides an overview of Medical Evacuation. Detailed guidance on this subject is contained in the supporting AJMedP-2 Allied Joint Doctrine for Medical Evacuation.

3.1. Basic Principles of Medical Evacuation

1. This chapter describes a concept of medical evacuation for combined joint operations that is consistent with the principles and policies dictating the organization and capabilities of the medical evacuation system whilst taking into account the development of multinational operational integration.

2. The MedEvac concept described in this chapter does not impose a unique mandatory evacuation system on nations. It should enable nations to maintain their national evacuation procedures as far as possible. At the same time it encourages nations to plan for reliable, cost-effective AE to medical facilities where they can subsequently collect their patients under non-threatening conditions. The concept may facilitate bi- or multi-lateral agreements and promote common planning, programming, and training.

3. Medical evacuation of casualties is a crucial part of the medical treatment provided by the medical support organization to patients deployed in operations. It requires specific medical capabilities (personnel and assets). Qualified movement of casualties in accordance with modern medical standards is not just the simple transportation of casualties to a suitable MTF but is part of the continuum of their treatment and care and is, therefore, a medical responsibility.

4. In short, the in-transit provision of medical attention to casualties throughout the continuum of care should be considered an independent medical activity in its own right and should be planned for accordingly.

5. To accomplish its mission, a MedEvac system should have the following capabilities:

   a. The ability to evacuate casualties to or between MTFs 24 hours a day, in all weather, from all terrain and in any operational circumstances. The evacuation organization must also identify alternative means to ensure continuation of care is maintained even if evacuation itself is restricted due to operational, environmental or technical reasons.

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42 CASEVAC as the non-medicalised evacuation of patients without qualified medical escort must be distinguished from Medical Evacuation. (see definition of CASEVAC in AMedP-13(A) NATO Glossary of Medical Terms and Definitions [English]).
b. The provision of the necessary clinical care of the casualty throughout the evacuation, using appropriately trained clinical staff with dedicated equipment.

c. The ability to regulate the flow of patients and their disposition to the most appropriate MTF.

d. Tracking patients accurately throughout evacuation.

### 3.1.1. Medical Evacuation Assets

1. Meeting evacuation requirements demands a range of transportation assets for both intra- and inter-theatre movement.

2. Intra-Theatre assets must be appropriate to the mission and possessing similar technological capabilities as the units they support. This includes:
   a. Ground assets (armoured and non-armoured, wheeled or tracked depending upon the units to which they are assigned).
   b. Air assets (fixed and rotary wing).
   c. Maritime, littoral and non-tidal water assets (depending on the geographical constraints of the operation)

3. The provision of ground and maritime evacuation assets occurs via national contributions or multinational arrangements, such as bi- and multi-lateral agreements, use of assets from role specialising nations, lead nations and host nation, and contracting. The pooling of assets will allow smaller contributions from several nations to be combined into a larger multinational organization perhaps a single nation could provide. Centralization of these assets, under the force commander, allows for economies of scale, effective operational management and timely and unhindered intervention throughout the JOA. In this case the patient evacuation coordination cell (PECC) is expected to provide the regulating functions for all patients through its own dedicated communication links. Details on the overall concept for MedEvac in the specific theatre, national or multinational lines of control and accountability, co-ordination of MedEvac assets must be given in the OPLAN.

4. Inter-Theatre assets will also be mission dependent. The most likely option will be to use fixed wing aircraft, but rotary wing aircraft or ships might also be used depending on the nature of the JOA and movement distances involved.

5. All MedEvac assets must have communications on board to allow:
   a. Appropriate assets to be directed to incidents and subsequently directed to the most suitable medical support capability.
   b. Reduced response times by increasing flexibility.
c. Precise tasking and re-tasking of assets, thus reducing the numbers of medical evacuation assets required.

d. Direct communication at the scene of an incident.

e. Direct communications between in-transit medical staff and receiving clinicians. This allows advice to be given and permits the receiving facility to prepare appropriate staff and equipment.

3.1.2. Interdependence of Evacuation and Treatment

1. The availability and type of evacuation assets to be utilised, the length of evacuation route and the operational environment will determine the distribution, size, capacities and capabilities of in-theatre MTFs. Limits on the number or type of evacuation assets have a direct impact on the length of time MTFs have to hold patients before evacuation is available. This not only increases the time taken before patients arrive at their destination, it takes up vital capacity at the holding MTF.

2. The theatre holding policy is a command decision indicating the maximum length of time (in days) that a patient will be allowed to remain in theatre to receive treatment, recover and return to duty. If the clinical prognosis is that recovery will take longer than the limit set by the holding policy, then the patient should be evacuated as soon as it is considered appropriate. Used in this way, the theatre holding policy provides a mechanism by which the needs of the casualty are balanced against the need to ensure sufficient medical treatment and evacuation capacity remains available to support the force.

3. The theatre holding policy:

   a. Enables an appropriate level of capacity and capability to be maintained in theatre to meet the likely immediate needs of the force, knowing that this is supported by additional capacity and more sophisticated capability held in the home base location.

   b. Requires that whilst the less serious sick and injured are managed and returned to duty at the correct level of response, the seriously ill are evacuated to appropriate MTFs as rapidly as possible.

   c. Ensures that in-theatre MTFs remain capable of responding rapidly to meet operational imperatives, such as surges in casualty numbers as a result of enemy action.

4. The theatre holding policy must be:

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43 See AMedP-13 (A) NATO Glossary of Medical Terms and Definitions (English).
44 A prediction of the probable course and outcome of a disease.
a. Established by the operational commander on the advice of the MEDAD, in concert with the operational staffs.

b. Mission dependent. It will also be influenced by availability of assets, constraints on movement, particular operational imperatives, distances, weather and topography, and by national evacuation policies.

c. Dynamic and able to respond to changes in the operational situation.

d. Influenced, in the absence of tactical imperatives, by other factors such as welfare considerations, public expectations, national policy and cost of strategic evacuation.

3.1.3. Evacuation Priorities

1. Casualties that require evacuation must be prioritized based on their clinical condition. However, a large number of factors must be balanced for casualty evacuation to be successful. For optimum results, the decision to evacuate casualties should be based primarily on clinical outcome.

2. AE priorities are described in greater detail in STANAG 2546 - AJMedP-2 Allied Joint Doctrine for Medical Evacuation, STANAG 2087 Medical Employment of Air Transport in the Forward Area, and STANAG 3204 Aeromedical Evacuation.

3.1.4. Medical Regulation

1. Medical regulation is the process of directing, controlling and coordinating the transfer of patients within and outside a JOA. This means from point of wounding or onset of disease and through a continuum of care, in order to facilitate the most effective use of medical treatment and evacuation resources, and to ensure that the patient receives appropriate care in a timely manner.

2. To achieve this requires dedicated regulating staff, sufficiently trained and experienced, equipped with appropriate CIS providing the requisite visibility of the status of medical support capabilities, evacuation assets and casualty flow.

3. The management of patients in any JOA is a dynamic process, taking into consideration a large number of important planning and operational factors including:

   a. Availability of evacuation capabilities and assets at the tactical and strategic level.

   b. MTF availability, their specialist capabilities, medical equipment status and staffing levels.

   c. Current bed occupancy status at each MTF including any surgical backlog.
d. Location of airport / seaport of embarkation (APOE / SPOE).

e. Clinical condition of each patient.

f. Current tactical situation and associated risk from movement to patients or evacuation assets.

g. Communication status in the regulating chain.

h. Theatre evacuation policy.\(^{45}\)

(Note: Patients with known, suspected or highly contagious diseases will normally not be transported within the patient movement system. These infected patients may pose a potential threat to national security and require special public health action as described in paragraph 5.13.8.)

3.1.5. Patient Tracking

1. Patient tracking is the precise and continuous monitoring of the location and intended destination of the patient within the continuum of care. Keeping track of all personnel once they have been introduced into any MedEvac chain either national or multinational is of crucial importance in terms of the individual’s clinical condition, readiness implications to the unit of origin, as well as media and family sensitivities to casualties.

2. A patient tracking system should be near-real time (ideally real time), accurate and dynamic, using standardised procedures, enabling exchange and interchange of data and available to HQ J1 and Medical staffs. Such systems can significantly reduce J1 administrative efforts and relieve distress for both, patients and relatives.

3. Continuous monitoring and notification of patient location and status is a great challenge and of significant importance in a multinational environment, involving transfer of information between and among nations. Practical issues of language differences, communication system compatibility, and record keeping practices combine to complicate multinational patient tracking functions. These challenges make interoperability evaluation and training tasks of paramount importance as well as the provision of trained and experienced liaison officers.

3.2. Ground Evacuation

1. Ground evacuation assets typically comprise ambulances, buses and trains. Ground evacuation assets are used to transfer casualties from point of injury to or between MTFs within the JOA, and finally from MTFs to the port of debarkation, be it sea or air.

\(^{45}\) A command decision, indicating the maximum period of non-effectiveness that patients may be planned to be held within the command for treatment.

see: AMedP-13 (A) NATO Glossary of Medical Terms and Definitions (English)
2. Ambulances are the most common type of ground evacuation transportation; these vehicles must have commensurate mobility and protection as the force they are supporting. However there is variation in terms of capabilities and patient capacity:

   a. At the top of the scale are advanced support units, staffed with emergency care medical specialists and/or trained specialist paramedic personnel who can provide extended resuscitative care, administer drugs, and begin administration of intravenous fluids in addition to providing basic first aid. These are often required in areas of high risk or areas distanced from MTFs, such as a LOC or rear support area. Ambulances of this type tend to be able to carry only one or two patients.

   b. Others, usually a higher number, are equipped for basic life support only. These tend to be used for transfer of less seriously ill patients having only a low dependency on in transit care or for provision of intimate local support to personnel close to a MTF. These ambulances may be capable of transferring more than one or two patients.

   c. In forward areas armoured ambulances are used to afford some degree of protection for casualties and medical personnel. These vehicles must have commensurate mobility and protection as the force they are supporting.

   d. Specialist patient transfer assets to allow the movement of stabilised pre- and post-operative patients under close clinical supervision. Clinical staff and specialist equipment should commonly be provided by the losing or gaining MTF dependent on the circumstances rather than held just in case.

3. Ambulance buses can also be used for sitting and supine casualties, but buses tend not to have a cross-country capability and are usually only used on roads between MTFs and for onward transfer to the point of embarkation. Within CIM and in MASCAL situations ambulance buses may, in extremis, be used to convey large numbers of slightly or moderately injured casualties.

3.3. Maritime Evacuation

1. Maritime evacuation assets can range from small boats with limited capabilities to evacuate casualties, full-scale hospital ships which may both treat and ferry casualties to more advanced Role 4 MTF facilities ashore or evacuation points.

2. Strategic AE will normally be provided by Air Component assets. Therefore the use of sea based capabilities requires additional AE assets (normally rotary wing) to ensure the transportation of patients afloat and ashore.
3. Further details of the influence of the maritime environment on medical evacuation are given in Chapter 1.

3.4. Aeromedical Evacuation

1. AE is the movement of patients under medical supervision by air transport to and between MTFs medical treatment facilities by air transport as an integral part of the treatment continuum. AE may include up to three complementary phases:

   a. **Forward AE** provides air transport for patients between the point of injury or illness and the initial point of treatment within the area of operations.

   b. **Tactical AE** provides air transport for patients between MTFs within the area of operations. It is conducted by rotary wing assets or tactical fixed wing air assets in the JOA.

   c. **Strategic AE** provides air-transport for patients from MTFs within the area of operations to MTFs outside the area of operations or additional AE between MTFs outside the area of operations. Strategic AE can be done from overseas areas or from theatre of active operations, to the home nation, to other NATO countries or to a temporary out of theatre safe area. It is ultimately a national responsibility. Nevertheless bi- or multi-lateral agreements between nations are an efficient way to share scarce resources of AE aircraft, equipment and AE teams. Consideration should be made for the use of civilian charter aircraft for strategic AE provided they are allowed to fly into the operational theatre or can operate from an airport in a safe area, within reach of the available tactical AE assets.

2. The specialist personnel and equipment required to provide the medical support for AE must be given access to the air assets to be used in a timely manner to ensure preparation of the airframe for the specific AE task. This requires a responsive medical C2 structure and direct access to the air tasking authorities, supported by a robust communications system.

3. AE casualty staging units (CSUs) and aeromedical staging units (ASUs) may be required to enable strategic AE. These units should be based at the APOD and/or Staging Airfield; the latter being where ASUs may be required to cover long LOCs. These units collect the already stabilised patients, hold them, prepare them for air transportation and transport the patients to the aircraft for handover to the AE crew. CSUs/ASUs can also act as checkpoints within the patient tracking and regulation processes.

4. Different levels of dependency for all stages of AE lead to the requirement to enhance – for certain patients - the standard AE crew with teams providing intensive or critical care during the AE. These specialised teams are referred to as Critical
Care Air Transport Team (CCATT) or Critical Care Air Support Team (CCAST). Such teams should be available throughout the evacuation chain.

5. AE of patients with highly contagious infectious disease may be severely impeded due to internationally (International Health Regulations) or nationally imposed restrictions of movement (ROM).
Chapter 4 Medical Intelligence

This Chapter provides an overview of Medical Intelligence. Detailed guidance on this subject is contained in the supporting AJMedP-3 Allied Joint Medical Doctrine for Medical Intelligence.

4.1. General

1. Medical Intelligence is the product of the processing of medical, bio-scientific, epidemiological, environmental and other information related to human or animal health. This intelligence, being of a specific technical nature, requires informed medical expertise during its direction and processing within the intelligence cycle. MEDINT provides the basis for action throughout the range of operations. The intelligence required for medical planning and operations must thus be comprehensive, rapidly available, accurate and up to date. It is a permanent secondary task of the entire medical staff active in the theatre of operations to collect information and data on medical, bio-scientific, epidemiological, environmental and human or animal health that might prove useful to the production of medical intelligence and to report it through the appropriate channels. The MEDDIR will be responsible for direct assessment of the information collected. Information collected will be mutually shared with J2.

2. Medical Intelligence serves several essential purposes, especially at the strategic and operational levels of planning. It is important to the intelligence and operational staffs in the conduct of strategic assessments and to the medical planning, preventive medicine and operations staffs Medical Intelligence for:

- a. Assessment of health risks.
- b. Conduct of medical estimates.
- c. Development and execution of preventive medicine actions and necessary prophylactic measures.
- d. Planning of more detailed health risk and operational risk assessments.
- e. Ongoing management of medical support services.
- f. Force protection and defence.

3. In a somewhat broader context, Medical Intelligence is useful in the following areas of military planning:

- a. Strategic intelligence assessments.
b. Analysis of enemy capabilities and vulnerabilities.

c. Operations planning and execution.

d. Civil-military medical planning and operations.

4. Medical Intelligence provides the basis for action throughout the range of military medical operations where deployed forces will be required to notify the unit medical staff of any intelligence, which may affect medical readiness. This information will then be reported up to the theatre level for appropriate command advice on risks and recommended response.

4.2. Intelligence Requirements and Requests for Information

1. Intelligence required for medical planning and operations must be comprehensive, rapidly available, accurate and up to date. It can include information on:

   a. Geographic factors such as effects of climate, topography, flora and fauna on health.

   b. Epidemic and endemic diseases, their types and prevalence, local prophylactic measures, resistant strains, treatment.

   c. Special environmental and occupational hazards such as radiation hazards, road movement hazards, pollution, toxic industrial hazards.

   d. CBRN capabilities of protagonists.

   e. Military and civilian medical capabilities and resources available in the JOA.

2. Medical staffs are responsible for developing intelligence requirements in order to enable the intelligence staff to efficiently request, acquire, and disseminate the finished intelligence products needed. Intelligence requirements are often categorised as either routine standing requirements or priority intelligence requirements (PIRs).

3. Standing medical intelligence requirements are the recurring routine requirements for intelligence to be fulfilled in normal day-to-day strategic and operations planning. PIRs tend to be orientated to operational planning either for contingency or for crisis action planning. In the latter case, staffs develop and submit the most critical PIRs, usually just a few which are essential to plan development, and the formation of estimates. In either case, both standing requirements and PIRs are usually written in the form of questions about a specific topical area and can be used interchangeably.
4. There will be times, especially during evolving crises, where intelligence is either insufficient or absent. In these situations, the medical planning staff will need to forward requests for information (RFIs) to the supporting intelligence staff. RFIs will usually be submitted in a format similar to a PIR, but should be very well defined, narrow in scope, and specific to a command mission or objective. Additionally the RFI must state the highest classification required and a workable time limit.
Chapter 5  Force Health Protection

This Chapter provides an overview of Force Health Protection. Detailed guidance on this subject is contained in the supporting AJMedP-4 Allied Joint Medical Force Health Protection Doctrine.

5.1.  General

1.  AJP-3.14 Allied Joint Doctrine for Force Protection defines Force Protection (FP) as “Measures and means to minimize the vulnerability of personnel, facilities, materiel, operations and activities from threats and hazards in order to preserve freedom of action and operational effectiveness thereby contributing to mission success.” In practice, this translates into three main operational FP elements:

   a.  Physical and Operational Security: guarding personnel and materiel against hostile intent.
   
   b.  Safety: protecting individuals against injuries from inappropriate procedures and inattention.
   
   c.  Health: protecting individuals against the physical environment and disease.

2.  In a medical context, FP is the conservation of the fighting potential of a force so that it is healthy, fully combat capable, and can be applied at the decisive time and place. It consists of actions taken to counter the debilitating effects of environment, occupational health risks, environmental and industrial hazards (EIH), disease, and selected special weapon systems through preventive measures for personnel, systems, and operational formations.

3.  Force health protection as a subset of FP is the sum of all efforts to reduce or eliminate the incidence of DNBI and thereby enhancing operational health readiness and combat effectiveness. These measures will enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards. FHP will provide commanders with advice on how best to protect their force against threats to health. Robust and proactive health surveillance has to be in place at the start of a deployed operation.

5.2.  Force Health Protection Cell

To provide oversight of medical aspects of FP, a force health protection cell is normally established within the formation HQ or within the medical director’s staff.

46 A medical contribution to FP could also consist of medical engagements to support CIMIC or PSYOPS operations in order to actively influence local key leaders and power brokers.
This ensures medical aspects of FP are properly incorporated into the commander’s decision making, whilst also allowing FP to inform medical planning processes.

5.3. Force Health Protection Assessment

1. FHP assessment focuses on the adequacy of the medical support structure to prevent and respond to all possible factors influencing the health of the force and on all measures that have to be taken to protect personnel against health risks. This assessment is a comprehensive approach designed around a threat, vulnerability and risk assessment process with the key elements of hazard identification, health risk assessment, health risk management, health risk control, health risk communication and evaluation. In summary this assessment will determine the full effect of health threats on the mission and provide solutions for how these effects can be eliminated or mitigated to the greatest extent possible.

2. Medical support capabilities, which may provide the FP evidence base for assessment, include:
   a. Air, maritime and ground MedEvac capabilities.
   b. Epidemiological surveillance, monitoring, enquiries and medical reporting functions.
   c. Medical information collection and intelligence functions.
   d. Preventive medicine and veterinary services functions.
   e. Education on preventive medicine and health related topics for deployed troops.
   f. Health risk management.

3. Medical FP assessment has a key role to play in every stage of an operation, from pre-deployment training, through the deployment itself and continuing into post-deployment activities. The medical FP assessment contribution to each will now be described.

5.4. Pre-Deployment Medical Readiness Preparation and Baseline Assessment

1. National and NATO command emphasis must be placed on personnel readiness prior to deployment in order to ensure appropriate levels of medical, dental and mental health fitness and preparedness for duty are achieved upon arrival in a JOA. This requires each TCN to establish and meet medical pre-deployment criteria and a system for their administration, which includes, at a minimum, screening personnel for the following:
a. **Physical and Dental Fitness.** Compliance with TCN and, when defined, with NATO fitness requirements contained in the relevant medical STANAGs. In particular:

1. STANAG 2235 AMedP-4.8 *Pre- and Post-Deployment Health Assessments*

2. STANAG 2466 *Dental Fitness Standards for Military Personnel and a Dental Fitness Classification System.*

b. **Mental Fitness.** Compliance with TCN mental fitness requirements and, when defined, with NATO medical requirements.

c. **Immunization Coverage.** Compliance with TCN and STANAG 2037 *National Military Strategies for Vaccination of NATO* requirements or in response to specific operational requirements as contained in relevant OPLANs. Appropriate immunisations must be given to deployed personnel, as guided by medical intelligence estimates of the infectious health risk.

d. **Preventive Medicine Training.** As a minimum, training should include emphasis on preventive medicine measures for the full spectrum of disease and injury threats to include key infectious diseases and environmental health risks, and on core preventive medicine principles and countermeasures, including those for good personal hygiene and sanitation.

e. **Baseline Health Surveillance Documentation.** National and international emphasis requires the establishment of strong baseline health surveillance for deployed military forces. This provides a baseline against which illnesses and disability liability can be assessed for multinational personnel returning from operational deployments. Each nation is responsible during pre-deployment to consider establishing a pre-deployment health assessment baseline.

2. Although establishing objectives and executing baseline health surveillance are fundamental national responsibilities, the NATO commander shares the responsibility for assuring that nations participating in NATO operations deploy healthy, fit-to-fight and sustainable forces. NATO standardisation objectives include harmonization and integration of fitness requirements from member and participating nations.
5.5. Deployment Phase Medical Readiness Support Functions

During deployment on NATO operations, several key monitoring and health surveillance functions provide important measures of medical support readiness. These measures are defined below:

a. Assessment of the overall health readiness status of personnel through medical situational reports.

b. Establishment of an epidemiological surveillance data-collection and reporting system.

c. Verification of a system for the management of stress and prevention of post-traumatic stress disorders.

d. Certification of the readiness and preparedness of NATO and non-NATO deployed medical capabilities.

e. Assessment of the force health protection function that will:
   (1) Provide commanders with an assessment of the readiness and adequacy of the medical support structure at all levels.
   (1) Identify positive lessons learned to assist and thereby promote exploiting operational success across the entire JOA.
   (2) Advise commanders on medical support issues requiring national or collective action.

f. Provision of selected or focused initial force protection preventive medicine training and on-going reinforcement training.

g. Provision for monitoring, inspection, assessment and advice regarding occupational and environmental health risks.47

5.6. Post-Deployment Phase Medical Status Monitoring Functions

1. The return of personnel from an operation is an important national responsibility, but also shapes follow-on roulements of the same NATO operation, and indeed, future operations. Information pertaining to changes in the health readiness status of re-deploying forces is important in both the short and longer-term at national and NATO levels of management.

2. In the short term for both participating nations and NATO commanders, important insight may be gained on the adequacy of Medical Intelligence and health support services, thereby identifying the need for changes in current or follow-on

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47 Including risks related to food and water safety and veterinary support.
multinational operations. Critical to this information requirement includes the notification of reportable medical events back to the operational medical director such as diagnosed infectious diseases in recently re-deployed troops. Monitoring of preventive measures to minimize risk of transferring disease on equipment presents another critical issue. At the national level, critical fitness for duty determinations for returning troops is also gained.

3. Longer-term, such assessment will support liability determination at the national level for follow-up medical support requirements such as disability liability and continuing medical support liability. Longer-term benefit may also be achieved for the continuation and enhancement of NATO operations where economy and efficiency will be important principles governing multinational medical support.

5.7. Preventive Medicine and Veterinary Service in Force Health Protection

1. DNBIs will be an ever-present risk to personnel that very often generate the greatest burden of morbidity upon the deployed force. Medical support plans must include provision for robust preventive medicine measures and the means to implement them effectively. Preventive medicine is the anticipation, prevention and control of communicable diseases, illnesses, and exposure to endemic, occupational and environmental threats. These threats include non-battle injuries, environmental and occupational exposures, weapons of mass destruction, and other threats to the health and readiness of the deployed force. OPLAN execution requires a close collaboration of preventive medicine veterinary, environmental health and force health protection programmes.

2. Preventive medicine and veterinary service includes FHP measures against infectious, endemic, environmental, occupational, industrial, and operational health risks that must be capable of:

   a. Identifying risks and threats from terrain, climate, endemic disease\(^{48}\), special EIH and occupational hazards to the health of all personnel deployed in a specific JOA.

   b. Identifying necessary preventive and controlling measures and advising commanders on their implementation, to include the development of a theatre policy on immunization and prophylaxis measures, and on the appropriate training of all personnel, especially on measures to prevent food/waterborne and vector-borne diseases.

   c. Advising on and auditing the quality of air, water and food sources.

   d. Auditing and supervising implemented measures.

   e. Vector and pest control.

\(^{48}\) Including animal diseases with potential operational impact and zoonotic diseases
f. Gathering of epidemiological and other medical data and information.

g. Advising commanders on the overall health risks and threats, and the limitations they may place on the campaign by their impact on force readiness.

3. Preventive medicine measures are an essential element of the planning process. Their implementation begins during the pre-deployment phase, and continues throughout the deployment, irrespective of overall changes in the conduct of the operation and must extend well into the post-deployment period. The early introduction of preventive medicine personnel or units into the AO is critical for mission success and getting the FHP plan implemented prior to the arrival of the main deploying force. Preventive medicine measures involve every individual in the operational theatre, who must be aware of necessary personal protective measures and be trained accordingly.

4. The organization to undertake preventive medicine measures must therefore be in place from the outset and must extend from theatre HQs down to unit level and below. Its shape and size will be mission dependant, but will include, as a minimum, advice on individual preventive medicine at every level of operational command. Depending on the circumstances, this advice may come from a single medical staff officer with multiple medical responsibilities, supported by public health officers, or from preventive medicine and environmental health specialists.

5.8. Preventive Medicine and Veterinary Service Requirements

1. Medical Intelligence/ Health Threat Assessment Information. The single most essential requirement of preventive medicine is a source of prompt, usable medical information and/or intelligence, available at the planning stage prior to the outset of an operation. This information must be accurate and its source sufficiently dynamic to quickly inform personnel at risk of threat changes.

2. Immunizations, Education & Training Materials. Other preventive medical resources will include provision for immunizations against specified diseases and chemoprophylaxis, advice on hygiene, training and information for the prevention of DNBI, prophylactic medical materiel, personal protective equipment and a spectrum of mission dependent field support measures.

3. Health Threat Monitoring and Prevention. Preventive medicine personnel will conduct a robust health threat identification and monitoring program to assess threats on an on-going basis and provide countermeasure recommendations for threat mitigation or elimination. Environmental health site assessments will identify potential environmental and occupational health hazards of concern that may put deployed personnel at increased health risk. Oversight evaluations and surveillance to monitor for potential and emerging infectious diseases is a continual process requiring constant vigilance and engagement of deployed preventive medicine
personnel. Monitoring shall include health risks which could be caused by vectors, pests and wild animals.

4. **Laboratory Capabilities.** Surveillance and assessment of public health risks require laboratory capabilities. Field laboratory capabilities support functions focus on identification, surveillance and monitoring of health risks in field operating environments. These capabilities should include technology for sampling and analysis of CBRN contaminants in air, soil, water, and food supplies as well as dead or diseased animals. Equipment and transport capabilities suited to deployed operating environments are needed to provide both mobile laboratory capability to support immediate sampling and initial screening of hazards, as well as fixed laboratory capability to support both confirmatory evaluations and more extensive assessment of collected samples pertaining to naturally occurring and man-made health risks. There is also a need to source reference laboratories capable of dealing with advanced analysis as well as provision of medico-legal advice.

5. **Health Risk Communication.** Effective health risk communication is essential to casualty prevention and vital to an effective FHP plan. Providing factual information and reasonable recommendations regarding existing and potential health threats to deployed personnel and to the chain of command is a critical preventive medicine core responsibility. Keeping the chain of command informed throughout the deployment life cycle will ensure that potential or actual vulnerabilities of the deployed force are routinely incorporated into the commanders operational risk management and decision making process.

5.9. **Veterinary Animal Care Requirements**

While veterinary service is an integral part of preventive medicine (prevention of zoonotic disease transmission, food and water safety, and recommendations for disinfection of equipment and personnel), the welfare and care of military working animals is another responsibility with additional requirements for veterinary personnel, as described in STANAG 2538 - AMedP-8.4 Animal Care and Welfare and Veterinary Support during all Phases of Military Deployments. These requirements include:

a. Conducting surveillance for zoonotic and animal diseases of military importance and implement measures to prevent their spread.

b. Providing comprehensive health, surgical care, and welfare for military animals.

c. Coordination of medical evacuation of wounded military animals.

Veterinary medical Role capabilities are similar to the defined human Roles. A complete description of the Veterinary Roles is found in STANAG 2538 -AMedP-8.4.

5.10. **Deployment Health Surveillance and Casualty Reporting**
1. Deployment health surveillance and casualty reporting systems are important functions performed by medical staff supporting the NATO commander. Deployment health surveillance is the routine, standardized tracking of disease and injury incidence in meaningful rates, initial analyses and response at the unit level, and data driven corrective actions taken at all levels.

2. Deployment health surveillance activities include identifying the population at risk, identifying and assessing potential occupational and environmental health (OEH) hazards, documenting OEH and CBRN risks and exposures, using specific risk management countermeasures, monitoring real time health outcomes and reporting of DNBI and BI rates during the deployment in a timely manner. Deployment health surveillance provides a key indication of troop health status, and serves as a key warning system or sentinel to trigger further investigation, implement preventive countermeasures, or other command actions needed to reduce the adverse impacts of health threats. It also provides an estimate of the impact on manpower and working day losses.

3. A comprehensive deployment health surveillance approach will also include the monitoring of disease and illness occurrence in local indigenous populations where the NATO force is deployed and disease occurrence in local animal populations. Depending on the route of exposure and degree of susceptibility, illness or death in local human and animal populations can have an impact on the deployed force.

4. Deployment health surveillance activities will also include the investigation of suspected disease outbreaks or clusters of illness amongst deployed personnel. The capability to rapidly respond, investigate and coordinate interventions in suspected or actual outbreaks and illness clusters is critical to the mitigation of wide-spread degradation of mission readiness and requires deploying preventive medicine personnel trained with this knowledge and skillset.

5. A NATO-sponsored deployment health surveillance system (EpiNATO) is utilised in all NATO operations and exercises and is managed by the medical staff of deployed forces at all levels. EpiNATO involves the monitoring, collection, and evaluation of illness/injury data on all deployed personnel who report for medical treatment support both, on an outpatient and inpatient basis. It is also set to run in conjunction with other national reporting systems.

6. In EpiNATO, epidemiological data on all treatment visits in the JOA, including both first and subsequent attendances, are collated and analysed at theatre level. Relevant findings are reported as feedback to the reporting units. Medical staff and commanders thus have reliable, quantitative planning and resource allocation data regarding medical support and useful trend analyses by illness and injury category.

7. Through the quantitative identification of causes of morbidity and qualitative measuring of their effect, an evaluation of both, occurrences and consequences is the prime objective of this survey. Findings may then support appropriate response
actions, both in the short and long term.

5.11. Civil Labour

1. During operations local civilian labour is often utilised in large numbers and this can pose a number of health hazards:
   a. The labour force may be reservoirs of infectious disease occurring in the host nation.
   b. If not operated under the same preventative measures, regulations and conditions as military locations, compounds of civilian/local staffs might pose a risk to the force.
   c. Infection of own troops from infected food handlers, contamination of water sources, and sexually transmitted diseases are historical problems associated with civil labour.

2. The HN should be responsible for the health of civil labour and any camps they occupy. However, if the HN’s medical infrastructure or the medical standards are inadequate, TCNs employing civil labour will need to make sufficient arrangements in order to protect the health of their own troops and civilians.

3. At a minimum these arrangements must include a strategy to prevent and/or eradicate infectious diseases that are a threat to own forces, and a first aid service during work. Depending on the supporting civilian infrastructure, consideration will also have to be given to providing a primary health care service, if only to ensure the continued provision of the required labour.

5.12. Critical Incident Management

In response to incidents that generate casualties, command and control of CIM rests with the battle-space owner, both in planning and execution. The coordination of medical support must be undertaken in close cooperation with operations and planning staff in the main HQ of the supported formation. Such coordination is especially important if MASCAL incidents threaten to overwhelm medical support resources. Preparation for CIM will be a normal component of pre-deployment training; MASCAL responses must similarly be planned for and exercised before and during deployment. Medical planning for MASCAL is addressed in Chapter 2 and in more detail in AJMedP-1 Allied Joint Medical Planning Doctrine.

5.13. Consequence Management

1. During the recent past, the world has witnessed a number of complex disasters, both accidental and intentional, that have necessitated innovative and varied event responses. Most agree that an international response is optimal, using both civil and military assets to meet such events. Currently, NATO policy on military
response and coordination with civil organizations exists. In the case of CBRN events though, spreading agents or contaminants may require immediate action and could quickly overwhelm even the most prepared nation(s). CM deals with the military capability to react and respond to such an event.

2. MC 472 NATO Military Concept for Defence Against Terrorism defines CM as ‘the reactive measures used to mitigate the destructive effects of attacks, incidents, or natural disasters’. CM describes the events and not the procedures on how to deal with the event. CM procedures are similar to those used in international disaster relief or humanitarian assistance operations; what differs are the required capabilities and speed of response.

3. CM is a critical element of any post attack response, and any military involvement must be closely coordinated with civil authorities; the operation remains the responsibility of the national civil authorities. NATO and partner nations request CM assistance through the Euro-Atlantic Disaster Response Coordination Centre (EADRCC). ACO, upon request, can coordinate the military component of CM assistance.

4. Several CM CONOPS scenarios exist in which NATO could conduct CM operations following a CBRN event. In particular:

   a. CM of a CBRN event in a CRO or

   b. Reacting to a national request for CM assistance (not necessarily involving a NATO nation) following a CBRN event or terrorist attack.

Each event requires a different response from NATO; regardless, timeliness of reaction to an event with the correct resources is the key to successful CM operations.

5. Overarching principles guiding CM measures include responsiveness, deployability, specialisation, coordination, legitimacy, and interoperability. Reachback, command, control and communication, scope of operations, and policy decisions remain key areas of CM consideration.

6. Medical considerations include, but are not limited to, medical assessment/detection of the event, decontamination, recommendations on force protection (vaccines and antidotes), medical countermeasures, psychological support, epidemiological surveillance, victim identification, and health education.

7. Regardless of the level of effort to defend against terrorist attacks, the threat from terrorism will continue in concert with the possibility of an attack using Weapons of Mass Destruction. Should such an event occur, the Alliance could collectively provide a host of crucial capabilities to reduce the effects of an attack, to include the use of existing command, control and communication, logistics, engineer, medical, de-contamination, explosive ordnance disposal, and security capabilities. While CM
remains the responsibility of national civil authorities, the Alliance can provide a wide range of support. The medical response to a CM event may be similar to disaster relief operations, but modified according to the weapon used. Comprehensive and flexible medical plans are essential for a quick response to a CM event. To properly fulfil the mission, the deployed NATO medical staff must contain trained, experienced and qualified personnel with reliable communications. Plans must be flexible enough to be adapted to any situation. The following items must be considered when dealing with CM response:

a. Specific incident point casualty rates will be higher than with conventional planning. Often the goal of the terrorist is to inflict as many casualties as possible in the shortest period of time.

b. If biological agents are used, the attack may not be known until well after the attack. This is due to variation of incubation periods, and a variety of symptoms that may mask the actual agent.

c. Indirect casualties will occur as people respond to the attack. These will include road traffic casualties, heat injuries, and, in the event of a WMD attack, psychological illnesses.

d. NATO military medical treatment facilities will work directly with civilian authorities and are there to support these organizations, coordinated by the MEDDIR and medical staff.

e. The force must also be prepared to manage medical support items being provided by well-meaning individuals and organizations that may not be appropriate for the CM event.

8. Public Health Emergency of International Concern (PHEIC). The International Health Regulations 2005 require notification to the WHO of any event that may constitute a public health emergency of international concern. Such an event would be one that constitutes a public health risk to other countries through its international spread and may require a coordinated international response. The aim of this notification is detecting early on any public health event that could have serious and international consequences, and preventing or containing them at the source through an adapted response before they spread across borders. Deployed preventive medicine personnel will coordinate any such notification through the chain of command and with host nation health authorities. Isolation and quarantine are measures that may be implemented to prevent further disease spread during an outbreak. Restriction of movement may also be a measure undertaken to aid in the protection of the deployed force. Legal advice should be sought when such actions as quarantine and RoM are deemed necessary and both medical and legal implications of these actions will be needed to be communicated and approved by the commander.
Chapter 6 Medical Communication and Information Systems

This Chapter provides an overview of Medical Communication & Information Systems. Detailed guidance on this subject is contained in the supporting AJMedP-5 Allied Joint Doctrine for Medical Communications and Information Systems (MEDCIS).

6.1. General

Reliable, secure and effective communications and information systems (CIS) are critical to operational success and the effective employment and control of CIS resources are now essential command responsibilities. CIS embodies the principal domains of computer automation systems, auditory communications systems and visual communications systems. Despite the apparent abundance of such modern communications technology such as satellites, computers and fibre-optic transmission, adequate communication capacity is a limited resource. Medical CIS support connectivity is an increasingly important operational requirement but will be competing with all the other functional areas for its allocation of communication capacity. This Chapter outlines the essential medical CIS requirements and functions and its particular importance in relation to medical recording and reporting.

6.2. Medical CIS Requirements

1. The most effective CIS means should be selected to capture mission-essential medical data throughout the operational theatre. Such data includes information on the medical support capabilities in theatre, in particular the location, capability and capacity of each MTF. This in turn enables the medical CIS to support operational decision-making, such as the regulation and tracking of casualties and provides the ability to respond quickly to medical contingencies by having rapid access to the information needed to make educated decisions.

2. Such capability is equally important for decision-making on the clinical management of individual cases. CIS connectivity allows medical professionals, including medical associations and clinical governing bodies to communicate with the lead clinician to discuss medical cases and provide clinical advice.

3. A well-structured medical CIS provides an essential foundation for efficient command and management of the medical support structure. Medical CIS requirements on operations are likely to include a span of dedicated and non-dedicated assets encompassing medical verbal and visual communication, automation technology, data and information management. The medical CIS must also be able to interface with corresponding logistic and operational data management systems, as well as operational planning tools.
4. Medical verbal communications include all forms of auditory linkages of staffs within the medical support structure, as well as between medical support elements and other NATO and national organizational elements and staff. This is a key element in the communications infrastructure and must have sufficient connections and capacity to support all essential medical CIS needs. It will provide the backbone to support in-theatre tactical military connectivity down to the lowest force level, being particularly important for evacuation and treatment assets located in theatre, as well as providing support to similar assets located out-of-theatre. Direct signal communications support, in the form of terrestrial and satellite networks, through both commercial and military systems is required to provide a reliable and timely verbal communications architecture comprising radio, fax, telephone, and web based capabilities.

5. Visual communications includes both real-time and store-and-forward technologies and is increasingly likely to include electronic health applications. For example, transmitting visual imagery from one geographic location to another for teleconsultation, telementoring and teleconferencing functions, provides medical diagnostic support to detachments in locations away from centres of specialist clinical advice.

6. Automation technology embodies computer automation hardware and software capabilities that are fundamental to medical support across the progressive spectrum of evacuation, treatment, record-keeping, surveillance, and the full range of staff functions, including information and data exchange through electronic mail linkages. This domain is essential to create a shared information management system and enable mutually-beneficial medical interactions at theatre and with subordinate command levels.

6.3. Medical Records

1. Medical record keeping covers the recording and processing of medical information on a patient to include personal medical details and clinical history, as well as details of medical care and evacuation provided.

2. During operations careful and standardised documentary medical recording supports:
   b. Monitoring the location and progress of a patient through the various Roles of medical care.
   c. Medical Intelligence documentation, reporting, and follow-up.
   d. Breaching language barriers and achieving effective translation of documentation on patient treatment records.
   e. Quality control and evaluation.
f. Statistics and medical surveillance system functions.
g. Legal audit and boards of inquiry.
h. Programming medical supplies and other logistics support.
i. Financial resource management.

3. Patient documentation procedures should be clear and comprehensive. Medical documentation should be interoperable throughout the area of operations. Standardised NATO tools/documents/forms should be utilised in all cases for which such templates are prescribed through NATO medical STANAGs. Key medical documentation STANAGs include:

a. STANAG 2132 – AMedP 8.1 Documentation Relative to Medical Evacuation, Treatment, and Causes of Death of Patients.
c. STANAG 2347 – AMedP 34 Medical Warning Tag.
d. STANAG 2348 – AMedP 8.2 Basic Military Hospital (Clinical) Records.
e. STANAG 2543 Standards for Data Interchange between Health Information Systems cover this subject.
f. STANAG 2464 Military Forensic Dental Identification

4. Copies of patient documents and digitized medical records, if available, should move with the patient throughout the evacuation system to definitive care, and then be retained in the individual service member’s medical records. If care is provided to patients in medical support capabilities other than their respective national MTFs, medical personnel will ensure that documentation of medical treatment is noted on official medical records and medical confidentiality is respected. Medical records will accompany the patient during evacuation, ideally being sent electronically ahead of the patient so that their needs are known by the receiving MTF in advance. Suitable medical documentation should also be released to the respective national medical liaison teams.

6.4. Medical Reporting

1. Deployed medical C2 must be capable of exchanging information with medical facilities. The aim is to make best use of deployed medical support capabilities for the benefit of the deployed force.

2. Reporting comes in two generic forms; reports dealing with assessment of status and, requests for medical support. It should be recognized that there are
linkages and inter-relationships between such reports, and that there are specific issues to be acknowledged regarding medical reporting, primarily that of medical confidentiality.49

3. National legal requirements regarding the protection and sharing of medical information must be adhered to; these may differ between TCNs. All reports between medical units should be copied to the respective competent national medical authority in accordance with applicable TCN law.

4. The frequency of reporting varies and should be focused on the requirement; it can be regular and routine, ad-hoc or episodic. It will be heavily influenced by the nature and tempo of the operation. Factors such as size of the force, its composition (multinationality), and assigned mission type will all influence the reporting requirement and frequency. To ensure reporting is effective and supports the information needs of the chain of command, it is important that those receiving reports provide feedback to reporting authorities that initiated the report.

5. Medical reporting will not happen in isolation, nor should medical support capabilities ignore their responsibility to ensure they comply with operational reporting requirements set by the operational commander.

49 The policy that sensitive clinical information is not to be communicated to any individual or organisation that does not have a medical need-to-know, except as required by national policy for that Nation’s patients. (AMedP-13)
Chapter 7 Civil-Military Medical Interface

This Chapter provides an overview of the Civil-Military Medical Interface. Detailed guidance on this subject is contained in the supporting AJMedP-6 Allied Joint Civil-Military Medical Interface Doctrine.

7.1. Principles for the Civil-Military Medical Interface

1. Though not their primary operational function, military medical services are frequently being called upon to use their capabilities, resources and skills in the provision of healthcare at the civil-military medical interface. The ability of military forces to deploy medical assets at short notice in both permissive and non-permissive environments, with dedicated infrastructure support and C2 architecture makes them an exceptionally useful capability. This may lead to military medical assets being deployed in a range of situations and mission types outside those for which the military routinely train.

2. In such situations, managing the interface between civil and military organizations will be a key consideration. The civil-military relations during allied operations will be in large part defined by the type of the mission and the specific situation in the JOA. Whereas medical support to the local population might be the focus of a Humanitarian Assistance or Disaster Relief operation, provision of adequate medical support for own forces will likely be the main task of the medical support in a Crisis Response Operation. In fact, in some operations the military medical support may be dependent upon the in place civil healthcare system of a Host Nation to provide specific medical capabilities to own forces.

3. Guiding medical principles to be considered in such circumstances include:
   a. Medical ethics,
   b. Impartiality,
   c. Cultural awareness,
   d. Standards of healthcare,
   e. Medical confidentiality,
   f. Continuity of care, patient tracking and regulating,
   g. Emergency care.

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50 The values and guidelines governing decisions in medical practice.
4. From the perspective of most civilian organisations it will be important to retain their identity as independent, neutral and impartial bodies. This will be particularly important for non-governmental humanitarian organizations, whose only protection depends upon the maintenance of perceived impartiality from governmental or political objectives in the affected location. Such organizations will aim to achieve a clear delineation between their activities from those carried out by military forces. While some may be willing to engage in dialogue with armed forces at all levels, most if not all will preserve their independence of decision-making and action.

5. The imperative for civilian actors is to ensure humanitarian access, meaning the unimpeded access to the civilian population at risk with the consent of all involved or conflicted parties. As a result, in their relations with military medical forces, IOs and NGOs specializing in the provision of healthcare will always try to ensure their activities are not perceived as a contribution to the military effort, as this would be likely to restrict their humanitarian access.

6. To help guide civil-military interactions, a number of standards have been agreed by civilian humanitarian actors on the use of military assets, the most important being:

   a. Engagement of military assets should be a “means of last resort”, only considered in the absence of adequate civilian assets to achieve a certain task.

   b. If military capabilities are required they will only be employed at the request of a civilian humanitarian coordinator.

   c. All humanitarian engagement has to retain a “Civilian Character”, so military assets must serve in a supporting role.

   d. All military effort has to be limited in time and scope, with a clearly defined exit strategy for handover to civilian actors.

7. All employed military assets are to respect the United Nations code of conduct. These standards cannot be automatically or routinely accepted by the military, as operational planning is driven by differing imperatives. However, the standards provide useful guidance and need to be known to military planners in advance and recognized as the primary guide to civilian attitudes towards the military.

8. The provision of direct care to a civil population is usually seen by GOs, IOs and NGOs as a non-military responsibility. However, other tasks might be seen as acceptable, such as sharing of medical or environmental information, provision of medical education and training or complementary efforts in the mitigation of wider health consequences of a humanitarian situation. In each case, civilian organisations will make their decisions based on an assessment of the expected benefits of civil-military cooperation versus negative consequences for their perceived neutrality and
freedom of decision-making.

7.2. Operations at the Civil-Military Medical Interface

1. The medical contribution to NATO operations planning is described in Chapter
2. Operations involving a civil-military medical interface have additional specific planning considerations and these will be covered next.

2. The different phases of an operation, as depicted in AJP-3 *Allied Joint Doctrine for the Conduct of Operations*, each require a specific approach to civil-military medical interaction. The following three operational phases are the most crucial in this regard:
   a. Initial phase / acute crisis
   b. Stabilization and Reconstruction
   c. Withdrawal.

3. Where a requirement exists to provide care to civil patients, the conduct of a thorough analysis of the local health situation is of utmost importance. Medical support planning in this context will often identify the requirement for capabilities that are not routinely represented among military medical force structures such as obstetrics and pediatrics. Timely identification of the need for such clinical specialists will be essential to ensure their availability, if needed via bilateral or other agreements with other nations. The need for specialist services may also change with each phase of the operation.

4. General principles for the planning and execution of military medical support to civil structures include:
   a. Provide life, limb or sight saving surgery to all patients that require it and are presented to a military facility.
   b. During periods when high patient numbers are being dealt with it may be necessary to avoid initiating complex or comprehensive clinical procedures if by doing so would tie-up valuable clinical resources. A general principle of *doing the most for the most* may be the best use of finite resources.
   c. Limit periods of hospitalization of patients to the minimum to ensure an effective capacity to accept and treat new patients is maintained.
   d. Adapt therapeutic protocols to the local health situation. It may not be appropriate to undertake a course of treatment if the host nation clinical infrastructure does not have the capability to successfully complete the treatment after discharge from the military medical system.
e. Return the lead for provision of treatment to host nation health infrastructure as early as possible.

The WHO standards will be used as planning parameters for all assistance and support measures. As result of this, the medical care to the civilian population and livestock will be in accordance with prevailing local peacetime standards.

7.3. Civil-Military Aspects of the Medical Contribution to the Operational Planning Process

1. Medical Reconnaissance. To enable appropriate planning and preparation it is important to undertake a timely and complete reconnaissance of the JOA with the supporting participation of medical subject matter experts. The medical staff assigned to the reconnaissance team must possess adequate knowledge and experience in the provision of medical support at the civil-military medical interface.

2. Review of the Situation. Conduct a comprehensive analysis of the situation, taking account of the following aspects of civil-military medical provision:
   a. Structure and organization of the civilian health care system.
   b. Details of health care providers and authorities.
   c. Survey health care infrastructure, equipment, supplies and personnel, as well as the standards of hygiene of each.
   d. Health status of the population and epidemiological challenges.
   e. Involved organisations such as the host nation government, IOs and NGOs and the executive relationships between and within them.
   f. Medical situation of any displaced persons or refugees in the JOA.

3. Mission Analysis. The purpose of mission analysis in this context is to clearly define what is expected from the civil-military medical interface. Limitations and constraints are likely to define the balance between the resources that can be provided for involvement in civilian health care matters versus providing medical support to the force's own personnel.

4. Evaluation of Factors. One of the most important planning factors to consider will be the determination of the population at risk (PAR), both civilian and also military if a multinational force is deployed. During the initial stages of a deployment it will be difficult to acquire accurate information on the numbers, location and condition of the civilian PAR, particularly if refugees and displaced persons need to be taken into account. The size and nature of the PAR has a fundamental bearing on the medical assets required and how they can be employed. The medical plan for civil-military support may have to be significantly amended or a new one produced as information on the PAR is gathered and assessed. Furthermore, in CBRN environments military
MTFs may be the only functioning medical assets available. Provision of support to the civilian population in such situations will have to be carefully assessed during the planning process.

5. **Operational Design.** Any significant civil-military medical interaction is likely to have a major impact on the operational design of the medical plan. Quality, capacity and ensuring equal access for the local civil healthcare system will be important factors that strongly influence the perceived level of control exercised by local government and in turn perceptions of the success of stabilization and reconstruction efforts. Even if it is decided that deployed military medical assets will not be used to for the treatment of civil patients directly, the medical staff still have a key role to play in the overall civil-military effort by providing guidance on health care issues for inclusion in the civil-military plan.

6. **Measuring and Reporting Progress.** If medical tasks and objectives are included within the civil-military plan care must be taken to identify how progress towards these objectives will be measured and reported. For example, epidemiological indicators such as morbidity and mortality rates could be used or measurement of the number of clinics, hospitals and personnel employed in the health care sector in relation to the size of the population.

### 7.4. Humanitarian Assistance, Reconstruction and Development

1. Military medical capabilities are usually not designed specifically to meet the needs of HA. When tasked with the support of HA operations, medical services will usually have to adapt their capabilities according to the specific requirements of the particular mission.

2. When military medical support is involved its employment must be managed so as not to compete with civilian actors but instead work in a complementary way with them. The military should avoid duplicating the efforts of IOs, GOs and NGOs. For HN assets, the military should encourage development and self-sustainment of local medical structures and avoid creating dependence on the deployed medical assets.

3. Health is increasingly acknowledged to be a key factor in state stability and development. It is important, therefore, that health is considered early when developing reconstruction or development plans. Factors such as capacity, capability, accessibility and acceptable standards of the local population should all be considered.

4. In the early stages of an operation, the military medical services must be prepared to deliver medical care to sick and injured civilians as well as wounded service personnel. There may be only limited military medical capacity available and the level of civilian demand very difficult to quantify. The type of care to be provided must also be decided and may include elements of emergency medicine, surgical treatment, public health and primary care. The effectiveness of each will need to be
monitored and evaluated to ensure the most effective mix of support is provided. There is unlikely to be a single, ideal solution and it will be important to adjust the support provided as the circumstances and needs of the civilian population change.

5. Lasting success in rebuilding or developing a local healthcare system can be achieved only by long-time engagement with civil organizations. It is imperative to understand that well-meant direct patient care projects delivered by military forces may have severe destabilising effects on the local capabilities. This is especially true where local health services depend on payment at point of use by the patient. In such situations the provision of free health care by a deployed military force may lead local health care providers to relocate elsewhere. Military medical capabilities can deliver vitally important support to an affected population, particularly in the early stages of a humanitarian emergency or in an unsecure environment. However, sustained intervention by military medical services should only occur if the civil-military team has a thorough understanding of the local health situation and conducts proper planning to avoid adverse effects.

7.5. Command, Control and Coordination

1. The core requirements for a flexible and effective civil-military command and control architecture are described in AJP-9 NATO Civil-Military Co-operation Doctrine. Since medical issues will be an ever-present factor in civil-military relations, the necessary medical expertise must be integrated into civil-military planning at the earliest opportunity.

2. The Medical Director of a Joint Force is responsible for medical support within the JOA, including medical interactions with civil organizations and treatment of civil patients. The Medical Director must advise the commander and staff on all civil-military medical interaction and must work closely with the civil-military staff to maintain consistency and credibility of the medical activities of the force as a whole.

3. The civil actors in the healthcare sector will consist of a complex mixture of local authorities, IOs, GOs and NGOs. A common, closely coordinated effort of all involved stakeholders promises the best and most efficient way to rebuild or develop a sustainable healthcare system. However, it may not always be possible to achieve in practice due to competing demands and objectives of the actors involved.

4. In addition, a great many NGOs rely on their status of neutrality, impartiality and independence in order to deliver their HA to individuals in need even in the most hostile and insecure environments. As a result, NGOs may wish to avoid or limit their contact with any military or government assets, to avoid being perceived as affiliated to a single belligerent party.
Chapter 8 Medical Support in the CBRN Environment

This Chapter provides an overview of Medical Support in CBRN Environments. Detailed guidance on this subject will be contained in the supporting AJMedP-7 Allied Joint Medical Doctrine for Support to Chemical, Biological, Radiological and Nuclear (CBRN) Defensive Operations that is currently in production.

8.1. Challenges of the CBRN Environment

1. The employment or threat of CBRN weapons and other toxic materials poses serious challenges to Allied military operations worldwide. CBRN incidents include the detonation of CBRN weapons and the accidental or deliberate release of chemical and biological agents, toxic industrial materials (TIMs) (especially air and water poisons), biological pathogens, and radioactive material. The deadly, destructive, and disruptive effects of these weapons and materials merit continuous consideration by the force commander and staff.

2. Commanders at all levels are faced with the possibility that operations may have to be conducted in a CBRN environment. The component command surgeons are responsible for guiding and integrating all medical support capabilities available to the command to support mission accomplishment in a CBRN environment.

3. The conduct of operations in a CBRN environment poses unique challenges to medical support forces worldwide. Planning for medical support to CBRN defence operations must include five key considerations:

   a. CBRN incidents will likely produce a large number of casualties.

   b. The types of casualties from a CBRN incident are not those normally managed in a military medical support system.

   c. CBRN casualties may be contaminated or contagious, and may constitute a significant hazard to the medical personnel and facilities charged with caring for them.

   d. MTFs may have to operate in areas that are contaminated, or with restrictions that limit movement of personnel and materiel into, and out of, the MTF.

   e. Medical support will be required to continue for conventional casualties as well as for CBRN casualties.

4. The commander establishes the theatre’s medical support requirements and uses directive authority to ensure the proper coordination of all medical support capabilities in the force, to include general medical support services, shelter, food,
water, environmental and occupational health, medical surveillance, medical prophylaxis, medical pre-treatments, immunizations, post-exposure therapeutics, antidotes, and fluids. One of the most difficult challenges faced by a medical planning staff is defining requirements for adequate force protection and the medical management of casualties in a CBRN environment. Coordinating an effective response requires access to the full spectrum of military and emergency management resources, the marshalling of significant NATO military medical resources, and support from the medical systems of the host nation. The following must be considered when planning or preparing for medical support to CBRN defence operations:


b. Education and Training for CBRN Medical Support

c. Casualty estimation.

d. Force Health Protection.

e. Patient management.

f. Medical evacuation.

g. Sustainment of medical operations.

8.2. Medical Planning in the CBRN Environment

1. Considerable flexibility can be exercised when planning for medical support to NATO CBRN defence operations. AJMedP-7 Allied Joint Medical Doctrine for Support to CBRN Defensive Operations is the primary source for all medical planning for support to NATO CBRN defence operations within the NATO Command Structure. However, it does not reflect nor exclude any particular nation’s approach to planning for medical support to CBRN defence operations. It does however, constitute a basic framework for planning as a prerequisite for a common understanding in a joint and combined CBRN defence environment.

2. The basic CBRN defence planning process remains the same across the range of military operations and requires consideration at all levels of planning, from strategic to tactical. Nevertheless, specific CBRN defence planning considerations may vary considerably among strategic-, operational-, and tactical-level operations due to differences in missions, available resources, and size of operational areas and area of interest. An adversary’s use of CBRN weapons can quickly change the character of an operation or campaign. The use of such weapons, or threat of their use, can cause large-scale shifts in strategic and operational objectives or alter the execution of plans. Planning at all levels should ensure the integration of CBRN considerations into the overall planning and decision-making processes. A key task for commanders will be the establishment of protection against CBRN attacks in the
operational area. This includes areas involved in preparing and providing forces or sustaining deployed capabilities, as well as preventing adversarial use of CBRN weapons.

8.2.1. Phased Planning for Medical Support to CBRN Defence Operations

1. There are three distinct phases of a CBRN incident as it relates to CBRN defence: pre-incident; during-incident; and post-incident. In each, medical support plans must assist the commander to establish priorities for the effective use of available medical support and public health service resources.

2. Pre-incident activities are critical because they will increase the unit’s survivability and maintain the commander’s freedom of action to the greatest possible extent. Pre-incident actions are essentially contingent measures and are the result of the CBRN risk and threat assessment. During this phase, measures and equipment are planned, prepared, tested, and, if necessary for some measures, implemented. In accordance with their missions, medical organizations assist with provision of adequate shelter, establishment of safe food and water sources, and ensuring that preventive measures and curative treatments are available. Adversary action and the potential need to deal with panic among the civilian population require physical security measures at facilities to permit uninterrupted medical treatment. The commander may decide to assign the physical security mission to nonmedical units, if operational requirements and priorities permit.

3. During-incident activities are the implementation of contingent measures in response to a CBRN incident. These measures are directed mainly at ensuring that assets are suitably protected immediately following receipt of a warning and during an incident to minimize the decontamination burden. During-incident activities include initial detection, the avoidance of contamination, the relocation of units, the use of collective protection (COLPRO) systems, the wearing of individual protection equipment (IPE), and immediate decontamination procedures. These need to be made ready and exercised in the pre-incident phase.

4. Post-incident activities follow a CBRN incident and are essential to protect assets, restore operational capabilities and regain operating tempo. These measures will be performed to reduce the required level of protection and minimize the spread of contamination. These will include the operations necessary to determine the location, type and extent of the contamination, movement control to limit the spread of contamination, decontamination operations, and patient care. Following a CBRN incident, special emphasis should be placed on basic preventive medicine principles, including: food and water sanitation, hygiene, and common prevention measures that reduce the spread of disease. The procedures, equipment and training necessary for effective CBRN warning and reporting, recovery and control measures, hazard management and medical countermeasures and support, need to be prepared and practiced in the pre-incident phase.
5. In some circumstances (such as an incident with a very large number of CBRN fatalities), the commander may need to authorize alternative procedures for the disposition of human remains. If human remains cannot be decontaminated to a "safe" level, decontamination capabilities are not available, or because of public health and safety, contaminated human remains may have to be temporarily interred or stored in a manner that contains the CBRN hazard and is properly marked to facilitate contamination avoidance. In instances of mass fatalities, the commander, under the advice of the mortuary affairs office, may authorize temporary interment. Temporary interments will require dedicated transportation assets to avoid the spread of contamination, engineering support to prepare the site, and security personnel to prevent unauthorized personnel from entering the interment area.

8.2.2. Casualty Management and the Scale of CBRN Incidents

1. CBRN incidents can vary greatly in magnitude. At the lower end of the scale, incidents such as the puncturing of a chlorine tank in the vicinity of an improvised explosive device can generate a small number of casualties requiring unusual but manageable medical care. These incidents are episodic in nature and typically can be managed within the regular medical planning process for conventional casualties. In the middle of the scale, Allied military forces may be required to conduct operations in a combat environment where the use of CBRN weapons is expected. In such cases, medical planners must prepare to manage CBRN casualties as a routine part of medical support operations. At the upper end of the scale, CBRN incidents can result in disasters at a national or international level. Planning for these incidents should assume there will be MASCAL events and that resources and capabilities for response will be severely constrained.

2. Commanders and medical support planners must ensure that a process is in place to manage and treat CBRN casualties in all phases of a CBRN incident and for all magnitudes. The widespread disruption and destruction that may accompany a CBRN incident will require special patient handling and will further challenge medical support capabilities and resources. To provide adequate medical support in these circumstances, definitive planning and coordination are needed and should be driven by pre-deployment intelligence collection, reporting, analyses, and risk assessments. Medical intelligence collection and risk assessments must be continuous, comprehensive, timely and accurate throughout the pre-deployment and deployment phases of operations. Sound preparation and thorough disease containment planning will ensure the greatest range of options is available to respond to CBRN hazards while balancing mission requirements with the risk to personnel.

8.2.3. Situational Awareness and Command and Control

1. Operations in CBRN environments place particular medical support demands on situational awareness and C2. Especially important will be a clear and commonly shared assessment of adversary CBRN capabilities, CBRN use effects, and national, multinational, and host nation medical support capabilities and limitations in countering adversary CBRN use. Threat assessments should include the
identification of industrial sites in the theatre of operations that can produce toxic hazards, as TIMs could become a health hazard to deployed forces if these sites are accidentally or intentionally destroyed or damaged. Furthermore, TIMs could be a source of environmental hazards to deployed forces even when the sites are not disturbed.

2. Although the source and means of exposure to CBRN hazards affect incidence and the severity of injuries, basic principles of prevention and treatment do not change. For instance, in the event of a biological incident, rapid detection and accurate identification of the agent are important factors in providing operationally relevant information to the commander and medical support units. This allows the command to mitigate effects on the force, facilitate adequate casualty management, and provide effective medical treatment. The first indication of a biological incident or covert radiological source may be the appearance of numerous casualties in which medical specialists are challenged to differentiate endemic disease occurrence from adversary attack.

Important medical assets for situational awareness in an unclear disease situation are Rapidly Deployable Outbreak Investigation Teams (RDOIT) and their radiological counterparts the Medical Radiation Incident Investigation Teams (MRIIT).

3. In the theatre, the medical intelligence collection and analysis process includes investigations of disease and injury resulting from known or suspected chemical, biological, or radiological agents, and integration of medical support information from medical and nonmedical units. Effective preventive and curative medical support for the forces requires production of complete, timely, and accurate medical intelligence products and their integration into overall theatre intelligence assessments and estimates. Since an effect from a CBR agent may first occur in the local population, it is important for medical support to maintain an awareness of local civilian disease trends and unique cases in order to quickly identify potential biological agent casualties.

8.2.4. CBRN Casualty Estimation

1. Like battle casualty estimation, CBRN casualty estimation is a task for the operational planning staffs, guided by their CBRN experts. Suitable guidance for the estimation of casualties from a CBRN attack can be found in AMedP-8(C) **NATO Planning Guide for the Estimation of CBRN Casualties**. CBRN casualty estimation is comprised of three separate processes which must be accomplished by the operational planner:

   
   b. Estimation of CBRN dose/dosage/insult.
   
   c. Compilation of CBRN casualty estimate.
2. The requisite human response estimation component input values may be derived from various methodologies including, for example, a CBRN hazard prediction model that produces these values as output, the direct assignment of values to persons of interest or using available National methodologies or other means which derive the dose/dosage/insult values required as inputs to the human response methodology. Given the estimated dose/dosage/insult, the estimation of human response provides a measure of the type and severity of an individual's injury. Injury severity level is then used to determine the casualty status of individuals over time.

8.3. Force Health Protection (FHP)

1. Among the key considerations discussed above in planning for medical support to CBRN defence operations, the most significant from the perspective of FHP is that CBRN casualties may be contaminated or contagious, and may constitute a significant hazard to the medical personnel and facilities charged with caring for them. In addition, MTFs may have to operate in areas that are contaminated, or with restrictions that limit movement of personnel and materiel into, and out of, the facility. Planning for FHP while providing medical support to CBRN defence operations must ensure that the fighting potential of a force is conserved, even under the most complex scenarios and austere environments, so that it is healthy, fully combat capable, and able to operate when and where required. Suitable guidance for FHP under normal operational conditions can be found in Chapter 5 and in AJMedP-4 Allied Joint Medical Force Health Protection Doctrine.

2. Effective FHP includes a combination of preventive and curative measures. Commanders must ensure that all personnel train to survive and accomplish FHP in anticipation of and in response to a CBRN environment. The command's medical support elements must be able to provide all other required health services while effectively caring for CBRN casualties.

3. Countermeasures and responses to the health effects of CBRN agents include physical protection, medical protection (immunisations, medical prophylaxis, medical treatments, and antidotes), and disease containment measures such as Restriction of Movement. These actions occur before exposure to high-risk, CBRN conditions (e.g. pre-treatments and immunisations) as well as after exposure to CBRN agents (e.g. treatments and fluids).

8.3.1. Physical Protection

1. The use of physical protection is not a uniquely medical countermeasure, although medical personnel must consider its use when operating in a CBRN environment. Suitable guidance for the use of physical protection can be found in AJP-3.8 Allied Joint Doctrine for Chemical, Biological, Radiological, and Nuclear Defence. Personal CBRN physical protection can be applied individually or collectively. Individual protection and COLPRO should be used so personnel can survive CBRN incidents and continue to operate in a CBRN hazard environment.
2. Individual physical protection is protection provided to an individual in a CBRN environment by protective clothing and/or personal equipment. All military personnel in a hazard area should be provided with an individual respiratory protection system (respirator or mask), prophylaxis/pre-treatment medications, antidotes, an individual decontamination kit, a first aid kit and protective clothing. The risk of exposure of personnel to CBRN hazards needs to be continuously monitored and the necessary medical records updated, so support and aftercare can be arranged.

3. COLPRO is afforded by facilities or systems equipped with air filtration devices and air locks which provide personnel with a CBRN hazard-free environment for performing critical work and obtaining rest and relief in order to sustain combat operations. COLPRO systems offer a means of balancing the need for protection against the requirement to maintain tempo. Medical support capabilities in particular, which require the collection and management of contaminated casualties, may benefit from the use of COLPRO.

8.3.2. Medical Protection

Medical countermeasures and pre-treatments are designed to diminish the susceptibility of personnel to CBRN agents and effects. The medical planning staff will be responsible for advising the commander on medical countermeasures. Commanders and staffs need to make decisions, on advice from the medical staff, about the timely and appropriate administration of prophylactic or preventive compounds (immunisation, medication) as well as other pre-treatment measures (skin barrier sprays or repellents). These countermeasures and pre-treatments must to be issued to personnel under national guidelines.

8.3.3. Operational Contamination Control

1. The movement of a force into hazard areas will be restricted by the principle that hazard avoidance will reduce exposure and subsequent casualties. The avoidance of CBRN hazards will be a key factor in planning for the location of medical facilities. Medical facilities may need to be relocated to avoid contamination. If hazard avoidance is not possible and contamination occurs, an assessment of decontamination requirements should occur as quickly as possible. See AJP-3.8 Allied Joint Doctrine for Chemical, Biological, Radiological, and Nuclear Defence, for guidance on hazard avoidance.

2. The spread of hazards is controlled through the limitation of spread, hazard containment, decontamination, controlled movement, restriction of movement for disease control, and waste management. The medical planning staff will coordinate with the engineering staff on design and operational constraints for medical facilities
and sites. The commander may employ RoM, including isolation\(^{51}\) and quarantine\(^{52}\), to prevent the transmission of communicable disease or infection. Isolation and quarantine are critical when contagious disease is suspected or present within the forces or the surrounding civilian population. RoM should be consistent with any limitations imposed by HN law, treaty obligations, or agreements/arrangements between the parties.

8.3.4. Combat and Operational Stress Control

1. Following any significant incident, especially where there may have been multiple casualties, stress is likely to have a number of effects on an individual. The management of psychological stress should be managed by the chain of command in a supportive way that initially is independent of any medical interventions.\(^{53}\)

2. Prevention of stress casualties and control of combat and operational stress is a command and leader responsibility. Medical staff and other personnel at all levels play important supporting roles. A coordinated program must be planned for the prevention, treatment, and return to duty of combat stress reaction casualties. Active education, training, and prevention programs assist with controlling stress and preparing unit leaders and medical support personnel to identify and manage stress reactions in units.

8.4. Patient Management

1. Patient management refers to a group of post-incident medical capabilities that are applied to preserve the health of the force, to deliver optimal care to casualties, and to maximize the rate at which casualties return to duty. In the aftermath of a CBRN incident, the number of casualties may far exceed the capacity of the medical treatment system. The medical planning staff must develop a plan for managing a substantial increase in casualty flow and the demand for treatment. The plan must address handling and movement of CBRN casualties, avoiding contamination spread, and treating infectious diseases. CBRN casualty care requires extensive coordination and communication with the hospitals of contributing nations and the host nation.

2. CBRN hazards can create large numbers of casualties who have been exposed to chemical agents, toxins, radiation, or infectious agents. Medical facilities should be prepared to respond rapidly as casualty workload will likely peak quickly with little advance warning. As some biological agents are transmissible between

\(^{51}\) *Isolation* is the separation of ill or contaminated persons or affected baggage, containers, conveyances, goods or postal parcels from others in such a manner as to prevent the spread of infection or contamination.

\(^{52}\) *Quarantine* is the restriction of activities and/or separation from others of suspect persons, plants or animals that are not ill or diseased or of suspect baggage, containers, conveyances or goods in such a manner as to prevent the possible spread of infection or contamination.

\(^{53}\) For further information see Paragraph 9.3.5 and AJMedP-64 *Forward Mental Healthcare* (Study)
humans, they may cause problems for some time after any initial attack.

8.4.1. Patient Decontamination

1. Patient decontamination reduces the threat of contamination-related injury to medical support personnel and patients. Patient decontamination will have to be accomplished as the operation and patient load allows. Decontamination and triage of CBRN casualties will vary with the situation and the contaminant. For most CBRN exposures, delaying treatment or stabilisation of the patient for decontamination should not put the patient at additional risk. Trained and qualified triage personnel should determine priority of treatment and decontamination. Medical evacuation capabilities for contaminated and contagious casualties are likely to be very limited.

2. Decontamination should be decentralised to avoid creating a backlog of casualties awaiting clean-up at a central location. Each MTF should be able to establish its own decontamination area. A great majority of all decontamination tasks can be performed without interfering with medical treatment simply by removing a casualty’s outer clothing and shoes.

8.4.2. Patient Treatment

The success of medical support organizations in treating CBRN casualties depends on prior planning and adaptability. Each element of the patient movement and treatment process requires careful evaluation to assure it best conserves and restores the command's combat capability. Consideration of multinational partner and host nation requirements and capabilities that affect the Allied mission and the ability of medical support units to function effectively are especially important. Suitable guidance for the CBRN patient treatment can be found in the AMedP-6 series.54

8.4.3. CBRN Mass Casualty

1. CBRN materials are capable of producing mass casualties. In the hours immediately following a CBRN incident, MTFs can be overwhelmed with casualties that exceed their capacity. The force commander, supported by the command surgeon, establishes medical support priorities for treatment of mass casualties. MTF commanders are responsible for planning and training to cope with this situation in line with joint force plans and priorities. If a CBRN incident occurs, the surgeon and supporting staff will need to consider consolidating contaminated personnel to certain hospitals or areas, augmentation of medical resources, or reallocation of medical resources to better manage the casualties.

54 In the future AMedP-6 Vol I NATO Handbook on the Medical Aspects of NBC Defensive Operations (Nuclear), AMedP-6 Vol II NATO Handbook on the Medical Aspects of NBC Defensive Operations (Biological) and AMedP-6 Vol III NATO Handbook on the Medical Aspects of NBC Defensive Operations (Chemical) will be pooled in a new edition of AMedP-6 (Ed. D V 1).
2. Medical units should have a basic CBRN MASCAL plan that can be modified to meet varying situations. The MASCAL plan must be clearly defined and sufficiently detailed for understanding at all levels. It must be practiced at regular intervals and executable at the appropriate level.

3. As in any MASCAL situation, arriving CBRN casualties should be examined at a triage point and directed to the proper area. Conventional treatment priorities may have to be abandoned. This means a radical departure from the traditional practice of providing early complete definitive treatment to each patient on the basis of individual need. An additional triage decision in CBRN MASCAL situations is whether patients have medical conditions that take priority over decontamination.

8.5. Medical Evacuation

1. MedEvac typically involves the linear movement of patients along the chain of evacuation. In some circumstances, such as MASCAL or other scenarios where the ordinary chain of evacuation is disrupted or inadequate, field expedient or lateral movement of patients between MTFs may be required. Suitable guidance for the evacuation of casualties can be found in Chapter 3 and AJMedP-2 Allied Joint Medical Evacuation Doctrine.

2. Operating in a CBRN environment presents severe challenges to the Medevac system. The number of patients that must be managed may far exceed conventional planning estimates, and they may present within a narrow time window. Moreover, the utilization of Medevac assets may be significantly slowed in a CBRN environment, reducing the overall capacity of the system. Casualties may be contaminated or contagious, requiring decontamination or specialized equipment and procedures for contamination control. Medevac operations may need to be conducted in contaminated areas, generating requirements for both individual and collective protection for personnel and decontamination for personnel and vehicles.

8.5.1. Medical Evacuation Policy and Operations in a CBRN Environment

1. Should the CBRN environment cause a MASCAL situation, lateral or skip movement of patients may be required to maintain the required level of care and maximize the efficiency of MTF operations in the operations area. The anticipated progression of CBRN injuries and illnesses may also dictate nonlinear movement of patients through the evacuation chain.

2. Medical regulating in a CBRN environment may require changes to on-going Medevac operations. The presence of contaminated areas in particular will effect consideration of the movement of patients out of or through contaminated areas. In general, the transport of contaminated patients should be limited to movement that is essential to provide patient care. Every effort should be made to limit the number of assets and people that become contaminated. To that end, some portion of Medevac assets may be dedicated for use within designated contaminated areas, with the remainder dedicated to transporting patients between MTFs in clean areas.
The decontamination of patients before evacuation will further help limit the spread of contaminants throughout the MedEvac chain.

3. In the aftermath of a CBRN event, theatre holding policy may need to be adjusted in response to both the number and type of resulting casualties. In some cases, large numbers of casualties may have injuries or illnesses of moderate severity and would be expected to return to duty soon after the established maximum length of stay. In others, economies of scale in the provision of treatment may best be achieved if patients requiring highly specialized care are treated at a common location, either within or outside the area of operations. Differences in national policies and treatment protocols for CBRN injuries and illnesses may support the early transport of patients to Role 4 facilities, regardless of their expected return to duty date. On the other hand, ROM when imposed may severely impede rapid aeromedical evacuation and therefore require a reconsideration of theatre holding policies in place.

4. Host nation and multinational partners may have concerns about exposing their civilian population to contamination or contagion while CBRN casualties are in transport within their borders. Transportation of these casualties will require close coordination and cooperation between Joint Force Commanders and Host Nation authorities. In some cases, MedEvac (particularly AE) may only be accomplished if overflight and landing rights are permitted by the Host Nation.

8.5.2. Medical Evacuation Assets in a CBRN Environment

1. In a CBRN environment, contaminated patients and those infected with contagious biological agents should not normally be transported by any means without first being decontaminated or cleared for transport. In rare cases, movement may be essential to preserve life, limb or eyesight or to maintain operational capabilities. On these occasions every effort must be made to prevent the spread of contamination during movement. When allocating Medevac assets to evacuation routes within contaminated areas, consideration should be given to the relative ease of vehicle decontamination.

2. It is best to ensure a robust ground Medevac capability as a baseline augmented by aeromedical evacuation when possible. In a MASCAL situation, ambulance buses may be used to convey large numbers of slightly or moderately injured casualties. Although often limited by infrastructure and vulnerability, purpose-built or reconfigured ambulance trains also have a large patient carrying capability. In cases of known or suspected CBRN exposures associated with delayed onset of symptoms, these types of ground evacuation assets may have particular utility.

8.5.3. Aeromedical Evacuation of CBRN Casualties

1. Most patients should be decontaminated prior to entering the AE system. Procedures implemented during AE should include precautions to avoid aircraft contamination, as decontamination of an aircraft is often a challenging task. In the
event patients cannot be decontaminated, the commander will identify the requirement to move contaminated or contagious patients.

2. A CBRN environment and the resulting number and type casualties may strain the capacity of dedicated military airlift. In addition to overwhelming numbers of casualties, the potential requirements for specialized medical equipment, such as ventilators and positive pressure, or the need for patient isolation may further reduce the number of casualties that any given aircraft can transport. In these circumstances, aircraft of opportunity or multinational and civilian aircraft may need to be integrated into aeromedical evacuation operations. Certain specialist aeromedical evacuation capabilities may have particular utility in a CBRN environment. CCAST are specialized teams with intensive care expertise for AE of critically ill patients, including those on a ventilator. The Air Transportable Isolator (ATI) has the ability to transport a highly infectious patient if required.

8.6. Sustainment of Medical Operations

1. Among the key considerations discussed above in planning for medical support to CBRN defence operations, the most significant from the perspective of sustainment of medical operations are that MTFs may have to operate in contaminated areas and that medical support for conventional casualties will have to continue alongside that for CBRN casualties.

2. The sustainment of medical operations to provide continuity of care during and after a CBRN incident will be particularly challenging. Even if a CBRN attack produces few fatalities, it may likely result in numerous casualties who require extensive treatment, and a large number of patients who are well but will report for medical treatment anyway. Medical staffs will be taxed if not overwhelmed. Additionally, medical personnel may need to work with individual protective equipment, which will reduce their effectiveness. Decontamination efforts may reduce the number of staff available to perform medical functions. As a result, the unit’s throughput will be considerably reduced. The proper planning and management of medical supplies, waste, contamination, and facility operations will mitigate these challenges and facilitate continuity of medical support.

3. CBRN defence SOPs must be prepared during pre-deployment. Once deployed, the joint force must exercise, train, validate and adjust, if necessary, these SOPs to meet the conditions encountered in-theatre. Evaluations must also be made to ensure that general operating procedures are workable in a CBRN environment.

8.6.1. Non-Article 5 Crisis Response Operations and Civilian Support

1. Terrorist groups may employ CBRN weapons, or natural and manmade disasters may contaminate areas with toxic materials whose mitigation will require the efforts of specialized military forces. Medical forces may require coordination and cooperation with agencies, organizations, and individuals outside the military chain of command or direct control. In many situations, the force commander may be in a
supporting role to HN authorities. Regardless of the role, the force must be prepared for CBRN use and contamination with toxic materials at any point, including the transition from noncombat to combat environment. The ability of HN medical facilities to handle MASCALs from CBRN effects should be assessed and factored into multinational planning. Close coordination with medical and other public health providers in the theatre is a vital means of detecting chemical or biological attacks, since casualties from such an attack may appear initially in the civilian medical system. Suitable guidance for the planning the civil-military medical interface can be found in Chapter 7 and in AJMedP-6 Allied Joint Civil-Military Medical Interface Doctrine.

2. Civilian casualties may be a significant problem in populated areas. Medical support may be required to assist in treating civilian patients when the civilian medical resources become overwhelmed and inundated with patients. Demands for military medical support to neighbouring civilian populations following a CBRN incident may be substantial, especially in areas with a concentration of very young, very old, and other individuals already suffering from underlying disease or other forms of weakening stress. In consultation with the command surgeon, the commander must establish, at the beginning of the operation, the scope of care to be rendered to civilian populations.

3. The presence of CBRN agents could constitute a unique kind of complex disaster, whether accidental or intentional, that will require innovative and varied responses. In the case of CBRN events, spreading agents or contaminants may require immediate action and could quickly overwhelm even the most prepared nation(s). Consequence Management encompasses the military capability to be prepared to react and respond to such an event. Should such an event occur, the Alliance could collectively provide a host of crucial capabilities to reduce the effects of an attack, to include the use of existing command, control and communication, logistics, engineer, medical, de-contamination, explosive ordnance disposal, and security capabilities. The medical response to a CBRN event may be similar to disaster relief operations, but modified according to the type of hazard. Comprehensive and flexible medical plans are essential for a quick response. To properly fulfil the mission, the deployed NATO medical staff must contain trained, experienced and qualified personnel supported with reliable communications.
Chapter 9  Military Health Care

This Chapter provides an overview of Military Healthcare. Detailed guidance on this subject will be contained in the supporting AJMedP-8 Allied Joint Medical Doctrine for Military Health Care (MHC) that is currently in development.

9.1. Overview of Allied Joint Military Healthcare

1. Military Healthcare encompasses the continuum of care for military personnel from enlistment through the full spectrum of military duties in garrison and in the deployed environment and on through to retirement. This includes preventive medicine, acute medicine, rehabilitative, dental, and mental healthcare as well as veterinary support. Military healthcare supports the full range of military missions from major combat operations through to HA.

2. The purpose of this chapter is to be the doctrinal document that bridges MC 326/3 “NATO Principles and Policies of Medical Support” and the military healthcare doctrine, which is captured in STANAG 2598 AJMedP-8 Allied Joint Military Healthcare Doctrine (STUDY) and its subordinated STANAGS/AMedPs. It is not designed to replace the guidance contained within the STANAGS/AMedPs. Therefore, specific details should be consulted in the original STANAGS/AMedPs as required.

3. The standards will be common to all participating nations. NATO forces and their operational partners work in close cooperation at the lowest tactical level. This demands that military healthcare systems are interoperable according to STANAG 2560 AMedP-27 Medical Evaluation Manual.

9.2. Medical Training of Military and Healthcare Personnel

1. As NATO works toward the development of allied and combined medical teams to support operations, there is an increased need to have standardized training to ensure that a high standard of care is maintained throughout the healthcare continuum.

2. Basic Medical Training for All Military Personnel: Basic First Aid and “Buddy Care” are skills essential to all military personnel. In any emergency situation it is likely that the first personnel on the scene will not be medical but will be personnel from the injured person’s unit or bystanders in the area. A basic ability to give appropriate first aid an injured person in the field greatly improves the likelihood of survival for that person to allow time for medical personnel and other professionals to respond. Stopping serious bleeding, securing the airway and providing the ability for the casualty to breath are the first steps to successful resuscitation and stabilization. Combat Life Support (CLS) courses have been developed to train military personnel in life-saving basic medical skills. Additionally all military personnel should have some
understanding and training in simple hygiene and force health protection measures to prevent and limit the development and transmission of infectious disease in a deployed environment. These standardized training requirements for first aid and emergency care in combat situations and basic hygiene training for all military personnel are outlined in STANAG 2122, AMedP-79 *Requirement for Training in First-Aid, Emergency Care in Combat Situations and Basic Force Health Protection for all Military Personnel.*

3. **Medical Training for Healthcare Personnel:** NATO nations must meet training standards acceptable to all participating nations. This general principle is noted in STANAG 2249 AMedP-8.3 *Training Requirements for Healthcare Personnel in Military Operations,* which also provides standardized guidance to accomplish the necessary pre-deployment training. It outlines the following nine modules of required training: Basic Training for Healthcare Personnel, Traumatology, General and Tactical Training, Multinational Relations and Medical Ethics, Environmental Risk, Tropical and Epidemic Diseases, Stress Management, Disaster Relief, Language, Current Proficiency in Primary Healthcare Issues, and in addition any mission-specific modules.

4. The Military Medical Centre of Excellence (MilMed CoE) in Hungary and the NATO School in Oberammergau support NATO in enhancing the Alliance’s capability to develop and provide standardized training. For more information on medical training refer to the following websites:

   a. [http://www.act.nato.int/e-learning/e-management](http://www.act.nato.int/e-learning/e-management)

   b. [http://www.coemed.hu/coemed/](http://www.coemed.hu/coemed/)

   c. [https://natoschool.org/de/organization/nato-school](https://natoschool.org/de/organization/nato-school)

5. As NATO becomes more involved in training of host nation military personnel in the medical arena, STANAG 2585 AMedP-29 (Study) *Training of Host Nation Medical Personnel* is being developed in order to set common standards and guiding principles for this task.

6. Physicians, nurses, medics or any other military medical personnel who are participating in NATO operations should provide trauma care following standardized skills. STANAG 2544 AMedP-22 *Requirements for Military Acute Trauma Care Training* provides a skill set matrix required for each category of medical personnel and covers tactical trauma skills and MedEvac.

9.3. **Clinical Guidelines**

The purpose of NATO’s clinical guidelines is to give the healthcare provider, who is supporting multinational operations, guidance on the principles of care that have been developed by the expert panels, working groups or other entities within NATO and agreed upon by the ratifying nations. However, whilst it is appreciated that every
nation has its own standards of care, these guidelines are designed to promote standardization and interoperability. They are evidence-based and provide a common agreed standard of care and facilitate the development of healthcare protocols. This also enables and facilitates the Lessons Learned process. Lessons identified, learned and implemented are clearly an important aspect of healthcare best practice which will contribute to optimum standardization and interoperability.

9.3.1. Surgical Care

The critical importance of forward surgical capability near the point of injury cannot be overstated. Immediate control of serious bleeding and control of airways and breathing followed by surgical stabilization have become the mainstay of tactical combat casualty care (TCCC). The appropriate stabilization prior to patient movement via ground, air or sea is an absolute imperative to ensure safe evacuation between MTFs. Combat casualty care is constantly evolving due to advances in military medicine and therefore this guidance must remain flexible and focus on principles of treatment. The United States “Emergency War Surgery Handbook” provides a guide that might be used by all NATO and Partnership for Peace forces.

9.3.2. Care of Women in Joint/Combined Operations

Participating nations agree to provide appropriate competency, equipment and treatment for routine female conditions. Whilst capability must exist to deal with unexpected pregnancy and related complications, it is envisaged that member nations will not knowingly deploy pregnant female personnel. However it is possible that local national female patients may be pregnant and therefore plans must be made to deal with the situation either directly or through onward referral to an obstetric healthcare provider. STANAG 2179 AMedP-8.9 Minimum Requirements for Medical Care of Women in Joint/Combined Operations in Joint/Combined Operations defines the essential requirements for providing female-specific medical care in joint/combined operations.

Reasonable efforts should always be made to incorporate sensitivity and respect to local cultural, religious practices and preferences when dealing with gynaecological and obstetric matters.

9.3.3. Dental Care and Dental Forensic Examination

1. Dental care during allied operations is provided at deployed MTFs to a varying degree based on the operational requirements if the particular mission. In order to standardize interoperability and interchangeability, STANAG 2453 AMedP-35 The Extent of Dental And Maxillofacial Treatment at Role 1-3 Medical Support describes the different dental care modules required to treat dental and maxillofacial conditions at Role 1-3 facilities.

55 Previously covered by the now cancelled STANAG 2068 Emergency War Surgery
2. The forensic examination and identification of human casualties continues to be a task for the allied medical services deployed on missions, with forensic dental identification playing a major role in ensuring the required quality and desired outcome. STANAG 2464 AMedP-3.1 Military Forensic Dental Identification provides guidance on the organizational structure for military dental field identification teams and the standardized equipment for the handling, examination, interpretation and presentation of dental evidence. It also reiterates the current internationally recognized protocols and procedures for identifying individuals from their oral remains, particularly in disaster/mass casualty scenarios.

9.3.4. Deployed Laboratory Capabilities

Laboratory capabilities are a crucial and integral part of the delivery of medical support in all medical treatment facilities. While this is also true for deployed MTFs, the extend and capabilities of these deployed laboratory units differ significantly between the several levels of care, depending on the specific mission profile and operational requirements. However, in principle every higher role includes all the lower role’s capabilities. The minimal needed capabilities at Roles 1 to 3 are describe in STANAG 2571 AMedP-8.5 Minimum test requirements for Laboratory Units of In-Theatre Military Medical Treatment Facilities.

9.3.5. Mental Healthcare

1. Psychological health and mental health support to military operations continue to receive increasing focus. The stresses of prolonged increase the risk for mental health problems and suicides. Mental healthcare requirements range across the deployment cycle from mental health screening prior to deployment, prevention, management and treatment of patients during combat operations and subsequently into the post-deployment period. The aim of mental healthcare is to improve the overall health of the force and ensure that personnel returning from combat deployments have the services they require to deal with issues such as post-traumatic stress disorder and traumatic brain injury. Several STANAGS have been developed to address mental health issues that arise as a result of participation in NATO operations.

2. **Role of the Commander.** The importance of commanders and leaders in understanding and managing the psychological well-being of their personnel has become increasingly recognized. In addition to achieving operational objectives, Commanders must be able to recognize and deal with a range of mental health problems affecting unit readiness. While most military personnel do well on deployment, it is the Commander’s responsibility to manage psychological support when operational stressors are present. Commanders may have to manage operational stressors coming from many sources and in a full range, from interpersonal conflicts to the witnessed deaths of unit members. Mental health is available to consult with commanders as needed to support a unit’s operational readiness. Commanders must also deal with less dramatic issues such as interpersonal conflict within their unit. The skills, responsibility and authority of
military leaders put them in a unique position to make a significant difference to how their unit members cope with operational stress.

STANAG 2565 AMedP-65 A Psychological Guide for Leaders across the Deployment Cycle is designed to provide leaders with tools to help them manage the array of psychologically demanding experiences that can occur before, during, and after an operation and which have the potential to degrade individual and unit performance. This guide and its annexes include discussions of the following topics:

- Military Leaders’ Role in Psychological Readiness,
- What Unit Members and Leaders expect,
- Individual Psychological Fitness, Morale and Unit Effectiveness,
- Military Family Readiness, and
- Working with Mental Health Professionals.

3. Mental Health Conditions and Topics Important to Military Operations. There are several other mental health topics of interest to military medicine. Suicide prevention is an important topic for all Commanders, thus STANAG 2566 AMedP-66 Suicide Prevention (STUDY) covers this topic. The association of mental health problems with traumatic events inherent in combat operations have brought to the fore the need for early identification of individuals with potential for acute stress immediately after exposure that is covered in STANAG 2568 AMedP-68 Acute Stress Disorder (STUDY) as well as the more chronic post-traumatic stress disorders and the role of preventive measures immediately after exposure. STANAG 2569 AMedP-69 Psychological Management of Potentially Traumatizing Events (STUDY) provides guidance on how to prevent these disorders. STANAG 2564 AMedP-64 Forward Mental Health Care emphasizes the need for early, forward-based intervention. Many psychological conditions present as more common medical conditions. STANAG 2548 AMedP-63 Prevention of Post-Deployment Somatoform Complaints deals with recognition and management of psychological factors in the development of these conditions.

4. Much work has been accomplished over the last several years on the role that relatively mild head injuries, including blast injury, play in affecting the physiology of the brain and human behaviour and how to recognize these, often subtle, effects.

5. In view of the fact that some mental conditions may be common within the military population and have the potential to impact operations, it is important to define any resulting occupational or operational limitations. STANAG 2573 AMedP-72 Operational Restrictions of Personnel with Psychiatric Disorder (STUDY) provides guidance on this issue.

9.3.6. Post-Exposure Prophylaxis
There are some specific medical conditions that require a timely and standardized approach in order to mitigate the risk of development and progression of disease. Rapid post-exposure prophylactic treatment of some conditions is key to their prevention and can significantly impact their progression. Two of these conditions, Human Immunodeficiency Virus (HIV) and Rabies, require a specific approach to treatment and prevention.

a. STANAG 2554 Human Immunodeficiency Virus (HIV) Post Exposure Prophylaxis describes this risk assessment process and the approved treatment protocol for those with suspected HIV exposure.

b. STANAG 2559 Post-Exposure Prophylaxis in Rabies describes the specific protocols for pre- and post-exposure prophylactic management of individuals at risk for, or exposed to, the Rabies virus.

9.3.7. Veterinary Care

During military deployments, animal welfare will always apply to military working animals. However, the following animals could also require the attention of deployed veterinary personnel: stray dogs and cats, farm animals (particularly during HA or DR operations and / or in support of CIMIC activities), wild animals (especially animal species protected by international laws and regulations). STANAG 2538 AMedP-8.4 Animal Care and Welfare and Veterinary Support during all Phases of Military Deployments provides guidance on veterinary issues concerning the provision of care to military working animals, and the protection of animal health during the military deployments. The AMedP covers all aspects of deployment of military working animals, including pre-deployment screening, vaccination, transportation, housing, preventive and routine veterinary care in the deployed environment and prophylactic procedures for return from deployment. The AMedP outlines the equipment requirements for the deployed veterinary team as well as the management of stray animals and humanitarian support for agricultural animals.

9.4. Medical Equipment and Supplies

1. Generally, it is the responsibility of each nation providing support of medical material or pharmaceuticals to other nations to ensure that all required conditions for storage and transportation have been pursued until the point of transfer. However, in order to facilitate the interoperability amongst NATO Medical Services STANAG 2128 AMedP-54 Medical and Dental Supply Procedures summarizes key aspects of medical and dental supply:

a. Property exchange or replacement of medical and dental non-expendable items (e.g. ventilators, stretchers) at all levels within a theatre of operation that are required to accompany patients during evacuation from the battlefield to the next appropriate medical or dental facility. This materiel must clearly be marked with the nation of origin in plain text or the national flag.
b. The required information on medical and dental supplies and pharmaceuticals, including instructions concerning specific conditions for storage or transportation (humidity or temperature). The date of production and expiry should always be visible.

c. The methods of identification of the contents of syringes, syrettes, containers and self-injection devices. For self-injection devices, it is imperative that all medical staff, Commanders and users understand the meaning of the colour codes that are utilized.

2. NATO has developed an Individual First-Aid Kit that is recommended to be carried by all military personnel. This kit is described in STANAG 2126 First-Aid Dressings, First Aid Kits, and Emergency Medical Care Kits.

This STANAG does not deal with special medical supplies necessary for the treatment of NBC casualties. It recommends that a vehicle first-aid kit is carried in all military vehicles, as well as special purpose kits should be developed by each nation in accordance with national requirements.

3. STANAG 1208 AMedP-31 Minimum Requirements of Emergency Medical Supplies on Board Ship standardizes the minimum emergency medical supplies on board NATO naval ships operating in medically isolated areas. Whilst it is accepted that nations have their own choice of drugs for treatment in emergency medical cases, due to potential mutual assistance situations it is important that medical personnel are informed about the medical supplies issued to ships of other member nations.

9.5. Administrative Aspects of Military Healthcare

1. Clear communication and documentation of pre-existent medical conditions, medical care received in the field and at subsequent levels of care are key to ensuring that proper care is administered. In combat settings, it is crucial that healthcare providers at subsequent levels clearly understand the care that has been previously administered. Documentation also ensures standardization of terminology and conditions that allows tracking and trending of disease and injury data to identify potential epidemics and areas for improvement of care. Several STANAGS provide standardized ways to communicate, including a medical phrase book, means to classify diseases and injuries and communication of care that has been administered.

2. Included in this section is a brief description of the medical recording and documentation of ionizing radiation exposure. Treatment and evaluation of exposure to ionizing radiation is also addressed in AJMedP-7 Allied Joint Medical Doctrine for support to CBRN Defence Operations.

3. Classification of Diseases, Injuries and Causes of Death. As in all aspects of NATO operations, interoperability plays a key role in medical support and requires
that all organizations and personnel use common terms when describing diseases, injuries, and causes of death. A common practice in the medical community is to use an alphanumeric coding of diseases and injuries to facilitate identification, billing for services, comparison of disease states and tracking of care. Common coding is also essential to the success of the new NATO Trauma Registry. STANAG 2050 AMEDP-51 *Classification of Diseases, Injuries and Causes of Death* is the NATO standard for classification of diseases.

4. **Medical Warning Tags.** First responders and others who provide initial medical treatment and stabilization must often triage and treat individuals who are unconscious or otherwise incapacitated and unable to communicate critical information. This information includes previous medical history, medications and allergies. Ensuring that this medical information is readily available is critical when treating casualties during NATO operations. STANAG 2347 AMedP-34 *Medical Warning Tag* provides a standard means by which members of NATO forces ensure that this information is communicated. Members of NATO Forces who are affected by a significant medical condition, but which is not readily apparent when the individual is unable to communicate, shall wear the Medical Warning Tag. Obligatory information on a medical Tag includes: wearer’s name and family name, personal service number, nationality and a significant condition(s) affecting the wearer. A list of such conditions is proposed but is not mandatory. The shape, size and colour of the medical warning tag are left to national discretion.

5. **Documentation Relative to Initial Medical Treatment & Evacuation.** NATO's primary interest in medical care is that whether it is provided by one nation, several nations or multinational medical units, this care shall be able to meet standards acceptable to all participating nations. Even in crisis or conflict, the aim is to provide a standard of medical care as close as possible to prevailing peacetime medical standards.

6. The quality of medical records (or medical information) that is collected and transmitted has a significant impact on the quality of care that can be given, especially in a multinational setting. It is critical that, as patients move through the evacuation and treatment chain, the medical records of the care already received are then available to their new treatment teams at each succeeding medical treatment facility. NATO multinational medical care must be "continuous, relevant, and progressive" and this is not possible unless adequate medical records of each patient are produced, maintained, and transferred, particularly at Role 2 and above. Guidance for development of Medical Information Communication Systems to allow future easy transmission of this data will be found in AJMedP-5 Allied Joint Medical CIS Doctrine.

7. A hard copy Field Medical Card in a water resistant material that can be drawn or written upon with a water resistant pencil is still necessary for initial treatment and evacuation up to and including Role 1. A minimum core data set found on the Field Medical Card consists of identity, nature of injuries or illness, diagnosis, treatment and movement as outlined in the NATO Trauma Registry Minimum Data Set.
Nations may include other information in their Field Medical Cards but they should not exclude any of the information agreed upon by NATO. National Field Medical Cards are required to carry English and French text as a supplement to national language instructions.

8. At the Role 1 level, STANAG 2132 AMedP-8.1 *Documentation Related to Initial Medical Treatment and Evacuation* has developed standards for basic documentation regarding the treatment and evacuation of patients, as well as the cause(s) of death. This document provides basic information to be collected at the point of wounding or at Role 1 (the Field Medical Card), information to support further evacuation for care (The Patient Evacuation Tag), and Cause of Death (Medical Report of Cause of Death) which should be used by all nations. National variation in these forms is permitted so long as the required information can be transmitted.

9. At the Role 2 and 3 levels, STANAG 2061 *Procedures for Disposition of Allied Patients by Medical Installations* lays out the basic policies that "All clinical documents, to include X-rays, relating to the patient will accompany him on transfer to his own national organization." To the extent possible, such clinical documents must provide enough information to allow receiving medical personnel to continue care in full knowledge of previously given care, and must be easily interpretable by the receiving medical facilities. STANAG 2348 AMedP-8.2 *Basic Military Hospital Records* defines what information must be included in the records to be transferred with the patient. As electronic systems of medical records have become more common, data transfer standards have needed to be developed, and new documents address these issues, including STANAG 2231 AMedP-5.1 *Patient Data Exchange Format for Common Core Information* and STANAG 2543 AMedP-77 *Standards for Data Interchange between Health Information Systems*.

10. "The NATO Medical Services Phrase Book. STANAG 2131 AMedP-5 *The NATO Medical Services Phrase Book* consists of fourteen sections corresponding to the fourteen NATO Languages. The phrase book contains commonly used names of injuries and diseases as well as words and phrases which are indispensable for mutual understanding between medical and nursing personnel and patients of different nationalities.

11. STANAG 2474 – AMedP 7.8 *Recording of Operational Ionizing Radiation Exposure for Medical Purposes* and management of Dosimeters ensures that operationally-incurred ionizing radiation doses, estimated or measured, of all those presenting, whether as outpatients or inpatients at medical facilities, are obtained and recorded. It ensures that procedures are in place to document ionizing radiation exposure in appropriate medical records so that medical management may be optimized. This STANAG ensures that when personal radiation dosimeters come into custody of participating nations and/or are recovered on admission to an MTF, these dosimeters are passed through the medical lines of communication for return to the relevant nation. It also provides terms and definitions of exposure to ionizing radiation.
Chapter 10  Multinationality and Medical Support Structures

This Chapter provides an overview of the specifics and challenges that come with multinational medical support as well as a description of the medical command and control architecture with a particular focus on its multinational aspects.

10.1. Aspects of Multinationality

1. Medical assets represent significant national investments in military capability, both in terms of cost and the training time taken to generate the personnel that staff them. Medical assets also often require the support of other specialist capabilities to deploy or sustain them, such as medical logistics and engineering, even when they are not in active operational use. They are valuable, finite resources and it makes operational sense to make best use of them at all times, avoiding duplication of effort or deployment of redundant capability.

2. On operational deployments maximum effort should be made to tailor medical support provision to the predicted requirements. Otherwise some elements of the force may have an abundance of assets whilst others lack all but the fundamentals. A NATO commander’s medical staff should seek a balance across the joint operating area, both in terms of medical services and supplies held by the TCNs. The collective medical effort this produces is termed multinational medical support.

10.1.1. Multinational Medical Support

1. Multinational medical support is the overarching term for methods of medical support other than purely national to military operations. Multinational medical support aims to meet the needs of the joint operating environment by making the best possible use of all available medical assets in order to contribute to operational success. Multinational medical support involves the coordination and in some cases integration of assets from multiple nations through collaborative planning, deployment and utilization supported by multinational decision-making regarding force health protection, medical management and clinical processes.

2. Multinationality must take into account the diversity that exists within the Alliance and may require a flexibility of approach in how assets are grouped and utilized, if best possible use is to be made of them. Notwithstanding the relative levels of each national contribution, the greater the number of nations involved the greater the level of multination planning and coordination needed. Each particular national strategy will have implications for the provision of medical support and a balance will have to found that meets both national and NATO requirements.
3. By seeking multinational solutions, nations will be able to more effectively share the collective operational burden and provide the NATO commander with greater flexibility in how the force as a whole is utilized. This in turn will have benefits for the health care provided to the force as a whole. The greater the level of integration, the greater the collective benefits.

4. To be worthwhile multinational medical support must lead to increased collective performance. This will be achieved through improved utilization of assets, avoidance of duplication and increased flexibility. In other words:

   a. using less for the same or better results
   b. saving more lives through better coordination
   c. protecting forces better through information sharing
   d. reinforcing morale through the knowledge personnel will receive the same standard of care irrespective of their location in theatre and
   e. decreasing costs through better use of all available resources.

10.1.2. Barriers to Achieving Multinational Cooperation

1. Multinationality poses a number of key challenges whose resolution is crucial to military effectiveness and success in combined operations. These challenges include the formation of an effective command system, an intelligence system that can draw and share data from multiple national sources and a logistic system based on national lines of support that is able to collectively serve a multinational population in theatre.

2. Differences in force capabilities and operating procedures impose constraints on the ability of a force to integrate effectively. Among the issues that may need to be addressed are differences in operating procedures, technical compatibility of equipment and individual cultural perspectives. For example:

   a. Procedural and tactical differences may present the force with situations where different units from different services or nations may not be able to work effectively together.

   b. Language barriers create communication difficulties that may lead to differences in interpretation of the mission or assigned tasks; and may be intensified by limitations in the range of communications technologies available. At the tactical level, the ability to communicate between patient and medical staff is a key element in medical care.

   c. Lack of standardisation and interoperability can cause technical difficulties.
d. National security procedures restrict the ability to exchange information, intelligence or technical data.

e. Medical cooperation may be limited due to concerns regarding other Nations’ capabilities or standards of care.

f. Professional relationships vary between nations. For example nurses in some nations have greater independence, autonomy and status than in others.

g. National laws may prevent some health professionals working in another nation’s medical facilities.

h. Differences between the medical command structures of participating nations.

i. Legal barriers to drug, medical materiel and blood use.

3. Careful delineation of responsibilities prior to and during deployment can help overcome or avoid altogether differences between nations or between nations and the NATO command structure. Guidelines, both generic and specific to the operation must be established to clarify responsibilities and the how they relate to the planning and conduct of operations. Such responsibilities will be determined according to the specific circumstances of each operation and agreed by the TCNs and commands involved.

10.2. Multinational Medical Support Options

1. Medical support provision can range from purely national in nature to fully integrated multinational medical units (MMUs). A deployed NATO force is likely to be supported by a variety of the individual options available.

2. The various ways in which nations can be involved in provision of medical support to a multinational force allows each nation to adopt an approach best suited to its individual circumstances and national policy. For integration to be successful nations must have confidence that the arrangements are both flexible and reversible so that they can be adapted as circumstances change. Nations may choose to withdraw from an integrated arrangement, but should provide sufficient notice of this decision to avoid unbalancing the overall provision of medical support to the force.

3. A number of options are available to nations when determining their level of interaction with the medical assets of other nations on operations:

a. Coexistence. Medical capabilities to exist concurrently at the same time in the same place in theatre. In this case, the level of multinationality is low, but a minimum of common dialog and basic organization are required for the benefit of patient care. The NATO MEDDIR will enable achieving this minimum requirement.
b. **Cooperation.** Specific arrangements have been set between nations and/or civilian and military sectors to make best use of common medical functions. Equitable cooperative arrangement and mutual assistance to make use of medical support capabilities allow burden sharing. The NATO MEDDIR will guarantee relevance of these arrangements in line with NATO strategy in the field.

c. **Coordination.** Linkage between various national medical support capabilities in order to establish a medical task force. Coordination requires strong organization, common understanding, and a sufficient level of interoperability. Appropriate medical C2 capabilities are indispensable for coordination of medical support. If feasible, coordination should be established with civilian medical facilities as well, without any operational control (OPCON).

d. **Integration.** Combination of various national medical support capabilities in order to institute a harmonized medical task force under NATO control. Possible combinations range from small elements integrated into a lead nation facility up to an entire aggregation of various national elements. The NATO operational commander retains OPCON of the integrated facilities and ultimately can have operational command (OPCOM). On his behalf the MEDDIR will execute the functional command and coordinating authority. Where one nation’s medical facility is augmented by integral elements from another nation, ideally, training as a complete unit prior to deployment should be undertaken.

4. From the beginning of the planning process NATO commanders and their medical staff have a key role in tailoring the medical support to meet mission requirements. They also have a key role in coordinating medical functions and activities during the various phases of operations, and in some cases redistributing or integrating medical assets to meet collective need. This will require appropriate situational awareness and operational visibility of all medical assets deployed in theatre.

10.2.1. Role of Nations

1. **Degree of participation.** Nations can be involved in the medical multinational approach to different degrees, allowing each nation to define its stance in line with national policy. The underlying principle at all times is reversibility. Nations can decide for any reason to change their degree of participation or to stop it. The only exception being for forces already deployed, where a change should not be applied without an advance notification. The different degrees of participation can be characterized as:

2. **Independent Nation.** Despite the advantages of utilizing multinational medical support options, nations may, for a variety of reasons, choose to medically support
their forces with a purely national effort. In this way a nation assumes the total mission of providing medical assets and evacuation means to their units. In this case the basic link is dialog. The level of interaction will increase with nations deciding to develop cooperation.

3. National medical support will flow from national sources, usually based in the respective nation, and to their most forward deployed national units in the AOR. Each nation maintains absolute control over its own capabilities. Role 1 capabilities are generally provided under this option. In the maritime environment generally Role 2 MTFs afloat are similarly provided.

4. However, even if a TCN relies solely on national medical resources, the NATO commander will retain a certain responsibility and authority, described in later in this Chapter.

5. **Customer.** A nation participating can become a customer if it participates in an operation and lacks the required medical support capabilities as a whole or in parts. By compensating the respective LN and/or capability specialist nation, this allows to ensure the required medical support.

6. **Module Provider.** The modular approach will offer many possibilities to provide modules within required medical support capabilities. Nations may offer their available modules during force generation without becoming capability specialist. This choice is particularly flexible.

7. **Capability Specialist/Role Specialist Nation (RSN).** One nation assumes the responsibility for providing or procuring a particular class of supply or service for all or part of the multinational force.

8. In a particular operation common supplies and services may most efficiently be provided to all or a portion of the force from a single designated nation that has unique and qualified capabilities. A single nation may provide specified support to the entire or a portion of, the force with customer nations compensating the RSN for the support provided. Examples of candidates for role specialisation include certain medical services such as strategic AE or speciality care.

9. In all cases where a RSN is designated, the support is coordinated and centrally managed by the NATO commander who determines how to best support the operational concept. Before designating an RSN, legal advice should be sought regarding the implications of applicable international, CN and HN law and the appropriate instruments to give effect to the designation.

10. **Lead Nation (LN).** A LN for medical support assumes overall responsibility for coordinating and/or providing an agreed spectrum of medical support capabilities for all or a part of a multinational force within a defined geographical area.

11. Administrative, legal and financial issues between TCNs and the LN, for example in the form of a memorandum of understanding (MOU), will be a part of this
arrangement. In a NATO operation more than one LN could be designated to provide a specified range of support.

12. A LN mission is similar to a RSN mission with the main difference being that the LN mission is wider in scope and geographically orientated. Medical support to a HQ and AE covering a specific sector in the area of operation can be included under this option.

13. Successful medical support to an operation by means of customer, module provider, RSN, and LN will only be achievable through the coordination and integration level of the interaction spectrum.

10.2.2. Mutual Support Agreements

1. TCNs retain the option to develop mutual support arrangements, bi- or multilaterally to provide medical support to their forces. This is especially useful when TCNs have low numbers of forces collocated with the forces of another nation or during specific operations or phases of an operation (for example during a relief in place or if one formation is passing through another).

2. Most mutual support agreements will be created at the national level and involve the strategic NATO authority to ensure the national arrangements fit into the overall NATO concept of support.

10.2.3. Multinational Medical Units

1. To take advantage of economies of scale, medical support capabilities may be provided by medical units composed of more than one nation as a multinational medical unit. This is an attractive support option when a single nation is capable of providing the nucleus and the command structure of a MTF, which is supplemented or augmented with capabilities, assets, and services by other nations. Common funding, cost sharing, reimbursement or provision of services free of charge should be agreed to as a part of MMU participation.

2. The flexibility offered by MMUs might be particularly attractive when a single nation is capable of providing the nucleus of the unit and/or the command structure around which the rest of the unit can be formed through augmentation or provision of complementary units from other nations. The MMU will require a designated commander who in turn will need clearly defined authority over the subunits that comprise it realistically this should be OPCON.

3. MMUs can offer a way for some countries to contribute to an overall operational effort within limited resources. MMUs can also be used as a force generation tool, which may be important in missions with a prolonged duration, which some nations may not otherwise be able to support beyond the first roulement.
4. In general the planning and provision of services will not differ substantially from those that the MMU components have been trained to provide within their own national forces. However, C2 within a MMU will be more challenging and its organization and preparation will need to reflect that.

5. Funding the operation of a MMU will be the responsibility of the contributing nations in accordance with established NATO procedures, usually shared costs, but the specific arrangements will be negotiated between the nations concerned. Common funding to support MMU activity is an option but can only be undertaken with the agreement of ACO.

6. Support arrangements for the MMU must be mutually agreed upon and specific to the operation or exercise on which the MMU is deployed. Documents must conform to recognized NATO procedures and practices and generally should not contradict the domestic law of the nations involved. As there are also likely to be international legal considerations, formal legal advice is critical during all phases of medical support negotiations. Status of Forces agreements (SOFAs) may also apply if the presence of forces in a foreign territory is undertaken with the consent of the nation involved.

7. The duration of operation of a MMU should be agreed upon in the force generation process, preferably formalized in a MOU between the nations concerned and ACO.

8. The level and quality of care provided by a MMU must be of a level acceptable to the nations contributing assets to the MMU and in accordance with all applicable STANAGs. The specific requirements should be established in the medical annex to the OPLAN or subject to separate technical agreements between the nations involved.

10.2.4. Host Nation Support

1. Medical support by or to the Host Nation may be provided in accordance with arrangements or agreements between NATO, its TCNs and the government of the HN that accepts NATO forces operating in or transiting through its territory in order to facilitate the accomplishment of the military mission. The HN will be involved in writing the HNS plans, will control their implementation, and monitor the support provided, whilst complying with local laws, regulations and cultural considerations.

2. The quality and quantity of medical resources available in the JOA is important in determining the size and capability of the medical organization the force must establish. The more HNS that is available for force use, the less has to be provided by TCNs. Resources which might be obtained through HNS can include:

   a. Patient evacuation assets (air, land and maritime) for both, intra-theatre and inter-theatre medical evacuation.
b. Treatment capability within the whole continuum of care, but particularly
hospital response capability (Role 3 MTF).

c. Medical logistics support, including the provision of drugs, consumables, disposables, and medical gases.

d. Essential non-medical support, including buildings, water, power, disposal of waste, laundry, labour, etc.

3. The appropriate NATO commander must be involved in the development of HNS options and is responsible for HNS planning and development of appropriate legal instruments. TCNs will retain the sovereign right to negotiate and conclude bi-lateral HNS instruments. However, it may be desirable to attempt to limit, as far as possible, the number of instruments used to a single one capable of supporting a broad range of potential operations. The NATO commander should be invited to participate in bi-lateral HNS negotiations, where cooperation between TCNs and the HN can be promoted. According to circumstances, NATO commanders may be required to negotiate and conclude HNS instruments for NATO multinational HQs, designated NATO multinational units and selected NATO theatre-level support organizations.

4. The support provided by the HN provides a crucial supplement to that provided by NATO and its nations. From the medical standpoint, consideration should be given to resource availability, compatibility of equipment, interoperability of medical support structures (both military and civilian), acceptability of procedures and quality and the standards of medical care available.

5. NATO forces may be deployed in areas where local medical structures do not meet the standards enjoyed by NATO nations. Such areas may not be subject to the same regulations regarding the environmental consequences of medical waste disposal, or may utilise medications and clinical supplies from sources not approved by NATO nations and which may not meet accepted standards for manufacture, storage or transportation. A further complication may be that local medical resources have been damaged by conflict or may be overwhelmed providing care for the local populace and/or displaced persons.

6. Overall HNS capability will be assessed by a combination of Medical Intelligence analysis and reconnaissance, and the political decision by the HN to make resources available to the incoming force. A key issue will be the standards of medical care available when compared to NATO force and national contingent criteria. It is vital that the NATO commander’s medical staffs are directly involved in the assessment of medical HNS capabilities as well as any attempt to develop HNS agreements for medical support. Medical HNS has many potential advantages if the medical care is of an acceptable quality and reliability. This latter point is particularly important for handling MASCAL, incident response, and other medical treatment surge needs which may occur on an infrequent and unplanned basis. Medical HNS could make a crucial difference during deployment and RSOI, when deploying NATO
medical facilities may not yet be fully operational and provided casualties from hostile action will be relatively unlikely. However, there will be many issues to resolve and medical staff, including personnel experienced in medical logistics, should be intimately involved in this process.

10.3. Authority and Responsibility

10.3.1. The Medical Responsibility of the Commander

1. As outlined in Chapter 1, provision of medical support within NATO is, in principle, a national responsibility. Nevertheless, NATO commanders share, together with TCNs, responsibility for the provision of appropriate medical support to the multinational forces they command. Implicit in this, is the responsibility of NATO commanders to ensure that the medical support provided is in accordance with the medical principles, policies and directives established and agreed by the Alliance as directed in MC 326/3 NATO Principles and Policies of Medical Support.

2. To be able to achieve this in practice, the NATO commander requires the support of a dedicated medical staff sufficient in number, training and experience. The NATO commander will, with the advice from this staff and the TCNs’ medical representatives:

   a. Establish the NATO medical support requirements.
   b. Coordinate medical planning and support within the JOA.

3. The medical support requirement will determine the resources needed to collect, evacuate, treat and hospitalize casualties occurring at agreed daily rates for the deployed force. It will also include the resources needed to provide preventive medicine services and force health protection support, including readiness assessment of medical capabilities.

4. Medical planning should consider options for the provision of medical support, including both national and elements as outlined above. Nations will retain overall command of their own resources until such time as they are released to the NATO commander. Each case will be different and the specific rules regarding control authorities, responsibilities and funding need to be established at an early stage during the planning process and well before TOA.

10.3.2. The Authority and Responsibility of the Force Commander

1. For military command to be effective, responsibility must be aligned with authority. Thus, a NATO commander assigned responsibility for a specific operation must also be given the authority to determine the medical support capability needed to accomplish the mission.
2. This responsibility continues throughout the execution of the mission itself, as on all operation the NATO commander will have a vested interest in the overall health of the force as this will have a direct impact on its operational effectiveness.

3. During NATO operations, units and formations should deploy and re-deploy with a coherent medical structure tailored to their anticipated employment. Under normal circumstances, nations will expect to have first call on their national medical assets. However, during peak periods when patient numbers are above normal levels the force commander will need to take appropriate action to utilize the full medical capacity and capability of the force. This may include redistribution of assets within the force. The authority to take such action is defined in MC 319/2 *NATO Principles and Policies for Logistics*. If used, such authority should be exercised only temporarily and in extraordinary situations.

**10.3.3. Coordinating Authority**

1. The NATO commander will typically be granted coordinating authority over the medical assets deployed to support the assigned mission. In coordinating the medical disposition of assets and activity involving two or more countries, commands or services, the NATO commander can require consultations to be conducted between the parties but will not normally have the authority to compel agreement. In the event the commander is unable to reach a consensus, the matter will have to be referred to higher authority. This coordinating authority is exercised both during force generation and execution of a given operation.

2. In exercising medical coordinating authority the NATO commander may:
   a. Evaluate medical intelligence/information about possible deployment areas and incorporate this data into contingency plans.
   b. Determine the minimum standards of individual first aid, health and hygiene to be achieved within the theatre.
   c. Require reports on existing bi- and multilateral medical HNS agreements that have been established, establish new medical HNS requirements, as well as initiate, participate, coordinate, and conduct negotiations for them.
   d. Establish epidemiological health surveillance of the force deployed.
   e. Direct appropriate education and training, and propose immunisation policy and programmes for disease prevention and control within the force.
   f. Direct environmental monitoring/occupational hygiene measures.
   g. Establish a specific medical C2 system to ensure continuous in transit care during patient evacuation.
h. Make arrangements to ensure safe shelter, food, water and sanitation within the joint operations area.

i. Determine the theatre holding policy.

j. Propose the use of CBRN medical counter-measures including the administration of prophylactics.

10.3.4. Evaluation and Assessment Authority

1. The NATO commander will have oversight of all medical issues likely to have an effect on the mission. Therefore, once deployed into theatre and for the duration of operation, all assigned medical units must provide status reports in a timely manner to the chain of command. This requires a reporting mechanism that is both sufficiently detailed and yet easily interpreted within a multinational force.

2. Such reports will follow agreed NATO standards but may require augmentation with additional reports or procedures in order to meet the needs of each mission. This may include:

a. Assessments of the status of the medical support structure and its ability to provide for the health needs of the force.

b. Evaluation and promotion of opportunities for medical coordination and cooperation between assets or TCNs.

c. Identification of key lessons relevant to TCNs and NATO, using the lessons process of the NATO Joint Analysis and Lessons Learnt Centre (JALLC). Including the promotion of innovation and recognised best practice across the force.

d. Identification of deficiencies, issues requiring command awareness or action.

e. Establishing agreed standards for quality assurance across the force, especially if multinational medical units are being used.

f. Ensured clinical governance, providing a framework in which medical support capabilities, and individual medical staff, are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.

3. A NATO commander may choose to evaluate and certify MTFs located within the joint operations area. Depending upon the nature of the mission these evaluations could extend not only to NATO MTFs, but also to those from non-NATO TCNs or HN assets. NATO’s standardized approach to this process is detailed in STANAG 2560 - AMedP-27 Medical Evaluation Manual (MEM).
4. This evaluation may include both core medical capabilities applicable to all NATO operations as well as capabilities tailored to meet the needs of specific operations, deployments, and exercises involving combined joint forces. The evaluation may also serve as an important component of the on-going force protection assessment programme covering such aspects as physical security, safety, and health undertaken as a collaborative effort involving the appropriate staff branches of the commander’s HQ.

10.3.5. Medical Responsibilities of the NATO Strategic Commands

The medical responsibilities of the NATO Strategic Commands (SCs), ACO and ACT, are as follows:

a. Defence Planning. Guidance at the SC level is a Bi-SC responsibility. Within this, ACT has the lead for military medical aspects of the defence planning process, with medical support forming an independent planning domain. In turn, ACO leads on military aspects of civil emergency planning as well as nuclear planning.

b. Command and Control of Forces. C2 of forces, including operational planning, is the responsibility of ACO. For force generation, ACO in consultation with the Nations allocates resources, including funding, to support the NATO commander’s operational plan. ACO may assist in the coordination of medical support provision to TCNs for specific national requirements, especially if these are identified before or during the execution of the operation.

c. Joint and Combined Medical Concepts and Doctrine. ACT is responsible for NATO joint and combined medical concepts and doctrine as well as assisting development of military medical concepts by Partner nations. ACT leads the NATO medical lessons process, supported by the technical expertise of JALLC. Lessons identified in this way will inform medical concepts, doctrine and capability development. Based upon these, ACO will develop strategic medical directives and procedures for operations, including Partner-related operations.

d. Medical Intelligence Support. ACO provides medical intelligence support for operational planning and operations, while ACT concentrates on long-term analysis of trends and development of medical intelligence concepts and capabilities.

e. Medical Communications and Information Systems. ACT guides NATO’s medical CIS strategy, concepts, capabilities and architecture whilst ACO focuses on operational planning and is responsible for identifying shortfalls in medical CIS capability.
10.3.6. Medical Responsibilities of Joint Commands and Combined Joint Task Forces

1. Joint commanders have the operational level command. At this level, based on strategic military guidance, military campaigns are planned, conducted, sequenced, directed and sustained in order to attain the identified NATO end-state. During an operation the designated operational level commander exercises their responsibility through a Joint Command (JC) HQ that, depending on the characteristics of the operation (type, size, duration, joint/combined character, location of the JOA will be either static or deployed as a Joint Task Force (JTF) HQ.

2. A JTF HQ is deployable and its minimum framework staff (JTF HQ nucleus) is contained in each JFC or JC HQ (parent HQ). The JTF HQ nucleus can then expand in accordance with operational requirements, through the provision of augmentation modules (containing additional staff elements from other NATO HQs and/or nations) and support modules (specialised support organizations, such as a HQ medical support unit).

3. Commanders at the operation level (in JFCs, JCs and JTFs) assume the following responsibilities:

   a. **Contingency Medical Planning.** Contingent operational level medical planning will be conducted concurrently alongside the development of medical strategic plans by ACO. There will be a constant dialogue between the two levels of command to ensure medical planning efforts are complementary.

   b. **Identification of Medical Support Requirements.** The conduct of mission analysis and the identification of medical support requirements are essential. These requirements may include the provision of medical support capabilities, medical intelligence, medical communications, medical HNS or provision of local resources and creation of SOFAs.

   c. **Medical Command and Control.** Based on the medical planning process and associated planning conferences, the operational level of command details the medical C2 organization and, on TOA, coordinates all aspects of medical support to a specific operation.

   d. **Assessment of Medical Support Capabilities.** The operational level commander is responsible for the evaluation of medical support capabilities and certification of non-NATO TCNs’ medical assets prior to deployment as well as the assessment of all nations’ medical support capabilities during deployment.

   e. **Health Surveillance.** Evaluation of the health status of the force during deployment is a key responsibility of the operational commander. The
SCs will contribute through development of mission specific assessment criteria and, in conjunction with the nations, will execute epidemiological surveillance programmes and other evaluation programmes of the health status of deployed troops.

10.3.7. Medical Responsibilities of Component Commands

1. Component commands (CCs)\textsuperscript{56} will develop specific component orientated medical planning for contingency operations as directed by the Joint Commander.

2. Certain staffs of the CCs may provide medical augmentation to a medical coordination cell, which is included in each joint HQ. Medical staff of CCs may take part in operations as directed.

10.3.8. The Commander’s Medical Staff

1. To ensure the provision of appropriate medical planning and support to the forces under command, the NATO commander must be provided with a medical staff.

2. Development and implementation of a robust FHP policy requires that the MEDAD is granted direct access to the commander and key staff elements at all levels of command. If there are medical staffs at HQ level embedded in other J staff cells, they are to follow technical directions given by the MEDAD. The MEDAD’s staff must be capable of overseeing all required medical functions and be successfully integrated into the HQ staff structure.

3. During operations, the MEDDIR will be responsible for the implementation of medical policy, plans, and coordination of medical support within the commander’s area of responsibility (AOR). The relations between the different medical staffs in theatre will be aligned to the authority and responsibility delineated in the C2 architecture by relevant OPLANs, support plans, and SOPs.

10.3.9. Responsibilities of Contributing Nations

1. Medical Support to Contributed Forces. While there may be a variety of options to provide medical support to forces that nations have contributed to a NATO operation, the TCNs remain accountable for the health of their own personnel. If nations elect to support forces through a purely national medical support system, it remains vital that they establish a national medical element including a national senior medical officer that interfaces with the NATO medical organization, and establishes permanent contact with the NATO MEDDIR. The national senior medical officer’s location can be mission and nation dependent and may include the additional responsibility of serving as the command’s MEDDIR.

\textsuperscript{56} This is applicable to a Joint Logistic Support Group (JLSG) as well, if such an entity is deployed in a mission (see STANAG 2230 AJP-4.6 ALLIED JOINT DOCTRINE FOR THE JOINT LOGISTIC SUPPORT GROUP).
2. **Contribution of Resources.** With few exceptions all personnel and equipment required to conduct an operation are provided by TCNs. Under NATO procedures, nations transfer authority over their national force contributions to NATO at an agreed time. This transfer may include medical support capabilities that nations nominate as centralised or theatre assets. Type and amount of medical assets and TOA limitations can significantly affect the actual medical support concept for a NATO operation.

3. **Planning.** Nations are involved in the medical planning process from the strategic down to tactical level. In developing the initial medical support concept, nations need to be involved from the outset. This includes the development of the medical C2 architecture, establishment of mutual support arrangements, and the conclusion of HNS agreements. Inclusion of national influence in the concept and plan development is essential to avoid shortfalls and misunderstandings during the force generation process.

4. **Lead Nation (LN) or Capability Specialist/Role Specialist (RS) Mission.** Nations may be called upon to coordinate and plan, as well as to provide actual support in specific functional areas, including medical support, to other national forces. In all cases the assumption of these missions is voluntary and coordinated in the planning process.

5. **HNS.** Nations may provide HNS, including medical HNS, to Article 5 operations and CROs.

6. **National Support Element (NSE) Establishment.** TCNs may wish to establish a NSE to coordinate national logistic and medical support functions with other TCNs and with NATO commanders' medical staffs. In such cases, coordination with the multinational medical C2 structure is required, along with a reporting framework, to promote good communications between and among levels of command, and their respective medical support elements.

**10.4. Multinational Medical Command and Control Architecture**

**10.4.1. Multinational Medical Command and Control**

1. Medical support to operations is a key enabling function. In order to follow the NATO commander's concept of operations, the establishment of a flexible and dedicated medical C2 structure is necessary to coordinate national and multinational medical support. Medical C2 activities must be organised based on the operational mission requirements and closely coordinated with nations to obtain full support and staffing for the structure. For the sake of simplicity the layers of command should be kept as few as possible and the responsibilities clearly delineated, fully understood and agreed upon. The lines of medical accountability and C2 must be clearly established in relevant OPLANs and agreed upon by TCNs.
2. The medical C2 organization in theatre must be capable of planning, executing, controlling, sustaining and assessing the full range of medical support functions. It must also be capable of passing prompt and accurate operational medical advice to respective commanders and pertinent general medical information to the NATO commander’s medical staff.

3. Medical decisions will have an operational and a logistic impact. Likewise operational decisions of the commander will influence the medical support. The medical C2 structure must be able to provide the NATO commander with visibility over all medical implications of his decisions.

4. The medical C2 structure demands granted visibility and autonomy, as medical personnel face unique problems affecting the health of armed forces reflecting the special and non-transferable medical responsibility for the health of the force.

5. Other medical activities are compelled to a level of professional confidentiality (patient medical data exchange) or timeliness (provision of care), which call for specific qualifications, requirements and procedures.

6. Whilst overall policy, direction and control of medical activity are vested in the various key medical offices, implementation is effected through a comprehensive staff structure. To achieve a full operational and coordinating capability, it is crucial that the medical personnel are identified by the parent NATO HQ and TCNs, and fully trained in the medical management of operations according to their assigned duties.

7. To accomplish their specific mission and tasks across the whole medical C2 structure, the multinational MEDADs and their staffs work under the authority granted to the commander they are assigned to, and exercise, as directed, coordinating, assessment, inspection or visit and redistribution authorities in the area of medical support. It should be noted that the delegation of authority in terms of OPCOM and OPCON does not include a delegation or change of administrative or logistic responsibilities. Any such delegation or change must be specifically ordered, either separately or together with the delegation of command authority. On occasion, changes to the degree of command authority may require changes to administrative or logistic responsibilities, and circumstances will arise in which administrative or logistic considerations place constraints on operations. Therefore, a delegating authority must always consider the possible administrative and logistic implications of any intended operational arrangement.

8. The medical C2 architecture includes the SC MEDADs and extends through the theatre level MEDDIRs and other multinational MEDADs (for example divisional MEDAD, multinational maritime force (MNMF) MEDAD) to all medical assets in theatre.

10.4.2. Allied Command Operations Medical Advisor
At Strategic Command (SC) level, ACO medical representation may be activated in the strategic operations centre (SOC), strategic coordination team (SCT) and other coordination centres, such as the ACO Comprehensive Crisis and Operations Management Centre (CCOMC). Depending on circumstances, the medical representation in these elements should in principle be permanent. The relationship between the ACO MEDAD and those in subordinate formations is one of functional direction and coordination; executive authority remains with the operational commander’s J3 command chain.

10.4.3. Medical Director

1. The MEDDIR is responsible for:
   a. Developing, setting and disseminating medical policies, plans and directives for the theatre.
   b. Monitoring and assessing of the medical situation of deployed troops and the health situation in theatre.
   c. Collection and assessment of the medical situation of deployed troops and the overall health situation in theatre.
   d. Collection and collation of medical reports from CC HQs and related organizations, including IOs and NGOs.
   e. Tracking of medical assets and capabilities, including AE.
   f. Production of the theatre medical assessment report.
   g. Collection of Medical Intelligence.
   h. Contribution to short and longer term operational planning.
   i. Establishing and maintaining medical interface/liaison with relevant local authorities, IOs and NGOs.
   j. Coordinating and deconflicting multinational medical support to the forces in theatre.
   k. Provision of joint medical guidance through liaison with multinational component command medical directors.

2. The MEDDIR will:
   a. Coordinate all medical force-protection related actions (preventive medicine, Medical Intelligence, epidemiological and environmental survey, hygiene and sanitation, veterinary services).
b. Ensure medical response within CIM and establish an overall MASCAL Plan, in coordination with other HQ staffs.

c. Provide medical CBRN advice.

d. Direct the preparation and maintenance of a summary of the medical support capabilities in theatre and other relevant medical information (Theatre Medical Handbook) for theatre-wide dissemination.

e. Coordinate with and support Civil-Military staffs in the area of public health and humanitarian assistance throughout the theatre.

10.4.4. Combined Joint Medical Branch

1. To affect all medical support tasks the combined joint medical branch (CJMED) supporting the MEDDIR requires the following functions:

   a. MEDDIR (Chief CJMED)
   b. Medical plans/Deputy MEDDIR
   c. Medical operations\textsuperscript{57}
   d. Patient Evacuation Coordination\textsuperscript{58}
   e. Force health protection and/or preventive medicine
   f. Health advice/liaison for host nation health sector development\textsuperscript{59}
   g. Medical logistics
   h. Veterinary services functions
   i. Administrative assistance and information management

2. The staff of the MEDDIR expands through national augmentees from a nucleus to a full establishment, capable to address the whole spectrum of medical issues that the operation demands.

\textsuperscript{57} Section Head and sufficient personnel to man the medical desk in the combined joint operations centre (CJOC), to sustain 24 hour manning if necessary. The number of personnel may be increased or reduced depending on tempo, as determined by the estimate. Medical services personnel running the medical desk require access to clinical expertise at all times.

\textsuperscript{58} Including patient regulation for TACEVAC between medical facilities, and co-ordination of STRATEVAC, usually also based in the CJOC and sustained 24/7.

\textsuperscript{59} This health advisor might usually work within the branch responsible for reconstruction and development.
3. During a JTF mission there will be generally the need for qualified personnel to assess the health risk and to provide preventive and environmental medicine support. As a theatre asset these personnel as well as the relevant equipment will be found through the force generation process and employed under the control of the CJMED public health officer.

10.4.5. Liaison with the HN and Civil Agencies and Organizations

1. Coordination and cooperation between NATO and HN military and civilian authorities must be carried out at all appropriate levels to optimise medical support. Cooperation requires a clear division of responsibility and, in turn, a clear understanding of the various national capabilities and limitations, and of the NATO medical support structure. Cooperation also extends to governmental organizations, IOs and NGOs, which may operate alongside NATO in the theatre.

2. Specified points of contact and liaison with HN as well as other civil agencies (GOs, IOs and NGOs) must be identified at every level of the command structure.

3. Civil agencies and organizations may be involved in assisting the local population, which may include medical services. Links are to be established by the medical C2 architecture in theatre, at appropriate level in order to coordinate efforts, share important medical information, and to optimize resources in the achievement of adequate medical support.

4. Medical elements may contribute to host nation health sector reconstruction and development. Although not their primary purpose, this can promote stabilisation and the conditions for operational success. To achieve this requires engagement with a broad range of experts, civilian and military, from governmental organizations, IOs and NGOs.

5. Further details are provided in Chapter 7 as well as AJMedP-6 Allied Joint Civil-Military Medical Interface Doctrine and AD 83-2 ACO Directive on Military Medical Services Engagement in Humanitarian Assistance, and Governance, Reconstruction and Development.

10.4.6. Medical Coordination Cell

The medical coordination cell (MEDCC) may be the executing body of the medical organization for all JTF operations. The MEDCC coordinates multinational, joint and multifunctional medical issues, including AE. The MEDCC will be part of the respective HQ medical staff element.

a. The MEDCC is designed as a modular structure that encompasses two cells, medical operations/plans cell and the patient evacuation coordination cell. The MEDDIR may advise according to the specific needs of the mission, on the number and position of personnel employed within the MEDCC.
b. The main function of the MEDCC is the execution of medical plans and the implementation of medical policies set by the MEDAD. It coordinates implementation and execution of the full spectrum of medical and health plans between all components of the JTF.

c. The function of the ops/plans cell is to coordinate current medical operations and develop medical support planning for future medical operations as directed by the MEDCC. It develops and updates the theatre-level MASCAL plan and cooperates with the PECC in case of its execution. It provides the expertise required to implement the preventive medicine and environmental policies directed by the MEDDIR. The ops/plans cell coordinates the activities of the Environmental Health Team. During a JTF mission there will generally be the need for qualified personnel to assess the health risk and to provide preventive and environmental medicine support. As a theatre asset these personnel with the relevant equipment will be found through the force generation process and employed under the control of the MEDCC environmental health officer.

d. The PECC provides the theatre level MedEvac coordinating and regulating functions for all patients, moving beyond formation boundaries, in conjunction with force components and theatre logistic and movement control agencies. It is responsible for patient tracking and the maintenance of the MTF capability database. It must be operational 24/7. The PECC must have its own dedicated communication links to the key nodes of the evacuation system. Should a MASCAL situation arise the PECC will implement the MEDDIR’s decisions and act as the interface between the MEDDIR and the units involved in the MASCAL.
ANNEX B GLOSSARY OF TERMS AND DEFINITIONS

See:

- AAP-6 NATO GLOSSARY OF TERMS AND DEFINITIONS
- AAP-15 NATO GLOSSARY OF ABBREVIATIONS USED IN NATO DOCUMENTS AND PUBLICATIONS
- AMedP-13 NATO GLOSSARY OF MEDICAL TERMS AND DEFINITIONS
- NATO TERMINOLOGY MANAGEMENT SYSTEM
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## ANNEX C GLOSSARY OF ABBREVIATIONS AND ACRONYMS

This Glossary contains abbreviations and acronyms used in this document as well as others commonly used in joint and combined operations. A comprehensive list of NATO abbreviations is contained in AAP-15 *NATO Glossary of Abbreviations used in NATO Documents and Publications*.

### A
- **ACO**  Allied Command Operations
- **ACT**  Allied Command Transformation
- **AE**  Aeromedical Evacuation
- **AJP**  Allied Joint Publication
- **ALSS**  Advanced Logistic Support Site
- **AMedP**  Allied Medical Publication
- **AOR**  Area of Responsibility
- **AOO**  Area of Operations
- **APOD**  Air Point of Disembarkation
- **APOE**  Air Point of Embarkation
- **ASU**  Aeromedical Staging Unit

### B
- **BC**  Battle Casualty
- **Bi-SC**  Bi-Strategic Commands

### C
- **C2**  Command and Control
- **C3**  Consultation, Command and Control
- **CBRN**  Chemical, Biological, Radiological and Nuclear
- **CC**  Component Commands
- **CIM**  Critical Incident Management
- **CIMIC**  Civil-Military Cooperation
- **CIS**  Communications and Information System
- **CJMEd**  Combined Joint Medical Branch
- **CJOc**  Combined Joint Operations Centre
- **CM**  Consequence Management
- **COA**  Courses of Action
- **COMEDS**  Committee of the Chiefs of Military Medical Services in NATO
- **CONOPS**  Concept of Operations
- **CRO**  Crisis Response Operations
- **CSU**  Casualty Staging Unit
- **CT**  Computed Tomography

### D
- **DCS**  Damage Control Surgery
DNBI Disease and Non-Battle Injury(ies)
DOB Deployed Operating Base
DR Disaster Relief

E
EIH Environmental and Industrial Hazards
EU European Union

H
HA Humanitarian Assistance
HN Host Nation
HNS Host Nation Support
HQ Headquarters

I
ICRC International Committee of the Red Cross
ICU Intensive Care Unit
IDRO International Disaster Relief Operation
IO International Organisation

J
JALLC Joint Analysis and Lessons Learnt Centre
JC Joint Command
JFC Joint Forces Command
JOA Joint Operations Area
JOC Joint Operations Centre
JTF Joint Task Force

L
LN Lead Nation
LOC Line of Communication

M
MASCAL Mass Casualty
MC Military Committee
MEDDIR Medical Director
MED Medical
MEDAD Medical Advisor
MedEvac Medical Evacuation
MMU Multinational Medical Unit
MOU Memorandum of Understanding
MTF Medical Treatment Facility

N
NATO North Atlantic Treaty Organisation
NBC Nuclear, Biological and Chemical
NGO Non-Governmental Organisation
### NRF
NATO Response Force

### O
- **OPCOM**: Operational Command
- **OPCON**: Operational Control
- **OPLAN**: Operation Plan

### P
- **PAR**: Population at Risk
- **PECC**: Patient Evacuation Coordination Cell
- **PfP**: Partnership for Peace

### R
- **R&D**: Reconstruction and Development
- **RFI**: Requests for Information
- **RSN**: Role Specialisation Nation
- **RSOI**: Reception, Staging, Onward Movement and Integration

### S
- **SC**: Strategic Command(er)
- **SHC**: Secondary Health Care
- **SOF**: Special Operations Forces
- **SOFA**: Status of Forces Agreement
- **SOP**: Standing Operating Procedure
- **SPOE**: Sea Point of Embarkation
- **STANAG**: Standardisation Agreement

### T
- **TCN**: Troop Contributing Nation
- **TOA**: Transfer of Authority

### W
- **WMD**: Weapons of Mass Destruction
ANNEX D LIST OF REFERENCES

"THE GENEVA CONVENTIONS OF 1949", (INCORPORATING THE HAGUE PROTOCOLS OF 1907)

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MC 133/4 NATO’S OPERATIONS PLANNING
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