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Joint Medical Doctrine

Development, Concepts and Doctrine Centre

JOINT DOCTRINE PUBLICATION 4-03

JOINT MEDICAL DOCTRINE

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CHANGE 1

Change 1 to JDP 4-03, *Joint Medical Doctrine*, 3rd Edition was promulgated in November 2012. Change 1 updates current medical doctrine on eligibility for UK Defence Medical Services (DMS) medical support, in particular for non-UK military personnel, and for civilians.

On operations, DMS capability and capacity is predicated on UK military 'population at risk'. Providing medical support to civilians remains a host nation responsibility. While these policies remain extant, over time legal, ethical and operational drivers will almost inevitably lead to DMS personnel on operations treating non-UK military personnel and civilians.

Treating non-UK military personnel and civilians is now covered in paragraphs 118-124. No other content of this publication has been reviewed or altered.

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PREFACE

Purpose

1. JDP 4-03 (3rd Edition) *Joint Medical Doctrine* is capstone medical doctrine applicable to all Permanent Joint Headquarters (PJHQ), single-Service and Defence Medical Services (DMS) operational and tactical medical doctrine. Its purpose is to provide guidance to all levels of joint command (including the Joint Task Force Commander and his staff) and to inform superior and subordinate levels of command. JDP 4-03 contains the fundamental principles by which medical capability should be delivered, both within the wider strategic context and on operations.

Scope

2. This doctrine is consonant with extant Surgeon General's Policies and Guidance, JDP 0-01 *British Defence Doctrine*[1] (BDD) and higher level Joint Doctrine Publications. Its principal themes are medical support in the operational environment, the joint nature of that environment and the increasing requirement to act as part of a coalition. The doctrine is authoritative without being unbending, allowing flexibility in response and interpretation to achieve optimal outcomes at all levels of mission type and tasks.

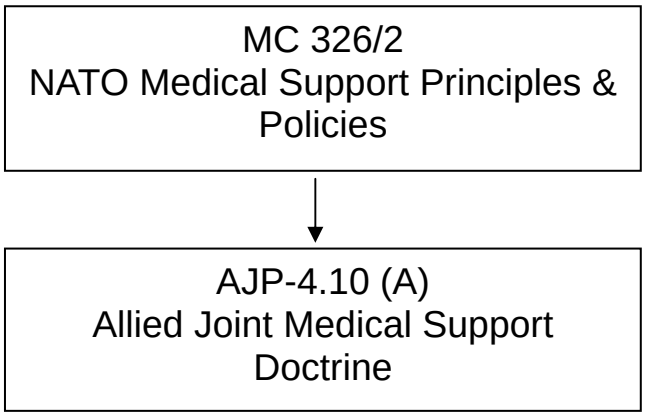
3. JDP 4-03 seeks to establish a common framework of understanding for the delivery of medical care in the military. It does not seek to reduce clinical freedom or prevent the optimum treatment. It describes the clinical rationale behind the organisation of medical support and its employment within the military. In military healthcare large numbers of clinical personnel may attend the same casualty at different points in the patient care pathway. This is one of the main differences between military and civilian medical services and is why common, overarching doctrine is required. Clinical direction is confined to broad principles only. More detailed explanations are available from other joint and single-Service publications.

4. Medical support to the military has a unique profile; it is emotive, in the public domain, has an impact upon the national will, is linked to and compared with the NHS and is critical to the maintenance of morale on operations. It is influenced and affected through all three components of fighting power as described in BDD – conceptual, moral and physical – which provides the foundation for the approach in this doctrine.

[1] British Defence Doctrine, JDP 0-01(3rd Edition), Development, Concepts and Doctrine Centre, 2008. This is the capstone doctrine for the Armed Forces and conveys a message about the tone and nature of the British approach to military activity at all levels.

5. This doctrine is not constrained by current operations and reflects medical interactions across the deployment arc, the spectrum of military activities and along the patient care pathway. It also acknowledges the requirement for cross-governmental interactions in military medical activities and the need to liaise with International Organisations, host nation agencies and Non-governmental Organisations (NGOs) to achieve optimal medical outcomes.

6. To be successful, alliance or coalition military activity requires a clearly understood doctrine that is acceptable to all nations and Services concerned. It is UK policy that national doctrine should be consistent with NATO doctrine,[2] terminology and procedures where possible. In the main, JDP 4-03 does this. However, in areas where NATO doctrine does not provide adequate cover national doctrine has been developed. The hierarchy of the NATO series of medical doctrine is as follows:



7. JDP 4-03 (3rd Edition) applies to all types and scales of operation, exercises and other military tasks. It also encompasses functional links between medical and non-medical enablers, military and non-military actors, national and international alliances, other government departments and NGOs. The scope, as well as the doctrinal and functional links of this publication are shown in Figure 1.

[2] Users are advised to be aware of and to consult NATO doctrine in conjunction with national doctrine.

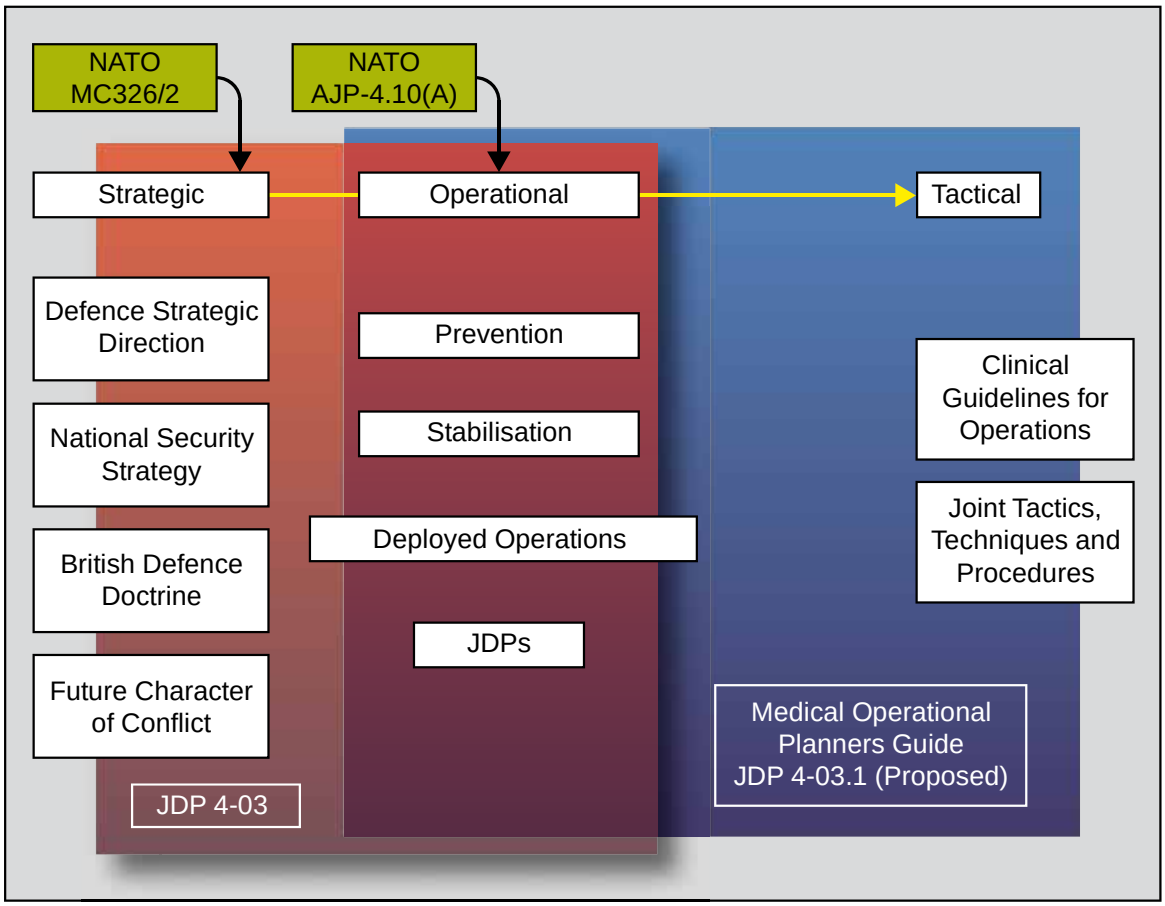


Figure 1 – Scope and Linkages of JDP 4-03

8. As shown at Figure 1 the Defence Strategic Direction and the National Security Strategy guides JDP 4-03. Direct links with the following publications will need to be maintained and users are advised to consult the following for additional guidance:

a. *High Level Operational Concept* (HLOC).

b. JDP 1-10 *Prisoners of War, Internees and Detainees*.

c. JDP 3-00 *Campaign Execution*.

d. JDP 3-40 *Security and Stabilisation: The Military Contribution*.

e. JWP 3-50 *The Military Contribution to Peace Support Operations*.

f. JDP 3-51 *Non-combatant Evacuation Operations*.

g. JDP 3-52 *Disaster Relief Operations*.

h. JDP 3-64 *Joint Force Protection*.

i. JDP 3-90 *Civil-Military Co-operation*.

j. JDP 4-00 *Logistics for Joint Operations*.

k. JDP 5-00 *Campaign Planning*.

l. JDP 6-00 *Communications and Information Systems Support to Joint Operations*.

9. JDP 4-03 (3rd Edition) will lead to the development of subordinate doctrine and Joint Tactics, Techniques and Procedures.

JOINT MEDICAL DOCTRINE

CONTENTS

CHAPTER 1 – CONTEXT, ENABLERS AND CONSTRAINTS

SECTION I – MILITARY MEDICAL ACTIVITY IN CONTEXT

101. The Future Character of Conflict[1] describes how the global security environment is changing and how conflict may evolve over the next 20 years. Implications for the UK military and the Defence Medical Services (DMS) include: the increasing importance of conflict prevention; greater use of stabilisation in pre and post-conflict situations; and working with other nations as part of extant multinational organisations (NATO, United Nations, European Union, etc.) or in bespoke coalitions. The military tasks,[2] however, remain valid and guide the current planning models.

102. Future medical capability will need to support a comprehensive approach where the military is employed as just one of the levers of power. There will also be an enduring requirement to support the generation of fighting power. This is a key element in sustaining the physical, psychological and social well-being of the most important of military resource – people.

103. Elements that need to be considered when setting the context are:

a. **Changes in Society**. Public expectations of an individual's right to health and of a high quality of care continue to increase. Employers have a legal duty of care in this respect and the military is no different, even when deployed on operations. Media coverage of medical support to troops, or perceived inadequacies in its provision, can dramatically shift public and political opinion. While accepting that military activities are hazardous, public opinion does not tolerate what is perceived to be an avoidable risk. As a result, there is a requirement for the health of any military force to be given high priority before, during and after any operational deployment. An effective and reliable military medical support system helps to improve troop morale and maintain the trust of military personnel, the general public and their political leadership.

b. **Changes in Medicine**. Medicine has become a highly specialised and technical field. This includes military medicine which leads the field in elements of emergency medicine and rehabilitation. The exponential growth in civilian specialties and sub-specialties has been mirrored in

[1] DCDC, Strategic Trends Programme, *Future Character of Conflict*, February 2010.
[2] As defined in the Technical Instruction drawn from the Strategic Defence and Security Review, 2010.

military medicine. Consequently, enhanced strategic, conceptual and doctrinal support is necessary.

b. **Changes in the Military**. Armed Forces are becoming smaller, particularly among Western nations. As a result there is a proportionately greater loss of capability if an individual is unfit for duty. At the same time some military forces are finding it difficult to both recruit and retain medical professionals and to fund expensive medical equipment from constrained budgets. This may compromise the ability of the DMS to produce a required medical capability for a planned or contingent operation. The ability to operate alongside other nations may mitigate this risk but presents its own problems of coalition burden-sharing integration.

c. **Changes in Threat**. In addition to conventional threats from state and non-state actors, it is likely that adversaries will seek to combine conventional, irregular and high-end asymmetric threats in the same time and space. Such threats may arise at home as well as on operations overseas. In such circumstances military medical support may be required to bolster civilian responses.

d. **Changes in the Global Environment**. Changes in the global climate, economy and technology will shift the focus of threat drivers, creating instability, especially in states that are already susceptible to other pressures. Resource shortages and the risks of state fragility will drive the need to secure resources and manage migrant populations. As globalisation magnifies inequality between nations access to healthcare may also drive migration and demands for a more equitable approach to healthcare.

104. Other elements will endure. They are considered in the later chapters of this publication in detail, and here briefly:

a. **Joint and Multinational**. It is highly likely that any medical support to military activities will take place within a joint environment. It is equally likely that this would also be as part of a multinational organisation or bespoke coalition. A thorough understanding of multinational medical cooperation, which can be found in AJP-4.10(A) *Allied Joint Medical Support Doctrine*, will help with interoperability.

b. **Military Skills**. As far as practicable, medical forces should be as agile, mobile and as well protected as the forces they support. This will require medical personnel to acquire and maintain appropriate military skills (as well as clinical skills) through training and practice.

c. **Chemical, Biological, Radiation and Nuclear**. Where they exist, Chemical, Biological, Radiation and Nuclear (CBRN) threats, ranging from CBRN weapons or improvised devices to natural and man-made hazards, are likely to pose a distinct challenge to operational medical support.

d. **Best Medical Practice**. Military medical support will seek to achieve outcomes of treatment consistent with best medical practice. Within the DMS accountability by individuals and organisations for their actions will be delivered through healthcare governance and assurance processes under the auspices of the Inspector General.

e. **Comprehensive Approach**. The military will need to work alongside Other Government Departments (OGDs) and Non-governmental Organisations (NGOs). This will need to be integrated into planning processes. Chapters 2 and 4 expand on planning processes.

f. **Information Management**. Effective information management is essential to enable optimal care, track patients and facilitate authoritative audit across the spectrum of medical care. Chapter 2 discusses this further.

Healthcare

105. According to the World Health Organisation, '*health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity*'. In the military context, this well-being enables Service personnel to function unimpeded by physical, social or psychological problems. Health promotion, disease prevention and treatment of the sick and injured are core functions of the DMS but responsibility for health is also a command function and an individual responsibility. The contribution that health makes to fighting power, through the provision of healthcare, medical operational capability and health advice is implicit.[3] It is important, however, that every possible effort should be made by commanders and medical staff to promote and sustain the highest state of health.

106. Health is a key force multiplier; only a healthy force can function at, and sustain, maximum effort. It is in this respect that medical support contributes to the conceptual, moral and physical component of fighting power:[4]

[3] Defence Medical Services Strategic Plan 2010 – 2014, May 2010.
[4] JDP 0-01 (3rd Edition) *British Defence Doctrine*. This is the capstone doctrine for the Armed Forces and conveys a message about the tone and nature of the British approach to military activity at all levels.

a. **Conceptual Component**. The conceptual component can be described as the thought process that shapes the ability to fight. It combines lessons from the past, thinking about current best practice and potential future techniques. This is mirrored within the evidence based approach of medicine, which allows outcomes to be predicted from previous experiences thereby enabling the identification of the correct medical capability to deliver the appropriate health intervention. This provides the medical contribution to conceptual development and assists in the maintenance and assurance of fighting strength.

b. **Moral Component**. The moral component concerns the ability to get people to fight. A person's sense of well-being and purpose is influenced by the difference between expectations and reality. Modern Service personnel have been brought up in an environment where personal experience of high standards of medical care is the norm. These high expectations endure during military activities and any perceived, or actual, inadequacy in medical care or ethical behaviour is likely to reduce morale.

c. **Physical Component**. The physical component is the means to fight. Medical support contributes to the physical component in distinct ways; through force maintenance and by clearing casualties from the point of wounding. Effective medical support also increases the possibility of returning former casualties to the fighting force.

107. Medical support should be delivered by an agile, task-oriented joint medical capability geared towards generating, protecting and recovering the deployed force. Historically, more forces have been degraded by Disease and Non-Battle Injury (DNBI) than by kinetic activity. In spite of this the timely delivery of surgery and resuscitation in order to save life, limb and sight is a paramount requirement of any deployed operation.

108. The main effort of the DMS is to support deployed operations, starting from within the UK Home Base and extending beyond an operation's conclusion. This deployed medical capability depends upon seamless links with the UK Role 4 infrastructure and the National Health Service (NHS). Through partnership, the Departments of Health (DH) and DMS are able to pursue common interests, goals and objectives. There are cross-Government links with the Foreign and Commonwealth Office (FCO), Department for International Development (DFID) and the Stabilisation Unit in the provision of healthcare and other elements of stabilisation as part of a comprehensive approach.

109. Beyond government, the DMS interacts and liaises with NGOs and Inter-Governmental Organisations (IGOs) when on operations overseas. When engaging with these agencies, DMS personnel should consider the impact their actions and interactions may have upon local healthcare providers and the general population. Care must be taken to respect the neutrality of NGOs and IGOs.

110. Health is a global security challenge: a major health crisis may threaten a nation's security and stability in the short-term. Longer-term health issues may also cause, or exacerbate, insecurity in failing or impoverished nations. Health is, consequently, a vital consideration in all levels of contingency planning, both military and civilian. This is why assured lines of communication between all elements of healthcare provision within the UK as well as with OGDs, NGOs and IGOs are required.

SECTION II – ENABLING AND CONSTRAINING FACTORS

111. **Legal Compliance**. UK Armed Forces must comply with UK and International Law during all operations.[5] In addition they may have to comply with the laws of the territory in which operations take place. Whatever law applies, all captured,[6] sick, injured, shipwrecked and wounded persons taking part in the conflict are entitled to basic, minimum, humanitarian standards of treatment at all times.[7] Although the operational commander has authority to limit the availability of military medical support to third parties, such as local civilians, emergency treatment of life-threatening conditions should not be denied. Captured Persons (CPERS) are entitled to equivalent medical treatment to UK personnel while held by UK personnel.

112. **International Humanitarian Law**. International Humanitarian Law (sometimes referred to as the Law of Armed Conflict), has implications for medical support. Annex 1A outlines these implications and highlights areas that need specific consideration.

113. **Medical Ethics**. While all military personnel are bound by military laws, regulations and ethics, health professionals are subject to additional codes of conduct. An action may be legal but unprofessional, exposing a health professional to action by their registrant or regulatory body. Organisations such as the United Nations and the General Medical Council (GMC) support and reinforce the strong stance taken by the military on topics such as

[5] JDP 3-46 (2nd Edition), *Legal Support to Joint Operations*.
[6] JDP 1-10 *Prisoners of War, Internees and Detainees* and JSP 950, leaflet 1-3-4, *Medical Support to Persons Detained by UK Forces Whilst on Operations*.
[7] JSP 383 *The Joint Service Manual of the Law of Armed Conflict*.

confidentiality and torture.[8] A medical organisation must maintain these values if its members are to retain both their licences to practise and credibility within their profession and society in general.

114. **Professional Constraints Imposed by Regulating Bodies**. The healthcare profession is one of the most tightly regulated professions within the UK. Healthcare professionals may find themselves with a dual loyalty concerning their duty to Defence and their obligations to their profession.

115. **Standards of Medical Care for UK Military Personnel**. Military medicine is highly specialised. The standards of care available may have a permanent effect upon clinical outcome and the effects of poor care rarely can be reversed. Patients should receive the highest practicable level of medical care in suitable clinical environments. The DMS is expected to deliver a standard of healthcare to the Armed Forces that will be at least equal to provision in the NHS be they deployed or in the Firm Base.[9] Effective healthcare governance is necessary to support this, and structures and processes to enable governance and assurance in the plan are essential.

116. **Standards of Medical Care for non-UK Military Personnel and Civilians**. The UK DMS will provide clinically and culturally appropriate medical support to non-UK Military personnel and to civilians.

117. **Time-Related Constraints of Medical Care**. Time is a fundamental and critical factor in patient survival and recovery. The aim of medical support is to ensure that every casualty gets the right treatment, in a timely manner and at an appropriate facility. Clinical timelines are discussed in greater detail within paragraphs 211-212. Time, however, is not the only determinant of treatment outcome; an assessment should be made as to the most appropriate destination for each case, based on clinical need, capabilities available and informed by a clinically-aware patient regulation system, even if this necessitates a longer evacuation time. Flexibility within the planning process to accommodate appropriate timelines, while ensuring as short a delay as practicable until surgery should be the main aim. Specific consideration will need to be given by the command chain when the nature of the activity and its constraints mean that these timelines may be compromised.

[8] United Nations, *Istanbul Protocol – Manual on the Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*. Professional Training Series No. 8/Rev.1. New York, 2004.
[9] Defence Medical Services Strategic Plan 2010 – 2014, Section 1, DMS Strategy, Paragraph 3.

Eligibility

118. Eligibility for DMS medical support will be articulated in *Medical Rules of Eligibility*, within Operational Orders. Members of all 3 Services are entitled to medical support, as are members of the Reserve forces, the Royal Fleet Auxiliary and civil servants deployed on operations. CPERS are also entitled. MOD contractors and nationals from NATO, the EU or other troop-contributing nations may be included, depending upon standing or other agreements. These rules should also specify the level of eligibility of civilians to DMS medical support.

119. **Obligations to Treat Others under International Humanitarian Law**. Eligibility for medical care for the wounded and sick is primarily derived from the provisions of the International Humanitarian Law. This is explored in greater detail in Joint Service Publication (JSP) 770.[10] The DMS follows the general obligation to treat others, and for treating civilians in certain circumstances, abides by *The Geneva Convention 1, Article 12*. Therefore, the deployed medical contingent requires the capability to appropriately treat the UK military Population at Risk (PAR), non-UK military personnel and civilians (including children and the elderly). The healthcare needs of non-UK military and civilian populations demand some capabilities which are not routinely available from the DMS.

120. **Providing Healthcare to Coalition Forces**. Coalition partners frequently expect access to DMS resources. During the estimate process, an assessment should be made whether:

- DMS' capacity is sufficient to meet such an increase in PAR; and
- Coalition partners could contribute to the medical support plan.[11]

121. **Providing Healthcare to Contractors**. The use of contractors on operations is likely to increase in the future. Current DMS capability is designed to support an essentially young and fit military PAR. Contractors may be neither young or fit. They do not have to maintain mandated fitness standards nor are they subject to age restrictions. This potentially places an additional burden on healthcare provision. Defence will ultimately finance contractor healthcare, either as an integral element of the contracted costs, or by providing agreed DMS assets. Defence is also required to derive, and apply, consistent pre-deployment health standards, and health protection standards to contractors.

[10] JSP 770, Issue 3, *Tri-Service Operational and Non-Operational Welfare Policy*, Ministry of Defence, September 2009.
[11] For example, provision of personnel for a multinational medical unit or a contribution to medical evacuation helicopter task line.

122. **Providing Healthcare to Captured Persons**. CPERS are entitled to equivalent medical treatment as UK military personnel, in theatre. This is covered in detail in JDP 1-10, *Captured Persons*, 2nd Edition. When planning medical support to operations, healthcare to CPERS is to be factored into resource calculations.

123. **Providing Healthcare to non-UK Military personnel and to civilians**. On operations, DMS capability and capacity is predicated on UK military PAR. Providing medical support to civilians remains a host nation responsibility. While these policies remain extant, over time legal, ethical and operational drivers will almost inevitably lead to DMS personnel treating non-UK military personnel and civilians. As mentioned previously, the limits of what they are entitled to will be detailed in Medical Rules of Eligibility, within Operational Orders. These rules are compiled during the operational planning process, and authorised by the Permanent Joint Headquarters on advice from Headquarters Surgeon General.

124. **Undermining Health Sector Reform**. It should be noted that providing indiscriminate (even if well meaning) medical support to the indigenous population can undermine health sector reform. It may also create dependency, effectively 'fixing' elements of a deployed force.

ANNEX 1A – INTERNATIONAL HUMANITARIAN LAW CONSIDERATIONS

Introduction

1A1. This Annex introduces some of the International Humanitarian Law (IHL)[1] considerations that can affect the planning of medical support to joint operations. It is not intended to be all encompassing or to replace the advice from the Ministry of Defence (MOD) or Service legal staffs, which should always be sought on individual issues. Instead, it lays down some enduring principles covering IHL on operations, draws attention to the breadth of legal issues affecting the medical function and identifies areas where further development is required.

1A2. IHL exists to minimise the effects of conflict on those not, or no longer, directly involved in the conduct of hostilities[2] as well as to regulate conduct between combatants themselves.[3] IHL places obligations on the UK Armed Forces to take account of all protected persons, including the wounded and sick, in the planning and conduct of operations during international armed conflict. Although different legal obligations under IHL may apply depending upon the nature of the conflict, it is MOD policy that similar obligations and protections should be applied where appropriate to the planning and conduct of all operations where hostilities are envisaged. While a detailed discussion of these issues is beyond the scope of this publication, medical specialists engaged in operational planning should recognise that the Geneva Conventions and their Additional Protocols influence the planning and conduct of all operations. Guidance should be provided or requested as to the application of all legal obligations that may affect the provision of medical treatment.

1A3. In particular, there is guidance in Joint Service Publication (JSP) 383 *Manual of the Law of Armed Conflict*, Chapter 7 on: the legal definitions of medical units, personnel and transport; the protection afforded by the law to those entities; the general protection afforded to the conduct of medical duties; permitted functions of medical units (including being armed for self-defence of medical personnel and their patients); the duties of occupying powers to meet the medical needs of the civilian population; rules for the protection of medical transport; and identification of medical units, personnel and transport. Those

[1] International Humanitarian law (IHL) is also referred to as the Law of Armed Conflict (LOAC). See JSP 383 *The Joint Service Manual of the Law of Armed Conflict*, Chapters 7-9.
[2] For example, medical personnel, Prisoners of War, the wounded and the civilian population.
[3] For example, by restricting or banning certain activities or weapons. 'In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.' Art 35(1), Additional Protocol I (1977) to the 1949 Geneva Conventions.

responsible for the planning, conduct and command of medical functions and any related activities in joint operations should be familiar with that guidance. Legal advice should invariably be sought to resolve cases of doubt.

1A4. The challenge for planning staffs is reconciling the requirement to abide by IHL with the need for additional resources to achieve this compliance with the law. There will be occasions where IHL can assist in balancing resources. As a tactical example, since uniformed medical staff may be armed with *light individual weapons* for the purposes of self defence and the protection of those under their care, force protection can, to some extent, be addressed within medical resources. However, this also brings with it an obligation to equip and train medical staff in weapon handling. It should be noted that early consultation with J1/J9 planning staffs and legal advisers can assist in identifying how and where IHL is likely to impact, and how to address those issues most effectively.

The General Obligation to Treat Others

1A5. UK Armed Forces are under a continuing obligation to respect and protect wounded or sick persons, whether military or civilian, who are in need of medical assistance and who refrain from hostilities. They shall not wilfully be left without medical care or assistance. Only urgent medical reasons will authorise priority in order of treatment to be administered.[4] They shall be treated humanely and shall receive, to the fullest extent practicable and with the least possible delay, the medical care and attention required by their condition. There shall be no discrimination among them founded on any grounds other than medical ones.[5] This may of course include not only adversaries but the civilian population, and careful consideration should be given to calculating the likely numbers of casualties in any operation. Liaison with J2/J3 and operational analysts, while of assistance, cannot be definitive, and planners should recognise that the demands on medical staff may vary considerably depending on the phase and success of the operation. The ability to surge, re-role and recover medical support will be key, and the resources to support this range of activity must be identified and assigned at an early stage.

[4] Geneva Convention 1, Article 12.
[5] Additional Protocol 1, Article 10.

The Specific Obligation to Treat Captured Persons including Prisoners of War, Internees and Detainees[6]

1A6. Captured Persons (CPERS) are entitled to certain basic standards of humane treatment. Once in the hands of UK Armed Forces, they are to be treated strictly according to medical need. This protection extends to all those who are interned or detained pursuant to the conflict and calls for planning and resources to be committed to their initial care. Complications arise when it is proposed, for reasons of imperative medical care, to transfer captured patients to a country outside the territory where they were captured. As a rule, while prisoners of war may be directly repatriated or accommodated in neutral countries for medical reasons or to receive medical treatment (Geneva Convention III) (subject to legal and policy advice in each case), internees and detainees may not. In all cases, J9 legal advice should be sought before any transfer takes place.

The Nature of Treatment

1A7. The nature and extent of the medical treatment administered to individuals will be governed primarily by medical judgement and ethics, within the constraints of Armed Forces' medical policy. In addition, IHL places certain obligations on UK medical staff.[7] Medical procedures, which are not indicated by the patient's state of health and which are not consistent with generally accepted medical standards, are prohibited. Experiments on CPERS and the sick and wounded are strictly prohibited under IHL and unjustified medical interference on patients who are in no position to give free and genuine consent, are prohibited. A patient may refuse surgical treatment, but emergency surgery to save a life does not require the patient's consent.

Status of Medical Units

1A8. IHL accords special protection to medical units and the personnel serving in them solely in a medical capacity. The Geneva Convention defines medical units as establishments and other units, whether military or civilian, organised for medical purposes, namely the search for, collection, transportation, diagnosis or treatment (including first-aid treatment) of the wounded, sick or shipwrecked or for the prevention of disease (Additional Protocol I (Article 8e)). They include hospitals, blood transfusion centres, preventive medicine centres, medical depots and stores. Medical units are to be respected and protected at all times and are not to be made the object of attack (Additional Protocol I (Article 12)). They may be fixed or mobile,

[6] See JDP 1-10 *Prisoners of War, Internees and Detainees*, and JSP 950, leaflet 1-3-4, *Medical Support to Persons Detained by UK Forces whilst on Operations*.
[7] See JSP 383 *Manual of the Law of Armed Conflict*, Chapter 7.

permanent or temporary, and on land, sea or in the air. Medical units, personnel and transport must not be used for non-medical purposes or they will lose their protected status. Medical units must not be used to shield military objectives from attack and where possible should be so situated that attacks upon military objectives do not imperil their safety (Additional Protocal I (Article 12.4)). Improper use of the protective emblems identifying medical units, transport or personnel to kill or injure the enemy, or that results in death or serious injury is a war crime. The protective emblems may not be used in a way that falsely suggests protected status to avoid attack by an adversary.

Status of Medical Personnel

1A9. The term medical personnel means those persons assigned exclusively to the medical purposes enumerated above, and/or to the administration of medical units, or the operation of medical transport. Such assignments may be permanent or temporary but must be exclusive for their duration. The Geneva Convention definition of medical personnel includes doctors, dentists and nurses, and a range of specialists, technicians, maintenance staff, drivers, cooks and administrators attached to medical units or medical transport units (Geneva Convention I, Articles 24-32; Additional Protocol I (Article 8c and 9.2)).

1A10. Medical personnel should be respected and protected in all circumstances and if captured, they should be retained only to the extent necessary to tend to the health of prisoners of war (Geneva Convention I (Article 28)). On capture, they are not categorised as prisoners of war but they do have the same benefits and protection. They shall be granted all facilities necessary to provide for the medical care of CPERS. When no longer required to be retained, they should be returned to their own side. While captured, they continue to carry out, within their professional ethics, their medical duties on CPERS.[8]

The Arming of Medical Personnel

1A11. Medical personnel may be armed with *light individual weapons for their own defence or the protection of those in their charge* without losing their protected status. They may only use light arms in their own defence, or in the defence of the wounded and sick in their charge (Geneva Convention I (Article 22)). The arming of medical transports or ambulances with *light individual weapons* for strictly defensive purposes is also permitted. If weapons heavier than light individual weapons are mounted on a medical transport or ambulance then the distinctive emblem is not to be shown. It should be

[8] There is a legal obligation in relation to prisoners of war, as a matter of practice, and where possible, this is applied to all Captured Persons (CPERS).

stressed that the provision and use of such arms must only be for defensive purposes, and the Rules of Engagement issued to armed medical personnel must reflect these limited purposes, as should their training. Medical units may be protected by armed guards or pickets but, again, those guards may only act for the self-defence of medical personnel and patients in their care.

Medical Vessels and Vehicles

1A12. The general rule is that medical vessels, craft and vehicles are to be respected and protected at all times. International law recognises that such protection is only effective if the medical transport can be recognised as such. Thus in the case of hospital ships (vessels built, converted or equipped specially and solely with a view to assisting either military and/or civilian wounded, sick and shipwrecked and to treating them and transporting them) or craft,[9] they should be white and marked with the distinctive emblem. Emblems should be as large as possible and be so placed as to maximise visibility.

1A13. Information about a hospital ship may (and in normal circumstances, should) be declared, including its name, description, time of sailing, course, estimated speed, etc. Negotiations between belligerents may settle a protected zone for use by hospital ships where no military operations will take place. The protecting powers may assist in the negotiation of such an agreement. Information to ease identification of medical ships may also be transferred between belligerents.

Medical Aircraft

1A14. Medical aircraft shall also be respected and protected. If such aircraft are being operated in areas not controlled by the enemy, respect and protection do not depend on specific agreements, but notification to the other side of flight arrangements may make the flights safer (Additional Protocol I (Article 25)).

1A15. Prior agreement of the enemy becomes essential in the combat zone, particularly those areas where control is not established. Without that agreement, medical aircraft operate at their own risk. If recognised as such, they should be respected (Additional Protocol I (Article 26)). Protection of such aircraft continues when over-flying enemy-controlled territory provided prior agreement has been obtained. If no agreement is obtained or the aircraft has to deviate from an agreement, the aircraft should identify itself and explain the solely medical purpose of the flight and the reason for any deviation from

[9] The Primary Casualty Receiving Facility, RFA ARGUS is not declared under the Geneva Convention – see Chapter 2.

the agreement. When recognised, the adverse party shall give orders to protect its own interests and give time for compliance before resorting to an attack on the aircraft (Additional Protocol I (Article 27)).

1A16. Medical aircraft flying over areas controlled by the enemy can be ordered to land for inspection. If its medical status and *bona fides* are supported by the inspection, it shall be permitted to resume its journey. If the inspection reveals that it is not a medical aircraft, has flown without or in breach of an agreement, or has broken the rules, it may be seized.

1A17. Medical aircraft may not be used to acquire a military advantage, nor to collect or transmit intelligence data and cannot carry associated equipment. Communications, navigation and identification equipment is permitted. They must be unarmed (save for small arms taken from the wounded and *light individual weapons* to defend the personnel on board).

Recognised Emblems

1A18. Great care must be taken to ensure that no improper use is made of the Red Cross, the Red Crescent, the Red Crystal (Diamond) or any other recognised distinctive emblems. The Red Cross flag must not be used to cover vehicles used for the transport of munitions or other non-medical stores. A hospital train must not be used to facilitate the escape of combatants. Using a building protected by the Red Cross as a firing position is prohibited. This does not infringe the right of personnel to protect themselves or their patients. Vehicles used for transporting the wounded, sick and medical equipment may display the protective emblems and entitled to protection. Non-medical supplies may not be carried in a vehicle using the protected emblem (Additional Protocol I (Article 8k)).

CHAPTER 2 – PRINCIPLES OF MEDICAL SUPPORT

201. The basic principles that apply to the provision of medical support are derived from historical experience, lessons identified and learned from previous deployments, and an ever expanding evidence base across both military and civil domains. They are related to the ideals of a duty of care allied with Service and public expectations. The principles mandate the provision of the best possible care under prevailing circumstances, with the aim of minimising mortality and morbidity together with maximising care and subsequent quality of life while maintaining the fighting ability of the force concerned.[1]

Part 1 – Enduring Principles

SECTION I – GENERAL PRINCIPLES

Mutual Responsibilities

202. Deployed medical assets, irrespective of their parent Service, should stand ready to support any combination of units or formations, including other nations and agencies, when the operational need dictates and provide the best quality of medical care, in a timely manner, to all casualties. They should also be fully integrated into the medical lay-down across the area of operations and be representative of the integrated medical response of the Defence Medical Services (DMS) rather than that of a specific Service alone.

Medical Provision

203. Medical provision is actively managed through a Healthcare governance process; a 'system through which medical organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care, by creating an environment in which clinical excellence will flourish. Basic components are a coherent approach to improving clinical effectiveness, continuing utilisation of audit, ongoing professional development and establishing effective processes for identifying and managing risk and addressing poor performance'.[2] Healthcare governance is fundamental to medical support since it governs how and to what extent medical capability is delivered. Previously force generation and the distribution of resources were described in quantitative terms such as capacity, force element tables, numbers of beds, timelines and lay-down.

[1] The Army Medical Directorate (AMD) has generated the *Seven Capabilities of Care* which detail the components required to establish a healthcare system in any environment; it is detailed in Annex 2A.
[2] MC 326/2, *NATO Principles and Policies of Operational Medical Support*, April 2004.

While these remain relevant, healthcare governance demands a qualitative approach, based upon best practice and delivered through organisations, training, clinical environment and equipment.

204. At the core of the intent of healthcare governance is the imperative that it will result in quality improvement or, as described by NATO, 'Continuous Improvement in Healthcare Support to Operations (CIHSO).'[3] Quality improvement can only be shown to be achieved if systems and processes exist to collect and exploit healthcare information. Maintenance and improvement of standards must then be confirmed through a robust assurance process utilising the common assurance framework.[4]

Levels of Medical Care

205. Medical care is provided in a progressive manner, ranging from immediate first aid at the point of wounding to definitive, specialised care and rehabilitation provided at the UK Home Base medical treatment facilities. This may comprise resuscitation and stabilisation of vital functions, damage control resuscitation, and definitive treatment and rehabilitation. Linking all these interventions is the requirement to evacuate to the next appropriate level of care in a timely manner to maximise the chances of survival and minimise the risk of future disability.

206. In NATO terminology military Medical Treatment Facilities (MTFs) are designated a *Role* number to describe their functional capability to deliver a specific level of care. In NATO doctrine it is implicit that higher levels of *Role* incorporate the functions of lower levels but UK doctrine is more capability focused and does not necessarily replicate this approach, for example Role 2 may not routinely include primary care. These *Roles* are predominantly used to represent the deployed secondary care response but it must be remembered that the provision of primary care before, during and after the deployment arc is key in ensuring medical fitness for duty. A detailed breakdown of specific *Roles* may be found in AJP-4.10(A)[5] but a summary of the broad capabilities that may be expected at each level is given below:

a. **Role 1**. This includes the provision of primary care, emergency treatment (resuscitation and stabilisation) and preparation for transfer usually under the guidance of a medical officer. This capability is normally integral to a major land-based unit and also reflects the provision of medical support inherent to an afloat platform.

[3] Allied Command Operations Directive for Medical Support to Operations, AD 83-1 (Edition 2), *Promoting Excellence in Healthcare Support on Operations*.
[4] JSP 950, leaflet 5-1-4, *Healthcare Governance and Assurance in the Defence Medical Services*.
[5] Allied Joint Publication (AJP)–4.10(A) *Allied Joint Medical Support Doctrine*.

b. **Role 2**.[6] This includes the reception and sorting of patients as well as the ability to provide elements of damage control resuscitation and the treatment of casualties. This is bolstered by a wider range of medical and nursing interventions and enhanced laboratory and imaging facilities. In addition, this level of care will prepare patients for further transfer with a limited holding capacity to prepare casualties for onward evacuation or for return to duties.

c. **Role 3**. This incorporates reception from Role 2 MTFs as well as direct receipt from local incidents. Major specialist facilities are available at this level of care with intensive care, holding and nursing capabilities. Final sorting of casualties for transfer to Role 4 or return to duties will occur here.

d. **Role 4**. Role 4 '*provides the full spectrum of definitive medical care that cannot be deployed to theatre or is too time consuming to be conducted there*'.[7] This would normally include definitive care, specialist surgical and medical procedures, reconstructive surgery and rehabilitation. This care is highly specialised, time consuming and normally provided in the casualty's country of origin. Within the UK, in accordance with Reception Arrangements for Military Patients (RAMP) the acute phase of this care is provided within the main receiving hospital at University Hospitals Birmingham Foundation Trust (UHBFT) in combination with the Royal Centre for Defence Medicine (RCDM). Subsequent rehabilitation is provided according to clinical need with less severe cases going to Primary Care facilities, Primary Care Rehabilitation Facilities or Regional Rehabilitation Units (RRUs) and the majority of the complex cases going to the Defence Medical Rehabilitation Centre (DMRC) at Headley Court. RCDM and DMRC are collectively known as the UK Role 4 Medical Group (although elective and acute force generation patients are also admitted to and treated in both locations). During an individual patient's care pathway he or she may return to Birmingham or be referred to other NHS or third party specialist centres. The overall partnership with the NHS is therefore fundamental to the provision of Role 4 care in the UK but is not necessarily tied to one specific Trust or Strategic Health Authority.

207. There is a variable relationship between the provision of MTFs at the various Roles within operational theatres. While NATO doctrine applies

[6] Role 2 is subdivided by NATO doctrinal definitions into Role 2 Light Manoeuvre (R2LM) and Role 2 Enhanced (R2E) - see table 2B-1. These represent differing aspects of similar capabilities, namely the provision of damage control resuscitation. The other key points of difference being in the relative sizes, footprint and manoeuvrability of the respective MTFs. Each UK single-Service has variations on Role 2 capability configured to meet the needs of the respective environment.
[7] AJP-4.10(A), page 1-13.

specific capabilities and capacities to specified Roles (see Table 2B-1 at Annex 2B) the UK doctrinal approach is more fluid, blending capability within the Roles to ensure that apposite investigation and treatment is provided within recommended timelines.[8] This allows patient evacuation to be aligned with MTFs to ensure that the right treatment capability is available at the right time for the patients' needs. As medical techniques change and improve under the evidence base from operational experience the need for inherent flexibility in the assignment and use of MTFs becomes self-evident.

208. Operational circumstance may dictate that flexibility is required in the application and work of MTF Roles. This is particularly likely to be the case in coalition and multi-agency tasks, such as stabilisation.

Continuity of Care

209. Casualties passing between Roles of care should receive continuous, relevant and progressive care. Implicit in this statement is that casualties requiring further treatment should only be transferred to a higher level of care and that care should continue while in transit between medical facilities during the evacuation process. It is not always necessary to go through every level of care sequentially. There will often be situations where it is appropriate to leapfrog a level of care in order to reach a more sophisticated treatment capability sooner.

210. **Triage**. Casualties should be sorted into priorities based on their need for resuscitation and treatment. Triage is the technique used to determine initial treatment priority on arrival in a MTF as well as for assessing evacuation priority for subsequent onward transfer down the casualty chain. Prioritisation is dynamic and must be continually reassessed at key points in the course of casualty treatment. Consistent and reproducible triage techniques should be included in all military first aid and medical training:

a. **Triage Sieve**. A process applied in the early phases of a major incident or Mass Casualty (MASCAL) situation. It provides for a very swift assessment of patient needs in the face of a large number of casualties and/or limited medical resources. The aim is ensure the right treatment is provided to the right patient at the right time.

b. **Triage Sort**. A more involved triage process combining physiological changes with injury patterns to provide a graded score giving insight into the severity of insult[9] the casualty has received. This is not formal trauma scoring and is applied within the confines of a

[8] AJP–4.10(A).
[9] The insult reflects not only the injury but also the physiological changes which occur after injury.

clearing station or formalised MTF. The Triage Sieve and Sort are modified for the Chemical, Biological, Radiological and Nuclear (CBRN) environment.

c. **Triage Categories**. There are 3 basic categories used when triaging patients which reflects the severity of injury and priority for intervention and evacuation.[10]

(1) **T1 (immediate)**. Casualties with life-threatening injuries, who will predictably die without rapid intervention to stop bleeding, maintain the airway, support ventilation or support the circulation. Physiology will be significantly deranged (pulse, blood pressure, respiratory rate and level of consciousness).

(2) **T2 (urgent)**. Casualties whose injuries may be potentially life-threatening if treatment is delayed, or who will experience significant morbidity or suffering with a delay in treatment. Physiology will be moderately deranged.

(3) **T3 (delayed)**. Casualties whose injuries are unlikely to result in additional morbidity or suffering with a delay in treatment. Physiology may be mildly deranged or normal.

(4) **T4 (expectant)**.[11] Casualties who will predictably die even when optimal treatment is available. In a MASCAL resources are diverted to the potentially salvageable with minimal supportive treatment provided for the expectant.

Time Imperatives

211. Current NATO doctrine advocates the provision of primary surgery[12] within one hour. If this is not achievable then damage control surgery[13] should be available within 2 hours followed by primary surgery within four.[14] These timelines are a pragmatic planning tool enabling better risk management. The DMS has been operating to a different set of timelines endorsed by Allied Command Operations. These timelines advocate that bleeding and airway control for the most severe casualties should be achieved as soon as possible – ideally within 10 minutes of wounding. Medical evacuation assets should

[10] NATO procedures currently use a 9-line message to call for medical help, this uses a different method of prioritising patients from A to C (to be at the MTF within 90 minutes, 4 hours and 24 hours of notification respectively). Details of this and the MIST message are found in *Clinical Guidelines for Operations*.
[11] The T4 (Expectant) category is only to be used at the instigation of the medical chain of command.
[12] See Lexicon.
[13] See Lexicon.
[14] AJP-4.10(A). The 1-2-4 hour principle.

reach the seriously injured casualty with *skilled medical aid*[15] within one hour of wounding at the latest. Casualties that require surgery or further resuscitation should, where possible, be in an MTF equipped for this within two hours of wounding.[16] It is likely that these timelines will be incorporated into future NATO doctrine and it is appropriate that the UK provision of care should mirror this best practice. Therefore, Allied Command Operations medical planning timeline, the 10-1-2 guideline detailed above, should be used when planning operations and is subject to the usual risk assessments and mitigations if unable to meet it.

212. Once injured, the principal factor that determines mortality, morbidity and residual disability is time. This includes the time delay before high quality medical care is initiated and any delays between subsequent levels of care. The provision of high quality early intervention will save more lives, but paradoxically increases the urgency with which follow-on treatment should be initiated. For those in need of more advanced care, this is usually achieved through damage control resuscitation.[17]

Damage Control Resuscitation

213. Damage Control Resuscitation (DCR) is '*a systemic approach to major trauma combining the <C>ABC (catastrophic bleeding, airway, breathing, circulation) paradigm with a series of clinical techniques from point of wounding to definitive treatment in order to minimise blood loss, maximise tissue oxygenation and optimise outcome*.' DCR involves the use of multiple techniques drawn from technical and organisational advances in combat casualty care. It is consistent with and encapsulates the established concept of Damage Control Surgery (DCS),[18] providing an overarching approach to resuscitation in order to reduce the physiological as well as surgical impact of major trauma.[19]

214. DCR brings the maximum contribution to life saving capability (following major trauma) within the operational environment provided that apposite medical resources are available.[20] Given the intent to provide the best

[15] *Skilled medical aid* refers to medical services personnel with competencies that include awareness and experience of the pre-hospital environment and the ability to control bleeding, provide advanced airway support, intravascular access and pain control (i.e. start the resuscitative process).
[16] Allied Command Operations Directive for Medical Support to Operations, AD 83-1 (Edition 2). The 10-1-2 guideline.
[17] Hodgetts TJ, Mahoney PF, Kirkman E, *Damage Control Resuscitation*, J R Army Medical Corps 153(4) pages 299-300.
[18] Midwinter MJ, *Damage Control Surgery In The Era of Damage Control Resuscitation*, J R Army Medical Corps 155(4) pages 323-326.
[19] Holcomb JB, Jenkins D, Rhee P, Johannigman J, Mahoney P, et al., *Damage Control Resuscitation: Directly Addressing the Early Coagulopathy of Trauma,* J Trauma, 2007, Volume 62(2) pages 307-310.
[20] Current clinical practice within DMS is for DCR and DCS to occur concurrently at the surgical facility from the outset. This has led to the ability to individually tailor therapy for a casualty and of extending the surgical

possible care within the constraints of the operational environment, compromising on the provision of these resources is seldom justified. Thus every effort needs to be made to keep the optimal surgical and haemostatic[21] capability as far forward as physically, technologically and logistically possible. Commanders need to remain aware of the logistic and personnel burden that resuscitative processes place on combat service support throughout the spectrum of activity.[22]

Medical Logistics

215. The provision of medical support to personnel is a logistic function and is subject to the same principles as other logistic activities. Details of each principle are covered in JDP 4-00 *Logistics for Joint Operations*.

216. **Joint Supply Chain**. It is critical that medical logistic elements and staff operate within the framework of the Defence Logistics Support Chain, particularly the joint supply, joint support and reverse supply chain. The joint supply chain covers the end to end processes and activities necessary to receive materiel from trade and deliver it to end users in support of operational and non-operational commitments. The joint support chain covers the in-service operation of support solutions, including the physical flow of materiel, people services and information. The reverse supply chain is the process by which surplus, repairable, damaged or waste materiel is returned for reallocation, reclamation, repair or disposal.[23]

SECTION II – COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS AND INTELLIGENCE

217. Complex, progressive healthcare support in theatre, provided by multiple nations, Services and organisations, requires fast and efficient communication of relevant information delivered as part of the overall operational picture through Command, Control, Communications, Computers and Intelligence (C4I). Effective C4I allows commanders to make decisions in the light of the best information and intelligence. This also supports medical planning and patient management as well as the optimal preparation and utilisation of resources. The information management, flow and use, will also

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options. This requires a fully integrated cross-disciplinary trauma team with joint training and understanding of this approach. This is the objective of the Military Surgical Operational Surgical Training (MOST) course at the Royal College of Surgeons of England.

[21] JSP 950, leaflet 2-24-1, *Management of Massive Haemorrhage on Operations*.

[22] For example, the numbers of people required to man such teams, as well as the supply of oxygen, blood and blood products, and the ability to produce such effect as far forward as practicable.

[23] JSP 886, Volume 6, Part 6 gives authoritative policy and procedural direction for the supply of medical, dental and veterinary equipment in the joint supply chain.

form part of the healthcare governance and assurance processes which enables us to learn from issues arising during the course of the intervention.

218. Medical C4I includes medical unit headquarters and higher command elements, which will normally be embedded within other command nodes, including the principal deployed headquarters. Medical planners should issue clear guidance on C4I matters as they relate to specific joint, coalition or multinational interventions.

Functions

219. Medical C4I functions include:

a. Ensuring that medical support meets the operational requirement through monitoring and assessing the medical status of deployed personnel, the collation of medical reports from subordinate organisations and by the setting and dissemination of medical policies, plans and directions.

b. Directing medical force protection through preventive medicine, medical information, medical intelligence, epidemiological and environmental survey, hygiene, sanitation and veterinary services, including CBRN measures.

c. Contributing to the provision of acute care services through battlespace awareness and casualty estimation.

d. Medical regulation and tracking of patients and medical assets including aeromedical evacuation.

e. Establishing an overall MASCAL plan in coordination with other headquarters staff.

f. Contributing to the development and maintenance of the operational plan.

g. Coordinating with Civil-Military Co-operation (CIMIC) staff in the areas of public health and humanitarian assistance throughout the UK's area of responsibility.

h. Liaising with the medical directors of other nations in order to coordinate medical support to forces in theatre.

i. Ensuring that appropriate senior and educated people are nominated to maintain healthcare governance, patient confidentiality and clinical assurance.

j. Commanding the medical grouping, medical units and medical sub-units.

Information Management and Exploitation

220. Medical information management is enabled by the Communications and Information Systems (CIS) community (J6).[24] Information management and exploitation is a set of integrated management processes and services that provide exploitable information on time, in the right place and format, to maximise freedom of action. Integration with logistic information systems, for example, will facilitate collection, analysis, management and exploitation of information and intelligence in order to enable effective and timely provision of logistic support. Accordingly, information management supports and guides people and their methods of working as well as information flow and technology. It is as applicable to the DMS as it is to other areas.

221. Challenges to medical information management include the large number of health care providers delivering medical support to operations, together with the diverse population of military and non-military patients. This requires seamless and confidential transfer of sensitive information through efficient information systems that are coherent across all healthcare boundaries and where operational constraints and circumstances limit this, alternative systems and procedures. Medical information exploitation extends beyond the management of confidential patient health records to include patient tracking, real time tele-medicine, Medical Intelligence (MEDINT) and situational awareness to name a few. Such infrastructure allows clinical decisions to be made in the light of changing operational situations with image transfer to Role 4, for example, enabling the pre-triage and effective resource planning prior to the arrival of a casualty. Access to online information resources and Defence Medical Library Services (DMLS) specialist library resources will also be required.

222. Medical information management should be considered, with headquarters J6 staff, as part of the estimate process, the aim being to achieve an integrated communications network as soon as is practicable. A specific consideration for all information systems is that of security and medical information systems are no different. Approved professional installation is essential and will be driven by the J6 community. This should take into account the increasing relevance of *cyber security*.[25] Any medical information management system needs to be sufficiently robust to withstand

[24] JDP 6-00, *Communications and Information Systems Support to Joint Operations*, 3rd Edition, DCDC, January 2008.
[25] DCDC Draft, *Cyber Operational Concept*, November 2010, (due for promulgation in 2011).

computer network exploitation and computer network attacks, be it deployed or within the home base.

SECTION III – JOINT APPROACH

223. **Medical Considerations**. It is important to test medical support by its output – best quality patient care and prevention of disease. Casualty management between levels of care in the area of operations should be seamless, both between single-Service roles and between Services where the provision is joint in nature. Only through common procedures and interfaces will the least stressful casualty transfer be achieved. Similarly, the practical limits of joint medical procedure need to be delineated and observed in the interests of both patient care and medical personnel alike.

224. In the DMS there is already much commonality across the 3 Services with common equipment modules allowing simpler support solutions and a single training requirement, with the only discernable differences being evident because of the nuances of the operating environment, for example operating at sea. Commonality will continue to be exploited to produce coherent structures to deliver best care and allow optimum use of scarce medical assets which are finite and not amenable to quick regeneration. Commonality exists and should continue to be developed.

225. In addition to the provision of its own integral medical support, each of the single Services has specific areas of medical expertise:

a. **Maritime Support**. The Royal Navy is responsible for all aspects of maritime medical support including amphibious/littoral operations.

b. **Land Support**. The Army is responsible for land-based deployed hospital care support.

c. **Aeromedical Evacuation**. The provision of in-transit care during intra- and inter-theatre evacuation by rotary and fixed wing aircraft is an RAF-led task (this is covered in greater detail in AP 3394).[26]

SECTION IV – MULTINATIONAL/COMBINED/COALITION OPERATIONS

226. **Advantages of Multinationality**. Multinational medical support is the overarching term used where methods of medical support, other than purely national, are used to support military interventions. The multinational medical

[26] Air Publication 3394 (4th Edition), *The Royal Air Force Aeromedical Evacuation Service*. Ministry of Defence, November 2009.

support concept is consistent with the multinational logistic support concept. Both are aimed at meeting the demands of the Joint Task Force Commander's operational concept, assist in exploiting operational success and achieve efficiencies and economies of scale resulting from the effective coordination and, in some cases, integration of assets. In addition to the obvious benefits of medical burden sharing, multinational cooperation may also bring with it wider political and military benefits. Political advantages include: a demonstration of shared risk and hence solidarity; a demonstration of diplomatic, military or political support to other regions; and the potential to influence national and international opinion. Such cooperation adds military advantages in both depth (strength in numbers) and breadth (additional capabilities) to a force as well as providing access to national or regional infrastructures and in certain circumstances, access to high value medical information and intelligence products. A comprehensive description of the multinational medical support concept as it relates to NATO operations may be found in the relevant NATO doctrine publications.[27]

227. **Challenges of Multinationality**. Differences (perceived or otherwise) in force capabilities and operating procedures impose limitations on a multinational force's ability to operate effectively. Among the risks that may need to be addressed are difficulties in communication and understanding, interoperability, such as differences in operating procedures, technical incompatibilities and lack of standardisation.[28]

228. **Multinational Support Operations**. A variety of ways exist to exploit burden-sharing on multinational operations. Such arrangements will normally be formalised in the form of a written agreement. Agreements may exist prior to commencement of an operation in the guise of an extant *memorandum of understanding* or *military technical agreement* between 2 or more parties, or may be drawn up in the light of a specific operation as *mutual support agreements*. Within the multinational framework several concepts for burden-sharing exist:

a. **Role Specialisation**. In some operations common supplies and services may most effectively be provided from a single designated nation that has unique and qualified capabilities. A single nation may provide specified support either to the entire force, or a portion of it, with customer nations compensating the Role Specialist Nation (RSN) for the support provided. Examples of candidates for role specialisation include certain medical services such as strategic aeromedical

[27] MC326/2 *NATO Principles and Policies of Medical Support* and AJP-4.10(A).
[28] Underpinning all NATO business is a series of Standardisation Agreements (STANAGs) that are designed to promote national conformity and interoperability. A list of current STANAGs is contained in AAP-4, *NATO Standardization Agreements and Allied Publications*.

evacuation or specialty care such as neurosurgery. In all cases where an RSN is designated, the support is coordinated and centrally managed by the overall medical commander in the way that he determines will best support the operational concept. Before designating an RSN, national laws concerning the transfer of military goods and services must be considered.

b. **Lead Nation**. Lead-nation support involves a nation assuming responsibility for coordinating and providing specified support and other functions within a defined geographical area to other contributing nations. Normally reimbursements to the lead will be a part of this arrangement. In a NATO operation more than one lead nation could be designated to provide the required range of MTF support. A lead nation mission is similar to an RSN mission with the main difference being that the lead nation mission is wider in scope and geographically oriented. Medical support to a headquarters and aeromedical evacuation covering a specific sector in the area of operations can be included under this option.

c. **Framework Nation**. In certain circumstances a nation may be responsible for coordinating the medical support of other nations who have units assigned or deployed in the framework nation's area of operations.

d. **Multinational Medical Units**. To take advantage of economies of scale, medical units composed of more than one nation may provide medical support. This is an attractive support option when a single nation is capable of providing the nucleus and the command structure of a medical facility, which is augmented with capabilities, assets and services from other nations. Common funding, cost sharing, reimbursement or provision of 'free of charge arrangements' should be agreed to as a part of the Multinational Medical Units' (MMU) participation. Such an arrangement will normally work best when coordinated by a framework nation. Differences in clinical practices and standard operating procedures are likely to be common, even amongst NATO partners and should be addressed through collective pre-deployment training.

e. **Medical Host-Nation Support**. Host-nation Support (HNS) is normally provided under arrangement between NATO, contributing nations and the government of the host nation. Provisions are established to facilitate the accomplishment of the military mission by allowing forces to transit through, or arrive in, its territory. It is the government of the host nation that provides what is needed using

national assets, or which makes other arrangements for its provision. Host-nation departments or agencies are involved in writing the HNS plans, controlling their implementation and monitoring the support provided. The quality and quantity of medical resources available in the area of operations is important in determining the size and capability of the medical organisation the force must establish. The more HNS available for force use, the less has to be found from contributing nations. Resources which may be obtained through HNS include:

(1) Patient transportation assets (air, land and maritime) for both intra- and inter-theatre evacuation.

(2) Treatment capability at every level of care but particularly at Role 3.

(3) Medical logistics support (and quality control), including the provision of drugs, consumables, disposables and blood products.

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

f. Medical HNS potentially has many advantages providing acceptable quality and reliability can be established. HNS is particularly useful for handling MASCAL, incident response and other medical treatment surge needs that may occur on an infrequent and unplanned basis. Medical HNS is also useful during deployment, when medical facilities may not yet be properly in place and when the expected workload will not unduly stretch available and suitable HNS facilities. There are however many issues that must be resolved before a decision to use medical HNS can made and many of these can only be resolved by medical personnel and those experienced directly in medical logistics. The decision to use HNS should not be undertaken lightly and will normally require scrutiny by senior NATO and national medical personnel.

g. **Local Contracting**. Local contracting refers to purchasing of supplies from the local economy through J9 authorised contracts struck directly with local suppliers. This alternative applies in cases where a formal HNS arrangement is not made or there is no legitimate or recognised government with which to formalise an HNS agreement. Local contracting will normally be considered a viable option in meeting part of the force medical support requirements for NATO operations. Even though the provision of pharmaceuticals and certain kinds of

medical materials and services can be locally contracted, at all times there is the requirement for medical expertise from the earliest stages of the contracting process. Only experienced medical personnel are trained and capable of supervising the safe and effective procurement of local medical materials and service. The contracted support must conform to respective national regulations and NATO policies and STANAGs governing materiel and support. Where local medical HNS is fragile, any attempt to contract the provision of goods and services may cause harm and denude public support for the deployed force.

229. **Multinational Operations beyond NATO**. It is likely that any future interventions in which the UK participates will be as part of a multinational or bespoke coalition response. It needs to be emphasised that, while NATO forms a core part of UK international partnerships, it is not the only International Organisation with which UK will integrate. The UK has already worked with both United Nations and European Union operations as well as bespoke coalitions formed to act in a specific situation. The UK military medical services need to maintain flexibility to be able to operate alongside and, if required, lead other nations drawing on the established reputation for providing the best health output within operational and environmental constraints.

Part 2 – Specific Aspects of Medical Support

SECTION I – FORCE HEALTH PROTECTION

230. NATO defines force health protection as '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, disease and selected special weapon systems through preventive measures for personnel, systems and operational formations'.[29] Specific aspects of force health protection are covered, in greater detail, in linked documents.[30]

231. While all aspects of medical support to operations might be considered to be a form of force health protection, there are specific areas of force health protection that need to be considered, namely:

a. The maintenance of a fit and healthy force by promoting behaviour that encourages health and minimises risk. This is largely a command issue, as the conduct and discipline of a deployed force has a significant impact upon the numbers of avoidable accidents.

[29] AJP-4.10(A).
[30] JDP 3-64 *Joint Force Protection*. JDP 4-03.3 *Medical Force Health Protection on Operations*.

Commanders will wish to gather advice from relevant subject matter experts such as environmental health, driver safety, etc.

b. Measures taken to counter the debilitating effects of infection, adverse environmental conditions including climatic extremes, Environmental Industrial Hazards (EIH) and CBRN hazards. These measures require MEDINT and may require medical countermeasures. Although this area falls under preventive medicine, the provision of environmental control equipment such as air conditioning is a non-medical function with consequences for health.

c. Performance-enhancing measures, both physical and psychological (such as G-protection or fatigue management) which are delivered by DMS specialists, supported by the Defence Scientific and Technology Laboratory (DSTL) and the wider research community.

232. Force health protection is one of the main areas of interaction between medical and non-medical functions, requiring an executive lead with medical advice. Responsibility lies with the J3 chain of command which should coordinate with J2, J4 medical and the wider force protection community to ensure balance of investment and best practice on operations. Force health protection permeates all levels of preparation within the DMS, extending throughout the operation, embracing the entire range of military activity from prevention to the post-conflict stabilisation aspects. Force health protection principles should apply beyond the force into the entire population at risk; both physical and psychological protection should be in place from the outset and across all units.

233. A wider exposition of force protection doctrine can be found in JDP 3-64 *Joint Force Protection*.

SECTION II – CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR HAZARDS

234. Responsibility for CBRN defence is a command responsibility, addressed through CBRN policy to which the Surgeon General contributes via the CBRN Medical Steering Group. Coordination of CBRN matters, across the J2, J3 and J4 functions is undertaken by the J3 Operational Support Force Protection Cell, usually found within PJHQ but may deploy with the Joint Task Force Headquarters (JTFHQ).[31]

[31] CBRN Policy are responsible for determining CBRN policy for CBRN Defence, Joint Capability are responsible for capability.

235. Particular medical considerations to achieve an effective CBRN force protection plan include recognising the source of the threat and quantifying the risk that may be presented. The medical response to any detected hazard will be directed by a risk assessment and appropriate actions taken in the light of this.

236. EIH[32] may have immediate or long-term health effects on personnel, as well as having an impact on operational capability. Hazardous materials may be released from industrial plants, storage depots or transport facilities through battle damage, terrorism, deliberate measures, accidents or natural catastrophe.

237. Threat agents across the CBRN spectrum may pose challenges for medical operational support which differ from those produced by conventional weapons.

a. Casualty rates may be higher when personnel are unprotected or where personal drills are not performed effectively.

b. Injury patterns may be different:

(1) Chemical weapon or EIH release may produce signs and symptoms with varying latency and severity.

(2) The effects of radiological exposure in particular may not be recognised immediately or may be misdiagnosed.

(3) Biological weapon agents and toxins may not be recognised immediately as an attack and may mimic a natural outbreak but with a greater impact.

(4) Combined CBRN and conventional injuries will present complex handling, treatment and containment problems.

c. Indirect casualties may result from the use of CBRN agents, including:

(1) Side effects of medical countermeasures which may degrade performance in the short term. The impact upon an individual's effectiveness may be minimised by the early administration of medical countermeasures; this in itself will require support from non-medical elements.

[32] EIH are defined as including hazardous chemicals other than chemical warfare agents, pathogenic micro-organisms (including animal disease) other than when used as biological warfare agents, radiation hazards other than those arising from the use of nuclear weapons and physical hazards such as dust, noise, asbestos and smokes.

(2) Heat stress or dehydration due to use of Individual Protective Equipment (IPE).

(3) Psychological casualties.

d. Clinical management of casualties, both conventional and CBRN, may be compromised by:

(1) The requirement to wear IPE.

(2) The requirement to decontaminate a casualty.

(3) Any interactions between medical countermeasures and other therapies such as anaesthetic agents.

238. **CBRN Aspects of Force Health Protection**. The aim of UK CBRN Defence is to allow UK Forces to maintain freedom of action despite the presence, threat or use of CBRN devices or agents.[33] Force health protection contributes through:

a. Medical countermeasures.

b. Restriction of movement, including the isolation of personnel and the use of quarantine.

c. Hazard control and management (including avoidance), communicable disease control, disease surveillance, control of agent spread and decontamination.

d. CBRN casualty management through all stages of medical support including triage, treatment, hospitalisation and evacuation, with logistic support providing re-supply and medical waste management.

e. Diagnosis of the effects of a CBRN agent, either through casualty assessment or clinical investigation; this contributes to the recognition of a CBRN attack in the absence of a detection warning.

f. Casualty hazard management including containment, decontamination and isolation as required by the CBRN agent and its physical properties or transmissibility.

239. **Medical Countermeasures and Support**. Medical countermeasures fall into 4 categories:

[33] JDP 3-61.1 (2nd Edition) *Joint CBRN Defence,* due to be promulgated in 2011.

a. **Pre-exposure Prophylaxis**. Pre-exposure prophylaxis describes the administration of medical countermeasures before exposure in order to prevent or ameliorate the effects of a CBRN agent. These may be given days, weeks or even months in advance. An example would be vaccines to protect against infectious disease. Current UK policy is for voluntary vaccination and emphasis should be placed on commanders encouraging good vaccination uptake before deployment.

b. **Pre-treatment**. Pre-treatment describes those drugs which are administered prior to exposure that enhance the efficacy of subsequent post-exposure therapy. Examples include the Nerve Agent Pre-treatment sets (NAPS) or the use of antibiotics.

c. **Post-exposure Prophylaxis**. Post-exposure prophylaxis exploits advances in detection capabilities in order to take advantage of the window of opportunity between exposure to an agent and the development of any irreversible consequences (e.g. starting a course of antibiotic therapy after potential exposure to biological warfare agents).

d. **Immediate Therapies**. Immediate therapies include self-administered medical products used when the effects of CBRN agents are evident (e.g. Combo Pen).

240. The specifics of force health protection as applied to the UK military are available in the related documents mentioned above and should be considered in conjunction with this capstone doctrine. Operational and tactical medical force protection aspects are better placed within subordinate doctrine and should be directly accessed and understood by commanders and their medical planners.[34]

SECTION III – PREVENTIVE MEDICINE

241. Preventive medicine forms an essential part of the core medical effort involved in force health protection. This discipline interfaces between health promotion and disease prevention and embraces the work of specialists in Public Health, Occupational Medicine, Environmental Health and Veterinary Medicine. Each specialty is multi-faceted and covers a wide and dynamic range of activities, both pro-active and reactive. It also requires those dealing with occupational health to have operational and environmental currency.

a. **Public Health**. Public health looks at the nature and effect of disease on population groups and therefore tends to be concerned with health issues at the strategic and joint operational levels of command.

[34] JDP 3-64, JDP 4-03.3.

Public health specialists use epidemiological and statistical tools, conduct active disease surveillance and access multiple health databases to provide evidence-based strategies for health promotion and disease prevention.

b. **Occupational Health**. Occupational health deals with the effect of work on health and health on work.[35] Its aim is to prevent any potential ill effects of the working environment on the health of individuals and to assess the influence of an individual's state of health on the ability to perform their duties. The practice of occupational health depends on a number of inter-related disciplines such as occupational medicine, occupational nursing, occupational and environmental hygiene and ergonomics. It requires collaborative working between these disciplines and other medical specialities, the individual and the employer.[36]

c. **Environmental Health**. Environmental health deals with the identification and assessment of a wide variety of environmental threats. Environmental health activities include:

(1) Health promotion and disease prevention.

(2) Outbreak investigation.

(3) Water quality monitoring, analysis and approval for consumption.

(4) Food hygiene and safety – from supplier to consumption.

(5) Field hygiene and sanitation.

(6) Control of pests and vectors of military medical significance.

(7) EIH identification and threat assessment.

(8) Noise and other industrial hazard protection programmes.

(9) Health impacts from the built environment.

[35] Occupational health aims to promote and maintain the highest degree of physical, mental and social well-being of individuals in all occupations, prevent ill-health resulting from the working environment, protect individuals in their employment from risks resulting from factors adverse to health and to place and maintain individuals in an occupational environment adapted to their capabilities. WHO/ILO definition.

[36] Examples include advice to commanders of the impact of training on health, such as in climatic extremes or following noise exposure.

d. **Veterinary Medicine**. Veterinary medicine contributes to the medical protection of the force and is covered in more detail later in this chapter.

SECTION IV – MEDICAL EVACUATION

242. Medical Evacuation (MEDEVAC) is the process of moving any person under medical supervision who is sick or injured to and/or between MTFs (this may be within the maritime, land or air environments). MEDEVAC falls into 2 categories. The first is responsive in nature, when assets are called to an incident; the second is planned when casualties are moved between MTFs. MEDEVAC requires specific medical personnel and assets appropriate to the particular operational environment. MEDEVAC forms part of the patient care pathway and is a medical function.

243. Each component contributes to MEDEVAC and should be able to adapt to changing (including deteriorating) operational scenarios. The need to evacuate patients, medical attendants and platforms from unstable and non-permissive environments may require a different clinical philosophy, and approach to risk, compared to more stable and benign environments. Similarly the approach to the treatment of manageable numbers of casualties differs to MASCAL situations in which the medical response is overwhelmed.

244. An ideal medical evacuation system will include:

a. An all-weather, 24-hour capability, over all terrains and in any operational environment. Clinical care should be provided throughout the journey, to an agreed standard and in accordance with healthcare governance principles. Alternative platforms or staging facilities should be available to ensure patients' safety and welfare when evacuation is jeopardised for operational or technical reasons.

b. Appropriately trained clinical staff applying best practice tempered by operational constraints and realistic expectations, whose training should include military skills appropriate to the operating environment.

c. Interoperable equipment and training of in-transit medical personnel to enable rapid and safe transfer between airframes, ambulance and MTFs.

d. A system of patient regulation so that the flow and types of patients can be controlled throughout the evacuation process.

e. A system to track patients accurately through the evacuation processes.

f. Appropriately dispersed assets, throughout (and beyond) the area of operations.

g. Platforms tailored to the environment, together with their necessary protection and mobility (especially for forward MEDEVAC), including air support and armoured ambulances. Geneva Convention principles restrict the use of recognised emblems on armoured fighting platforms (Annex 1A).

h. Effective C4I to enable a coordinated, timely MEDEVAC response supported by resilient communications across the MEDEVAC organisation.

245. **Aeromedical Evacuation**. Aeromedical evacuation is the movement of patients under medical supervision to and between medical treatment facilities by air transportation. The RAF Medical Services deploy aeromedical evacuation personnel as a force enabler, to provide a transfer service which meets or exceeds the level of care an injured person may reasonably expect to receive within the UK. This approach to aeromedical evacuation is laid down within AP 3394.[37]

Medical Emergency Response Team

246. The Medical Emergency Response Team (MERT) is defined '*as the medical component of an Incident Response Team where the capability may be delivered in the maritime, littoral, land or air environments. MERT is used when the clinical situation dictates the need for specialist Pre-Hospital Emergency Care (PHEC) interventions during MEDEVAC*'.

247. MERT operates within the tactical environment and its members will be specifically trained in PHEC to operate in this environment.[38] The team will be based on paramedics,[39] or emergency medicine nurses, or both, but may be augmented by medical assistants, combat medical technicians or Royal Air Force medics as the clinical and operational situation dictates.

248. MERT may be augmented with the addition of a medical officer. This adds additional clinical experience and competencies to the MERT response with the medical officer's ability to undertake specific procedures which may include advanced airway management, rapid sequence induction and the maintenance of anaesthesia whilst exercising different elements of clinical judgement. Intelligent tasking is required to decide the most appropriate

[37] Air Publication 3394 (4th Edition).
[38] As with any operational environment, it is expected that the members of MERT will have apposite and thorough military skills to support their function within the operational environment.
[39] State Registered Paramedic.

aspect of MERT to deploy as well as facilitating appropriate asset management across the area of operations.

SECTION V – MENTAL HEALTH

249. The operational environment can be expected to present the individual with abnormal or unfamiliar stressors and may result in a range of psychological responses. In a proportion of individuals these responses will require the intervention of mental health staff. In most cases prompt and appropriate care will result in an early return to duty and should prevent long-term morbidity. The effective management of psychological illness is a force sustainer and the inclusion of psychiatric capability in any operational force is therefore an important consideration.

250. Mental health support starts at the command level and is an executive responsibility. Good leadership that engenders trust, by showing competence, credibility and a caring attitude, and encourages cohesion is a major protective factor for mental health. Realistic collective and individual training promoting confidence in skills and equipment is another protective factor. There should be a persisting, unobtrusive command interest in the psychological welfare of personnel promoting both resilience and the acceptability of asking for help. No matter where military personnel are they should receive the same level of mental health care and commanders should expect the same level of occupational mental health input to assist in force maintenance.

251. Mental health care support consists of:

a. Clinical services that allow for the assessment, engagement, treatment and rehabilitation of patients.

b. Educational services that give mental health promotion to all in the area of operations and specific briefs to groups such as body handlers and any other group considered to be exposed to particular stressors. They also provide for the education of other medical personnel on the detection and management of mental health problems.

c. Liaison services that give advice to command on the psychological threat, provide liaison with Trauma Risk Management (TRiM)[40] practitioners and visit units around the area of operations.

[40] TRiM – peer group risk assessors (non-medical) within a unit will act after traumatic incidents at request of command and signpost any personnel that they believe are at risk of psychological disability toward medical services.

SECTION VI – DENTAL HEALTH

252. The provision of dental care is an integral component of operational medical capability. The level of support required should be evaluated as a factor in the medical estimate. Dental support must be flexible and optimised to the anticipated scale of conflict, mission type and military task. It should be determined on the basis of expected accessibility to dental services, the prevalence of dental disease in the population at risk and should ensure that, operational circumstances permitting, standards of dental care in war compare to those delivered in peacetime.

253. Historically, dental morbidity accounts for a significant element of DNBI casualty rates. The DMS Strategic Plan target for fitness to deploy requires that a minimum of 75% of personnel in a unit be dentally fit (NATO category 1). NATO category 3 represents personnel with the highest risk of dental morbidity. Category 4 is reserved for personnel who are out of date for their periodic dental inspection. While every effort is made to ensure that units have the highest possible dental fitness levels, it may not always be practical or clinically prudent to carry out operative treatment immediately prior to a deployment. Late augmentation of units by reserves (with a variable prevalence of dental pathology) should be evaluated as a risk factor. It is reasonable to predict that risk will increase if significant numbers of personnel in NATO category 3 and NATO category 4 are posted to a unit. Dental morbidity can, however, present unexpectedly from any fitness category.

SECTION VII – VETERINARY SUPPORT

254. The Royal Army Veterinary Corps (RAVC) has an important role (as part of the preventive medicine team) in maintaining the health of personnel on operations that goes far beyond their obvious responsibilities for Military Working Animals (MWAs). The requirement for the specialist capabilities of this corps should therefore be considered for all operations. Responsibilities of the RAVC include:

a. Ensuring the safety of locally procured foods of animal origin.

b. Advice on zoonotic diseases including their treatment and prevention (including the importation to UK of exotic animal diseases of major concern or public health significance).

c. MWAs, including the procurement, training, care and disposal as well as command advice on optimising operational use of such animals. Dogs in particular play an essential role in the security of UK forces on operations, e.g. guarding, explosive detection and tracking.

d. Specialist advice on the effects on animals from CBRN attack.

e. Disposal of feral animals.

f. Care of pack animals and support to approved animal mascots.

g. Local support from the RAVC may make a significant influence effect, particularly in stabilisation operations through the provision of assistance to the local community (particularly in agricultural economies where heavy reliance is placed on the use of animals for food and as a means of transport).

SECTION VIII – NURSING AND ALLIED HEALTH PROFESSIONAL SUPPORT

255. **Nursing Support**. Nursing is a vital component in all aspects of multidisciplinary medical care and support. The importance of the nursing contribution in the entire continuum of care through Roles 1 to 4 is demonstrated by the nursing cadre being the largest single specialty within the DMS. Within the general spectrum of nursing care, registered nurses may become specialised in an expanding range of disciplines that require a high degree of training and competency, above that of a non-specialist registered nurse, as required by their professional body. Nursing personnel contribute to continuity of care by working in partnership with all healthcare professionals in the following overlapping areas:

a. **Supportive Care**. Supportive care complements and enhances medical treatment regimes. This care can be the most important element of treatment for some patients and may require intensive and unremitting effort 24 hours a day. Patients may need to be monitored, clinical measurements made and observations recorded and acted upon independently of a medical practitioner. Patients require frequent monitoring, examination and review to ensure that improvements or deterioration in their condition are recognised and treatments adjusted accordingly. This may involve simple techniques, the management of sophisticated medical equipment or the intervention of a nurse advanced or autonomous practitioner.

b. **Adjunctive Care**. Throughout the medical professions there is a trend towards increasing delegation and specialisation. Greater clinical responsibilities are being delegated to appropriately trained junior and healthcare support workers at all levels. This allows other staff to concentrate on more complex clinical problems leading to greater specialisation. The nursing profession is at the forefront of these

changes and selected personnel will increasingly find themselves in positions of greater responsibility and autonomy in the provision of care for casualties and as such will require additional professional education and training to enable them to provide this advanced level of care.

c. **Clinical Environment**. Nursing staff are responsible, with others, for the creation and management of the clinical environment. A well-managed clinical environment extends throughout the patient care pathway and encompasses casualty transfer capabilities as well as static medical facilities. Some nursing staff specialise in certain aspects of the clinical environment, e.g. infection, prevention and control nurses.

256. Allied Health Professionals: [41]

a. **Radiographers**. Diagnostic imaging is essential to support deployed clinicians at Roles 2 and 3. Health Professions Council (HPC) registered radiographers will provide radiation protection advice and medical imaging capability using a range of digital equipment. A Computed Tomography (CT) service and a teleradiology capability can be provided when the appropriate infrastructure is deployed. Radiographers will also provide forensic imaging.

b. **Biomedical Scientists**. Military state registered biomedical scientists provide clinical laboratory support across all MTF roles. They are tri-discipline trained in haematology, biochemistry and bacteriology[42] and have a critical role in the provision of safe blood and blood components and healthcare assurance to the Medicines and Healthcare products Regulatory Authority (MHRA).

c. **Pharmacy Services**. Pharmacists and pharmacy technicians are registered with the General Pharmaceutical Council (GPhC) and provide the expertise for medicines management across the MOD and specific pharmacy advice on MedCM. This includes maintaining a robust medical supplies chain for the provision of medicines and medical consumables.

d. **Operating Department Practitioners**. Operating Department Practitioners (ODPs) will be registered with the HPC and provide care for the patient as part of the surgical/peri-operative team as a multi-

[41] The list is not exhaustive, other health professionals involved in the provision of military medical care include; environmental health personnel, physiological measurement technicians, medical assistants, combat medical technicians and state registered paramedics.
[42] NHS biomedical scientists are usually single discipline trained only.

skilled theatre practitioner including equipment sterilisation. ODPs will be deployed across Roles 2 and 3.

e. **Physiotherapists**. Professionally qualified and registered physiotherapists are employed across the DMS, delivering care at primary, intermediate and secondary care locations within the home base and on deployed operations. They provide a force multiplier by way of rehabilitation to full fitness and have a direct impact in the reduction of numbers of personnel unfit to deploy.

ANNEX 2A – THE SEVEN CAPABILITIES OF CARE

2A1. The 7 Capabilities of Care represent the health components required to establish a healthcare system in any environment. These should be used to ensure that all areas are considered and provided for healthcare planning. The consideration of the 7 Capabilities of Care is equally pertinent whether conducting a Defence Medical Services (DMS) force structures review, early entry direct intervention or supporting a specific mission during a small scale enduring peacekeeping operation. While the Land component has force elements configured to meet all the requirements of the 7 Capabilities of Care some of the force elements allocated to the task may be from Defence, another single-Service or troop contributing nation especially when operating in a multinational joint framework.

- Force Health Protection (including medical intelligence)
- Pre-Hospital Emergency Care (PHEC)
- Primary Health Care (PHC)
- Deployed Hospital Care (DHC)
- MEDEVAC
- Medical Command, Control, Communications, Computers and Intelligence (C4I)
- Medical Logistics

a. **Force Health Protection (including Medical Intelligence)**. Force health protection considers force preparation measures, environmental health advice, in-theatre preventative measures (hand washing, sanitation, education), post exposure measures and rehabilitation of the force. Force health protection follows the continuum of care cycle. This assists with informing the commander's intelligence preparation of the battlespace process. Medical intelligence may be derived from the location, capabilities and capacity of host-nation medical facilities; the analysis of local morbidity and insights into the enemy health systems. This base data can be as simple as accurate and timely morbidity reporting (EPINATO) and completion of medical patrol reports after providing medical support to a patrol.

b. **Pre-Hospital Emergency Care**. PHEC starts at the *point of wounding* and is the start of the patient's *damage control resuscitation paradigm*. Members of the Armed Forces that are confident and competent in the delivery of the battlefield casualty drills[1] will have an immediate positive effect on the survival opportunities of their colleagues. PHEC is delivered through a layered approach of medics, doctors, nurses and allied health professionals.

c. **Primary Health Care**. PHC contributes to approximately 90% of healthcare activity in the deployed environment and is essential to sustaining the force in the field and reducing unwarranted referral to DHC nodes. Delivery of and access to PHC in the non-deployed environment is a fundamental requirement to preparing the force for deployment, engendering belief in the healthcare system and is the building block to the patient-deliverer relationship in the deployed environment.

d. **Deployed Hospital Care**. PHC and DHC must be accessible to all personnel regardless of the nature of deployment. Expectations of care (by both Service personnel and the general public) demand that medical care on operations is comparable to that of the home base. This is achieved by adopting civilian procedures where appropriate and developing specific guidelines for operations when indicated. This will be tempered by the operational constraints and the *evacuation centric* nature of deployed care. The deployment and employment of DHC facilities are also subject to International Law as incorporated in UK Law,[2] which enables them to claim certain rights under International Law[3] but imposes restrictions[4] and incorporates widely accepted medical ethical standards.

e. **MEDEVAC**. MEDEVAC encompasses the spectrum of capabilities in the evacuation of patients when accompanied by a medical specialist(s). It can include the movement of casualties from point of wounding, injury or disease to DHC, intra-theatre DHC components and strategically from the operational environment to Role 4. MEDEVAC from the point of wounding to DHC should be conducted by emergency care specialists[5] in task-specific platforms.[6]

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[1] *Battlefield Casualty Drills Aide Memoire*, 5th Edition, dated January 2007; AC 71638.
[2] For example, The Geneva Conventions Act 1957 and Geneva Conventions (Amendment) Act 1995.
[3] Such as the right to display the Red Cross and claim protection from enemy action.
[4] For example, cannot be used as part of a security framework.
[5] These include paramedics, emergency nurses or medical officers suitably trained in pre-hospital care.
[6] MEDEVAC must be able to be conducted by land, air or sea. It is not solely the domain of the Immediate Response Team (IRT) helicopter and Medical Emergency Response Team (MERT).

f. **Medical Command, Control, Communications, Computers and Intelligence**. The delivery of a truly integrated Medical C4I system will enable commanders in the future to provide a 21st Century solution to patient management, tracking and treatment in the deployed environment. This could be summarised as *directed healthcare support*.

This can only be achieved if integration is conducted at all levels across Defence. This emerging and future capability will be provided by these 5 areas:

(1) **Monitoring Unit Health**. Defence Medical Information Capability Programme (DMICP) will provide an electronic health record for all serving personnel. However, as an electronic database it is also able to exploit information on the health of groups of personnel. Where, and how, to exploit these opportunities is currently ongoing work, led by Headquarters Surgeon General.

(2) **Communication Networks**. Like other specialist functional areas medical will seek to exploit communication networks to provide lighter, more capable and more agile healthcare support.

(3) **Reachout**. The ability to pass clinical information and images will provide a mechanism of supervising and supporting healthcare personnel operating in extended roles, thereby mitigating against some of the risks of increased dispersion.

(4) **Directed Healthcare Support**. In future it is envisaged that IT will provide greater medical situational awareness including accurate patient tracking; near real time details of the clinical condition of patient; and precise location/status of medical assets.[7] This will allow the development of more efficient highly responsive directed healthcare support, however this will require focus to manage this information, make decisions and coordinate activity. Traditional casualty regulation[8] focus is at the 2* formation level.

(5) **Casualty information**. In the contemporary political environment all levels of the chain of command up to ministerial level regularly require timely and accurate information on

[7] Both medical facilities and mobile MEDEVAC platforms.

[8] Casualty regulation matches clinical need of casualties to appropriate resources and regulates the flow of casualties to prevent overloading within the medical system. Effective casualty regulation requires visibility of operational context; casualties; medical facilities; medical supply and MEDEVAC.

casualties. Furthermore, boards of enquiry and ministerial questions often seek clarification of issues concerning casualties at variable times after the event. The chain of command requires access to an accurate source of casualty information both real time and possibly years after the event. Management, storage and retrieval of information will be essential to this process.

g. **Medical Logistics**. In accordance with JSP 886, *The Defence Logistics Supply Chain Manual*, Volume 6, Part 6 *The Supply of Medical, Dental and Veterinary Equipment in the Joint Supply Chain*.

ANNEX 2B – UK MEDICAL TREATMENT FACILITY ROLES

NATO Descriptor	Specified/Implied Tasks	Clinical Capability According to NATO
Role 1. *Provides Primary Health Care (PHC), specialised first aid, triage, resuscitation and stabilisation*.	Medical support to a manoeuvrable or static organisation. Includes packaging for evacuation. BATLS resuscitation. Not necessarily Medical Officer (MO)-led, likely to be MO supervised. **Collective Protection (COLPRO) unlikely**.	Basic occupational and preventive medical advice to the chain of command. Routine *sick call* and the management of minor sick and injured personnel for immediate return to duty. Casualty collection from the point of wounding and preparation of casualties for the next military treatment facility. Primary dental care. Additional capability may include – minimal patient holding capability, basic laboratory testing, initial stress management.
Role 2 Light Manoeuvre. *Conducts triage and advanced resuscitation procedures up to Damage Control Surgery (DCS). It will usually evacuate its post surgical cases to Role 3 (or Role 2E) for stabilisation and possible Primary Surgery (PS) prior to evacuation to Role 4*.	Utilised during high intensity combat supporting manoeuvre. Located forward in brigade area of operations to deal with anticipated surge of casualties. Light and highly mobile. An intermediate treatment node in complex terrain. **COLPRO dependent upon operational risk assessment**.	Consultant delivered resuscitation with those elements required to support it. DCS with post-operative care. Field laboratory. Basic imaging. Reception, regulation and evacuation of patients. Limited holding capacity.

Role 2 Afloat. *Provides up to Consultant lead Pre-Hospital recovery capability. Conducts consultant delivered triage and advanced resuscitation procedures up to Damage Control Resuscitation (DCR). It will usually evacuate its post surgical cases to Role 3 (or Role 2E) for stabilisation and possible Primary Surgery (PS) prior to evacuation to Role 4*.	Utilised to expand the maritime medical footprint, to meet clinical timelines when operating over significant distances, which can be in-conjunction with a deployed Role 3 or identified host-nation support. Role 2 Afloat capabilities are assigned to specific platforms that are generally fitted for, and become mission capable with the addition of medical modules and personnel.	All Role 1 capabilities. Pre-hospital emergency care recovery capability. Consultant led resuscitation with those elements required to support it. DCR with limited critical care post-operative care. Basic laboratory. Basic imaging. Reception, regulation and evacuation of patients. Limited holding capacity.
Role 2 Enhanced. *Basic secondary care facility built around PS, Intensive Therapy Unit (ITU) and beds with nursing support. A Role 2E facility is able to stabilise post-surgical cases for evacuation to Role 4 without the need to put them through Role 3 Medical Treatment Facility(MTF) first*.	Theatre entry MTF. A theatre or regional secondary health care hub mainly in stable or enduring operations where a full Role 3 is not justified. Role 2E will normally replace both Role 2LM and Role 3 units as operations mature. A light manoeuvrable hospital in advance of Role 3. **COLPRO dependent upon operational risk assessment**.	Primary surgery. Surgical and medical ITU capability Beds with nursing support. Enhanced field laboratory including blood provision. Casualty decontamination provision Capability may include – preventive medicine and environmental health capability, psychiatry, tele-medicine, evacuation coordination.

Role 3. *Provision of theatre secondary health care within the restrictions of the Theatre Holding Policy (THP)*.	Force hospital. **COLPRO capability present**.	PS, ITU, Surgical and Medical beds with nursing and diagnostic support. Role 3 MTFs can include mission tailored clinical specialities (specialist surgery (neurosurgery, burns, oral, maxillo-facial surgery, etc.)), advanced & specialist diagnostic capabilities to support clinical specialists (CT scan, sophisticated laboratory tests, etc.) and major medical and nursing specialities (internal medicine, neurology, etc.).

Table 2B-1 – UK MTF Roles from NATO MTF Role Definitions

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CHAPTER 3 – THE UNITED KINGDOM BASE AND MEDICAL INFRASTRUCTURE

SECTION I – UNITED KINGDOM CIVILIAN ASSETS

301. **The National Health Service**. The National Health Service (NHS) and the UK Departments of Health represent a considerable resource for the Defence Medical Services (DMS) and placements for secondary healthcare personnel. This includes personnel provision in the form of Reserves (or general call up in the time of major conflict) and the point of contact between the military treatment of those repatriated for Role 4 treatment and the wider NHS system of care in which the DMS is now integrated. The NHS will provide the UK-based backup for definitive treatment for casualties in any large operation; its resources are managed and allocated under *reception arrangements for military patients*.[1]

302. **Pharmaceutical and Medical Equipment Industry**. The pharmaceutical and medical equipment industries are geared more for steady commercial production than for meeting Ministry of Defence (MOD) surge requirements. For some drug manufacturers it may therefore be difficult to accelerate production. Capital items will rarely be stocked but rather produced to order. Industrial rationalisations and product licensing may necessitate overseas procurement – potentially when allies are making similar demands on common suppliers. No reliable assumptions are possible about industrial capacity and some stockpiling of those commodities not readily available at short notice may therefore be necessary.

SECTION II – UNITED KINGDOM DEFENCE MEDICAL ORGANISATION

303. **Headquarters Surgeon General**. The Headquarters Surgeon General is the overarching medical headquarters embedded within the UK MOD. Under the leadership of the Surgeon General it provides strategic direction and policy guidance to the DMS.

304. **Regular Defence Medical Services**. The Regular DMS[2] is established to provide the rapid reaction necessary for operations and to meet

[1] Reception Arrangements for Military Patients into the NHS, Version 4.1, March 2008.

[2] *Defence Medical Services.* The DMS is not formally constituted but is a *de facto* confederation of the single-Service medical branches and services, embedded in the front line commands and the Joint Medical Command, which operate under the strategic direction of the Commanders-in-Chief and the Surgeon General. Therefore the term DMS accurately and comprehensively describes the group of medical services which, collectively, give health advice, deliver healthcare and deploy medical operational capability; under the leadership of the Surgeon General, whose role is critical to ensure effective collaboration.

standing military tasks and contingent responsibilities of the UK military. Many of its units are at cadre strength, with reinforcing personnel being employed elsewhere, usually in the NHS, in order to maintain and develop their medical skills. The DMS (in common with the NHS) historically has difficulty retaining its full manning complement. At any time it is likely that there will be deficiencies in certain areas that may need to be made up from the medical Reserve Force or by contractors. High readiness tasks can only be satisfactorily met by Regular personnel.

305. **Permanent Joint Headquarters**. The Permanent Joint Headquarters (PJHQ) is an adaptable and agile headquarters created to command joint and combined military operations and provide politically aware military advice to the MOD. It is at the forefront of work throughout British Defence to further improve joint operational capability. Within the J4 medical cell there are representatives from all 3 single-Services who plan, direct and support DMS personnel while they are deployed on operations, at permanent joint operating bases or isolated detachments.

306. **Front Line Command Medical Branches**. The front line command medical branches support their commands, PJHQ and Headquarters Surgeon General by mounting force elements for operations and conducting specific tasks (e.g. control of strategic medical evacuation).

Joint Medical Command

307. The joint medical command provides the overarching structure and direction for the provision of military secondary care personnel on deployed operations, through the Defence Medical Group (DMG), and within the home base via the UK Role 4 establishment of the Royal Centre for Defence Medicine (RCDM) Clinical Unit, Defence Medical Rehabilitation Centre (DMRC) and the Ministry of Defence Hospital Units (MDHUs). The Healthcare Directorate is responsible for the commissioning of secondary healthcare within the UK and the joint medical command comprises various other subordinate units responsible for training (DMS Training Centre) and the provision of dental healthcare (Defence Dental Services). The joint medical command also commissions and directs research and development through its medical director. It is inextricably linked with both Headquarters Surgeon General and PJHQ providing medical personnel to deployed operations.

308. The provision of military secondary care personnel who are fully clinically and militarily trained for their roles is a highly complex joint undertaking between the front line commands, Headquarters Surgeon General and the Joint Medical Command. This is achieved through close cooperation with the NHS that allows the medical personnel to have access to a wide

patient base that will maintain and enhance those skills that will be necessary to their function in the operational environment. MDHUs provide the *prime loci* for this interaction between military and NHS assets but, in the interests of maintaining specific skills sets, individuals or coherent groups may be placed within NHS hospitals outwith the RCDM/MDHU system.

The Royal Centre for Defence Medicine

309. The RCDM was established in 2001 and its clinical unit is now the focal point for the military reception of operational casualties. RCDM supports University Hospitals Birmingham NHS Foundation Trust (UHBFT) through the provision of DMS command and control, manpower and specialist military expertise in order to facilitate the *patient care pathway*. This is a logical extension of operational care provision. Thus, RCDM is an operational unit in the home-base responding to the operational tempo of deployed formations. Therefore, during operations, it must not be constrained by peacetime business, timelines and activities. This demands manning and establishment support from the single-Services and MOD.

310. The critical contribution that the tri-Service uniformed Role 4 Medical Group staff provide is the visible, sustained and continuing military presence within UHBFT to work alongside NHS colleagues. The skill-mix of the military personnel should be appropriate to the tasks. They must be sufficient in number to allow deployment as required without compromising patient care. This joint and cross-government approach that has been developed between RCDM and UHBFT meets the duty of care expectations of the *patient group*,[3] the chain of command, ministers and the nation. It delivers military effect through the provision of first class clinical care supported by comprehensive military administrative and welfare provision which are all necessary to the well-being of the operational casualty.

Defence Medical Rehabilitation Centre

311. DMRC's core function is as part of the force generation process, returning injured military personnel to their functional lines. The rehabilitation of seriously injured casualties also contributes to force generation within the physical component of *British Defence Doctrine* but in addition is of great significance to the moral component. While complex trauma rehabilitation is currently perceived to be of core importance, its high profile is a function of the current operational climate. It is DMS policy to rehabilitate injured personnel to the highest achievable level. In a similar vein to RCDM, DMRC must be viewed as an operational unit, again at the home base, having a duty to

[3] The patient group encompasses both the patient and next of kin.

respond within an operational timeline without being constrained by less responsive business processes.

312. Subordinate Regional Rehabilitation Units (RRUs) and primary care rehabilitation facilities facilitate the flexible and responsive management of those casualties that are either in the later stages of recovery or less seriously injured, allowing them to be rehabilitated in an environment appropriate to their needs. They form an integral part of the patient care pathway and so are part of the manning and establishment requirement for DMRC. This rehabilitation function goes beyond the clinical duty of care and includes the requirement to maintain and instil military ethos with all personnel acting as exemplars. Supporting this process will be the clinical, social, mental, spiritual, administrative and general welfare support services provided from within DMRC and its associated RRUs.

313. Balancing the numbers of uniformed to civilian staff within the rehabilitation lines of both DMRC and the RRUs is an important element of fulfilling the duty of care. Again, this is a function of the single-Services and wider MOD rather than being a purely DMS role.

314. The assured provision of trained and qualified personnel to fulfil the establishment and force generation of Role 4 capability is recognised as an MOD-wide responsibility. It is supported by the single-Services, Headquarters Surgeon General and joint medical command.

Single-Service Organisations

315. Single-Service assets are deployed according to the nature of the tasks involved:

a. **Royal Navy Medical Organisation**. The Royal Navy Medical Service provides healthcare for the Royal Marines as well as ships and submarines. Within the appropriate readiness profiles, the RN's Role 2 and Role 3 afloat support provides cover in the maritime and littoral environment as part of an area of operations medical plan.

b. **Army Medical Organisation**. The Army operational medical organisation includes that which is provided for land forces. It is the largest medical organisation that includes hospital support assets to cover the needs of all 3 Services on land.

c. **Royal Air Force Medical Organisation**. The RAF operational medical organisation provides the medical support for air operations as well as aeromedical evacuation for all 3 Services. The latter encompasses provision of medical escorts, ground handling and patient

holding for strategic and tactical fixed wing aeromedical evacuation and medical escorts for helicopter transfer.

Medical Reserve Forces

316. The reserve component of the DMS is a substantial resource. Reservists may volunteer for any operation. They may not be called up for operations without an Order in Council issued under the Reserve Forces Act (RFA) unless they have already signed the RFA. The level of Reservists' individual skills, both military and clinical, should also be taken into account when considering their use; time for assessment and retraining, particularly of paramedical personnel, may be required. The Reserve medical organisation is mainly based on the Territorial Army, although small but significant contributions are found within the Royal Naval Reserve and Royal Auxiliary Air Force. The Reserve medical organisation is required in support of the regular force for medium and small-scale operations especially if these are enduring. It provides specialist individuals for niche speciality areas. In addition to formed units there are individual reservists who have previous service in the regular forces and who may be called out on mobilisation. Their conditions of callout are also contained in the RFA.

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CHAPTER 4 – MEDICAL SUPPORT AT THE STRATEGIC/OPERATIONAL INTERFACE

Health

401. Health is not merely the absence of injury or disease. Health in its widest sense includes physical, psychological and social well-being. In the military context health may be defined as the ability of Service personnel to work unimpeded by physical, social or psychological problems. Promotion of health, prevention of disease and treatment of the sick and injured are the core functions of the Defence Medical Services (DMS) – but responsibility for health is everyone's business. The contribution that health makes to fighting power has already been discussed but implicit in the goal for a healthy force is that health must be delivered both in peacetime and on operations.

402. Medical organisations that deliver a purely treatment based service are providing *sickcare* rather than *healthcare*. The former is demand led and reactive rather than needs led. This type of service will always be required to treat those who have become ill or injured but the aim is not merely to react to ill health when it occurs but to maintain and improve health pro-actively. Such action may be described as *healthcare* and implies a wider responsibility and involvement for individuals and non-medical organisations. The transition from *healthcare* to the all encompassing term *health* requires the addition of a further ingredient; that of primary prevention of events detrimental to health.[1] Although the medical services have an important role to play, they are not the most powerful influence on health.

403. **Determinants of Health**. In general terms the factors that determine health for any population are genetic, social, economic, environmental, lifestyle and access to medical services. During a military career personnel may, unlike their civilian counterparts, be placed in danger with the possibility of succumbing to disease, injury or death. In order to promote and maintain health one should aim to alter the determinants. The division of responsibilities for wide ranging influences such as operational risk, health and safety, housing, pay and conditions of service, clothing, nutrition, discipline and medical care makes health a complex issue which demands a clear focus.

404. **Consequences of Ill Health**. The consequences of failure to deliver comprehensive and integrated healthcare may be:

a. Failure of moral and legal duty of care.

[1] In the context of military operations (with inherent risk) this would, at first glance, appear to bring the medical organisation into conflict with the aims of the commander; this is not the case. The intention of prevention is to minimise avoidable morbidity and mortality but always within the constraints of the military mission.

b. Diminished force levels, leading to erosion of fighting capability both quantitatively and qualitatively.

c. Low morale in serving and retired personnel and their families.

d. Adverse political and medico-legal attention.

e. Poor public relations for the military.

Areas of Responsibility

405. There are 3 broad areas of responsibility for health within the military: individuals, the chain of command and the DMS.

a. **Individuals**. Lifestyle and behaviour are a powerful influence on health. Military personnel therefore have considerable responsibility for their own health, which includes following preventive advice. All personnel should acknowledge these responsibilities and take them seriously. Recruiting continues against a backdrop of an increasingly welfare-dependent society and personnel will require leadership, education and example setting, particularly from commanders, in order to increase awareness and individual responsibility.

b. **Chain of Command**. The chain of command has control over a number of the determinants of health through its ability to influence occupational issues. The health of the military population is an integral part of any human resource strategy with measures to promote and maintain health enshrined in policy.

c. **Defence Medical Services**. The DMS has 2 distinct areas of responsibility in contributing to military health: the provision of advice to the chain of command on the promotion of health, and the delivery of high quality timely medical capability in peace and conflict. Both make a valuable contribution to force protection.

406. The fundamental role of medical support is the conservation of the commander's force strength to enable an undiminished tempo and volume of operations in all environments. This is achieved through preventive medicine to minimise the loss due to *disease and non-battle injury* and the various roles of healthcare for the sick and wounded to restore them to their units as soon as possible. Both of these processes require forward and continuous planning by dedicated staff, coordination with all force elements and sufficient, well located personnel with training in the key disciplines. The commander should have a broad understanding of the medical threat and the need for a medical plan which:

a. Is integrated within the operational plan.

b. Places medical support in the most appropriate location.

c. Is inherently flexible.

d. Gives medical support units the mobility to provide timely care within any operation.

e. Provides a continuum of care from point of wounding or illness to definitive aftercare.

f. Is efficiently delivered and linked to host-nation support, Allied forces and UK hospitals as appropriate.

407. In common with other support services, medical support depends upon links deep into the home base. This includes medical resupply, casualty treatment in UK hospitals and the operational use of medical personnel who may themselves be drawn from the NHS and Reserves. This and public sensitivity to casualties and their treatment will ensure that medical issues always have a high political profile.

Standards of Health

408. Due to the unique physical and mental demands placed upon military personnel there is a requirement for a form of medical assessment and a system of standards by which fitness for operations (and wider employability) can be gauged. These standards may be stratified for the varying degrees of demand placed on individuals in different military roles and are applied on initial entry to military service as well as periodically throughout an individual's career. The assessment system therefore relies on 2 key components:

a. A qualitative analysis of the employment standards required for a specific job. This is principally a matter for personnel and operations staff.

b. A detailed evaluation of an individual's capacity for work expressed in terms of their physical, psychological and social history. This is a medical responsibility.

409. The system is designed to not only protect the individual from inappropriate employment that may further harm health but also to ensure that the Services benefit from the most efficient and flexible use of available manpower. The system of medical classification used to define individual

health in the military is the Joint Medical Employment Standard (JMES) which links the PULHHEEMS profile with employability.[2]

[2] Joint Service Publication 346, *PULHHEEMS – A Joint Service System of Medical Classification*, Chapter 5.

CHAPTER 5 – OPERATIONS

501. The planning, mounting and execution of an operation is an iterative process undertaken by Permanent Joint Headquarters (PJHQ). The Front Line Commands (FLCs) are supporting commands and act as force contributors with Headquarters Surgeon General providing central policy and guidance. Medical support in the area of operations is provided by single-Service assets working in concert under the overall command of Joint Task Force Headquarters (JTFHQ) and in line with the estimate. Single-Service doctrine will need to be coherent with this joint operational approach. Most notably medical planning must be integrated within all phases of the planning process described in JDP 5-00 *Campaign Planning*.[1] The following chapter covers the broad principles enshrined in joint doctrine and with which single-Service medical doctrine should be aligned.

SECTION I – PLANNING THE OPERATION

502. **Current Commitments Team/Contingency Planning Team/Operations Team**. The planning process may start with warnings from the Defence Intelligence Staff and from J2 in PJHQ. As the crisis develops, the MOD forms a Current Commitments Team and Chief of the Defence Staff (CDS) issues a planning directive to PJHQ and the FLCs. On the strength of this the PJHQ forms a J5-led contingency planning team. This will include J4 medical representation from the outset ensuring that PJHQ medical planners are fully aware of the emerging concept of operations. When political assent is received and an operation is activated the contingency planning team becomes a J3-led operations team. Normally specialist advisers (such as medical) will move from the contingency planning team to the operations team.

503. **Medical Planning Process**. CDS directs the joint commander, normally at PJHQ, and relevant single-Service commanders to plan operations in accordance with specified assumptions, objectives and constraints. PJHQ develops plans (including a medical plan) in conjunction with the FLCs who will identify the capabilities required to achieve the mission. Assistant Chief of Staff J1/J4's medical estimate, which is undertaken to inform the joint commander's mission directive to the Joint Task Force Commander (JTFC) will have early influence from Headquarters Surgeon General, Defence consultant advisers and FLCs. This early engagement with Headquarters Surgeon General allows the opportunity to pool scarce medical resources with other Services or troop contributing nations without compromising nationally accepted standards. The joint commander's directive will detail the mission, scale of forces, type of operation and command arrangements. The JTFC

[1] Joint Doctrine Publication (JDP) 5-00 (2nd Edition) *Campaign Planning*.

issues his own directive to component commanders outlining the campaign plan. Each level of directive contains a medical component which becomes progressively more detailed as information and the level of command permits/requires. The medical planning process is thus a product of:

a. Medical intelligence assessments.

b. Reconnaissance.

c. The medical estimate.

d. Medical warning notice (although not strictly part of the planning process, the medical warning notice enables subordinate formations and units to engage in concurrent mission preparation activity).

e. Medical directive (issued as an annex to the joint commander's directive).

504. **Medical Intelligence Assessments**. Medical Intelligence (MEDINT) is defined as '*intelligence derived from medical, bio-scientific, epidemiological, environmental and other information related to human or animal health*.' Note: this intelligence, being of a specific technical nature, requires medical expertise throughout its direction and processing within the intelligence cycle.'[2] MEDINT is a powerful medical planning tool. It may be derived from a variety of information sources. Pre-prepared digests, World Health Organisation reports, and scientific and technical data; all combine with information shared with allies (including both open and closed intelligence from other government departments and allies) to ensure that there should be no regions for which MEDINT cannot be derived. Requests for information may be raised by the planning staff if sufficient information is not fully available.

505. **Reconnaissance**. Reconnaissance is likely to be an important part of the early planning process and a suitably qualified medical planner should routinely accompany both strategic and operational reconnaissance parties. The primary aim is to confirm and update the medical information picture, confirm availability and suitability of health resources in the area of operations, identify potential health hazards and, where appropriate, assess local health needs. The same person may provide medical support for the team as a secondary role but independent dedicated medical support may be required for larger reconnaissance parties. The medical reconnaissance may be conducted along with the deployment of the JTFHQ *operational monitoring and liaison and reconnaissance team*.

[2] AJMedP-3 *Allied Joint Doctrine for Medical Intelligence (MEDINT)*.

506. **The Medical Estimate**. The purpose of the medical estimate is to gauge the effect of enemy and natural action upon the force strength and in doing so identify appropriate preventive measures and medical force capabilities required for the mission. Conducted under a PJHQ lead, the military operational medical estimate will calculate populations at general risk, together with those at specific risk and consider key factors such as mission, geography, population distribution, density, potential for Mass Casualties (MASCAL), battle risks and disease. These will be considered alongside available evacuation capacity and medical facilities (own, allied and host-nation support) to inform the emerging medical plan. At its essence it is an estimate of total liability and risk in order to inform the medical capability requirement. The main output of the estimate is a recommended course of action to support the developing military concept of operations. As well as indicating the medical capabilities that will be required for a particular operation, the estimate process will also identify medical tasks and constraints that may affect the mission, further critical information requirements, key medical decisive points and the requirement for a medical reserve.[3] The factors considered as part of the estimate process can be summarised under the *four 'D's*: distance, demand, duration and destination. Each of these may be further considered in the light of the *four 'C's*: capability, capacity, convenience and continuity. Further information on the estimate process is found in JDP 4-00 *Logistics for Joint Operations*.

507. **Population at Risk**. The *population at risk* is one of the key determinants of the quantity of medical support required. All entitled personnel within the area of operations should be included. It is on this figure that all calculations are based and it is therefore essential that it be correctly assessed. As the operational plan matures, substantial changes to the population at risk may be made. The medical requirement will change in step with these developments. The population at risk is also vital for epidemiological and disease surveillance purposes as it provides the denominator to allow comparison of ill health rates.

508. **Casualty Estimates**. The prediction of likely casualty rates is an important part of the estimate process and a detailed understanding of the underlying principles is essential for all medical planners. J2 and operational analysis informs J3 and J5 who are responsible for the casualty estimate from which the required medical support capability will be defined. For UK planning purposes NATO casualty rate methodology continues to provide the foundation for lower intensity operations. Work continues within NATO to identify generic casualty estimates for planning across the full spectrum of

[3] The demands of healthcare governance and the need to deliver assured quality improvement should be considered when compiling tasks and constraints.

conflict. The basis for Chemical, Biological, Radiological and Nuclear (CBRN) battle casualty estimates is contained within other NATO publications.[4] Casualties fall into 2 main groups for planning purposes:

a. **Disease and Non-Battle Injuries**. All deployed military populations will require medical support; even if there are no hostilities, Disease and Non-Battle Injuries (DNBI) casualties will still occur in any deployed force. This will exist from day one all the way to the last day of withdrawal and will persist during any phase of hostilities or combat. DNBI rates will vary for climatic and other reasons. Where appropriate historical data exist for a specific region these may be used in preference to generic rates. Of this number, only a few will require hospitalisation and subsequent evacuation to UK; the remainder will be less serious and may adequately be treated at Role 1.

b. **Battle Casualties**. Overlying the daily background workload generated by DNBI there will be surges of casualties related to periods of combat activity. The majority of battle casualties will require specialised hospital treatment. A large proportion will require treatment to be provided rapidly if the best long-term medical result is to be achieved. Battle casualty rates take into account those killed, missing and wounded, whereas the medical requirement is only concerned with those wounded. Planners will extrapolate from the overall casualty rate the type and severity of casualties thereby allowing the identification of any specialist medical capability requirement that should be made available.

509. **Medical Warning Notice**. A medical warning notice contains information such as the required medical standard of troops, details of immunisation policy, malaria chemo-prophylaxis and other measures and is issued to units, by PJHQ, as early as possible to aid force preparation. It is based on assessed threat (from the estimate), extant policy and specialist medical advice (especially from subject matter experts in public health and communicable disease control).

510. **Medical Directive**. As planning matures, a medical directive is issued as a medical annex within the joint commander's directive.

511. **Lessons**. The lessons process should begin as soon as the operation is ordered by means of a record of those lessons identified as the campaign progresses. It will culminate in the commander's post-operational report, highlighting relevant lessons and suggesting methods for assimilation and

[4] AJMedP-1. *Allied Joint Medical Planning Doctrine*. A MedP-8(A) *Medical Planning Guide for the Estimation of NBC Battle Casualties*.

learning. Lessons should be staffed through the chain of command to PJHQ and the single-Services. After assessment, strategic lessons should be passed to Headquarters Surgeon General for further analysis and action.

SECTION II – MOUNTING THE OPERATION

512. The joint mounting order, issued by PJHQ, directs FLCs on the mounting and deployment of forces. There are 2 medical aspects to the mounting of an operation:

a. Medical Preparation of the Force.

(1) **Selection of Personnel**. Medical standards for the selection of deployable personnel should be agreed and promulgated as soon as possible to allow replacements to be identified.

(2) **Preventive Measures**. Implementation of an agreed immunisation and pre-medication programme to protect against either prevalent disease or CBRN hazards takes time. Agreement on the implementation of such a programme should be reached early and instructions promulgated to allow these measures effectively to be put into place. Consideration should be given to the use of immunisation teams at the *airport of embarkation* or *sea port of embarkation* to assist with any immunisation programme where rapid mobilisation is required.

(3) **Medical Records**. Wherever possible, normal peacetime medical and dental records will be maintained on deployed operations. Checking medical records prior to deployment will assist personnel selection. The use of electronic medical records and a deployed medical information system should ensure that medical or dental information is not lost while deployed. This will need to be bolstered by a robust backup system (i.e. the use of the deployed medical record card).

(4) **Medical Training Requirements**. Preparation for deployment may include training and health education of composite/cadre strength units following the absorption of reinforcing personnel from other units, agencies or Reserves. Psychological preparation of troops through education is an important part of pre-deployment training; personnel should be advised on the normality of psychological reactions before, during and after deployment on operations and stressors likely to be

encountered in the area of operations. Intensified unit first aid training is a well-documented lifesaver. In addition, the importance of military training should not be underestimated; in particular proficiency in individual, collective and specialised CBRN defensive measures, incorporated into special to role medical tasks, will promote confidence, maintain survivability and increase the efficiency of medical support in CBRN environments. The rigorous and regular practice of military skills by medical units will enhance their ability to work closely with deployed units in austere conditions. Medical units should ideally undertake pre-deployment collective training with the formations they will support. Comprehensive pre-deployment training develops the necessary medical capability up to and including thorough mission rehearsal.

b. Mounting and Deploying the Medical Capability.

(1) **Training of Medical Personnel**. Individual and collective training will allow medical teams to work more coherently and should allow for apposite assessment and validation (both internal and external) of the deploying capability.

(2) **Deployment**. The following are factors to be considered in deploying coherent medical cover:

(a) **The Desired Order of Arrival Staff Table**. The out-load of medical capability into the area of operations should be phased commensurate with the build-up of the overall force package and the threat. The order of arrival of assets will be determined by the JTFC.

(b) **Continuity of Cover**. Continuous medical cover should be available throughout the deployment, both in the area of operations and for forces in transit. If there is more than one Seaport of Disembarkation (SPOD) or Airport of Disembarkation (APOD), cover should embrace all of them. An air evacuation route to definitive care should be established from the outset. If there is no SPOD or APOD, (for example in a maritime or littoral operation) the same standards must be applied.

(c) **Level and Dispersion of Cover**. When considering the appropriate level of cover, attention should be paid to force dispersion along any lines of

communication. All locations require an appropriate degree of medical cover and means of evacuation.

513. **Out-Loading Responsibilities**. Out-loading of medical stores, as with the out-loading of all operational stores, is a J4 responsibility. The priority allocated to medical stores within the overall out-load should take into account the requirements for an early medical presence in the area of operations. Relative priorities between the 3 Services will be determined by the JTFC to ensure that all participants in any operation receive their equipment in accordance with the overall operational and medical plan. Medical materiel provision includes time and temperature critical supplies (blood and blood products) which must be delivered expeditiously with appropriate environmental control. Tracking such assets is vital for effective, timely delivery.

SECTION III – EXECUTING THE OPERATION

514. JDP 3-00 (3rd Edition) *Campaign Execution*, describes the integration, coordination and synchronisation of deployed multinational and national joint operations. JDP 3-00 flows directly from JDP 01 (2nd Edition) *Campaigning*, and together with JDP 5-00 (2nd Edition), is the UK authority for the conduct of deployed joint operations. Medical Command, Control, Communications, Computers and Intelligence (C4I) is applied in the same way during any campaign; some specific points of intersection with the wider military processes are discussed below.

515. **UK Command Structures**. The varying levels of UK command relate to specific areas of the planned or current intervention.

a. **Strategic**. The Operations Directorate within MOD represents the strategic level equivalent to J3 and this is where MOD resources are allocated to achieve the Government's policy goals (set against the background of national and international imperatives). Medical advice to the Operations Directorate comes from the Medical Operations and Plans section of Headquarters Surgeon General.

b. **Operational**. PJHQ incorporates the Joint Force Headquarters staff and the Joint Force Logistic Component Headquarters (JFLogC HQ) who, dependent upon the type and size of operation are liable to form the basis for a deployed JTFHQ. Within PJHQ, Deputy Assistant Chief of Staff Medical deals with medical aspects of the planning and conduct of UK joint operations (following medical policy developed by Headquarters Surgeon General) and is the Joint Commander's principal adviser for operational healthcare governance. PJHQ issues

medical direction either as an element of the joint commander's theatre directives or through normal staffing procedures.

c. **Operational – Joint Task Force Headquarters**. The UK recognises 2 broad types of headquarters: a generic UK-led multinational or national JTFHQ or a national contingent headquarters where the UK is a participating nation. There is no fixed template for these headquarters and their structure will be mission dependent and should allow for concurrency of operations.

d. **Tactical – Component Headquarters**. Detailed execution at the tactical level lies with the various components.

516. The non-linear joint operations area is likely to be '*cluttered, congested, contested, connected and constrained*'.[5] In order to provide adequate medical support in this challenging environment, medical units controlled at each level and matched in flexibility to the formations they support will be required. Von Moltke's[6] observation that no plan survives contact with the enemy is just one reason to make medical plans as flexible as practicable, especially given the vagaries of casualty prediction. Casualties may arise where medical assets are not able to receive them, either as a result of surprise enemy action or as a result of attrition of medical facilities themselves. The medical plan should be sufficiently flexible to adapt to alterations in the intensity and source of casualties and should be able to switch medical dependencies to achieve this. This further reinforces the need for an effective information flow. Flexibility must be a feature of all environments and operations from humanitarian support to general warfare.

517. **Medical Advisers**. At each level of command there should be a Medical Adviser (MEDAD) who will advise the operational commander on medical matters. On small-scale operations or interventions this may be a unit medical officer while, on larger operations, senior medical staff officers or medical commanders may be appointed.

518. The MEDAD should be part of the operational command group and maintain a detailed understanding of both current and future plans. Being collocated with the commander,[7] they can be present at planning meetings and operational briefings, establishing direct lines of communication within the command staff. The relationship between MEDAD and those in subordinate formations is one of functional direction and coordination; executive authority

[5] DCDC, *Future Character of Conflict*, February 2010.
[6] Originally in Moltke, Helmuth, Graf Von, *Militarische Werke*. Volume 2, part 2, pages 33-40. Found in Hughes, Daniel J. (ed.) *Moltke on the Art of War: selected writings*. (1993). Presidio Press: New York, New York. ISBN 0-89141-575-0. page 45.
[7] If the medical adviser is the unit medical officer they may not be collocated with the commander.

remains with the operational commander's J3 chain of command. The only exception to this is when the MEDAD is appointed as commander medical.

519. **Commander Medical**. Commander medical is the functional head of the deployed medical services within the formation or theatre. His responsibility is to provide policy direction and coordinate the activities of all UK medical force elements. This will include the medical lay-down, casualty regulation, medical information capture and healthcare governance within the area of operations. Command status may be assigned by the JTFC, national contingent commander or PJHQ if neither of the former is deployed. Commander medical may also act as MEDAD to a senior commander.

520. **Location**. The location of principal UK medical staff is not prescribed. Ideally, medical staff should be embedded within all headquarters from the tactical level upwards, with overarching C4I being executed within the deployed headquarters. A commander medical will be appointed within the operational headquarters who will assume responsibility for deployed Role 3 (± *primary casualty receiving facility* if deployed) and strategic aeromedical evacuation. Alternatively, on operations without a JTFHQ, a lead component headquarters should support the nominated Commander British Forces or the components could answer independently to PJHQ. In the latter case a MEDAD in each of the components should be identified to communicate with PJHQ.

521. **Coordination of Medical Support**. Medical support to any operation should be coordinated with the conduct of the operation as a whole. This applies to the maritime, littoral, land and air aspects of the operation, each of which will have different demands on its medical support and each of which may be operating in different time frames and geographical spheres. To ensure that medical support is kept fully in step with the demands of the operation as it unfolds, appropriate medical staff representation at the various operational headquarters is essential:

a. **Medical Staffing at Headquarters**. Relevant experience with adequate access to the commander and operations staff is needed at each headquarters. The precise structure of the medical staff will depend upon the nature of the headquarters and of the operation itself. A mainly land operation is likely to have a preponderance of Army medical staff but the need for aeromedical evacuation should be served by RAF medical staff (with an equivalent Naval Service lead in an amphibious operation).

b. **Information Requirement**. In order for the medical plan to respond to changes in either the operational picture or the casualty

flow, the medical staff need real-time information and access to commanders and key staff. Historically this has not normally been available in rear headquarters where the majority of logistic staff are located. Casualties require a rapid response, clinical timelines are the important driver, and unlike ammunition or fuel, medical treatment cannot be pre-stocked. In order to keep pace with the battle and react sufficiently rapidly to minimise the loss of life or limb, there should be sufficient and competent medical staff representation in forward headquarters and information systems developed to ensure the most complete medical picture is made available throughout the command structure.

522. **Positioning of Medical Elements**. It is not always practical, in large-scale deployments, to locate the most sophisticated levels of medical care within the immediate reach of the main military population at risk. This is because tactical commanders need the freedom to manoeuvre their formations without hindrance from large (and in some cases relatively immobile) medical installations. It is also because vulnerable and scarce resources need to be protected from enemy activity and the requirement to comply with the Geneva Conventions. It is also necessary to provide a degree of stability for the sick and injured who require hospitalisation. This stability may be difficult to achieve with land-based medical units which need to move frequently, but this will not be a problem for maritime medical assets that are inherently mobile. The inability to place full medical or surgical facilities close to units *in contact* necessitates the provision of progressively more sophisticated attention between the point of wounding and the delivery of definitive care. It is this progression which defines the roles of medical support and the timelines that influence the positioning of these elements in the area of operations.

523. **Medical Operational Imperatives**. Medical support directly serves the commander's intent and the operational mission. Operational units should be cleared of casualties as rapidly as possible and with minimal impact on the conduct of the operation. The commander's mission should inform the medical plan, which must not impede the achievement of operational objectives. The corollary of this is that an efficient casualty transfer system can enhance the operation through a positive effect on tempo. It is essential that the joint medical staff are aware of the commander's intentions at all times in order to ensure that the medical plan remains in harmony with the military mission.

524. Treatment and casualty transfer facilities in sufficient quantity for the expected casualty flow should be available to the operational commander before he safely may undertake his mission. Delay in deployment, insufficient

quantity or inadequate preparedness of medical facilities may produce either an unacceptable delay in the execution of the operational plan or an unacceptable risk to the commander. As a direct corollary of this, operational medical facilities should share readiness states, strategic and tactical mobility with the formations they support.

525. **Medical Reserve**. Medical reserves have 3 discrete elements:

a. **The Medical Commander's Reserve**. The retention of a medical reserve to respond to the unforeseen is essential. This reserve should be under the direct control of the highest medical commander and should not be deployed without his agreement. Dependent upon the size of deployment and the medical assets available, the medical reserve may be: within the area of operations; retained in the UK; or a working, but not fully committed, part of an active unit or installation. In any event, it should be clear as to its reserve role and be at the correct notice to move (with its equipment) should it be required.

b. **The Tactical Reserve**. There may be a need for medical units or installations to be retained in reserve to support planned moves. Such force elements would normally be on short notice and ready in all respects to move; they should not have medical tasks while awaiting call forward.

c. **Equipment Reserve**. There is a requirement to ensure that sufficient equipment support is available to support surge capacity. The control of critical medical equipment must be carried out at the highest level to ensure maximum benefit.

526. **Healthcare Governance**. Responsibility for healthcare governance rests with line management and is laid down in extant medical policy. The Surgeon General assumes overall responsibility for healthcare governance (as part of the end-to-end patient care process). This is delegated through the Inspector General's organisation which shares responsibility with the joint commander for those deployed on operations. Deployed medical commanders effectively assume the joint commander's responsibility for healthcare governance within their area of responsibility and they should be resourced accordingly.

527. Interfaces between medical and other staff functions. The medical staff will also work with:

a. **J1 – Personnel and Administration**. The interface between medical and personnel support emerges during the initial planning stages and continues long after an operation has finished:

(1) Headquarters medical staff manning and qualifications.

(2) Manpower fitness and health standards.

(3) Operational manning and establishments.

(4) Patient tracking.

(5) Casualty reporting.

(6) Consideration of patients returning to the area of operations (with J3).

(7) Medical involvement in detention facilities.

(8) Handling of deceased.

(9) Patient and personnel welfare.

(10) Medical requirements for civilian contractors prior to deployment.

b. **J2 – Intelligence**. *Medical* is a customer of MEDINT and also contributes to the intelligence cycle.

c. **J3 – Operations**. The joint operations centre is the operational hub for the whole operation, including force protection and issues surrounding patients' return to the area of operations in the event of their recovery and return to duty (with J1). It is imperative that medical staff are included in the J3 decision-making cycle. Medical evacuation is a key J3 function. The need to allocate resources to casualty evacuation may require a permanent presence in J3 as a Patient Evacuation Co-ordination Cell (PECC).

d. MASCAL planning, including immediate response teams, involves a significant number of agencies, including medical and is therefore a command-led activity.

e. **J4 – Logistics**. J4 staff coordinate the overall logistic effort in theatre. *Medical* is grouped within the functional area of logistics. Close interactions are required for:

(1) Planning and mounting the operation.

(2) The creation of statements of requirement and sustainability statements.

(3) The conduct of reconnaissance and other enabling operations (in conjunction with J3 and J5).

(4) The resourcing process.

(5) The definition of logistics and medical command and control architecture.

(6) The deployment and redeployment of medical units.

(7) The logistic aspects of aeromedical evacuation, with planning and execution being coordinated through J3 Air.

(8) Medical supply, which is a J4 lead with medical advice.

(9) Management of bio-security hazards, including medical waste.

(10) Water potability, food safety, and duty and living environment.

f. **J5 – Plans and Policy**. J5 staff coordinate and consolidate planning input from key staff elements, including medical. They promulgate the commander's decisions on the courses of action for the campaign through planning directives, operation plans and contingency plans. Medical staff should provide input to the commander's Operations Plan (OPLAN) via J5 staff. A key function of J5 and the medical staff is casualty estimation and then adapting the current medical plan to meet that.

g. **J3/5**. In many cases a J3/5 staff will be established to provide the interface between J5 and J3. J3/5 staff are responsible for the planning of imminent operations with a short lead-in time. The medical plan may need refinement at this stage in concert with the J3/5 staff.

h. **J6 – Communications**. J6 communication staff provides reliable and secure Communications and Information Systems (CIS). Early operational planning should include the requirement for robust medical CIS.

i. **J7 – Exercise Planning and Training**. J7 is responsible for exercise planning and training. Medical should, where possible, participate in exercises as well as providing real-time, non-exercise cover. The latter requires the allocation of appropriate resources, including access to aeromedical evacuation. J7 records lessons and proposes amendments to doctrine.

j. **J8 – Resources and Finance**. J8 linkages to medical support relate to planning and budgeting, including: Memoranda of Understanding (MOUs); contractor support; renting accommodation for medical facilities; work services; hospital rebuilds; medical bills to other nations and contractors; and local purchase orders.

k. **J9 – Legal and Policy**. Examples of medical and legal inter-relationships include:

(1) Status of Forces Agreements (SOFAs) and host-nation support arrangements.

(2) Issues and actions pertaining to NATO support to International Organisations, Non-governmental Organisations (NGOs) or the local population.

(3) MOUs with non-NATO nations with regard to the arrangements governing shared or devolved delivery of health care and MOUs with NATO nations when operating on non-NATO territory.

(4) Claims activity within the area of operations related to incidents involving damage to property or injury or loss of life.

(5) NATO liability regarding individual or public health, such as related to environmental contamination.

(6) International Committee of Red Cross (ICRC) inspections.

(7) Compliance with Humanitarian Conventions.

(8) Treatment of captured persons and other protected persons on operations.

l. **J9 – Media Operations**. Information on real or perceived risks affecting the health of military personnel or others can be stressful for troops and their families. Accurate reporting and sensitive dealings with the media and informal information channels are essential in order to maintain focus and morale on operations, to reassure families and the home population, and to avoid unhelpful speculation in theatre or among the indigenous population.

SECTION IV – CONCLUDING THE OPERATION

528. The requirement for medical support continues after hostilities or the main operational phase is over since DNBI are a constant source of loss. A

withdrawing force needs to be covered while it is moving to departure ports and airheads or during an evacuation over the beach. This process may take a considerable time, during which the bulk of the medical organisation that was set in place to support hostilities may itself be extracted. At the same time, expectations of standards of medical care will be undiminished.

529. Each element of medical support should therefore remain, albeit drawn-down into a reduced form. Standards of record keeping, casualty tracking and preventive medicine should be maintained without any relaxation. A vestigial but commensurate scale of medical C4I, resupply, aeromedical evacuation, etc. should also remain in place.

530. The recovery of the force to their home base from operational areas where CBRN weapons have been used may present complex additional problems. Personnel and equipment (medical or otherwise) that may have been exposed to potential contamination and transmissible disease will have to satisfy criteria for decontamination and quarantine. Such criteria will be dependent on the nature of the CBRN hazard encountered.

Medical Recuperation

531. The replacement of medical resources following an operation is limited as follows:

a. **Manpower Limitations**. The most difficult resource to replace is that of trained manpower. Although recruitment and military training of replaced personnel can be relatively brief, the loss of medical skills (especially specialist skills) will be particularly difficult to replace in short order. Only those at an advanced stage of professional training could be relied upon to provide a replenishment pool. For those just entering training it could take 5 years to produce a basic capability of limited practical experience.

b. **Equipment Limitations**. Lost and damaged equipment should be replaced in a like manner to other force elements. Replacement of specialist medical equipment should also be taken into account and the acquisition timescales for this will be a factor in re-establishing medical capability.

Post-Conflict Activities

532. Post-conflict activities tend to be focused on normalisation, the civil population and on repairing damage to the area of operations infrastructure. Remaining forces (and contractors) will require continued medical support. Medical personnel may be required to plan and provide emergency support for

the civilian population, refugees or prisoners of war and may need to be prepared to work alongside (and, when appropriate, hand over responsibilities to) UN agencies and NGOs or Inter-Governmental Organisations. The medical response should be geared towards the new environment and population at risk, which may be very different compared to previous phases of the operation.[8]

533. After all operations there are a variety of post-conflict activities that are specific to the DMS. These are:

a. Assessment of the effectiveness of the medical support provided in terms of casualty treatment regimes, drugs scales, administrative procedures and general medical protocols.

b. Assessment of the suitability of medical and non-medical equipment (including communications and information management support).

c. Follow up casualties, including medico-legal and pensions requirements.

d. The assessment and management of psychological injury.

e. Post-recovery disease surveillance and follow up.

f. Medical research using the data obtained from the operation.

g. Collation and archiving of medical records (both paper and electronic).

h. Identifying cohorts of personnel for long-term epidemiological study.

534. **Medical Rehabilitation**. A significant number of casualties returning from the area of operations will require continuing treatment and rehabilitation and this is the responsibility of Surgeon General while they remain serving. Although rehabilitation is an important feature of civilian health practice it is largely oriented towards a different type of patient. This reinforces the unique position and role of the Defence Medical Rehabilitation Centre (DMRC) within the healthcare provision of Role 4 within the home base. A broader exposition of DMRC and Role 4 capabilities can be found at paragraph 311.

[8] JDP 3-40 *Security and Stabilisation: the Military Contribution*, November 2009.

CHAPTER 6 – PREVENTION AND STABILISATION

601. **Stabilisation**. Stabilisation is defined as '*the process that supports states which are entering, enduring or emerging from conflict, in order to prevent or reduce violence; protect the population and key infrastructure; promote political processes and governance structures, which lead to a political settlement that institutionalises non-violent contests for power; and prepares for sustainable social and economic development*'.[1]

602. **Prevention**. Prevention is 'better and cheaper than cure'. Examining the future character of conflict has led to the conclusion that 'the UK should invest more in this area. However, prevention has practical limits. It is also difficult to quantify and investment here does not guarantee that we will be able to avoid conflict altogether.'…… 'Prevention, if it is to be credible, needs early investment and protracted engagement'.[2]

603. As can be seen from the above references to stabilisation and prevention the anticipated role of the UK military in the next 30 years may see an increasing focus on such activity. These aspects are difficult to measure or accurately predict but it is likely that stabilisation will be an enduring element of future Defence Strategic Direction. This level of engagement requires the Defence Medical Services (DMS) to be alert to the influence that may be exerted by healthcare provision. It is widely accepted now that '*healthcare is political*.'[3]

SECTION I – THE MEDICAL CONTRIBUTION TO PREVENTION AND STABILISATION

604. Being trained and equipped for war-fighting does not guarantee ready adaptation to address all other military tasks; for example, stabilisation and prevention as detailed above as well as counter-insurgency operations, non-combatant evacuation operations, peace support operations and humanitarian assistance. It is now accepted that any military force, including any medical components, will require mission specific training and equipment to be effective in a stabilisation or preventive engagement.

605. Within the stabilisation remit the military should only lead on civilian health provision in the absence of civilian agencies and authorities for as short a time as possible, until the appropriate civilian organisation can take over. The general rule should be to support whoever is the most appropriate lead.

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[1] Joint Doctrine Publication (JDP) 3-40 *Security and Stabilisation: The Military Contribution*, November 2009.
[2] Strategic Trends Programme *Future Character of Conflict*, February 2010.
[3] Chatham House, Healthcare in conflict and post-conflict situations, May 2010.

Usually this will be the government if it exists, even if its capability is currently small. If there is no effective government then a lead agency will provide health coordination temporarily. In some cases this will be the World Health Organisation but it could be another UN agency such as United Nations Children's Fund or other Non-governmental Organisations (NGOs).

606. It is accepted that there is an inherent link between security and health in combination that may reinforce stability. The role of the military should be to set the initial conditions of security to allow NGOs, Other Government Departments (OGDs) and the host nation Ministry of Health to establish their respective capabilities and start the healthcare stabilisation processes.

607. The Commander needs to consider the following in such a situation:[4,5]

a. Identifying the specific health needs of the local population.

b. Optimising all local NGO and military agencies for health provision if appropriate or under the advice of a Development Adviser (DEVAD) (if available).

c. The disproportionate influence that simple health interventions can bring in developing countries.

d. Fostering (or providing if requested) an element of leadership and coordination to what may be a chaotic International Organisation, NGO and OGD mix.

e. Cultural sensitivity; western medicine may not be ideal and patient-centred cultural sensitivity should guide the response.

f. Maintain the local health economy and foster confidence in local healthcare providers.

g. Ensure consistency with the national health policies and sustainability at the local level. It should not endanger other civilian healthcare providers.

h. Help the local population to help itself. Better health leads to people better able to be economically, politically and socially productive.

i. Training healthcare workers to raise local health education.

[4] JDP 3-40.
[5] Allied Command Operations Directive 83-2 dated March 2010: *Allied Command Operations guidance for Military Medical Services' involvement with humanitarian assistance and support to governance, reconstruction and development*.

j. Veterinary health may significantly increase local wealth.

608. While it may be tempting for commanders to go for the *quick win* in terms of hearts and minds through the use of medical interventions; the potential negative impact of such activities on the local healthcare providers and the engendering of dependency on this healthcare provision may make them both ethically and socially unsustainable. It is better to maintain the local healthcare providers and enable the OGDs and NGOs to work safely in a manner to which they are accustomed.

SECTION II – INTERFACE WITH NGOS/OGDS/IGOS OR OTHER MILITARY MEDICAL SERVICES

609. Planning considerations and the joint commander's directive should set humanitarian assistance policy. Alternative medical support to civilians is usually organised through early engagement with host nation, Inter-Governmental Organisations (IGOs) and NGOs.[6]

610. The most likely point of interaction with NGOs, OGDs and IGOs will be along the humanitarian assistance or Disaster Relief Operation (DRO) lines:

a. **Humanitarian Assistance**.[7] The UK defines humanitarian assistance as '*support provided to humanitarian and development agencies, in an insecure environment, by a deployed force whose primary mission is not necessarily provision of humanitarian aid. Should the deployed force undertake such humanitarian tasks, responsibility should be handed over/returned to the appropriate civilian agency at the earliest opportunity*'.

b. **Disaster Relief Operations**. Comprehensive doctrine and policy guidance, both national[8] and NATO,[9] exist in relation to DROs. A DRO may be conducted independently or within the framework of an extant operation (which may be self-sustaining) requiring medical support to the force, the augmentation of existing local medical assets and the regeneration or development of medical capabilities through IGOs, OGDs and NGOs.

611. NGOs should be encouraged to provide healthcare to a civilian population following a disaster. However, during and immediately upon the

[6] Extant doctrinal publications JWPs 3-50 and 3-51, JDP 3-52 and JDP 3-90 cover *The Military Contribution to Peace Support Operations, Non-Combatant Evacuation Operations, Disaster Relief Operations and Civil-Military Co-operation*.
[7] JDP 0-01.1 *United Kingdom Glossary of Joint and Multinational Terms and Definitions*.
[8] JDP 3-52 *Disaster Relief Operations*.
[9] MC 327 provides NATO policy on the planning and conduct of non-Article 5 Crisis Response Operations.

cessation of combat operations, military medical support may be the only support available for humanitarian assistance.

612. The military, both medical and non-medical elements, should be able readily to engage with NGOs and IGOs. There may be different lines of approach and leadership as well as potential differences in use of language but there is still a commonality of approach. A mutual understanding of organisation, aims and practices can foster a closer working relationship to the benefit of the target population. Commanders and commanders medical are strongly recommended to familiarise themselves with the contents of the Development, Concepts and Doctrine Centre's pamphlet *Sharing the Space*[10] which gives a swift overview of how to engage with NGOs.

SECTION III – MEDICAL CARE FOR CIVILIANS/DETAINEES

613. There are essentially 3 groups of civilians who may be encountered on deployed operations:

a. Civilians who contribute to the total force and are entitled to some, if not all, aspects of medical care from the military (e.g. contractors, civil servants, workers from OGDs/NGOs, local civil labour). Their entitlement to medical support, and the scale of that support, is contained in JSP 770.[11]

b. Captured Persons (CPERS) including internees and detainees fall under specific policy and doctrine guidance found in Annex 1A and JDP 1-10.[12]

c. Civilians who are injured or displaced, either as a direct or indirect result of military intervention or due to events leading up to the intervention. Some of these individuals will enter the military medical chain.

d. Civilians injured in unrelated activity, such as a road traffic accident, but in proximity to own forces.

614. Any of these groups may pose a challenge for the DMS which are primarily configured for treating UK deployed forces. Concerns include the volume, age (particularly young children) and types of illness that may be encountered for which DMS personnel may not be equipped or prepared. This

[10] DCDC, *Sharing the Space: A Guide to Constructive Engagement with Non-Governmental Organisations and the Aid Community*, April 2010.
[11] Joint Service Publication 770, Issue 3, *Tri-Service Operational and Non-Operational Welfare Policy*. Ministry of Defence, September 2009.
[12] JDP 1-10 (2nd Edition), *Prisoners of War, Internees and Detainees*, due to be promulgated in 2011.

may require an entirely different type and structure of medical response that may be better delivered by an NGO so long as the security situation is permissive. In addition, civilian populations may harbour disease and may pose health risks if they are not subject to the same preventive measures as found in military compounds.

615. Host nations should be responsible for the health of civil labour and their compounds. Troop contributing nations employing civil labour should ensure the health of their own troops and civilians where the host nation's medical arrangements are inadequate. This should encompass arrangements for preventing, detecting and eradicating infectious disease as well as a basic first aid service.

616. Patient confidentiality should be observed in all situations and protocols on sharing medical information should be developed with local medical authorities wherever possible.

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LEXICON

ABBREVIATIONS AND ACRONYMS

This Lexicon contains abbreviations and acronyms used in this document as well as others commonly used in Joint and multinational operations.

ACO	Allied Command Operations
AJP	Allied Joint Publication
AP	Additional Protocol
APOD	Airport of Disembarkation
BATLS	Battlefield Advanced Trauma Life Support
BDD	British Defence Doctrine
C4I	Command, Control, Communications, Computers and Intelligence
CBRN	Chemical, Biological, Radiological and Nuclear
CDS	Chief of the Defence Staff
CGO	Clinical Guidelines for Operations
CIMIC	Civil-Military Co-operation
COLPRO	Collective Protection
COMBRITFOR	Commander British Forces
CONDO	Contractors Deployed on Operations
DCR	Damage Control Resuscitation
DCS	Damage Control Surgery
DDS	Defence Dental Services
DEVAD	Development Adviser
DFID	Department for International Development
DH	Department of Health
DMG	Defence Medical Group
DMICP	Defence Medical Information Capability Programme
DMLS	Defence Medical Library Services
DMRC	Defence Medical Rehabilitation Centre
DMS	Defence Medical Services
DMSTC	Defence Medical Services Training Centre
DNBI	Disease and Non-Battle Injury
DRO	Disaster Relief Operation
DSTL	Defence Science and Technology Laboratory
EIH	Environmental Industrial Hazards
FCO	Foreign and Commonwealth Office

FLC	Front Line Command
GC	Geneva Conventions
GMC	General Medical Council
GPhC	General Pharmaceutical Council
HLOC	High Level Operating Concept
HNS	Host-Nation Support
HPC	Health Professionals Council
ICRC	International Committee of the Red Cross
IGO	Inter-Governmental Organisation
IHL	International Humanitarian Law
IPE	Individual Protective Equipment
IRT	Immediate Response Team
ITU	Intensive Therapy Unit
JDN	Joint Doctrine Note
JDP	Joint Doctrine Publication
JFC	Joint Force Commander
JFHQ	Joint Force Headquarters
JFLogCHQ	Joint Force Logistic Component Headquarters
JMC	Joint Medical Command
JMES	Joint Medical Employment Standard
JOA	Joint Operations Area
JSP	Joint Service Publication
JTFC	Joint Task Force Commander
JTFHQ	Joint Task Force Headquarters
LOAC	Law of Armed Conflict
LOC	Line(s) of Communication
MASCAL	Mass Casualties
MDHU	Ministry of Defence Hospital Unit
MEDAD	Medial Adviser
Med CM	Medical Countermeasures
MEDEVAC	Medical Evacuation
MEDINT	Medical Intelligence
MERT	Medical Emergency Response Team
MHRA	Medicines and Healthcare products Regulatory Authority
MMU	Multinational Medical Unit
MO	Medical Officer
MOU	Memorandum of Understanding
MTF	Medical Treatment Facility

NATO	North Atlantic Treaty Organisation
NGO	Non-Governmental Organisation
NHS	National Health Service
OGD	Other Government Department
OH	Occupational Health
OPLAN	Operations Plan
PHC	Primary Healthcare
PHEC	Pre-Hospital Emergency Care
PJHQ	Permanent Joint Headquarters
PS	Primary Surgery
R2E	Role 2 Enhanced
R2LM	Role 2 Light Maneouvre
RAMP	Reception Arrangements for Military Patients
RAuxAF	Royal Auxiliary Air Force
RAVC	Royal Army Veterinary Corps
RCDM	Royal Centre for Defence Medicine
RFA	Reserve Forces Act
RNR	Royal Naval Reserve
SG	Surgeon General
SPOD	Seaport of Disembarkation
THP	Theatre Holding Policy
TRiM	Trauma Risk Management
UHBFT	University Hospitals Birmingham NHS Foundation Trust
UN	United Nations
WHO	World Health Organisation

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TERMS AND DEFINITIONS

This Lexicon is provided to aid comprehension of this Joint Doctrine Publication (JDP). However, it is not the full and definitive reference of UK and NATO medical terminology for which the reader is referred to JDP 0-01.1 '*UK Glossary of Joint and Multinational Terms and Definitions*' and AMedP-13 '*NATO Glossary of Medical Terms and Definitions*'.

Aeromedical Evacuation
The movement of patients under medical supervision to and between medical treatment facilities by air transportation. (AAP-6)

Aeromedical Evacuation, Strategic
That phase of evacuation that provides out-of-theatre airlift for patients 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. Strategic AE is ultimately a national responsibility, nevertheless bilateral or multilateral agreements between nations are an efficient way to share scarce resources of MEDEVAC aircraft, equipments and AE teams. (AJP-4.10(A))

Assurance
A systematic process of verifying that a product or service being developed is meeting specified requirements. (NHS Clinical Audit Support Group).
Note: Assurance checks compliance over a period of time rather than as a one off check.

Casualty
In relation to personnel, any person who is lost to his organisation by reason of having been declared dead, wounded, injured, diseased, detained, captured or missing. (AAP-6)

Casualty, Battle
Any casualty incurred as the direct result of hostile action, sustained in combat or relating thereto or sustained going to or returning from a combat mission. (AMedP-13)

Casualty, Disease and Non-battle Injury
A grouping of casualties which are due to disease or injury not acquired in combat or relating to combat. (AMedP-13)

Clinical Audit
A quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. The key component of clinical audit is that performance is reviewed (or audited) to ensure that what *should* be done is *being* done, and if not it provides a framework to enable improvements to be made. (A Practical Handbook for Clinical Audit, NHS Clinical Audit Support Group 2005).

Damage Control Resuscitation
A systemic approach to major trauma combining the <C>ABC (catastrophic bleeding, airway, breathing, circulation) paradigm with series of clinical techniques from point of wounding to definitive treatment in order to minimise blood loss, maximise tissue oxygenation and optimise outcome.
(JDP 4-03 3rd Edition)

Damage Control Surgery
Damage Control Surgery is an operative strategy that sacrifices the completeness of the immediate surgical repair to that required to achieve haemorrhage and contamination control, in order to address the physiological consequences of the combined trauma of the injury and surgery.
(JDP 4-03 3rd Edition)

Deployed Hospital Care
Hospital Care that is deployed. It includes Role 2 E and 3.
(JDP 4-03 3rd Edition)

Deployed Secondary Care
Secondary Health Care that is deployed. It includes Roles 2 LM, 2 E and 3.
(JDP 4-03)

Doctrine
Fundamental principles by which the military forces guide their actions in support of objectives. It is authoritative but requires judgement in application.
(AAP-6)

Environmental Health
The control of all those factors in man's physical environment that exercise, or may exercise, a deleterious effect on his physical development, health or survival. (AJP-4.10(A))

Firm Base
A secure environment, at home and overseas, that sustains the force, enables training for deployment on operations and ensures the consent and support of the public and host nations. (JDP 4-03 3rd Edition)

Force Health Protection
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, disease and selected special weapon systems through preventive measures for personnel, systems and operational formations. (AJP-4-10(A))

Haemostatic Resuscitation
Haemostatic Resuscitation involves techniques and approaches to stop bleeding and address the coagulopathy of trauma. This includes early use of blood and blood components (such as fresh frozen plasma, cryoprecipitate and platelets) and correction and prevention of hypothermia and acidosis. Haemostatic resuscitation is an integral part of DMS delivery of DCR. (JDP 4-03 3rd Edition)

Healthcare Governance
A system through which medical organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care, by creating an environment in which clinical excellence will flourish. (MC 326/2).

Host-Nation Support
Civil and military assistance rendered in peace, crisis or war by a host nation to NATO and/or other forces and NATO organisations which are located on, operating on/from, or in transit through the host nation's territory. (AAP-6)

Humanitarian Assistance
The support provided to humanitarian and development agencies, in an insecure environment, by a deployed force whose primary mission is not necessarily provision of humanitarian aid. Should the deployed force undertake such humanitarian tasks, responsibility should be handed over/returned to the appropriate civilian agency at the earliest opportunity. (JDP 0-01.1)

Incident Response Team
Team held at high readiness in order to deploy in response to an incident. The medical component of an Incident Response Team should include trained, equipped and experienced specialist personnel to deal with the consequences of trauma or life-threatening illness. (AJP-4.10(A))

Information
Unprocessed data of every description which may be used in the production of intelligence. (AAP-6)

Intelligence
The product resulting from the processing 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 which results in the product, and to the organisations engaged in such activity. (AAP-6)

Intensive Care
That degree of care, which is extensive, highly technical and required because of the patient's actual or threatened inability to maintain vital function. (AMedP-13)

International Organisation
An organisation established by intergovernmental agreement and operating at the international level. IOs include the various UN organisations and the Organisation for Security and Cooperation in Europe (OSCE). (JDP 3-90)

Interoperability
The ability to operate in synergy in the execution of assigned tasks. (AAP-6)

Joint Force Commander
A general term applied to a commander authorised to exercise command authority or operational control over a joint force. (JDP 0-01.1)

Joint Task Force Commander
The operational commander of a nominated Joint force. (JDP 0-01.1)

Joint Operations Area
An area of land, sea and airspace, in which a designated Joint Task Force Commander plans and conducts military operations to accomplish a specific mission. A Joint Operations Area including its defining parameters, such as time, scope and geographic area, is contingency/mission specific. (JDP 0-01.1)

Mass Casualty Situation
A Mass Casualty Situation is one in which an excessive disparity exists between the casualty load and the medical capabilities locally available for its management. Any number of casualties produced in a relatively short period of time which overwhelms the available medical and logistic support capabilities. (AAP-6)

Medical Adviser
The senior medical staff officer in a formation headquarters responsible for ensuring that the commander and his staff are properly aware of the health and medical implications of their actions and any issues connected to the operation. The Medical Adviser may also be the Force or Theatre Medical Director. (MC 326/2)

Medical Director
The functional head of the medical services in a formation or theatre of operations. The Medical Director may also have the additional responsibilities of being the Medical Adviser to a senior commander. (MC 326/2)

Medical Emergency Response Team
Medical Emergency Response Team is defined as the medical component of an Incident Response Team where the capability may be delivered in the maritime, littoral, land or air environments. MERT is used when the clinical situation dictates the need for specialist Pre-Hospital Emergency Care (PHEC) interventions during Medical Evacuation (MEDEVAC). (JDP 4-03 3rd Edition)

Medical Evacuation
The medically controlled process of moving any person who is wounded, injured or ill to and/or between medical treatment facilities. (AMedP-13)

Medical Intelligence
Intelligence derived from medical, bio-scientific, epidemiological, environmental and other information related to human or animal health. Note: this intelligence, being of a specific technical nature, requires medical expertise throughout its direction and processing within the intelligence cycle. (AMedP-13)

Multinational
Adjective used to describe activities, operations, organisations, etc in which forces or agencies of more than one nation participate. (AAP-6)

Non-Governmental Organisation
A voluntary, non-profit making organisation that is generally independent of government, international organisations or commercial interests. The organisation will write its own charter and mission. (JDP 3-90)

Patient Safety
1. The avoidance of harm to patients resulting from the acts or omissions of healthcare providers either individually or collectively. The concept encompasses situations where an increased risk of harm exists but where it may not be possible to distinguish the individuals harmed. (RPJ 2008).

2. The process by which an organisation makes patient care safer. This should involve: risk assessment; the identification and management of patient related risk; the reporting and analysis of incidents and the capacity to learn from and follow up incidents and implement solutions to minimise the risk of them recurring. (NPSA 2003).

3. A healthcare discipline that emphasizes the reporting, analysis, and prevention of medical error that often lead to adverse healthcare events.

Patient Tracking
The precise and continuous monitoring of the location and the intended destination of the patient in the medical treatment and evacuation chain. (AJP-4.10(A))

Preventive Medicine
The services that are concerned with identifying, preventing and controlling acute and chronic communicable and non-communicable diseases and illnesses with food and environmental hygiene, and vector control. (MC 326/2)

Primary Health Care
The provision of integrated, accessible health care services by clinical personnel trained for comprehensive first contact and the continuing care of individuals experiencing signs and symptoms of ill health or having health concerns. It includes health promotion, disease prevention, patient education and counselling, the diagnosis and treatment of acute and chronic illness, as well as dental and veterinary functions. (JDP 4-03 2nd Edition)

Primary Surgery
Primary surgery describes the surgery directed at repair of the local damage caused by wounding, rather than correcting the generalised effects. It is performed normally at Role 3. Delays to primary surgery allow further generalised effects to develop that may lead to an increase in mortality, morbidity and residual disability. (MC 326/2)

PULHHEEMS
PULHHEEMS is a tool for recording medical fitness across all 3 Services (literally; Physical; Upper limb, Lower limb, Hearing, Hearing, Eyes, Eyes, Mental, Stability). The acronym is an oversimplification without interpretation – details may be found in BR 1750A (Handbook of Naval Medical Standards); AC 13371 (PULHHEEMS Administrative Handbook 2000); AP 1269A (Medical Administration).

Risk Management
The application of policies, methods and practices to the tasks of identifying estimating and evaluating risks and then preparing and implementing risk response actions.
(Office of Government Commerce Publication – Management of Risk Guidance for Practitioners).

Role 2 Enhanced
Role 2 Enhanced is a basic secondary care facility built around primary surgery, intensive care unit and beds with nursing support; a R2E facility is able to stabilise post-surgical cases for evacuation to Role 4 without the need to put them through Role 3 first. (JDP 4-03 3rd Edition)

Role 2 Light Manoeuvre
Role 2 Light Manoeuvre conducts triage and advanced resuscitation procedures up to damage control surgery. (JDP 4-03 3rd Edition)

Role 3
Role 3 is provision of theatre secondary healthcare within the restrictions of the Theatre Holding Policy (THP); offering a range of clinical services not available elsewhere in the theatre of operations. (JDP 4-03 3rd Edition)

Role 4
Role 4 provides the full spectrum of definitive medical care that cannot be deployed to theatre or is too time consuming to be conducted there.
(JDP 4-03 3rd Edition)

Role Specialisation
One nation assumes the responsibility for procuring a particular class of supply for all or a part of the multinational force. Compensation and/or reimbursement will then be subject to agreements between the parties involved. (MC 319/2)

Secondary Health Care
The provision of hospitalisation and specialised clinical care, requiring training and equipment levels beyond that which could normally be provided at the level of primary care. Routine access to these services will normally be by referral from Primary Health Care. Urgent access will normally be via an Emergency Medicine department. (MC 326/2)

Stabilisation
The process that supports states which are entering, enduring or emerging from conflict, in order to prevent or reduce violence; protect the population and key infrastructure; promote political processes and governance structures, which lead to a political settlement that institutionalises non-violent contests for power; and prepares for sustainable social and economic development. (JDP 3-40)

Sustainability
The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. (AAP-6)

Tele-Medicine
The use of information and communications technologies to access healthcare regardless of time and distance. Depending on the clinical specialty involved, this may incorporate such terms as Teleradiology, Teledermatology, Telesurgery, Telepathology and Telepsychiatry. (AJP-4.10(A))

Theatre of Operations
A geographical area defined by the military-strategic authority which includes and surrounds the area delegated to the operational commander within which he will conduct operations - known as the joint operations area. (JDP 0-01.1)

Theatre Holding Policy
A command decision which sets the maximum period a hospitalised convalescing casualty will be kept in the theatre of operations awaiting recovery and return to duty. It is a control measure to ensure that sufficient hospital capacity is retained for anticipated surges in battle casualties or illnesses. (MC 326/2)

JOINT DOCTRINE PUBLICATIONS

The successful conduct of military operations requires an intellectually rigorous, clearly articulated and empirically-based framework of understanding that gives advantage to a country's Armed Forces, and its likely partners, in the management of conflict. This common basis of understanding is provided by doctrine.

UK doctrine is, as far as practicable and sensible, consistent with that of the North Atlantic Treaty Organization (NATO). The development of national doctrine addresses those areas not covered adequately by NATO; it also influences the evolution of NATO doctrine in accordance with national thinking and experience.

Endorsed national doctrine is promulgated formally in JDPs.[1] From time to time, Interim JDPs (IJDPs) are published, caveated to indicate the need for their subsequent revision in light of anticipated changes in relevant policy or legislation, or lessons arising out of operations.

Urgent requirements for doctrine are addressed through Joint Doctrine Notes (JDNs). To ensure timeliness, they are not subject to the rigorous staffing processes applied to JDPs, particularly in terms of formal external approval. Raised by the DCDC, they seek to capture and disseminate best practice or articulate doctrinal solutions. This can subsequently be developed in due course as more formal doctrine.

Details of the joint doctrine development process and the associated hierarchy of JDPs are to be found in JDP 0-00 *Joint Doctrine Development Handbook*.

[1] Formerly named Joint Warfare Publications (JWPs).

RECORD OF AMENDMENTS

Amendment Number	Date of Insertion	Initials