#### **NATO STANDARD**

#### AJMedP-5

# ALLIED JOINT DOCTRINE FOR MEDICAL COMMUNICATIONS AND INFORMATION SYSTEMS (MedCIS)

**Edition A Version 1** 

**JUNE 2013** 



NORTH ATLANTIC TREATY ORGANIZATION
ALLIED JOINT MEDICAL PUBLICATION

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## NORTH ATLANTIC TREATY ORGANIZATION (NATO) NATO STANDARDIZATION AGENCY (NSA) NATO LETTER OF PROMULGATION

12 June 2013

- 1. The enclosed Allied Joint Medical Publication AJMedP-5 Edition A Version 1, MEDICAL COMMUNICATIONS AND INFORMATION SYSTEMS (MedCIS), which has been approved by the nations in the MCMEDSB, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2562.
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Dr.Cihahgir Aksit, TVR Civ

Director NATO Standardization Agency



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#### **RECORD OF RESERVATIONS**

| CHAPTER | RECORD OF RESERVATION BY NATIONS |
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Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Database for the complete list of existing reservations.

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#### **RECORD OF SPECIFIC RESERVATIONS**

| [nation] | [detail of reservation]   |
|----------|---|
| GBR      | Bulgarian Armed Forces will not apply the following paragraphs of AJMedP-5:  1. Paragraphs 2012/f and 2057 since the parts of Medical Information Management System "Epidemiology" and "Trauma registry" are not established at present.  2. Paragraph 4003 since there is no point of connection with NATO MedCIS for data exchange.   |
| GBR      | We are in general agreement with the principles of the STANAG, but as we have not decided on which medical capability or applications are required to support future deployed UK medical operations, it is unclear when we can commit or forecast a date of implementation. There are currently too many variables to be agreed on our proposed medical operational capability for future operations and as yet financial commitment or resources has not been secured. |
|          | It is difficult to provide a forecast when specific national systems have not been developed for the likes of patient tracking etc, but we should endeavour, where feasibly possible, to incorporate key user requirements which facilitate the requirement of the STANAG and NATO MedCIS integration.  |
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#### **Preface**

Allied Joint Medical Publication 5 (AJMedP-5), *Allied Joint Doctrine for Medical Communications and Information Systems (MedCIS)*, is written at the strategic and operational levels — where campaigns and major operations are planned, conducted, and sustained — primarily for an Allied joint force and subordinate component commands. Although AJMedP-5 is intended primarily for use by North Atlantic Treaty Organization (NATO) forces, the doctrine is instructive to, and provides a useful framework for, operations conducted by a coalition of NATO, partners, non-NATO nations, and other organizations, including non-governmental organizations (NGOs).

The purpose of this Allied Publication is to describe the medical information management system (MIMS) needed at both the strategic and operational levels, identifying emerging requirements. The MIMS described here must be able to address medical information management in an operational setting and incorporate the approach described within the NATO Defence Planning Process (NDPP). For a MIMS to optimize the use of available medical resources, there must be a standardized approach to their description and classification through deployment, operational employment and sustainment. AJP-4.10 *Allied Joint Medical Support Doctrine* states the need for a NATO MedCIS and the functional system described in this AJMedP is derived from the requirements for medical care given in AJP-4.10.

AJP-6 (*Allied Joint Doctrine for Communication and Information Systems*) provides the overarching doctrinal guidance for integrating communication and information systems (CIS) into Allied joint operations across the range of military operations. It describes the characteristics of CIS, the overall structure of CIS, roles and responsibilities for CIS, and command and control of CIS. It further provides a joint force commander the guidance and information necessary to establish effective CIS for an Allied joint force. Although this current document is not subordinate to AJP-6 in the NATO doctrinal hierarchy, it must be read in conjunction with AJP-6. MedCIS is only one of many NATO CIS, and it must be seen as part of an integrated whole, rather than a stand-alone capability. Thus, in general, the guidance found in AJP-6 will apply to MedCIS, except as noted in this document.

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## CHAPTER 1 - OVERVIEW OF MEDICAL COMMUNICATIONS AND INFORMATION SYSTEMS (MedCIS)

#### Overview

1001. A MedCIS is a collective term for communication systems and information systems used in the provision of healthcare and in providing the commander with medical situational awareness. Thus, a functioning MedCIS will be a combined/joint system essential to North Atlantic Treaty Organization (NATO) multinational operations. The medical information management system (MIMS) concept must be part of the NATO Information Management System development with the capability to interface with NATO as well as with national information systems. A NATO MedCIS can be considered as having three main objectives, namely: to support medical command and control; to serve as an interface for the exchange of health information between the nations, and; to allow clinical health data to be transmitted between nations. This Allied Joint Medical Publication 5 describes how each of these three objectives may be achieved in practice:

- a. Chapter 1 provides an overview of MedCIS giving the aim of the concept, the need and capabilities for a NATO MedCIS as well as its primary and secondary objectives, and concluding with a discussion of the basic requirement and functional needs of MedCIS as stated in *Allied Joint Medical Support Doctrine* (AJP-4.10).
- b. Chapter 2 contains a functional description of MedCIS including the topics of patient tracking and regulating as well as information management issues, such as documentation management, confidentiality, asset tracking capability, assessment and sustainability analysis. Chapter 2 also describes the value of health and disease surveillance, common operational picture and situation awareness, telemedicine and trauma registry, as well as interoperability aspects of MedCIS.
- c. Chapter 3 describes the technical requirements for a functional MedCIS including connectivity, system design requirements and access management.
- d. Chapter 4 describes the roles and responsibilities within MedCIS. It defines the roles of national and strategic commands, the NATO Consultation, Command and Control Agency (NC3A), NATO Communications and Information Systems Services Agency (NCSA), NATO Committee of the Chiefs of the Military

Medical Services (COMEDS) MedCIS Expert Panel, and the theatre commander and the commander's staff.

The objectives and functions described in this Allied Publication are intended to provide a guide to MedCIS development and operation within the Alliance. It is not intended as a definitive statement of requirement. Such requirements will be defined as part of individual MedCIS development and acquisition projects.

#### Aim

1002. The aim of this document is to describe a concept of MedCIS for Allied combined/joint operations that is consistent with the principles and policies that necessitate medical data transfer and aggregation, while taking into account the development of multinational operational integration.

1003. Management of medical data and information is a fundamental aspect of medical support. Adequate documentation of medical care given, health status and location of personnel and environmental threats is part of a continuum of patient treatment and care, and is therefore, a medical responsibility. NATO Principles and Policies of Medical Support (MC 326/3) notes that:

"At all times, nations remain the risk owners; therefore they retain their legal duty of care as an employer of their military. However, upon Transfer of Authority, the NATO commander shares that responsibility. Increasingly, due to national capability shortfalls, medical support is delivered via multinational solutions, gradually shifting responsibility more to the NATO commander."

Now more than ever, the NATO Force Commander must have access to medical information on the health and status of the force. To achieve the NATO Commander's objectives, MedCIS principles will be considered and applied throughout an operation or campaign. Proper application of these principles will ensure that MedCIS contain the essential elements needed to effective function under a wide variety of conditions. Thus, a functioning MedCIS is critical to enabling the NATO Commander to achieve the mission.

#### General

1004. "The mission of medical support in military operations is to support the mission, through conservation of manpower, preservation of life, and minimization of residual physical and mental disabilities. Appropriate medical support makes a major contribution to both force protection and morale by the prevention of disease, rapid evacuation and treatment of the sick, wounded and injured and the return to duty of as many individuals as possible." AJP-4.10 (A)

1005. The medical support to a force must be capable of maintaining the necessary quality and quantity of treatment and evacuation activities during peace, crisis, and conflict. This requires having on hand or in reserve appropriate medical equipment, supplies, and evacuation capacity, as well as having the ability to resupply and to replace medical personnel on a continuous basis. Critical to the functioning of this force is the ability to acquire and transmit data relevant to the medical status of the force.

1006. This requirement for adequate medical documentation and communications ability is complex, since most NATO medical care is provided either by individual Troop-Contributing-Nations (TCN) or by multinational medical units. In either case, the MedCIS supporting those units will normally be a national one, not a NATO one. Thus, there is a true need for interoperability between a NATO MedCIS and those of the nations, based on the ability to enable controlled data transfer.

1007. The MedCIS concept described in this document does not impose a unique mandatory system on Nations. It takes due account of likely national responsibility and should enable Nations to maintain their national MedCIS and procedures wherever reliable and effective. At the same time, it encourages Nations to plan for reliable, cost-effective data interchange between medical facilities and national databases, so as to enhance the quality of care and enable the NATO Commander's situational awareness about the health status of the force. The concept may facilitate bilateral or multilateral agreements and promote common planning, programming, training and analysis.

1008. With the transformation of the world security environment fundamental changes have taken place in NATO medical doctrine, as regards the role of NATO Commander in medical support and the medical support concept for future operations. An effective MedCIS is increasingly needed as part of this to support current NATO medical doctrine.

1009. Information is a key issue in enhancing public understanding and confidence in NATO Operations. The Commander's staff bears a great responsibility for collecting and disseminating accurate, complete and timely information on medical issues and actions, some of which may turn out to be sensitive and involve legal liability. A robust MedCIS will ensure that such data is accurate and can be made available in a timely manner to the extent necessary and authorized. A robust MedCIS will ensure that commanders at all levels are provided with accurate and timely medical data to inform decision making processes.

#### The Capabilities for a NATO MedCIS

1010. Almost every NATO Nation has commenced the automation of deployable and home base MIMS in order to improve the quality of information available to not only

- commanders at all levels, but also care providers, and to personnel treated by their medical services. There is considerable variation amongst NATO nations concerning the functionality, standards and technologies of health information systems. This necessitates that a NATO standard is needed to enable member Nations to design their health information systems in such a manner that data exchange may be enhanced.
- 1011. A MedCIS will support medical interoperability through providing a NATO system which will enhance the exchange of health information in electronic format between nations in order to support multinational, combined and joint operations. This system will allow the transfer and analysis of medically-related data gathered in national medical communications and information systems, as authorized by each nation. This information will be exchanged to provide commanders with a common operational picture to support both command and control and operational medical decision-making. It can also assist tactical patient care through the enhanced multinational use of Telemedicine and Teleconsultation capabilities.
- 1012. Effective use of such a tool will serve to support the deployed medical system in the provision of the full range of quality medical services that prepare and deliver forces fit for their military tasks, as well as the delivery of a deployable medical capability which sustains deployed forces, recovers and treats the sick and injured, and restores them to health. A MedCIS will support medical interoperability and continuity of care through the standardization of data exchange modalities and business practices. This will enhance the exchange of health and medical threat information in electronic format between nations and so support multinational, combined and joint operations. In this context, a MedCIS must be capable of provision of the medical common operational picture (COP) to the NATO Commander and the Medical Advisor.
- 1013. It is necessary to recognize that Medical Support to NATO has implications across all the functional branches in particular personnel, operations and planning whilst also providing specialist advice to other areas such as Intelligence, Logistics, and Civil-Military coordination information available through a MedCIS will impact across the command functions.
- 1014. The efficient management of medical information, particularly regarding patients, is a vital element of competent medical support planning. It is essential that this information is standardized and distributed rapidly to all authorized personnel having a legitimate need for it. Of particular importance is information relating to:
  - a. Medical Situational Awareness. Medical decision-making is dependent on the efficient, speedy processing of environmental, tactical, and casualty data. Such information is of fundamental importance in specialties such as epidemiology to enable early detection of disease outbreaks including the use of biological warfare agents (disease surveillance).

- b. Patient Tracking and Regulating. Both Patient Tracking and Regulation require up to date and accurate information about individual casualties and the availability of treatment and evacuation assets. The key requirement is the maintenance of accurate data.
- c. Clinical Records. Medical documentation should be interoperable throughout the theatre of operations and in all national contingents. Copies of patient documents must move with the patient throughout the evacuation system through to the provision of definitive care. Clinical records, including postmortem reports and evidence related to deaths in theatre, must be accurately maintained for the purpose of official national or international audit or inquiry as required.

#### 1015. A NATO MedCIS will have three Primary objectives:

- a. First, to provide a capability that will support Medical Command and Control. There is a requirement to provide NATO commanders, at all levels, with non patient-identifiable medical information needed to ensure medical situational awareness, patient tracking, epidemiological and medical surveillance and medical logistics.
- b. Second, to serve as an interface for the exchange of health information between the nations and between the nations and NATO Commands for the purposes of providing medical situational awareness to the commanders and their medical staffs. Critical to this function is the ability to generate NATO-required reports, based on data which may have been entered for other purposes. "Enter once, read many times" is a valid goal.

Note that this concept of a MedCIS does NOT necessitate the development of a standardized NATO Electronic Health Record, nor does it mandate integrated storage of personally-identifiable medical data. Those tasks remain national responsibilities, and the NATO system should be designed to accept anonymized (non-patient-identifiable) data from various national systems and process it to accomplish NATO operational goals. In this context, the NATO MedCIS should facilitate the development, processing, transmission, and analysis of such data from national systems.

c. Third, to enable and facilitate the provision of clinical care within a multinational environment, by allowing clinical health data to be transmitted between the nations and the NATO Command chain to allow for optimum treatment of patients within a multinational medical system. This specifically mandates that the MedCIS must be able to support Patient Tracking/Regulating,

Disease surveillance, Clinical Records Transfer, and support Telemedicine/Teleconsultation utilization.

- d. A NATO MedCIS may also include the following Secondary objectives:
  - (1) The provision of certain medical planning capabilities; The ability to support medical management systems including Medical Asset Tracking, which can assist the Medical Advisor in carrying out their duties;
  - (2) The ability to support the Medical Intelligence and Force Health Protections systems and to interface with national or multinational disease surveillance (including both natural and Biological Warfare diseases) and health surveillance systems;
  - (3) A mechanism for the appropriate levels of transfer of patient healthcare record data between NATO and national systems, so as to allow the transfer of medical data as required to carry out the reporting of patient status required by NATO Standardization Agreements (STANAGs);
  - (4) The ability to exploit medical data from other NATO medical information systems (IS) such as the Deployment Health Surveillance Capability and Joint Theatre Trauma Registries, and non-medical IS, to improve medical support and clinical care.

1016. Though it is not an intelligence system, the MedCIS deals with the intelligence/information gathering process to identify medically-related threats and capabilities, and the surveillance of real and potential threats to health. It must be able to support the production of Medical Intelligence documentation, reporting, and follow-up.

#### 1017. From a medical viewpoint, future operations will:

- a. Likely be expeditionary, joint in nature (more than one force component involved) and will be combined (multinational in staff and force structure);
- b. Require a high degree of flexibility and mobility;
- c. Demand medical support to be as close as possible to peacetime standards:
- d. Increase the need for preventive medicine and force protection issues based on accurate health information, and;

- e. Attract a high level of media coverage, leading to a high degree of public scrutiny of medical support provision and its quality.
- f. Place greater emphasis on medical support standardization and structural interoperability. This will lead to increased use of multinational (as opposed to national) medical facilities and structures; and
- g. Increase the need for preventive medicine and force protection, based on accurate health information during operations, as well as on post-deployment medical status monitoring;

1018. High tempo regional operations require medical systems in the field to be mobile and flexible, with a goal of rapid treatment and evacuation and, in most circumstances, a minimum medical footprint in the theatre. Patients passing through the medical system must be given care which is timely, continuous, relevant and progressive. Medical care is usually provided in a progressive fashion, from point of injury or sickness through evacuation to specialized care and eventually to definitive treatment and rehabilitation. A patient may be cared for by multiple surgeons in different Medical Treatment Facilities (MTFs) along the evacuation chain and medical treatment might well be delivered by personnel of different nationalities. Information, not just the patient, must flow through all levels of medical support so that the patient goes to the right place at the right time, and facilities are prepared for the patient's arrival. Such situations necessitate the linkage of the medical support of staffs within the medical support structure, and between medical support elements and other NATO and national organizational elements and staff.

1019. Maintenance of health and prevention of disease, both in the form of illness and injury, in deployed forces is a key factor of personnel sustainability, and conserving the fighting strength of the force. Disease surveillance serves as a key indication of troop health status, and a key warning system (or sentinel) to trigger further investigation, preventive countermeasures, or other Command action to reduce the adverse impact of health threats. Furthermore it provides an estimate of the impact of disease occurrence.

#### **Current Doctrine**

1020. Recent experience has shown that medical support to NATO operations is no longer a purely national responsibility. After Transfer of Authority (TOA), NATO Commanders share with providing nations the responsibility for medical support to multinational forces. The NATO Commander has the responsibility to ensure that the medical support system is aligned with the medical principles and policies of the Alliance, and consequently the NATO Commander has the authority to establish, co-

ordinate and assess the medical resources needed to accomplish the mission. The NATO Commander also has the authority to take appropriate action to cope with casualty peaks and medical materiel shortfalls within the force. Therefore, collective responsibility requires that the NATO Commander have oversight of all medical issues within their authority and in particular the ability to confirm the status of medical units including their level of readiness, sustainability and ability to fulfil their tasks.

1021. A dedicated and structured command and control system is the essential foundation of an efficient medical support structure. This system, supported by a dedicated communications and information management system must be capable of planning, executing, controlling, supporting and auditing the full range of medical support functions. The medical command system should provide seamless resources to support treatment, evacuation and passage of information from initial point of injury or sickness throughout evacuation to definitive treatment and final disposition.

1022. The basic requirement and functional needs are given in AJP-4.10, which states that "Medical support connectivity is an operational requirement. There is a need to allocate the most effective CIS means to capture the appropriate medical data from theatre MTFs. This facilitates regulation and tracking of casualties within a Joint Operations Area and gives the ability to respond quickly to medical contingencies. There is also a need for medical professionals to communicate with each other so that medical cases can be discussed and clinical advice be provided. CIS medical requirements for operations will include a span of dedicated and non-dedicated assets encompassing medical verbal and visual communication, automation technology, data and information management. The medical CIS must have the capability to interface with the corresponding logistics and operational data management."

1023. The current national solutions for an integrated MedCIS in the operational environment, while still useful, do not provide optimal business processes in this era of increasingly constrained resources, nor in this period of radically changed medical support structures. The vision, promise, and potential of a NATO MedCIS to enhance access to care and quality of care are compelling. Implementing such a system will enhance NATO's ability to respond to future challenges.

1024. Information exchange for medical support in theatre is currently mostly done on paper, by email, by phone or by radio. Electronic data exchange is mostly done via email or office software applications. There is no automated processing of this data between nations and NATO. The advantages of automated data processing and exchange are not at all exploited, although needed.

#### **CHAPTER 2 - FUNCTIONAL DESCRIPTION OF A MedCIS**

#### General

2001. The function of a MedCIS is to facilitate the work of all staff involved in the operational medical support planning process, from high level medical planning carried out at Allied Command Operations (ACO) down to subordinate formation headquarters (HQs) such as the Joint Force Commands, Component Commands and NATO Response Force (NRF) HQs.

2002. An additional goal is to facilitate the exchange of information with Troop Contributing Nations (TCNs) and multinational medical staffs, as well as with participating non-NATO nations, other organizations such as the European Union, Organization for Security and Cooperation in Europe, United Nations and non-government organizations (NGOs) to improve situational awareness, decision making and lessons learned processes at each end.

#### 2003. The aim of MedCIS is to:

- a. Improve the efficiency of medical support taking into account the latest and most appropriate Information Technology systems and standards;
- b. Introduce standard and automated information exchange mechanisms between NATO, national and other medical systems;
- c. Provide timely, accurate and reliable information to relevant bodies to improve their situational awareness and decision-making processes; and
- d. Provide decision support functionalities such as search, query, reporting and analysis.

2004. A Theatre MedCIS should implement means and standards necessary for integrating existing, and developing future national medical information systems (software and hardware) into an interoperable system supporting the NATO Force Commander. Its major objectives are to facilitate the coordination and integration of medical capabilities across the theatre and to support in the delivery of seamless medical care in a multinational joint environment. The ultimate goal being to ensure global medical connectivity and information management as an integral part of meeting the medical support requirements.

2005. Any deployed MedCIS should be capable of providing support worldwide to help preserve NATO global interests. The system will be strategically and tactically agile in order to be responsive to the broad range of worldwide requirements.

2006. MedCIS availability and connectivity should be a continuum from the main area of operations through to national sustainment bases.

2007. The MedCIS will be structured in such a way that it can be tailored to support multiple, potentially diverse missions. It should support extremes such as forced or unforced early entry operations, humanitarian/disaster relief missions, and providing routine care within the deployed forces.

2008. A functional MedCIS will provide telecommunications options to allow for both synchronous and asynchronous consultation using any combination of voice, data, still or video images.

2009. Providers throughout the deployed NATO Medical Force Structure will have access to a teleconsultation capability which will provide specialist advice in all needed specialty areas. Such a network would ideally be multinational, allowing the pooling of all specialist providers and deployed clinicians/technicians and reducing the burden on any single nation. The end result will ideally be a simple one step process for all users. The provider network must be capable of accepting consults from all possible modalities, including voice, secure military data systems, and the Internet.

2010. Standardized consultation software will be developed to make such a system functional. In order to reduce the training requirements and increase user competence, there will be a single software program, which is usable by all nations. This software must be scalable and capable of functioning on all national platforms. There will be an international standard data output mode that allows for data exchange within a Multinational or coalition setting.

2011. Simple methods of providing security for patient data transmitted from all MTFs and protecting patient privacy will be developed. These security systems must function on all communications means that may be available.

2012. As regards functional capabilities, the system should be capable of the passage of timely and accurate medical information to entitled personnel. It should include, but not be limited to, the following functions:

- a. Patient tracking;
- b. Patient regulating;

- c. Medical documentation management and exchange;
- d. Medical asset tracking;
- e. Medical capability assessment/sustainability analysis;
- f. Provision of epidemiological statistics;
- g. Report generation;
- h. Provision of operationally relevant medical data to the NATO Commander in the form of a Joint Common Operational Picture.

2013. The objectives of cooperation in this area are to provide NATO members with access to common, cost-effective, interoperable, and secure capabilities to ensure the appropriate support of medical operations. The MedCIS should be compatible with the other NATO command and control (C2) systems, and will be in full compliance with the requirements of AJP-6.

#### **Patient Tracking**

2014. Patient Tracking is the precise and continuous monitoring of the location and the intended destination of the patient in the medical treatment and evacuation chain throughout the theatre medical system, and beyond, until national repatriation occurs. Keeping track of all personnel once they have been introduced into any medical evacuation chain (either national or multinational) is of crucial importance in terms of the individual's medical status, readiness implications to the unit of origin, taking into account media, welfare and political sensitivities regarding all casualties.

2015. A patient tracking capability must contain 2 key elements: in-treatment and intransit visibility. NATO and National medical staffs report all in-transit information to the manpower and personnel (J1) staff, which has the overall responsibility for patient tracking. If appropriate, data links are made available so that on-line visibility is possible. Identification, collection and dissemination of relevant patient information together with connectivity amongst theatre MTFs and NATO and national medical staffs is paramount to develop a seamless and comprehensive patient tracking and in-transit visibility capability.

2016. The purpose of a MedCIS Patient Tracking System (PTS) is to:

a. Support NATO and the nations with an overview of the location of the patients within the multinational medical support chain;

- b. Contribute to the Common Operational Picture; and
- c. Serve as the basis for Patient Regulation.

2017. A PTS should be near-real-time, accurate and dynamic, using standardized procedures and involving HQs J1 staff.

2018. Failure to establish a competent system for patient tracking, including across national boundaries, is likely to cause distress for both the patient and their relatives as well as attract national criticism.

2019. A national PTS is any national system that is dealing with the location of patients. For every nation there shall be only one point of data exchange at any time. Alternate points of data exchange are allowed only for the case of communication problems using the primary point.

2020. An integrated PTS will offer in-transit visibility of patients and is one of the bases for Patient Regulating. The medical evacuation process is supported by the tracking process. The tracking process will provide the following information:

- a. Who is the patient?
- b. When was the patient status changed? (This will apply on admission, on transfer and on discharge)
- c. Where is the patient currently located?
- d. What is the patient's destination (in case of transfer)?

2021. Additional information requirements beyond these are likely to relate to the much more complex activity of Patient Regulation and this is described later. Neither the NATO Commander, the NATO Medical Advisor, nor the Patient Evacuation Coordination Centre (PECC) has a need to know patient names or other medical protected information in order to conduct patient tracking.

2022. The patient tracking tasks which must be met by a MedCIS can be summarized as:

- Receive messages from national PTS;
- b. Receive messages from NATO tracking systems for transport assets;

- c. Ensure that patients in transit are mapped to transport assets in order to profit from NATO transport asset tracking system messages;
- d. Provide an input mask for the PTS operator to enter data from incoming non-electronic messages; and
- e. Log the tracking history.

2023. The relevant information set is stated in STANAG 2231 for minimum standardized data sets of medical information for patient tracking, patient regulating and medical documentation provides the common core data to support the patient tracking function.

#### **Patient Regulating**

2024. Medical regulating, or patient regulating, is a process of control and coordination to ensure patients are evacuated to medical treatment facilities which are best capable of providing the required treatment. This can most effectively be accomplished by a command, control and communication (C3) system which controls both the evacuation means and the destination medical treatment facilities.

2025. Medical regulating is the process of directing, controlling and coordinating the transfer of patients within and outside a theatre of operations, from point of wounding or onset of disease through successive MTFs, in order to facilitate the most effective use of medical treatment and evacuation resources.

2026. The patient tracking capability combined with management of MTF capacities and capabilities and with control of the evacuation modalities results in patient regulating. It is therefore the highest level of medical management.

2027. The management of patient movement in any joint operations area (JOA) is a dynamic process that needs to take into consideration a large number of important planning and operational factors:

- a. The availability of evacuation assets at the tactical and strategic level.
- b. The existing patient mix and type of medical facilities, the specialist capabilities available, medical equipment status, and staffing levels;
- c. The current bed occupancy status at medical facilities and any surgical backlog;
- d. Location of Air Point of Embarkation (APOEs) / Sea Point of Embarkation (SPOEs), Railheads, or other patient movement locations;

- e. The clinical condition of each patient, and any special medical requirements during or after movement;
- f. The current tactical situation and any risk in moving patients or in using valuable evacuation assets;
- g. Communication status in the regulating chain; and
- h. The theatre evacuation policy.

2028. The Patient Regulating Component of the MedCIS will be integrated with Patient Tracking that must be able to maintain a current record of the location of patients and utilization of MTFs. The objective of Patient Regulating component of the MedCIS is to provide an automated software platform for the PECC which:

- a. is electronically connected to MTFs for a near real-time update about utilization levels, capabilities, medical equipment status, staffing levels, and evacuation assets;
- b. maintains information about patients' status and location;
- c. is connected to joint common operational picture (JCOP) system for situational awareness about risks;
- d. as reporting capabilities:
- e. has functionalities to help the PECC staff in their decision-making process for evacuation, and resource allocation in case of mass casualty (MASCAL) incidents.

#### **Medical Documentation Management**

2029. Medical documentation is the recording and processing of medical information on a patient to include personal details and clinical history, as well as medical care and evacuation.

2030. Medical documentation must be interoperable throughout the Theatre of Operation.

2031. Maintenance of medical records at every level of care is key as well as the use of clear and comprehensive procedures for their compilation. Copies of patient's documentation must move with the patient through the evacuation system to definitive

care. Medical documentation is also fundamental part of clinical evidence for official national and international inquiries.

2032. A medical and clinical information set (the minimum standardized data set of medical information for patient tracking, patient regulating and medical documentation) should provide the common core data to support medical documentation management function.

#### **Medical Confidentiality**

2033. Note: Patient information which refers to a specific patient (i.e., non-anonymized data) requires special handling, and generally will not be transmitted by a NATO MedCIS. Special marking and handling is required for patient-identifiable and non-anonymized information. Some nations have very strict and sensitive legislation concerning the release of personal data, including medical records. All relevant national legislation will be accounted in the handling of medical records at multinational level.

2034. Individual patient medical information (also called "Medical Protected Data" or "Medically Sensitive Information") is not to be communicated to any individual or organization who does not have a medical need to know, except as required by national policy for that nation's patients.

2035. Medical reports, returns and files containing information other than in anonymous form are classified "MEDICAL CONFIDENTIAL" in accordance with the NATO classification policy. All personnel handling these documents must strictly respect the principle of Medical Confidentiality.

#### **Medical Asset Tracking**

2036. NATO's Strategic Concept demands flexible and interoperable NATO logistics, which requires the necessity for collective responsibility in logistics between NATO and nations, characterized by close coordination and cooperation during NATO operations. In this context Ministerial Guidance (MG) recognizes a capability gap concerning the ability of traditional materiel management techniques to keep pace with the required speed of force projection. To solve this problem the MG requires a common standard asset tracking system with high priority, which was also declared during the Washington Summit. A NATO MedCIS can provide the logisticians assistance in carrying out this function, either as a stand-alone medical materiel tracking tool, or through its built-in medical reporting capabilities.

2037. In addition, operational experience has proven the critical necessity of a standardized and shared NATO Asset Tracking Information Routing Network (NAIRN), and the substantial benefits it offers to both NATO and nations. Medical assets should

be part of NAIRN and interface with the MedCIS. The potential of future requirement for multinational tracking of medical material and supplies should also be taken into consideration to improve medical effectiveness.

#### Medical Capability Assessment/Sustainability Analysis

2038. Medical Capability Assessment and Sustainability Analysis is not part of the core MedCIS functions, but is of significant secondary importance. This function may provide the assessment of medical unit readiness and available resources. It allows the assessment of the viability of the medical support structure against specific requirements and the informed judgment of risks associated with identified shortfalls. Assessment criteria utilized for this function may focus on a range of organizational, resource and performance characteristics of the TCNs' medical support. Medical capability assessment/sustainability analysis is extremely relevant under specific conditions (e.g. in a mass casualty situation) when the NATO Commander is authorized to use redistribution authority to prevent local overload or to overcome unexpected deficiencies.

#### **Health and Disease Surveillance**

2039. The maintenance of health and prevention of disease are key responsibilities of deployed medical services and it is a key function of the Medical Advisor and their staff to appraise commanders on health of the force. In this context, there are two key aspects to consider: Health Surveillance and Disease Surveillance.

2040. Health Surveillance functions are defined as follows:

- a. Identification of population at risk.
- b. Assessing health of this population through pre-, during and post-deployment health assessments.
- c. Identification of potential health hazards and their assessment.
- d. Employment of specific countermeasures.
- e. Monitoring and measuring the performance of health outcomes

2041. Health surveillance deals mainly with the health status of NATO and other TCNs in theatre. This is different from the issue of host nation disease surveillance, which relates to disease present in the surrounding population.

2042. AMedP-21 *Health Surveillance* requires that all health surveillance data summaries, final reports and investigations prepared in accordance with the requirements of that document shall be forwarded from the deployed task force medical advisor (or national higher headquarters) office through the chain of command to a central analysis and repository center (as determined by NATO and the individual nation). Deployment health surveillance documents should be provided through the chain of command, to the troop contributing nations and the ACO Medical Advisor's staff using a standardized reporting application.

2043. Based on this requirement, the main objective of the Health Surveillance component of the MedCIS is to provide an automated software platform for the NATO Epidemiology Reporting Center which:

- a. is electronically connected to the data collection points (e.g. deployed task force medical advisor office, medical coordination cells, medical national headquarters, civilian centres, etc.),
- b. collects and stores data, data summaries, reports and investigations, provides analytical tools, search functionalities to pursue the Health Surveillance activities more efficiently,
- c. is integrated with a geographic information system to provide near realtime visualization for situational awareness provides applications for automated reporting to NATO Medical Advisors' staff and the contributing nations, and which issues early warnings in case of statistical anomalies and an emergency/critical event/input.

2044. The functionalities of the Health Surveillance component of the MedCIS can be summarized as follows:

- a. Pre- and post- deployment health assessment;
- b. Operational and environmental health risk assessment & surveillance (including animal disease surveillance); and
- c. Disease Surveillance

2045. A NATO-sponsored morbidity surveillance system named EPI-NATO involves the monitoring, collection and evaluation of illness/injury data on all TCNs' personnel who report for medical treatment support, both on an outpatient and inpatient basis. Morbidity data are reported through the chain of command and collected at Theatre level. Through identification of causes of morbidity and measuring of their effect, an evaluation of both occurrences and consequences (reduction in operational capability)

is the prime objective of the survey. Findings may then support appropriate response actions, both in the short and long term. Feedback to originators is provided.

2046. Disease Surveillance is the continuous monitoring of current incidence of disease symptom complexes to detect unusual high aggregates of symptoms in certain locations or units in order to provide early warning of the outbreak of diseases.

2047. In maintaining disease surveillance, the national medical staffs will provide daily medical situation reports (e.g. Medical Situation Reports & Medical Assessment Reports) transmitted through the chain of command at Theatre level. A functioning MedCIS will enhance the quality and ease of such reporting through its ability to populate report forms from data acquired through other means, and by reducing data re-entry. In concept, the Disease Surveillance Subsystem (DSS) requires that:

- a. Surveillance messages will flow from national systems to MedCIS whenever critical symptoms occur.
- b. DSS merges all received messages, analyzes the occurrence of symptoms and if statistical anomalies occur, it alerts the medical staff in the Central Analysis Centre, who will initiate further investigations.
- c. DSS provides statistics, query and browsing possibilities of the received messages including geographical visualization.
- d. Further analysis will be supported by open source reach back to e.g., World Health Organization (WHO), Centre for Disease Control (CDC) and other Analysis Centres and special capabilities.
- e. Therefore a list of points of contact (POCs) with telephone and fax numbers as well as email addresses and websites including appropriate communication lines between reporting, analyzing and reach back personnel within DSS must be available.
- f. Near real-time fully automated data exchange between national and MedCIS DSS is necessary in order to fulfil this time critical task.

2048. Incident summary reports should also be coordinated at Theatre level. Notification of serious sickness and injury must be rapid and accurate. Its lack will produce much national political disquiet, unnecessary administrative efforts and distress for patients and relatives.

#### **Common Operational Picture/Situational Awareness**

2049. MedCIS will support medical interoperability through the identification of requirements and business practices which will enhance the exchange of health information in electronic format between nations in order to support multinational, combined and joint operations. This information will be exchanged to provide NATO Commanders with a common operational picture to support command and control, and operational medical decision-making.

2050. The NATO Force Commander's medical staff must at all times have access to relevant data about the health of the command, and the assets available/needed to provide optimum care. Other Operational Relevant Medical Data is also needed, and should be accessible by the MedCIS, including:

- a. Maps of the Area of Operations (AOO);
- b. MTF locations (grid references) and connectivity means (phone and fax number, etc)
- c. Host Nation Support MTFs (location, phone, fax, capability, comments, etc)
- d. Airfield helicopter pad characteristics in the AOO (location, phone, length, operation hours, etc)
- e. National Support Element (NSE) (location, phone, fax, comments and remarks, etc)

#### **Telemedicine**

2051. For the purposes of this document, the term "Telemedicine" is used in a restricted sense. It is not used in the broadest sense of "e-Health", with the implications of patient education, scheduling, telesurgery, telementoring, or referring to any form of an electronic health record, though these are certainly valid uses of the technology which should be considered by NATO in the future. The term "Telemedicine" is used strictly to mean "Teleconsultation" as defined by STANAG 2517, namely: "The provision of specialty services (e.g., dental, mental health, cardiology, dermatology) by health care specialists to other physicians. Teleconsultation may employ a wide range of technologies from simple voice communication through to real-time video teleconferencing along with the ability to handle medical specialty-specific data streams (e.g., heart and lung sounds, electrocardiograms, video and still images) captured with the use of specialized equipment".

2052. Teleconsultation is a medical business process using advanced medical and communications technologies which enables healthcare providers to seek and obtain

consultation (opinion, recommendation, etc.) from another provider, usually a specialist (e.g., dermatologist, radiologist, infectious disease specialist, etc.). It complements the traditional direct provider-to-provider referral and consultation process which is routinely carried out within civilian practices and within national systems. Unlike traditional consultations, Teleconsultation is accomplished electronically where the "distant" or consulted provider does not meet with the patient face-to-face. Further, the use of an electronic "vehicle" provides the potential to attach images such as pictures, audio or video clips, waveforms (e.g., electrocardiograms, ultrasound images, microscopic images) and other types of media. Teleconsultation is increasingly being used by NATO allies and nations in the Partnership for Peace (PfP) program for the support of their deployed forces.

2053. With the implementation of the NATO Response Force, and with NATO's standing operational commitments, it is imperative that new mechanisms of medical support be implemented which allow high-level multinational medical support, with a small medical "footprint" in theatre. An increased use of Telemedicine is seen as one mechanism to support this requirement.

2054. The lack of a NATO-wide Teleconsultation capability has been identified as a capability gap by the ACO Medical Advisor. The requirement to establish telemedicine capabilities is accepted by COMEDS and ACO and Allied Command Transformation (ACT) work in conjunction with MedCIS EP in developing standards and regulations for distributed telemedicine capabilities.

#### 2055. Telemedicine concept description:

- a. Whether integrated into a NATO MedCIS or not, any deployed NATO Teleconsultation system will be capable of providing support worldwide to help preserve NATO global interests. The system will be strategically and tactically agile in order to be responsive to the broad range of worldwide requirements.
- b. Teleconsultation will be a continuum from the main battle area through to the nations' sustainment bases. It will provide specialist medical advice to providers at all roles of care, or at national choice may provide direct patient-to-clinician support.
- c. Teleconsultation will be structured in such a way that it can be tailored to support multiple diverse missions. It can support extremes such as forced or unforced early entry operations, humanitarian/disaster relief missions, and providing routine care within the deployed forces.
- d. Teleconsultation will enable the provision of responsive medical advice to the right person in the right place at the right time. This will be accomplished by

focusing resources and providing advanced telecommunications capabilities far forward.

- e. Any NATO Teleconsultation system will facilitate the transmission of clinical consultations. They will provide telecommunications options to allow for both synchronous and asynchronous consultation using any combination of voice, data, still or video images.
- f. Completed consultations will be returned to the referring provider within the specified response times. A copy of the consultation and its response, including any images, will be included in the patient's electronic health record, in accordance with national policies.
- g. Providers throughout the deployed NATO Medical Force Structure will have access to a consultation capability which will provide specialist advice in all needed specialty areas. Such a network would ideally be multinational, allowing the pooling of all specialist providers and deployed clinicians/technicians and reducing the burden on any single nation. The end result will ideally be a simple one step process for all users. The provider network must be capable of accepting consults from all possible modalities, including voice, secure military data systems, and the Internet.
- h. Telemedicine will provide a consultation capability able to function successfully within the low bandwidth environment. The equipment will be easy to use and simple to maintain by the end user.
- i. Standardized Consultation software will be developed to make such a system functional. In order to reduce the training requirements and increase user competence, there will be a single consultation software program, which is usable by all nations. This software must be scalable and capable of functioning on all national platforms. It must be capable of image incorporation and manipulation and will automatically incorporate the encounter into the enterprise electronic health record. There will be an international standard data output mode that allows for consult exchange within a Multinational or coalition setting.
- j. Simple methods of providing security for patient data transmitted from far forward and protecting patient privacy will be developed. These security systems must function on all communications means that may be available.
- k. Appropriate standardized nomenclatures for use in Teleconsultation systems are found in STANAG Study 2543. These nomenclatures can assist in alleviating the impact of language problems on the use of such a system.

I. Tele-consultation can be a useful tool, particularly when the area of operations is remote and medical resources are limited. However, it should not be used as a substitute for appropriately trained and equipped medical personnel. Planning should take into account that the use of telemedicine systems will be governed and may be restricted by operational electromagnetic security measures.

2056. This concept description provides recommendations to NATO for development of doctrine, policies, procedures, and Capability Packages which will support the development and fielding of Teleconsultation as a major medical support tool for the Alliance, as envisioned by the COMEDS Vision and Objectives. Ideally, telemedicine systems will be integrated into a NATO MedCIS, but to the extent that they are not, they will have to be developed as national stand-alone or multinational systems. High-level business use case scenarios are not included in this document, but will be found in STANAG 2517, which should be consulted for implementation information.

#### **Trauma Registry**

2057. There is currently no formal NATO Joint Trauma Registry, although there are several national trauma registries in existence. The requirement for national registries will remain but with various levels of data being made available to a central NATO organization for analysis and recommendations.

2058. A MedCIS would prove to be a viable information transfer mechanism for a centralised NATO Joint Trauma Registry.

#### Interoperability Aspects of Medical Communication and Information Systems

2059. **Level of standardization demanded.** Interoperability is the most frequently sought level of standardization to allow the passage of information between different elements of a deployed joint force or, on multinational operations, with troop contributing nations. Operations will not be either joint or combined unless interoperable MedCIS allow the commander to exercise command and permit all elements of the joint force to coordinate their activities.

2060. **Interoperability versus security.** The competing needs of interoperability versus security need to be actively managed, in compliance with respective NATO directives, particularly on multinational operations. Technical and procedural solutions based on a comprehensive risk analysis will be required. The means of risk analysis should be detailed and the risk owner identified.

2061. **Interoperability outside of the NATO environment.** The requirement for command information systems (CIS) to be interoperable within and between the

environments of land, air, maritime, and space forces and, on operations, between joint force components is well established. However, operational trends, particularly in peace support operations, indicate a growing requirement to achieve some degree of interoperability with cooperative partners, NGOs and international organizations (IOs). The lack of interoperable CIS in such an environment may require the deployment of compatible systems and greater use of liaison officers.

- 2062. **Language**. NATO communications' doctrine is based on the use of English as the common working language. However, in the broader context of multinational or coalition operations, interpreters, or language translation software, may be required at all levels to overcome language challenges.
- 2063. **Doctrine, Tactics, and Procedures**. Where possible, extent agreements such as STANAGs, memoranda of understanding (MOU), Allied publications, and doctrine should be used as a basis for interoperability. Such agreements and doctrine should cover principles, procedures (e.g., standardized message formats), and spectrum management. Testing the strength or validity of these should contribute to the aims and objectives of the CIS community when utilizing opportunities to exercise in the joint and combined environment.
- 2064. **Data Standards, Database Formats, and Information Exchange**. Lack of standardization in CIS procurement and development has led to numerous data, database, and waveform formats that hamper interoperability. This must be avoided, wherever possible. The Command, Control, Communications and Computer Systems (J6) planners should be aware of NATO agreed references on interoperability such as STANAG 5525. In some cases, established commercial off-the-shelf software may be used to maximize interoperability.

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#### **Chapter 3 - Technical Requirements for a Functional MedCIS**

#### Connectivity

3001. Medical connectivity is an operational requirement. NATO and National Medical staffs must have the full range of communication equipment and information technology to carry out their mission responsibilities. In the medical functional area, where there exists the potential for large amounts of detailed information on data on a casualty to be transmitted, it is essential that early operational planning includes the requirements to establish the commensurate priority for MedCIS. Dedicated MedCIS assets should provide adequate connectivity within the medical functional area, both vertically and horizontally in the command and control architecture.

3002. The requirements for a NATO MedCIS are unlikely to be significantly different whether used in Article 5 Operations or in non-Article 5 Crisis Response Operations (CRO). Although it is probable that the levels of data traffic on the communication pathways will be greater with respect to the former, the MedCIS architecture will be very similar in each case, as will the requirement to provide real-time visibility of the operational medical situation.

#### **System Design Requirements**

3003. Most data and information required for theatre operations are expected to come from existing NATO and national systems aligned with the core functional categories of clinical, logistics, movements, resources and executive information/decision support. To meet these needs, the system design should be interoperable with and integrate multiple communication networks, computers, software, databases, applications and other capabilities, some of which shared with other NATO and national operational users. The system should meet the information processing and transport needs for NATO Commanders and medical staffs in peace, crisis and conflicts. They must be aware of theatre medical capability and have the ability to respond as quickly as possible to medical contingencies.

#### **Access Management**

3004. A MedCIS will have a broad scope of different data covering MTF information, Medical Mission information, Patient Data, Medical Planning Data and aggregations of several inputs of medical data. This means data will be labelled with several qualifications. As people will be using MedCIS for different reasons they should only have access to what they need and to what they're entitled to use. A system for access management has to be in place to ensure patient confidentiality and security issues.

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#### **CHAPTER 4 - ROLES AND RESPONSIBILITIES**

#### Introduction

4001. This chapter outlines the strategic and operational roles and responsibilities of those organizations which have responsibilities regarding MedCIS within the Alliance.

#### **National Roles in the MedCIS**

4002. Nations are the main provider of information for MedCIS and they have to agree on all desired uses of that data. Due to the medical sensitivity and the fear of loss of authority, currently most nations hesitate to exchange information electronically without explicit authorization on a case-by-case basis. It is therefore assumed that only datapushing to the NATO MedCIS - under full national control, rather than data pulling, will be agreed by the nations.

4003. It is assumed that national MIMS will provide a point of connection for the NATO MedCIS. There must be National-NATO interfaces that can be used to exchange all the necessary information. The collection and distribution of information and their routing to the National-NATO interfaces is national responsibility. Nations have absolute control of what they are willing to share.

#### Role of the Strategic Commands in the MedCIS

4004. ACO will be responsible for:

- a. Requirements generation.
- b. Monitor usage.
- c. Provide new/modified reporting formats for incorporation.
- d. The major strategic input on MedCIS requirements is the responsibility of ACO, with the assistance of the Medical Communications and Information Systems Expert Panel (MedCIS EP) of COMEDS

4005. Allied Command Transformation (ACT) will be responsible for:

- a. Requirements definition.
- b. Field demonstrations of functional capabilities.

c. Development and fielding of doctrine regarding the use of systems to support these requirements.

4006. At the operational level, the Joint Forces Command (JFC) ensures adequate MedCIS support as a critical requirement to operational success.

#### Role of NC3A / NCSA

4007. The NATO Consultation, Command and Control Agency (NC3A) and the NATO Communications and Information Systems Services Agency (NCSA) are NATO's players in the development of new software. NC3A undertakes research, analysis, design and implementation of software up to a prototype stage. Once the development is complete and the prototype is stable then the product is industrialized by commercial contractors and handed over to NCSA that officially introduces the product, operates and maintains it on NATO level. Accordingly, NC3A will undertake software development for the NATO MedCIS, as envisioned in this document.

### Role of the NATO/COMEDS Medical Communications and Information Systems Expert Panel (MedCIS EP)

4008. The MedCIS EP will develop user operational requirements and concepts of use which will enhance:

- a. The appropriate levels of integration of patient healthcare record systems;
- b. Mechanisms for transfer of patient-related medical data between national and NATO information systems;
- c. Mechanisms to protect patient privacy and confidentiality of medical data in the multinational environment; and
- d. The use of Telemedicine and Teleconsultation Systems across national boundaries in a multinational operational environment.

4009. The MedCIS EP will produce recommendations for standardization of data transfer modalities, including minimum data sets required to support various modalities, as well as providing technical specifications for information coding, storage, and transfer.

4010. The MedCIS EP will provide requirements for capabilities to support NATO Medical Advisors and their staffs, including the general ability to track personnel throughout the theatre medical system, and beyond, until national repatriation occurs.

- 4011. The MedCIS EP will develop requirements and concepts of use, which will enhance the functionality of medical force protection systems, medical intelligence and health surveillance systems.
- 4012. The MedCIS EP will provide requirements for capabilities to maintain situational awareness and sustainment analysis for improved medical support management as well as intelligent decision aids for the planning and execution of medical support operations in the theatre.
- 4013. MedCIS EP contributes to the development of the interoperability standards, profiles, and architectures thus enhancing the interoperability of coalition medical systems. Additionally, MedCIS EP communicates with COMEDS Steering Group to ensure compatibility with other ongoing NATO work in this arena.

#### Role of the Theatre Commander and the Commander's Staff

4014. The Theatre Commander, supported by the Medical Adviser and in conjunction with the TCNs, will have all medical and other relevant information to enable the Commander to exercise authority for coordination, evaluation and redistribution. The system will provide distributed collaborative planning and, on the basis of data collected from the theatre, situation awareness and sustainment analysis for improved medical support management, and intelligent decision aids for the planning and execution of medical support operations in the theatre.

4015. The TCNs through the Theatre Commander's oversight can achieve broad and even full visibility of the theatre medical resources and catch the potential opportunities and rewards of burden sharing. These rewards may include achieving synergy in provision of medical support services, while also attaining economy, efficiency and effectiveness.

4016. The Theatre J6 communications staff must provide reliable and secure CIS necessary to support an operation. The principles of flexibility, reliability, security, network resilience and interoperability are crucial to the NATO framework at all levels, as is the continued emphasis on commonality of CIS procedures. The most important aspect of this process is to engage the CIS staffs in recognizing the need for CIS assets to provide adequate connectivity within the medical functional area, both vertically and horizontally in the C2 architecture. Medical CIS should include all MTFs in theatre, in order to facilitate the ability to rescue, evacuate, regulate and track casualties, permit commander's analysis and assessment of theatre medical capabilities, achieve direct interaction and information exchange on a continuous basis and should facilitate teleconsultation, telemedicine, patient tracking, medical data collection, storage and transmission and in-transit patient monitoring. Connectivity with the joint operations centre (JOC) and commander's staff elements must also be established and maintained for coordination purposes.

4017. In the medical functional area, where there exists the potential for large amounts of detailed information and data on casualties to be transmitted, it is essential that early operational planning include the requirement to establish the commensurate priority for the medical CIS. Support needs for the Medical CIS must be assessed at all levels. In conjunction, the medical and the CIS staff will establish the medical CIS requirements for the operation and include them in the statement of requirement (SOR), as detailed in *Allied Joint Medical Planning Doctrine* (AJMEDP-1). The CIS staff may also allocate the means to effect the capture of appropriate medical data.

#### **ANNEX A REFERENCES**

AJMedP-1 - Allied Joint Medical Planning Doctrine

AJMedP-2 - Allied Joint Doctrine for Medical Evacuation

AJMedP-4 - Allied Joint Force Health Protection Doctrine

AJP-3 (A) - Allied Joint Doctrine for Operations

AJP-4- Allied Joint Logistic Doctrine

AJP 4.10(A) - Allied Joint Medical Support Doctrine

AJP-6 - Allied Joint Doctrine for Communication and Information Systems

AMedP-21 - Health Surveillance.

COMEDS (MMSG)D(2007)0004, 26 Nov 2007 - NATO Military Medical Vision and Objectives Review (containing NATO Military Medical Objectives for 2007-2016)

MC 319/2- NATO Principles and Policies for Logistics

MC 326/3 - NATO Principles and Policies of Operational Medical Support

MedCIS EP Terms of Reference, Updated September 2008

Medical Information Management System Concept and Requirements Statement Paper, 2000, SHAPE, currently Allied Command Operations (ACO)"

STANAG 2050 Statistical classification of diseases, injuries and causes of death

STANAG 2061 MED - Procedures for Disposition of Allied Patients by Medical Installations

STANAG 2132 MED - Documentation Relative to Medical Evacuation, Treatment, and Causes of Death of Patients

STANAG 2348 MED - Basic Military Hospital (Clinical) Records

STANAG 2517 MED - Development and Implementation of Teleconsultation Systems

## **AJMedP-5(A)(1)**