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MARITIME MULTINATIONAL MEDICAL UNITS

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NORTH ATLANTIC TREATY ORGANIZATION

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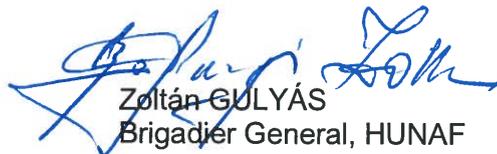
NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

9 June 2021

1. The enclosed Standards Related Document, SRD-1 to AMedP-9.2, Edition A, Version 1, MARITIME MULTINATIONAL MEDICAL UNITS, which has been approved in conjunction with AMedP-9.2 by the nations in the Military Committee Medical Standardization Board is promulgated herewith.
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MARITIME MULTINATIONAL MEDICAL UNITS

Chapter 1 Introduction

1.1 Introduction

This document gives an overview of the particular nature of multinational medical units, in particular role 2. This document is related to

- AMedP-9.1 MODULAR APPROACH FOR MULTINATIONAL MEDICAL TREATMENT FACILITIES (MTF)
- AMedP-9.2 GUIDELINES FOR A MULTINATIONAL MEDICAL UNIT
- AMedP-9.3 CREDENTIALING FOR NATO HEALTHCARE PROFESSIONALS ASSIGNED TO ROLE 2/3 MULTINATIONAL MEDICAL UNITS.

This document is also related to the AJMEDP-1 Allied Joint Medical Planning and AJP-4.10C ALLIED JOINT DOCTRINE FOR MEDICAL SUPPORT, both of which have incorporated the MARITIME MEDICAL PLANNING GUIDE (MMPG), 2017 edition.

1.2 Background

1.2.1. In AMedP-9.1, MODULAR APPROACH FOR MULTINATIONAL MEDICAL TREATMENT FACILITIES (MTF), the introduction discusses the importance of multinational medical treatment facilities. Although the provision of medical support to NATO operations has been a national responsibility, in the last decade, it has become more common to operate with a multinational medical unit. To date, no document has focused on the maritime aspects of a Maritime Multinational Unit.

1.2.2 The experiences with MARITIME MULTINATIONAL MEDICAL UNITS are very limited compared to the experience with a land-based multinational medical unit. From 11-20 October 2017, a Multinational Maritime Unit Trial was conducted in Norway. Two surgical teams from the United Kingdom and the Netherlands conducted a medical exercise. The aim of the trial was to evaluate this document. The two surgical teams, from the United Kingdom and the Netherlands, worked on Norwegian frigates to see what problems would be encountered by putting surgical teams on foreign platforms. Two Norwegian surgical teams were included in the exercise and support for both foreign teams was necessary.

1.2.3 The outcome; All surgical teams declared at the end of the exercise to be overall capable to deliver their capabilities and give good and safe patient care, but only if certain topics are addressed upfront. All analyzed topics from the surgical teams and the medical evaluation team are included in this document

1.3 AIM

The aim of this document is to give an overview of the particular nature of maritime multinational medical units. This document will set the basis for the creation of standardized component modules of personnel and equipment able to be rearranged,

replaced, combined and interchanged easily, under the coordination and responsibility and with the support of a Lead Nation (LN), in order to create Maritime Multinational Medical Units (MMUs) able to meet specific operational requirements.

This document describes modularity in the maritime environment and gives the provision for the basic conceptual work for pre-deployment training and evaluation of a multinational medical treatment facility. It briefly touches on other issues (legal, economic etc.), which, while recognized as fundamental, need further analysis, with the contribution of experts other than medical.

It refers to the Role 2 Basic / Level 3, Role 2 Enhanced/Level 4 and Role 3 / Level 5 Medical Treatment Facilities (MTFs) as described in the MMPG (Maritime Medical Planning Guide). The resulting MMUs can be employed across the whole spectrum of operations, including warfighting at full scale, deterrence, contingency operations, peacetime engagement, crisis response and humanitarian assistance & disaster relief (HADR). This will provide to NATO the means to:

- Mitigate Role 2 /Level 3 & 4 shortfalls;
- Improve multinationalism and partnerships;
- Enhance multinational medical engagement;
- Meet specific operational requirements and
- Create and/or Improve standards of care and interoperability.

Chapter 2 Maritime Environment

2.1 As stated in the MMPG: Maritime operations differ from land and air warfare in several ways. Perhaps the most significant is the fact that ships are constantly moving around the operational area. This means that the maritime medical treatment facilities are also moving, both absolutely and relative to other platforms that may require them. Therefore, medical timelines are also subject to frequent change. Additionally, maritime areas of operations are often very large, with assets spread throughout them and with great distances between them. As in the land environment, the weather at sea often changes rapidly, placing severe constraints on the operation of helicopters and ships and thus restricting the movement of patients between platforms or to MTF ashore. The non-availability of air assets in the land environment can be mitigated to some extent by enhancing movement by road. However, in the maritime environment, it is very likely that weather severe enough to preclude flying will also prevent the use of boats to transfer personnel.

2.2 Additional complications arise from the nature of a ship-based environment. First, maritime platforms pitch and roll in accordance with the sea state, and this can sometimes limit the performing of medical procedures. Second, there are epidemiological consequences of people living in such close proximity. The congested shipboard living environment increases the likelihood of a disease outbreak and makes controlling outbreaks difficult. Related to this is the fact that an attack on a platform is likely to result in a large number of casualties at once, as opposed to in a land environment where personnel are possibly dispersed over a wider area. In addition, medical personnel assume the same risk as the sailors on board, so the MTF may be affected, too.

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Chapter 3 The Multinational nature of Maritime Operations

3.1 Medical support in the multinational environment entails the provision of an efficient medical support system to treat and evacuate sick, injured and wounded personnel, minimizing the number of man-days lost due to injury or illness and to return casualties to duty. An effective medical support system is thus considered a morale booster and is a force multiplier. Medical care also plays a vital role in force protection. Though medical support is normally a national responsibility, planning must be flexible and consider coordinated multinational approaches. The degree of multinational support will vary depending on the circumstances of the mission and be dependent on the willingness of nations to participate in any aspect of integrated medical support.

3.2 In the Maritime environment, Level 1 and Level 2 capabilities¹ are integral to every ship and remain the responsibility of the host nation of that vessel. Although a Medical Branch Rating or Medical Officer from another nation may work onboard a HN vessel, this does not equate to the modular concept.

3.3 Level 3 to 5 MTFs, when deployed, will deliver a resuscitative, surgical and emergency medical capability and a holding capacity to the ship or the deployed task group. The greater the level of capability, the greater the opportunity for multinational cooperation to deliver it. Unlike the land environment, the relatively fixed infrastructure of a ship limits the extent to which a modular concept can be implemented. Additionally, medical equipment is normally supplied by the ship to ensure compatibility with the electrical system. Therefore, the modular concept in a Maritime environment will primarily come from personnel. This may be Individual Augmentees (IAs) or team contribution to one of the seven core capabilities

¹ Reference for level 1- 5 facilities MMPG

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CHAPTER 4 Methods for Establishing Multinational Maritime Medical Units.

4.1. In the land environment the concept of Multinational Medical Units (MMUs) is being developed based on the creation of standardized component modules of personnel and equipment able to be rearranged, replaced, combined and interchanged easily, under the coordination and responsibility of the Lead Nation (LN) in order to meet specific operational requirements. This concept is applied to Role 2 Basic and greater. This is described in the AMedP-9.1 MODULAR APPROACH FOR MULTINATIONAL MEDICAL TREATMENT FACILITIES. In the maritime environment, the Lead Nation is the Nation who provides the maritime platform. Unlike the land environment, the relatively fixed infrastructure of a ship limits the extent to which a modular concept can be implemented.

4.2. Multiple nations working together will lead to areas where differences in national practices may lead to confusion and contention. Many of these issues can be predicted and managed with the appropriate Memorandum of Understandings between the Lead nation and the Troop Contributing Nations (TCN), examples of which are illustrated in AMedP-9.2 GUIDELINES FOR A MULTINATIONAL MEDICAL UNIT. The examples in AMedP-9.2 are focused on land environment and there is no example for a maritime multinational unit. AMedP-9.2 Annex C Aide Memoire: planning considerations for the lead nation when establishing a multinational medical unit, highlights the issues which should be considered during the planning and establishment of an MMU. Although this Annex is written for a land-based operational environment, it is also very useful for a multinational maritime medical unit. It is important that these issues are addressed and resolved prior to any multinational operation to ensure the management of casualties is not negatively impacted and the best clinical outcomes are achieved.

4.3. The augmented team is a capability enhancement and not a replacement. The ships organic medical team must be maintained to support the ships personnel, as these skills will not be provided by the TCN team. The organic medical team is incorporated into the Ship's Damage Control Organization and this task can't be fulfilled easily by a multinational maritime medical unit.

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CHAPTER 5 Description of Multinationalism in Maritime MTFs.

5.1. The Medical Maritime Planning Guide (MMPG) recognizes five levels of MTFs in the maritime environment. This ranges from Level 1, a sick bay managed by a medical branch rating, up to a level 5 Role 3 Afloat capability.

5.2 A Role 2/Level 3 basic surgical capability provides the fundamental basis for 2 nations to provide a MTF. The host nation will provide the platform and / or equipment if fitted and a second nation will provide the surgical team that mans that capability and equipment if required².

This basic construct allows us to identify several issues which need to be addressed which will also apply to Level 4 and 5 capabilities:

- a. Med Plan – A clear med plan must be developed which articulates the MEDEVAC of patients from Point of Wounding (POW), through to reception and hold and subsequent STRATEVAC to Role 4 or host nation support (HNS). This must take into account the nationalities of the potential casualties.
- b. Language – there needs to be a common language to allow efficient communication between the two nations. The preferred NATO language is English. Although, if this is not possible an independent translator is required. If a person from a third nation is admitted to the MTF, it is important that a translator accompanies the patient.
- c. Training – given the nature of the operation, the team should be competent in working together having done individual and collective training prior to deploying. Further integration training must occur when the team is embarked to allow them to integrate with the ship's procedures.
- d. Technical / Legal agreement / Memorandum Of Understanding (MOU) – an agreement must be present between the two nations to ensure that all aspects of potential conflict are covered (e.g. blood, credentialing).

5.4 Level 4 and Level 5 MTFs provide additional modules to the seven core capabilities and therefore provide an opportunity for two or more partner nations to provide personnel to deliver the capability. MEDNP recommends that nations contribute teams rather than Individuals who would need to integrate as a team prior to deployment.

5.5 Given the logistical burden, the Lead Nation providing the platform should preferably provide the equipment and material to support the MTF since there will be

² An example of this is the ERSS presently deployed in the Middle East that has operated on several UK platforms over the past few years. Given the nature of its concepts of operations (CONOPS), this unit also brings its own equipment.

incompatibilities between the host nations electrical systems and donor equipment. This will also minimize the load on the Joint Supply Chain in regards to ordering unfamiliar equipment particularly if sustainability is an issue or non-standard equipment is requested. In the Pre-deployment Training extra attention should be payed to working with unfamiliar equipment.

5.6 Training and integration periods should be considered in developing this concept. Opportunities for exchange of teams should be maximized depending on the Defense exercise Program, but medical exercises should be realized at any opportunity. Once deployed the team should undergo the following integration training regime:-

- a. Basic sea survival and basic Fire Fighting training must be completed prior to embarkation and is a national responsibility. These skills are reinforced as part of the joining package.
- b. Ship familiarization and Damage Control training – this period allows the personnel to become familiar with the layout of the ship and how to move around it, to identify Damage Control and Fire Repair points along with First Aid posts. They should learn how a ship’s team responds to fires and floods and what their task is in these situations. Ships announcements should be made in the LN and TCN language to ensure emergency situations are fully understood.
- c. Maritime platforms pitch and roll in accordance with the sea state, and this can sometimes limit the performing of medical procedures. This has to be addressed in the training land integration period.
- d. Departmental familiarization, including equipment and SOPs – this period allows personnel to accustom themselves with each other, to understand the operating procedures of the department (which should be written in English) and to familiarize themselves with the foreign equipment. In particular, its use and maintenance, how to manage patients safely within the department, establishing the role of each member of the team. When equipment is provided by the lead nation, there may be language issues with regards to controls / displays if the equipment is unfamiliar. It is important that the standards of patient care are not reduced, and processes must be put in place to prevent this.
- e. Interdepartmental familiarization within the MTF allows the teams to work with their adjacent departments in the patient flow pathway, to minimize the risk to patients in moving from one area to another. They also become familiar with personnel in those departments.
- f. Rehearsal of Concepts (ROC) drills on a talk / walk / run through basis – This takes the entire MTF through the patient care pathway from the point of entry to the complex, through resuscitation, operating theatre, recovery / ITU and patient hold through to TACEVAC / STRATEVAC

from the ship. This is done as a discussion led by the Clinical Director (CD), bringing in the various elements initially without a patient, but then introducing a casualty - moving them at slow time and then normal time through the complex.

5.7 Language – Given the multinational nature of the MTF, it is important that teams be able to communicate in a single, common language (English). Where language skills are poor, a translator, fluent in medical terminology, is required.

5.8 Command and Control. A Medical Commander will be appointed as the Commanding Officer of the Multinational Maritime Medical Unit. A Medical Director is the appointed senior clinician who will oversee clinical activity within the multinational maritime medical unit. They will provide the link between the MTF and the Command. A Medical Advisor to the ship's Commander or maritime battle staff will be appointed, preferably the Medical Advisor is contributed by the Lead Nation and is not part of the Multinational Maritime Medical Unit. Each contributing nation should provide a nominated lead who should meet regularly with the CD and be the link for two-way exchange of information within the MTF.

5.9. The ship should provide a liaison officer to the multinational maritime medical unit to ensure full integration.

5.10. On a navy platform it is very important to have a good connection to the ship technicians and logisticians. At the level of Chief Petty Officers it is very important to have a good relationship between the multinational medical unit and the ship's Chief Petty Officers for small and detailed, but very important, issues.

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CHAPTER 6 Framework Nation / Lead nation

6.1 The Framework Nation concept³ focuses on allies coming together to work multi-nationally for the joint development of forces and capabilities required by the Alliance, facilitated by a framework nation. It will allow smaller nations with limited and specialized capabilities to form groupings around a larger Ally, allowing the delivery of an entire capability that would not otherwise have been provided.

6.2 A Lead Nation⁴ (LN) is the nation assuming functional responsibility for organizing, maintaining and coordinating the determined minimum military requirement capability, as included in the Combined Joint Statement of Requirements (CJSOR) and Theatre Capability Statement of Requirements (TCSOR) for:

- the pre-determined and required manning,
- an adequate, evaluation based and mission tailored pre-deployment training of all personnel
- the real life support key (MARLOGOPs) enabling capabilities (food-, water-, power-supply, bulk water-, waste-, biohazard-disposal, social welfare, accommodation and environmental protection)
- medical C4I (including clinical governance). It will be the LN responsibility to provide medical reports and medical information of respective personnel treated to the national command elements and/or organizational authorities of all troop-contributing nations (TCNs), taking into account medical confidentiality,

6.3 These capabilities have to be ensured by the LN, but this does not mean that they have to be actually provided by the LN itself. The LN may reach agreements with other Nations concerning the actual provision, but remains responsible for its availability.

It is also the LN responsibility to:

- assure and validate the capability and to be able to assure all partner nations that the MTF that is being provided will provide the best possible care to their patients, and will provide a comprehensive patient care pathway from reception at the MTF through to STRATEVAC to their host nation.
- publish administrative regulations and implementation procedures applicable to the services available
- develop Technical Arrangements (TAs) with all nations/organizations that

³ Proposed by Germany in 2013 and adopted by NATO in 2014

⁴ In accordance with STANAG 2552 (AMedP-1.3)

commit themselves to operate, maintain and man, or contribute, with specialized personnel and equipment, to certain functional units of the MTF, that will cover the details applicable to the various support functions/services

- control and evaluate the standards and procedures and feed all relevant data and factors into the lessons identified / lessons learned process.

CHAPTER 7 Special Considerations

7.1 Personnel:

- a. In AmedP-9.3, CREDENTIALING FOR NATO HEALTHCARE PROFESSIONALS ASSIGNED TO ROLE 2/3 MULTINATIONAL MEDICAL UNITS, sets out the procedures to be followed by a Lead Nation in order to credential health care professionals prior to their employment in a multinational medical unit Role 2/3.
- b. Working in a multinational environment may reveal differences in professional culture, roles and responsibilities. Personnel must be prepared to reflect and compromise; a well-trained functioning team may be more resilient to external influences and pressures.
- c. Navies have in some ways a different culture compared to most armies. Within NATO the Navies are used to operating in a multinational environment and share a lot of operational and cultural characteristics. It is recommended to pay attention to these cultural aspects.
- d. Working in a maritime environment can cause seasickness. While not everybody will be able to work on a moving ship, the vast majority of individuals will become accustomed to the environment and be able to function effectively.

7.2 Material:

- a. Use of blood and blood products vary between nations. Whereas some nations use packed cells, platelets and Fresh Frozen Plasma, other nations use frozen blood (stored in Glycogen), and other use walking blood banks or Emergency Donor Panels. Historical barriers may exist between countries which need to be clarified and agreed in TAs before team activation. And the teams need to be familiar and comfortable with these practices. Training may need to be given by the Lead Nation to allow the TCN to use their products, since the logistical supply chain will provide LN blood products, TCN must adapt to existing protocols.
- b. Equipment manufacturers place servicing schedules on their equipment to ensure they are functioning and correctly calibrated. It is important that the LN ensures that all the Electro-medical equipment is functional and fit for its intended purpose, with appropriate servicing documentation ready for inspection by the TCN at the time of embarkation.
- c. The scope of medical equipment provided by the lead nation should be articulated in advance. If a TCN feel that they need to bring any equipment that it

deems is important to have to deliver quality of care, then they are responsible for maintaining and repairing this equipment whilst embarked and must provide the appropriate capability to do this in consultation with the ship.

d. Logistics; Med supply will be done by the LN to ensure a timely resupply and to ensure the equipment is compatible throughout embarkation. If a team brings any equipment with it, it must ensure they bring sufficient supplies to support them without relying on the LN supply chain or have made agreements about the logistics. Be aware that logistics in the maritime environment is very dynamic because a ship can sail through the whole theatre.

e. Medical Supplies; Medications can vary between countries. In advance there should be an agreement which nation is going to provide the medications.

7.3 Procedures:

a. Documentation should be standardized in a NATO format across all nations and presented in English. Documentation must conform to the LN and TCA procedures.

b. Standard operating procedures should be developed across all nations which are platform specific which guide a TCN team on the practicalities of working in the LN environment. These should include management of a MASCAL, transfusion, management of the dead, MEDEVAC, radiology etc.

7.4 Legal

To avoid risk of patient safety issues and confusion due to constraints and restraints from legal issues a MOU/TA regarding legal issues has to be addressed before deployment.

These issues should at least include the following issues:

- Jurisdiction
- clinical protocols
- reporting)
- documentation (including patient records
- (controlled) drugs
- Blood
- Radiology
- patient safety issues
- credentialing
- malpractice
- operating equipment (including maintenance and resupply)
- doctrinal issues and SOP

It also needs to be taken into account that the platform of a Lead Nation is national territory.

In the preparation of a mission or exercise it is recommended to contact the Legal advisors.

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