NATO STANDARD

AMedP-7.3

TRAINING OF MEDICAL PERSONNEL FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR (CBRN) DEFENCE

EDITION A VERSION 1

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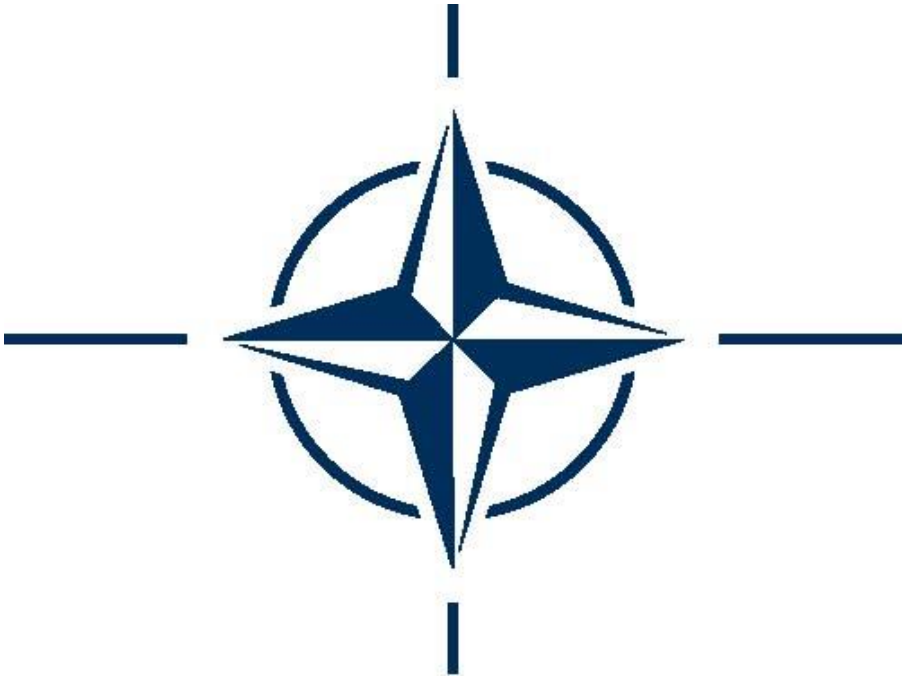

NORTH ATLANTIC TREATY ORGANIZATION

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NATO LETTER OF PROMULGATION

6 June 2016

1. The enclosed Allied Medical Publication AMedP-7.3, Edition A, Version 1, TRAINING OF MEDICAL PERSONNEL FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR (CBRN) DEFENCE has been approved by the nations in the Military Committee Medical Standardization Board, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2954.

2. AMedP-7.3, Edition A, Version 1 is effective upon receipt.

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

Edvardas MAŽEIKIS
Major General, LTUAF
Director NATO Standardization Office

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RESERVED FOR NATIONAL LETTER OF PROMULGATION

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RECORD OF RESERVATIONS

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

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
EST	The Estonian Defence Forces accept STANAG CBRN training requirements for deployed medical personnel; however, at the present time, there are no independent capability to provide medical support in CBRN environment on NATO operations.
NLD	1) NLD considers the tasks and responsibilities as described in STANAG 2954 / AMedP7.3 valid and very useful as guidance upon implementation in the future. In the NLD Armed Forces, however, a number of the tasks and responsibilities as described in AMed7.3 are carried out by the CBRN Defence specialist rather than (CBRN) medical personnel. The CBRN Defence specialist is trained according to ATP 3.8.1. 2) Due to priorities, CBRN medical training is being done at the individual and unit level at pre-deployment training solely. Therefore CBRN medical training is not being scheduled at intervals less 3 years.
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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CHAPTER 1: TRAINING OF MEDICAL PERSONNEL FOR CBRN DEFENCE

1.1. AIM

The aim of this Allied Publication (AP) is to describe the training requirements for deployed medical personnel providing CBRN medical support on NATO operations.

1.2. CONTEXT

1. A deployed CBRN medical support capability, as described in AJMedP-7, relies on a comprehensive CBRN medical training programme. This may be embedded in new-entry training, 'special to role' training, or as pre-deployment training (PDT). The exact approach will vary between Partner Nations and this AP provides an overarching framework.

2. Deployed CBRN medical support is a combination of the delivery of CBRN casualty care in accordance with AMedP-7.1 and the provision of advice on the medical aspects of CBRN defence in accordance with AMedP-7.6. CBRN defence also includes the protection of medical treatment facilities and personnel although this is outside the scope of this AP.

3. While the deployment of medical personnel on a CBRN defensive operation has a specific CBRN medical training requirement, it is recommended that deployed medical personnel on *any* NATO operation should be CBRN aware, and be able to recognise an event and respond accordingly.

4. While CBRN first aid will be referred to in this publication, AMedP-7.2 describes the training requirements for *non-medical personnel*.

1.3. DEFINITIONS

1.3.1. MEDICAL PERSONNEL

All ranks of medically trained or supporting individuals required in either a military or civilian medical treatment facility (MTF) in order to accomplish the assigned mission.[1] This includes clinical professionals, medics[2], pharmacists, allied health professionals, health-related technicians, veterinarians and medical service personnel with responsibilities for medical command and logistics.

[1] ACE Directive 85-8.

[2] The term medic varies between NATO member nations but generally implies the provision of medical care above first aid from point of wound through to Role 1; this may include combat medical technicians, medical assistants, corpsman and paramedics, but excludes doctors and nurses.

1.3.2. CBRN DEFENCE

Plans and activities intended to mitigate or neutralise adverse effects on operations and personnel resulting from: the use or threatened use of chemical, biological, radiological or nuclear weapons and devices; the emergence of secondary hazards arising from counter-force targeting; or the release, or risk of release, of toxic industrial materials (TIM) into the environment.

1.4. CBRN MEDICAL OPERATIONAL ROLES

The CBRN medical operational roles include:

a. *Direct CBRN casualty care*. This includes the care of casualties due to a CBRN incident and any casualty, including trauma, in a CBRN environment. Casualty care ranges from first aid, emergency medical treatment, casualty decontamination, and advanced medical care at a Role 2 or 3 MTF.

b. *Medical technical support*. Technical support may be provided by preventive (environmental) medicine, laboratory, pharmacy and radiology personnel.

c. *Provision of CBRN medical advice and planning support*. This is may be the provision of CBRN medical advice to force commanders, or tactical and operational CBRN advice to medical commanders.[3]

1.5. CBRN CASUALTY CARE COMPETENCY FRAMEWORK

1. There are five key tasks underpinning the CBRN casualty care competency. Each task is supported by one of the five parts of AMedP-7.1. The five CBRN casualty care tasks are:

   a. Manage any casualty in a CBRN environment.

   b. Manage the medical aspects of a CBRN incident.

   c. Manage a chemical casualty.

   d. Manage a biological casualty including sepsis.

   e. Manage a radiological casualty including nuclear.

2. The five tasks, as training objectives (TO), may be taught to one of the three competency levels (awareness, basic or advanced) depending on the deployed medical role and scope of clinical practice.

[3] This role may be divided between a CBRN medical advisor who is a medical officer and a medical support advisor providing advice on the requirements to deliver CBRN medical support.

1.5.1. LEVELS OF CBRN MEDICAL TRAINING

1.5.1.1. AWARENESS LEVEL

This competency level introduces concepts and mandatory knowledge. Medical personnel should be able to describe the CBRN threat, recognise a CBRN incident and carry out immediate actions beyond those taught at generalist (non-medical) level. An outline of CBRN medical awareness training is given in Annex A.

1.5.1.2. BASIC (PROVIDER) LEVEL

This level of competency includes knowledge and skills that provide a minimum standard of casualty care within the individual's scope of practice e.g. first responder, medic, nurse or doctor. This level covers the initial stages of the CBRN medical response focusing on the saving of life (enhanced first aid and emergency medical treatment). For deployed medical personnel, this will include the knowledge and skills to manage any casualties in a CBRN environment from point of exposure through to initial hospital resuscitation.

1.5.1.3. ADVANCED LEVEL

This level of competency for clinical personnel will support the medical response up to and including a Role 3 MTF. Advanced level includes advanced medical care to continue to treat life-threatening conditions and limit long-term health effects, incident management and command, and initial outbreak investigation, as appropriate to the deployed role.[4]

1.6. THE DELIVERY OF CBRN MEDICAL TRAINING

The training of medical personnel may be delivered at various points in the career pathway. These points include:

a. New-entry (core) training.

b. Special to role training.

c. Pre-deployment training (PDT).

d. Collective training.

1.6.1. NEW ENTRY (CORE) CBRN MEDICAL TRAINING

1. All medical personnel in both regular and reserve forces should be trained to a minimum standard appropriate to carry out their healthcare role. Medical personnel with core training requirements include:

[4] Different nations may train advanced level competencies in different ways either within clinical specialisation (board certification) programmes or as a cadre of CBRN medical specialists.

a. Medical officer (doctor).

b. Nursing (officer and non-officer).

c. Non-commissioned medics such as combat medical technicians, medical assistants, corpsman and paramedics.

d. Pharmacists.

e. Allied healthcare professionals (AHP) including dental practitioners and physiotherapists.

f. Medical technical specialists including preventive (environment health) medicine, laboratory, radiology & pharmacy.

g. Medical support officer and senior NCOs.

h. Veterinarians.[5]

2. New-entry (core) training is likely to be provided to medical personnel at the professional (phase 2) training stage. This is after completion of the basic military training (phase 1). The initial level of competence is dependent on the cadre of medical personnel and is listed in Annex B.

1.6.2. SPECIAL TO ROLE CBRN MEDICAL TRAINING

Some medical personnel within the groups listed above will require a higher level of training in order to accomplish specific operational roles beyond the scope of generalist and medical core training. This may be the provision of a higher level of clinical care, provide a specialist medical capability or advice, or support the medical planning process. Special to role training is likely to be delivered to those with operational roles as described in section 1.4.

1.6.2.1. DIRECT CBRN CASUALTY CARE

1. Specialist clinical personnel (doctors, nurses and medics) whose primary operational role may include the direct management of CBRN casualties from point of exposure through to Role 3 MTF may require medical training beyond core training. These clinical specialties may vary between member nations but include:

   a. Emergency medicine.

   b. Intensive care medicine.

   c. Anaesthesia.

[5] This is most likely in support of animal disease surveillance and medical support role but varies between nations.

d. Acute and internal medicine; this may include infectious disease medicine.

e. Pre-hospital emergency care (PHEC).

f. Preventive (occupational) medicine; this may include submarine and nuclear medicine.

g. Public health.

h. Infection prevention and control (IPC).

i. Primary health care (PHC).

j. Ophthalmology and plastic surgery (not listed in Annex C but with an interest in eye injuries and CBRN-related burns respectively).

2. The delivery of specialist CBRN medical training may vary between nations either as part of continuing medical specialty training or on assignment to a specific operational CBRN medical role. It may also be delivered as a military component or module following a civilian professional advancement course or programme. Details of the CBRN clinical knowledge and skills and the competence level required are detailed in Annex C and D.

1.6.2.2. MEDICAL TECHNICAL SUPPORT

These are medical personnel whose primary operational role is the provision of technical services to prevent or manage healthcare effects of CBRN, environmental and endemic hazards. This training may be incorporated into military specialist training or as a module in addition to a civilian qualification. The competencies for this group of medical personnel are described in Annex E.

1.6.2.3. CBRN MEDICAL ADVICE AND PLANNING SUPPORT

This operational role is likely to be provided by a number of senior NCOs and officers whose primary or secondary operational role is in the provision of CBRN medical advice to Command (CBRN medical advisor) or CBRN tactical and operational (CBRN defence/force protection) advice to medical personnel. The number of personnel deployed in support of this role will depend on CBRN threat and national deployed CBRN, force protection and medical command structures. The responsibilities and tasks for this group of medical personnel are described in Annex F.

1.6.3. PRE-DEPLOYMENT TRAINING

PDT will provide mission-specific training in addition to any core or special to role training. CBRN medical training as PDT will be delivered to a level appropriate to the deployed CBRN threat and medical risk assessment. PDT may be individual or

collective, either as a casualty simulation or table top exercise. PDT is highly dependent upon the operational situational awareness and mission objectives, and therefore valid only for a finite period of time.

1.6.4. COLLECTIVE TRAINING

Collective training is the development of a group capability enhancing individual capabilities and developing cohesion through unit exercise. Collective training is likely to take place as part of force generation, continuation training and unit pre-deployment training. This training may be used for unit evaluation, validation and assurance before operational deployment but will be invalid once the unit is disbanded or sufficient turnover of unit personnel has occurred. Further details are found in Annex G.

ANNEX A CBRN MEDICAL AWARENESS TRAINING

1. CBRN medical awareness training introduces the concept of CBRN medical support. Training includes CBRN threats and the environment and endemic disease spectrum, medical implications of a CBRN incident, principles of CBRN casualty care and CBRN recognition. Training delivery may be provided by short introductory lectures, DVD or advanced distributed learning (e-learning).

2. The enabling objectives (EO) and key learning points (KLP) for CBRN medical awareness training are:

x.1	**Raise awareness of the CBRN threat:**
KLP x.1.1	List historical CBRN incidents.
KLP x.1.2	Describe the medical implications of a CBRN incident.
KLP x.1.3	List significant CBRN agents and TIM.
x.2	**Describe deployed CBRN medical support**
KLP x.2.1	Describe the types of CBRN MedCM available.
KLP x.2.2	Describe the principles of CBRN casualty management.
KLP x.2.3	Describe the priorities for CBRN casualty management.
x.3	**Recognise a CBRN event**
KLP x.3.1	Describe the casualty indicators of a CBRN incident.
KLP x.3.2	Describe the on-scene indicators of a CBRN incident.

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ANNEX B CBRN MEDICAL NEW-ENTRY (CORE) TRAINING

	CBRN MEDICAL TRAINING OBJECTIVES – MINIMUM STANDARDS				
CADRE	**TO 1 Manage all casualties in a CBRN environment**	**TO 2 Manage the medical aspects of a CBRN incident**	**TO 3 Manage chemical casualties**	**TO 4 Manage biological casualties**	**TO 5 Manage radiological casualties**
Medical Officer	Basic	Basic	Basic	Basic	Basic
Nursing (All Ranks)	Basic	Awareness	Awareness	Awareness	Awareness
Defence Medic	Basic	Awareness	Basic	Awareness	Awareness
Allied & Other Health Professional	Awareness	Awareness	–	–	–
Technical Specialist	Awareness	Awareness	Awareness	Awareness	Awareness
Medical Support Officer	Awareness	Awareness	–	–	–

AHP - Allied healthcare professionals may include dentists, physiotherapists, pharmacists and veterinarians for some member nations. Higher level training will be determined by specialist role and this may vary between NATO member nations.
For Medical technical specialists refer to Annex E.
For Medical support officers refer to Annex F.

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ANNEX C SPECIAL TO ROLE MEDICAL TRAINING REQUIREMENTS

SPECIALIST TRAINING		CBRN MEDICAL TRAINING OBJECTIVES				
		TO 1 Manage all casualties in a CBRN environment	TO 2 Manage the medical aspects of a CBRN incident	TO 3 Manage chemical casualties	TO 4 Manage biological casualties	TO 5 Manage radiological casualties
Medic	Medic / Corpsman or equivalent	Basic	Basic	Basic	Awareness	Awareness
	Paramedic	Basic	Advanced	Basic	Basic	Basic
Medical Officer	Emergency medicine	Basic	Advanced	Advanced	Advanced	Advanced
	Intensive care medicine	Basic	Advanced	Advanced	Advanced	Advanced
	Anaesthesia	Basic	Advanced	Advanced	Advanced	Advanced
	Acute & internal medicine	Basic	Advanced	Advanced	Advanced	Advanced
	Pre-hospital emergency care	Basic	Advanced	Advanced	Advanced	Advanced
	Preventive/ occupational medicine	Basic	Advanced◊	Advanced◊	Advanced◊	Advanced◊
	Public health	Basic	Advanced◊	Basic	Basic	Basic
	Primary health care	Basic	Advanced	Basic	Advanced	Basic
Nursing	Emergency nursing	Basic	Basic	Advanced	Basic	Basic
	Intensive care nursing	Basic	Basic	Advanced	Advanced	Basic
	Infection prevention control	Basic	Advanced◊	Basic	Advanced	Basic

◊ Advanced level may not include the entire CBRN spectrum but reflect specific specialist requirements including radiation medicine and public health.

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ANNEX D CBRN MEDICAL COMPETENCY FRAMEWORK

The matrix below lists all the TO, EO and KLP applicable to CBRN medical training up to and including advanced medical care. The development of courses delivering training for casualty care in a CBRN environment may extract the KLP from this table for use within the student's scope of practice.

TO 1	**Manage any casualty in a CBRN environment**
	Awareness – Able to list CBRN threats, impact and risks, and describe the principles of casualty care in a CBRN environment including recognition **Basic (provider) level** – Able to operate safely in a CBRN environment and manage any immediate life-threatening conditions and casualty hazards iaw AMedP-7.1 **Advanced level** – Not applicable
EO 1.1	**Recognise a CBRN casualty or incident** 1. List historical CBRN incidents 2. Describe the medical impact of a CBRN incident 3. List the significant CBRN agents 4. Describe the general properties of CBRN agents including severity of effects, physical properties and onset of action (latency) 5. Describe the route of exposure 6. Describe the on-scene indicators of a CBRN incident including detection 7. Describe the casualty indicators of a CBRN incident
EO 1.2	**Carry out personal safety procedures** 1. Describe CBRN immediate actions 2. Demonstrate CBRN immediate actions 3. Describe the main components of individual protective equipment
EO 1.3	**Assess a casualty in a CBRN environment** 1. Describe the assessment of a casualty in a CBRN environment 2. Demonstrate the assessment of a casualty in a CBRN environment 3. Identify life-threatening conditions in a CBRN environment including heat illness and trauma
EO 1.4	**Treat life-threatening CBRN and traumatic conditions** 1. Describe the life-saving interventions that may be required in a CBRN environment 2. Demonstrate the life-saving interventions that may be required in a CBRN environment
EO 1.5	**Perform casualty hazard management** (including fatalities subject to national policy) 1. Describe the secondary hazards from CBRN casualties (contaminated and contagious) 2. Describe casualty hazard management (contain, decontamination, isolation & quarantine) 3. Demonstrate the stretcher decontamination of a T1 casualty 4. Demonstrate the stretcher decontamination of a T2 casualty 5. Demonstrate the walking decontamination of a T3 casualty 6. Demonstrate wound decontamination 7. Demonstrate the protective measures required for a contagious patient

TO 2	**Manage the medical aspects of a CBRN incident**
	Awareness – Able to describe the initial CBRN response and triage **Basic (provider) level** – Able to operate safely at a CBRN scene, triage casualties and communicate incident and casualty details iaw AMedP-7.1 (Part 2) **Advanced level** – Able to operate safely, manage and command a CBRN scene or conduct outbreak (operational epidemiology) iaw AMedP-7.1 (Part 2)
EO 2.1	**Identify on-scene CBRN hazards** 1. Describe on-scene hazards in a CBRN environment 2. Demonstrate the identification of on-scene hazards in a CBRN environment
EO 2.2	**Mitigate on-scene CBRN hazards** 1. List the types of CBRN functional zones 2. Establish medical command, control and communications within a CBRN environment 3. Describe the hazard management of specific CBRN hazards
EO 2.3	**Triage casualties in a CBRN environment** 1. List the five triage categories (T1, T2, T3, Expectant (T4) & Dead) 2. List the criteria for each CBRN triage category 3. Demonstrate CBRN triage
EO 2.4	**Communicate and handover of CBRN casualties along the medical evacuation chain** 1. Describe the types of casualty and incident reporting in a CBRN environment 2. Describe medical evacuation and handover in a CBRN environment 3. Complete a CBRN incident medical assessment and report 4. Complete a CBRN verbal casualty handover 5. Complete a CBRN casualty report form 6. Demonstrate the casualty handover procedure in a CBRN environment
EO 2.5	**Conduct operational epidemiology** 1. Describe the components of operational epidemiology 2. Describe initial actions during outbreak investigation 3. Describe protective measures and public health interventions to limit disease spread

TO 3	**Manage a chemical casualty**
	Awareness – Able to list chemical threats, effects and available MedCM **Basic (provider) level** – Able to manage chemical casualties with any immediate life-threatening chemical exposures iaw AMedP-7.1 (Part 3) **Advanced (specialist) level** – Able to manage chemical casualties and reduce long-term effects iaw AMedP-7.1 (Part 3)
EO 3.1	**Assess a casualty for life-threatening chemical intoxication** 1. List the main features of nerve agent exposure 2. List the main features of cyanide exposure 3. List the main features of blistering agent exposure 4. List the main features of pulmonary agent exposure 5. List the main features of incapacitating or riot-control agent exposure

	6. List the main features of the adverse effects of deployed MedCM 7. Demonstrate the assessment of a chemical casualty
EO 3.2	**Treat a casualty with life-threatening chemical intoxication (and reduce long-term effects)** 1. List the MedCM available for the treatment of nerve agent exposure 2. Demonstrate the treatment of nerve agent exposure 3. List the MedCM available for the treatment of cyanide exposure 4. Demonstrate the treatment of cyanide exposure 5. List the MedCM available for the treatment of blistering agent exposure 6. Demonstrate the treatment of blistering agent exposure 7. List the MedCM available for the treatment of pulmonary agent exposure 8. Demonstrate the treatment of pulmonary agent exposure 9. List the MedCM available for the treatment of incapacitating or riot-control agent exposure 10. Demonstrate the treatment of incapacitating or riot-control agent exposure 11. Demonstrate the treatment of the adverse effects of deployed MedCM

TO 4	**Manage a biological casualty including sepsis**
	Awareness – Able to list biological threats, effects and available MedCM **Basic (provider) level** – Able to manage biological casualties with any immediate life-threatening biological exposures iaw AMedP-7.1 (Part 4) **Advanced (specialist) level** – Able to investigate and manage biological casualties, including under isolation conditions, and reduce long-term effects iaw AMedP-7.1 (Part 4)
EO 4.1	**Assess a casualty for life-threatening or significant biological exposure** 1. List the syndromes associated with biological agent exposure 2. List the criteria for recognising life-threatening (sepsis) or significant biological agent exposure 3. Demonstrate the assessment of a biological casualty
EO 4.2	**Treat a casualty with life-threatening or significant biological exposure** 1. List the MedCM available for the treatment of a biological casualty 2. Describe the treatment of a casualty with sepsis 3. Describe the treatment of a casualty with a significant infection 4. Describe the treatment of a casualty with biological toxin exposure 5. Demonstrate the management of a biological casualty

TO 5	**Manage a radiological casualty including nuclear**
	Awareness – Able to list radiological and nuclear threats, effects and available MedCM **Basic (provider) level** – Able to initially assess radiological, including combined, casualties with acute radiation exposure and treat any immediate life-threatening conditions iaw AMedP-7.1 (Part 5) **Advanced (specialist) level** – Able to manage radiological, including combined, casualties up to Role 3 level of medical care iaw AMedP-7.1 (Part 5)
EO 5.1	**Assess a casualty for signs of acute radiation exposure** 1. Describe the difference between contamination and irradiation 2. Describe the effects of a nuclear detonation 3. List the features of acute radiation syndrome 4. List the features of local / cutaneous radiation injury 5. List the long-term consequences of an acute radiation exposure
EO 5.2	**Treat a radiological, including combined, casualty** 1. List the MedCM available for the management of radiation exposure 2. List the priorities for the management of a combined radiation casualty 3. Describe the initial management of a radiological casualty

ANNEX E MEDICAL TECHNICAL SPECIALIST

E.1. INTRODUCTION

1. Medical technical specialists include:

    a. Environmental health (preventive medicine) personnel.

    b. Laboratory personnel.

    c. Radiology personnel.

    d. Pharmacy personnel.

    e. Vetrinary personnel.[6]

2. All medical technical specialists should have completed the CBRN medical awareness and core training requirements set out in this AP. Additional training requirements for medical technical specialists are set by the tasks required below and can be defined using elements of the competency framework as well as training objectives specific to their area of technical specialisation.

3. The rank of the technical specialist should be appropriate to the role and level of experience in order to provide the deployed capability and advise the chain of command. Training may therefore either be part of continuing professional development or as pre-deployment training.

E.2. ENVIRONMENTAL HEALTH (PREVENTIVE MEDICINE) PERSONNEL

Responsible for environmental sampling and investigation of potential CBRN agents. Tasks include:

a. Accessing expert advice relating to CBRN and EH through the appropriate communication chain to military and civilian specialist centres (reach back).

b. Conducting risk assessments due to likely CBRN and environmental hazards, based upon medical intelligence, operational environment, protective measures deployed and nature of operations.

c. Assessing the potential effects of any CBRN or environmental hazard present based upon concentrations and duration, level of contamination and persistency, and effects on human and veterinary populations.

[6] Some nations include vetrinary personel as part of CBRN medical support although this is not covered in detail in this Annex.

d. Providing advice to Command on CBRN and EH sampling, planning, health surveillance and the implementation of protective measures (hazard management and physical protection).

e. Collecting and storing EH and potential CBRN samples including those from the environment, plants and animals.

f. Preparing EH and potential CBRN samples for safe transport.

g. Conducting field CBRN laboratory testing using in-service equipment and technical processes.

h. Maintaining a safe environment when handling and packaging potentially hazardous samples.

i. Maintaining or establishing a chain of custody for EH samples required for forensic investigation.

j. Liaising with local MTF resources and specialist teams such as Rapid Deployable Outbreak Investigation (RDOIT) Teams, Medical Radiological Incident Investigation Teams (MRIIT) and Sampling Identification Biological Chemical and Radiological Agent (SIBCRA) Teams.

E.3. LABORATORY PERSONNEL

Responsible for clinical investigations to support the diagnosis of potential CBRN, EH and endemic disease. This may use haematology, biochemistry, microbiology/virology, toxicology deployed and/or reach back laboratory services. Laboratory diagnostic capabilities and bio-safety levels may vary between MTF. Tasks include:

a. Accessing expert advice relating to CBRN and EH through the appropriate communication chain to military and civilian specialist centres (reach back).

b. Providing advice to clinicians and CBRN medical advisor on the requirements for CBRN-related clinical sampling.

c. Receiving and storing CBRN-related clinical samples.

d. Preparing clinical samples for safe transport by ground, sea or air.

e. Conducting deployed laboratory investigations to support patient care using in-service equipment and technical procedures.

f. Maintaining a safe environment when handling potentially hazardous samples to the appropriate level of deployed laboratory safety and biosecurity.

g. Maintaining or establishing a chain of custody for clinical samples required for a forensic investigation.

h. Liaising with specialist teams such as RDOIT, MRIIT and SIBCRA.

E.4. RADIOLOGY PERSONNEL

Responsible for advice on radiation protection and monitoring. Tasks include:

a. Accessing expert advice relating to CBRN and EH through the appropriate communication chain to military and civilian specialist centres (reach back).

b. Advising on the health effects of ionising radiation and radiological protection.

c. Advising on the protective measures to be used during the imaging of casualties with potentially contagious diseases or other hazards.

d. Conducting radiological/contamination surveys of casualties using in-service monitoring equipment and technical processes.

e. Liaising with local MTF resources and specialist teams such as RDOIT, MRIIT and SIBCRA.

E.5. PHARMACY PERSONNEL

1. Responsible for advice, logistic support and distribution of CBRN medical countermeasures (MedCM). Task include:

a. Accessing expert advice relating to CBRN pharmacological effects and MedCM issues through the appropriate communication chain to military and civilian specialist centres (reach back).

b. Advising on CBRN and MedCM pharmacological effects and interactions.

c. Maintaining CBRN MedCM and pharmacy stocks at a level appropriate to operational risk assessment and planning.

d. Supporting access to any CBRN MedCM stockpile.

e. Providing a CBRN medical advisor and support role according to national policy.

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ANNEX F CBRN MEDICAL ADVICE AND PLANNING SUPPORT

F.1. INTRODUCTION

1. CBRN medical advice and support staff may be senior NCOs and officers whose primary or secondary operational role is in the provision of medical advice to force commanders or tactical and operational CBRN advice to medical commanders. This role may be combined with other operational roles including medical officer, operations officer, medical intelligence officer and medical force protection advisor.

2. All medical advisors should have completed the CBRN medical awareness and core training requirements as described in the CBRN medical competency framework.

F.2. RESPONSIBILITIES

The responsibilities of a CBRN Medical Advisor is to provide:

a. Health advice on the CBRN threat and risk to a deployed unit.

b. Advice on MTF CBRN defence and wider force health protection.

c. Advice on CBRN medical countermeasures.

d. Advice on CBRN medical support capability in support of CBRN casualty care.

F.3. TRAINING REQUIREMENTS

1. Health advice on the CBRN threat and risk to a deployed unit:

a. Describe the general intelligence process for the assessment of CBRN threat.

b. Describe the medical intelligence process and its link to CBRN threat.

c. Describe the role of medical intelligence at headquarters level in providing input to the overall assessment of the CBRN threat as well as the background of environmental and endemic disease.

d. Describe the general health effects associated with CBRN and TIM incidents, both in the short and long term.

e. Predict performance detriment of personnel according to exposure levels to health hazards.

f. Conduct a casualty estimation process for CBRN and EH threats, considering the operational environment, the protective measures deployed and the nature of operation(s).

2. Advice on the medical aspects of CBRN defence (detect):

a. Describe the general capability of detection equipment and processes within deployed forces.

b. Describe the medical sense capability, including medical diagnostics, disease surveillance and morbidity analysis systems, as well as environmental monitoring.

c. Describe the role of medical sense in providing input to the overall force capability for detection, identification and monitoring.

d. Demonstrate the evaluation and interpretation of data from various sources including environmental monitoring, detection systems and health data.

3. Advice on the medical aspects of CBRN defence (information management):

a. Describe the general capability of warning and reporting systems and procedures within deployed forces.

b. Describe the medical information systems and the communication pathways between medical and command staffs for warning and reporting of information related to CBRN and environmental hazards.

c. Describe the process for the recording of information of potentially harmful exposures to hazardous materials on to individual medical records as well as the appropriate command reporting chain.

4. Advice on the medical aspects of CBRN defence (physical protection):

a. Describe the general capability for individual and collective protection within deployed forces, including equipment and procedures.

b. Describe the types of TIM and CBRN exposures, and be able to provide advice on protective measures including ‘stay-times’ based on NATO and national regulations.

c. Describe the potential health effects from the use of individual and collective protective systems, including physical and psychological degradation and the risk of transmission of disease within collective protective systems.

d. Describe the measures required to prevent or limit such health effects, including work rates and potable water requirements for personnel in individual protection.

5. Advice on the medical aspects of CBRN defence (hazard management):

   a. Describe the general capability of hazard management of deployed forces, including avoidance measures and contamination control equipment and procedures.

   b. Describe the procedures for hazard management, including field hygiene, sanitation and waste disposal; protective measures and security for food and water supplies, and animal and insect vector populations

   c. Describe restriction of movement and the levels of implementation.

   d. Describe the process of implementation of public health measures within force operational capability for hazard management.

   e. Describe the procedures for casualty decontamination and/or isolation (casualty hazard management)

6. Advice on the medical aspects of CBRN defence (medical countermeasures):

   a. Describe the types of MedCM available to deployed forces, including provision and supply, triggers for implementation and time to effect.

   b. Describe the operational guidelines for the implementation of MedCM, in accordance with NATO and national directives.

   c. Conduct a risk assessment for the implementation of MedCM to a deployed force.

   d. Describe the protective and potential adverse health effects of MedCM.

   e. Describe the requirement for recording and monitoring the MedCM status of force personnel, including numbers protected and impact on the military mission.

   f. Describe the process for recording the use of MedCM in medical records.

7. Advise on CBRN medical support and CBRN casualty care requirements.[7] CBRN medical advisors should have a thorough knowledge of the planning and conduct of medical support capability for operations including a response to CBRN:

[7] This role may be divided between a CBRN medical advisor who is a medical officer and a medical support advisor providing advice on the requirements to deliver CBRN medical support.

a. Describe the five components of CBRN casualty management:

   (1) Manage all casualties in a CBRN environment.

   (2) Manage the medical aspects of a CBRN incident.

   (3) Manage a chemical casualty.

   (4) Manage a biological casualty including sepsis.

   (5) Manage a radiological casualty including nuclear.

b. Describe the planning process for the medical support resources required to meet the assessed casualty estimate arising from all health threats including CBRN.

c. Describe the command, control, communications, computers and information (C4I) structure of deployed medical support.

d. Describe the medical capability available to support CBRN protective measures implemented by the deployed force.

e. Describe the medical capability for CBRN casualty management, at each role/echelon:

   (1) Pre-hospital casualty care (from point of wounding/exposure to Role 2).

   (2) Deployed hospital casualty care (Role 2 through to Role 3).

   (3) Casualty and medical evacuation.

   (4) Casualty hazard management, including decontamination, casualty decontamination area (CDA) and isolation.

   (5) Medical logistics, including distribution of MedCM.

ANNEX G CBRN MEDICAL COLLECTIVE TRAINING REQUIREMENTS

G.1. CONTINUATION TRAINING

A medical unit should have CBRN exercises at intervals of no more than 3 years appropriate to operational role and risk assessment. The aim of each exercise is to:

a. Develop or validate a CBRN response plan.

b. Identify key roles within the medical unit.

c. Identify Unit CBRN force protection requirements.

d. Develop or validate unit CBRN information management systems including the recording of CBRN casualty exposures and MedCM use.

e. Develop or validate CBRN casualty management systems compliant with NATO and national guidance.

f. Identify training requirements prior to deployment.

g. Liaising with other participating military or civilian organizations with contribution to CBRN or health protection medical management.

G.2. PRE-DEPLOYMENT TRAINING

All expeditionary medical units deploying are to exercise CBRN scenarios appropriate to operational role and current CBRN risk assessment. This may be the first opportunity to practice individual competencies at a unit or formations level. Scenarios are to include:

a. Hazard management of a contaminated casualty (decontamination).

b. Hazard management of a contagious casualty (isolation).

c. Management of a chemical casualty.

d. Management of a biological (septic) casualty.

e. Management of an outbreak or unusual illness (CBRN or endemic disease).

f. Management of a radiological casualty including nuclear, appropriate to the current risk assessment.

g. Management of a CBRN incident, either as live or table top exercise.

G.3. CONSTRAINTS FOR CBRN EXERCISES

CBRN exercises should not replace medical exercises for conditions (such as battle injuries) that may represent a more likely risk to deployed forces. However, because the potential impact of CBRN casualties is so great, CBRN casualties should be included in other medical exercises wherever practicable. CBRN-specific exercises should also include non-CBRN and combined casualties. All CBRN medical exercises should conclude with an After Action Report to identify:

a. Lessons identified.

b. Observed best practices.

c. Capabilities and gaps.

d. Short falls and weaknesses.

e. Post-deployment assessment.

G.4. SUPPORTING ALLIED PUBLICATIONS FOR CBRN MEDICAL EXERCISES

The conduct of CBRN medical exercises is supported by the NATO Medical Evaluation Course administered from the NATO Military Medicine Centre of Excellence in Budapest and the NATO Medical Evaluation series of publications listed below:[8]

a. AMedP-1.6: *Medical Evaluation Manual*.

b. AMedP-1.7: *Capability Matrix*.

c. AMedP-1.8: *Skills Matrix*.

[8] Annex AC of the three APs covers the requirements for the CBRN Medical Support (Enhancement) Module while other elements of CBRN medical support are incorporated into other MTF modules.

LEXICON

AHP	Allied Healthcare Professionals
AJMedP	Allied Joint Medical Publication
AMedP	Allied Medical Publication
AP	Allied Publication
C4I	Command, Control, Communication, Computers and Information
CBRN	Chemical, Biological, Radiological and Nuclear
CDA	Casualty Decontamination Area
EH	Environmental Health
EO	Enabling Objective
IPC	Infection Prevention and Control
KLP	Key Learning Point
MedCM	Medical Countermeasures
MRIIT	Medical Radiological Incident Investigation Team
MTF	Medical Treatment Facility
PDT	Pre-deployment Training
PHC	Primary Health Care
PHEC	Pre-hospital Emergency Care
RDOIT	Rapid Deployable Outbreak Investigation Team
SIBCRA	Sampling and Identification of Biological, Chemical and Radiological Agents
TIM	Toxic Industrial Materials
TO	Training Objective

AMedP-7.3(A)(1)