MILITARY COMMITTEE MEDICAL STANDARDIZATION BOARD (MCMEDSB)

5 January 2009  

[MCMedSB]

STANAG 2358 CBRNMED (EDITION 4) - FIRST AID AND HYGIENE TRAINING IN A CBRN OR TIH ENVIRONMENT

References:
   (Ratification Draft 1)

1. The enclosed NATO Standardization Agreement, which has been ratified by nations as reflected in the NATO Standardization Document Database (NSDD), is promulgated herewith.

2. The references listed above are to be destroyed in accordance with local document destruction procedures.

3. National staffs are requested to examine their ratification status of the STANAG and, if they have not already done so, advise the MCMedSB, NSA, through their national delegation as appropriate of their intention regarding its ratification and implementation.

Juan A. MORENO  
Vice Admiral, ESP(N)  
Director, NATO Standardization Agency

Enclosure:
STANAG 2358 (Edition 4)
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(Edition 4)

NORTH ATLANTIC TREATY ORGANIZATION
(NATO)

NATO STANDARDIZATION AGENCY
(NSA)

STANDARDIZATION AGREEMENT
(STANAG)

SUBJECT: FIRST AID AND HYGIENE TRAINING IN A CBRN OR TIH ENVIRONMENT

Promulgated on 5 January 2009

Juan A. MORENO
Vice Admiral, ESP(N)
Director, NATO Standardization Agency
RECORD OF AMENDMENTS

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EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.

2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.

3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet http://nsa.nato.int; NATO Secure WAN http://nsa.hq.nato.int).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO HQ NSA – Bvd Leopold III - 1110 Brussels - Belgium.
NATO STANDARDIZATION AGREEMENT
(STANAG)

FIRST AID AND HYGIENE TRAINING IN A CBRN OR TIH ENVIRONMENT

Annex:
A. First Aid and Hygiene Training in a CBRN or TIH Environment

Related Documents:

- STANAG 2083 CBRN – Commander’s Guide on Nuclear Radiation Exposure of Groups
- STANAG 2122 MED – Medical training in First-Aid, Basic Hygiene and Emergency Care
- STANAG 2126 MED – First-Aid Kits and Emergency Medical Care Kits
- STANAG 2150 CBRN – NATO Standards of Proficiency for NBC Defence
- STANAG 2473 CBRN – Commander’s Guide to Radiation Exposures in Non-article 5 Crisis Response Operations
- STANAG 2909 CBRN – Commander’s Guidance on Defensive Measures against Toxic Industrial Chemicals
- STANAG 2954 MED – Training of medical personnel for NBC operations

AIM

1. The aim of this agreement is to establish the minimum first aid and hygiene training of non-medical personnel in a CBRN or TIH environment.

AGREEMENT

2. Participating nations agree that in order to maintain the maximum effectiveness of the military medical effort and to reduce the demands which CBRN operations would place on available medical resources, it is necessary to provide training in first aid and hygiene in CBRN operations to all NATO Forces personnel.

3. It is agreed that the NATO Forces will adopt the programme outlined in Annex to this STANAG as the minimum first aid and hygiene training to be given to non-medical personnel.
DETAILS OF THE AGREEMENT

4. No specific schedules are to be established for accomplishment of training by this agreement. Training outlined in Annex A normally will be included in the training of non-medical personnel.

IMPLEMENTATION OF THE AGREEMENT

5. This STANAG is implemented when the necessary orders/instructions to adopt the training methods described in this agreement have been issued to the forces concerned.
FIRST AID AND HYGIENE TRAINING IN A CBRN OR TIH ENVIRONMENT

GENERAL

1. Training envisaged within the scope of this Annex must be simple, practical and general. It should be included in the training of all NATO Forces personnel and be continued during their entire period of service.

2. The minimum subjects noted below are not intended to limit further training that may be given by individual nations to meet their own national standards or requirements.

3. Nations are invited to exchange information on present and future techniques used in their training programmes to increase the benefit of standardisation in this subject.

SUBJECTS FOR TRAINING

4. The training will normally be given in conjunction with or after the teaching of CBRN defence procedures.

5. The training will emphasise that a CBRN environment not only generates casualties by itself, but always complicates first aid to conventional casualties.

6. The following subjects are to be covered:

   a. Appropriate measures to secure own safety first. Information contained in Para. 6.b.(3), Para.6.f.(2)/6.g.(1).

   b. Heat stroke:

      (1) A life threatening condition: signs and symptoms, first aid. Cooling is normal treatment in a non-CBRN environment, but in a CBRN environment evacuation, while drinking water if possible, should be emphasised as the preferred treatment so as not to compromise IPE (individual protective equipment).
(2) May be precipitated by the use of auto-injector in the absence of exposure to nerve agent. Namely, atropine as the active pharmaceutical ingredient of an autoinjector can cause hyperthermia when applied in the absence of an organophosphate intoxication.

(3) The general potential for overheating while wearing IPE should be mentioned.

c. **Nuclear:**

(1) Brief summary of the medical effects of flash, heat, blast, radiation, latency period for acute radiation sickness symptoms, potential for psychosomatic symptom expression and worried-well.

(2) Brief summary of first aid procedures for burns, fractures, blast injuries, hypovolaemic shock and radiation injuries. It should be emphasised that one can encounter casualties suffering from conventional injuries alone as well as from combined injuries consisting of the effects of radiation and conventional injuries.

(3) Summary of sources of radiation, contamination control and contamination avoidance. It should be stressed that collection of any unknown metallic object should be strictly avoided.

d. **Low Level Radiation (LLR):**

(1) Secure own respiratory, eye and skin protection.

(2) Treatment of life threatening conditions has priority over decontamination.

(3) Time, distance, shielding.

(a) Limit time near hazard.

(b) Increase distance from the hazard

(c) Use appropriate materials (e.g. lead, armour, concrete or sand) for shielding.

e. **Biological**

Brief summary of medical effects, basic infection control measures, availability of prophylaxis and treatment, and the importance of good field hygiene in a CBRN environment.
f. Chemical

(1) Brief summary of the medical effects of chemical agents on humans.

(2) Evacuation of casualties to a sheltered area, e.g. under a roof or in a building.

(3) First aid procedures should emphasize the need of immediate decontamination of eyes and other contaminated areas, immediate applying of protective masks to the incapacitated and assisted ventilation. Mask should not be removed (except to assist ventilation with filter) in a vapour hazard area.

(4) Casualty should not be made to sit or lie down on the ground as this would increase the speed of penetration of the agent through the IPE.

(5) In case of vomiting:
   • If possible, instruct casualty to keep eyes closed and hold breath
   • lift mask momentarily
   • finally clear, replace, and readjust mask

(6) Resuscitation:

Maintain an open airway by means of: head tilt, chin lift, jaw thrust.

(NOTE: reference to masking and unmasking procedures on self and others).

(7) Nerve Agents:

(a) Pre-treatment with pyridostigmine. Protection provided. Discontinuation of intake after development of initial symptoms.

(b) Self Injection Device. Atropine and/or atropine/oxime mix with or without a benzodiazepine, self injection procedure, injection site, number of doses, interval between repeated injections, disposal of used injector, principle of using the victim's injector. Signs of atropinisation in those who were not exposed to nerve agent.

(c) Special Respirators. For those who are unable to use standard respirator if available.

(8) Vesicants:

(a) Copious rinsing of eyes with water has first priority.

(b) However, it should be noted that the skin should not be decontaminated with water (especially under pressure) as
this facilitates the penetration of the vesicant into the skin. If available, use lotion or powder. If not available copious rinsing with soap and water is useful.

(c) Latency Period.

(d) Leave blisters intact, all exposed skin must be decontaminated. Do not decontaminate skin where blisters have formed; if available apply metalline bandage (burn dressing) or cover loosely with a field dressing.

(9) Lung Damaging Agents:

(a) Latency Period.

(b) Casualty evacuation in sitting position.

(c) Forced reduction of physical activity (bed rest) is mandatory in suspected and/or clinical cases for 24 hours in order to counteract the risk of late onset of pulmonary oedema.

(10) Cyanogen Agents (Blood Agents):

Emphasis on spontaneous recovery of casualties receiving a sub-lethal dose.

(11) Incapacitating Agents.

Some may mimic a vesicant like phosgene oxime. A high index of suspicion is needed. Protection from self injury, including physical restraint may be necessary.

g. TIH – Toxic Industrial Hazard

(NOTE: Information on the types of chemicals abundant in the area of operations should be gathered; deployment of first aid personnel may be delayed until source of TIH is located and secured in order to prevent first responders from becoming contaminated)

(1) Toxic Industrial Chemicals (TIC) / Toxic Industrial Materials (TIM):

Medical effects

(2) Subjects to be covered:

- Appropriate level of own personal protection: respiratory, eye and skin protection.
- Chain of command
- Evacuation of casualties out of danger area. Aim to end up on high ground that is not down wind of the hazard source
(a) **Airway involvement**

(I) Secure own respiratory protection (CBRN filters may not be adequate to deal with TIC).

(II) Every individual should be made fully aware that an **adequate respiratory protection** should be used in case of a TIH event.

(III) Assisted ventilation of casualties if needed.

(IV) Latency period for pulmonary oedema.

(V) Casualty should be rested as exertion will worsen later respiratory complications, i.e. pulmonary oedema.

(VI) Notify medical service immediately for further treatment and monitoring.

(b) **Eye involvement**

Rinsing with water for at least 10 – 15 minutes; a saline drip is ideal (1 litre for each eye). Pull eyelids apart and get casualty to move the eyeball while irrigating.

(c) **Skin involvement**

(I) Careful removal of contaminated clothing.

(II) Use of running water to shower casualty for 15 minutes.

(III) Chemically burnt skin should be thoroughly washed and then simply covered with a loosely applied sterile dressing taking care to handle the area as little as possible to reduce the risk of infection.