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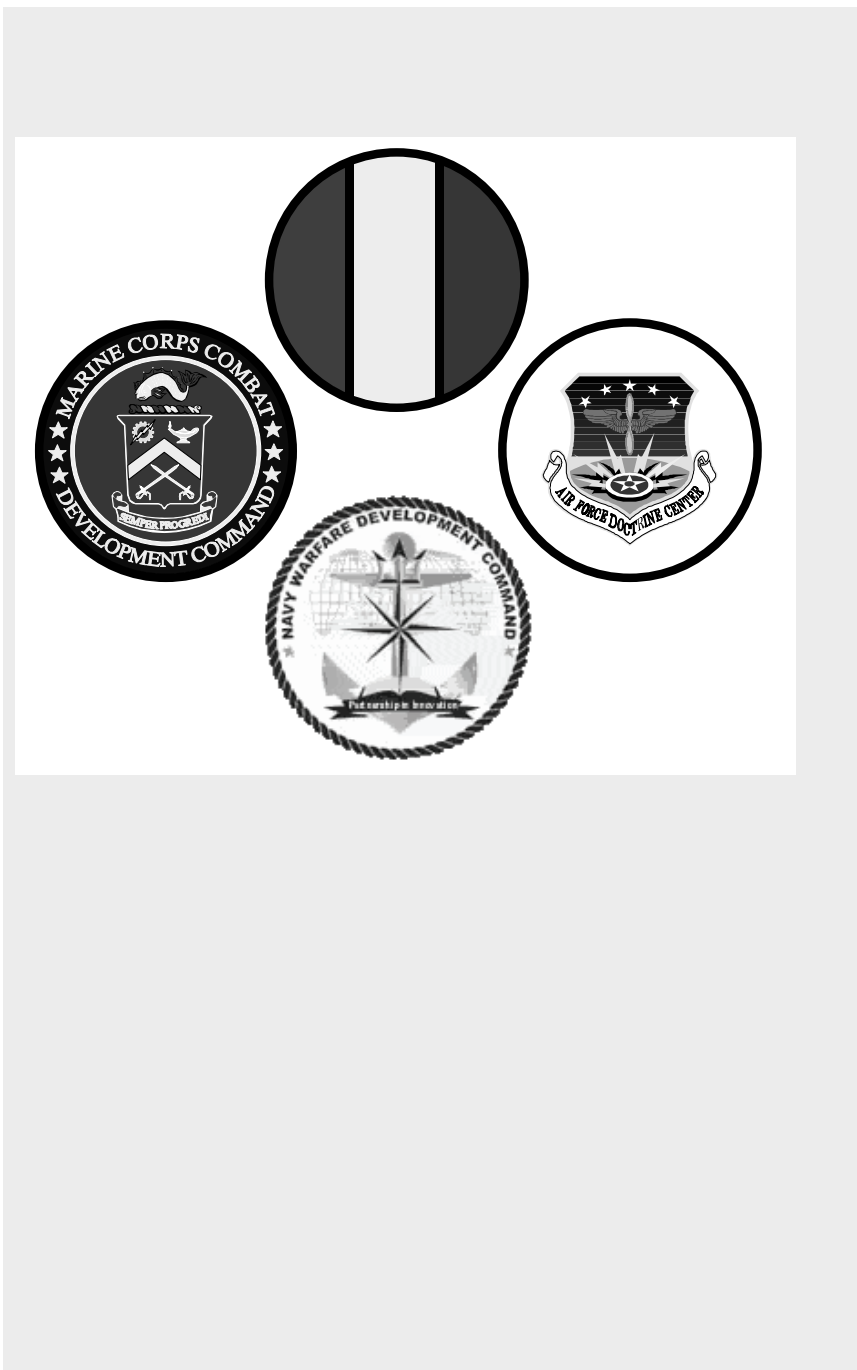
**MULTISERVICE TACTICS,
TECHNIQUES, AND
PROCEDURES FOR
TREATMENT OF
CHEMICAL AGENT
CASUALTIES AND
CONVENTIONAL MILITARY
CHEMICAL INJURIES**

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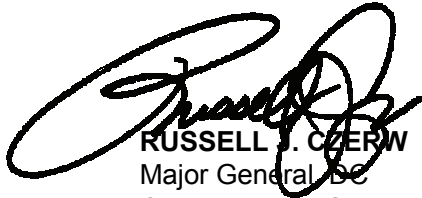
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MULTISERVICE TACTICS, TECHNIQUES, AND PROCEDURES

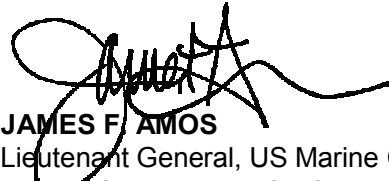


FOREWORD

This publication has been prepared under our direction for use by our respective commands and other commands as appropriate.



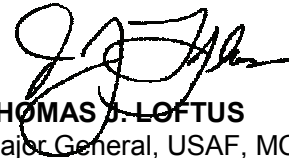
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PREFACE

1. Purpose

This publication provides multiservice tactics, techniques, and procedures (MTTP) and is designed for use as a reference for trained members of the Armed Forces Medical Services and other medically qualified personnel on the recognition and treatment of chemical agent casualties and conventional military chemical injuries. Additionally, this field manual (FM) provides information on first aid (self-aid and buddy aid) and enhanced first aid (combat lifesaver [United States (US) Army]) for these casualties.

2. Scope

a. This publication classifies and describes chemical warfare (CW) agents and other hazardous chemicals associated with military operations and describes how to diagnose and treat conventional military chemical injuries (that is, riot control agents, smokes, incendiary agents, and other toxic industrial chemicals [TICs]). Further, this publication—

(1) Describes procedures for recognizing chemical casualties (Appendix A).

(2) Describes measures for handling contaminated clothing and equipment at medical treatment facilities (MTFs) (Appendix B).

(3) Describes medical management and treatment in chemical operations (Appendix C).

(4) Describes procedures for individual skin protection and decontamination (Appendix D).

(5) Describes procedures for administering nerve agent antidotes (Appendix E).

(6) Provides an immediate/emergency treatment ready reference for the treatment of CW agents and some TICs (Appendix F).

b. Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

c. The use of trade names or trademarks in this publication is for illustrative purposes only. Their use does not constitute endorsement by the Department of Defense (DOD).

d. Metric measurements used throughout this publication are approximate equivalents of the customary units of measure. They are provided for the convenience of the users of this publication.

3. Applicability

a. This publication applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

b. The audience for this publication is the trained members of the Armed Forces Medical Services and other medically qualified personnel. This publication is in consonance with the following North Atlantic Treaty Organization (NATO) International Standardization Agreements (STANAGs); American, British, Canadian, and Australian (ABCA) Quadripartite Standardization Agreements (QSTAGs); and Quadripartite Advisory Publication (QAP) 256.

TITLE	STANAG	QSTAG
Concept of Operations of Medical Support in Nuclear, Biological, and Chemical Environments—AMedP-7(A) (3rd Edition)	2873	
Principles of Medical Policy in the Management of a Mass Casualty Situation (3rd Edition)	2879	
Medical Aspects of Mass Casualty Situations (1st Edition)		816
Training of Medical Personnel for NBC Operations (1st Edition)	2954	

When amendment, revision, or cancellation of this publication is proposed which will affect or violate the international agreements concerned, the preparing agency will take appropriate reconciliatory action through international standardization channels.

c. The Army Medical Department (AMEDD) is in a transitional phase with regards to certain terminology. This publication uses the most current terminology; however, other MTTP-series and Army FM 4-02-series and FM 8-series may use the older terminology. Changes in terminology are a result of adopting the terminology currently used in the joint and/or NATO and ABCA Armies publication arenas. The following terms are synonymous and the current terms are listed first:

(1) Medical logistics (MEDLOG), health service logistics (HSL), and combat health logistics (CHL).

(2) Roles of care, levels of care, and echelons of care which is a NATO term.

(3) Chemical, biological, radiological and nuclear (CBRN), chemical, biological, radiological, nuclear, and high yield explosives (CBRNE), and nuclear, biological and chemical (NBC).

4. Implementation Plan

Participating Service command offices of primary responsibility (OPRs) will review this publication, validate the information and, where appropriate, reference and incorporate it in Service manuals, regulations, and curricula as follows:

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b. We encourage change recommendations for the purpose of improving this publication. Key your comments to the specific page and paragraph and provide a rationale for each recommendation. Send comments and recommendations directly to—

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- Nature of change (addition/deletion of text; proposed new text).

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EXECUTIVE SUMMARY
Multiservice Tactics, Techniques, and Procedures
for
Treatment of Chemical Agent Casualties and Conventional
Military Chemical Injuries

Chapter I

Chemical Warfare Agent Casualties

Chapter I discusses the threat, military employment and classification of chemical warfare agents.

Chapter II

Lung-Damaging Agents (Choking Agents)

Chapter II discusses protection, pathology, symptoms, diagnosis and treatment of lung damaging agents.

Chapter III

Nerve Agents

Chapter III discusses effects, prevention, symptoms, diagnosis and treatment of nerve agents.

Chapter IV

Cyanogen Blood Agents

Chapter IV discusses protection, pathology, symptoms, diagnosis and treatment of cyanogen blood agents.

Chapter V

Blister Agents (Vesicants)

Chapter V discusses protection, properties, effects, symptoms and treatment of blister agents.

Chapter VI

Incapacitating Agents

Chapter VI discusses diagnosis, protection and treatment of incapacitating agents.

Chapter VII

Riot Control Agents (Irritant Agents and Vomiting Agents)

Chapter VII discusses protection, properties, effects, diagnosis and treatment of riot control agents.

Chapter VIII

Smokes

Chapter VIII discusses properties, pathology, symptoms, and treatment of different types of smokes.

Chapter IX

Incendiary Agents

Chapter IX discusses protection and treatment of different types of incendiary agents.

Chapter X

Toxic Industrial Chemicals

Chapter X discusses properties, pathology, symptoms, diagnosis and treatment of different types of toxic industrial chemicals.

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Chapter I

CHEMICAL WARFARE AGENT CASUALTIES

Given the probability that a significant number of Gulf War veterans may have been exposed to low levels of sarin and cyclosarin during and after the war, and recent research findings indicating that low-level sarin exposures can result in chronic health sequelae, the Committee concludes that low-level exposure to chemical agents must be thoroughly investigated as a potential contributing cause of the multisymptom illnesses affecting Gulf War veterans, and that it is important that the precise mechanisms of chronic adverse effects of low-dose exposures be identified.

Research Advisory Committee on Gulf War Veterans' Illnesses
2004 Report and Recommendations

It is believed that the use of chemical weapons dates back several centuries. However, the use of modern chemical weapons has its origins in World War I. Chemical gas (actually an aerosol or vapor) was used effectively on numerous occasions by both sides during this conflict to alter the outcome of battles. Chemical battlefield casualties were sustained. The Geneva Protocol, prohibiting use of chemical weapons in warfare, was subsequently proposed and signed in 1925. The United States, along with several other nations, signed with the stipulation that it will refrain only from the first use of chemical weapons, but reserves the right to retaliate in kind if chemical weapons were used against them (the United States did not ratify the Protocol until 1975).

1. The Threat of Chemical Warfare Agents to United States Forces

a. Chemical warfare agents remain a significant and continuing HSS threat to US forces. Chemical weapons delivery may be accomplished through conventional or non-conventional means, causing extensive injury and contamination. Collateral damage to enemy storage facilities and/or destruction of their munitions by "friendly forces," such as, bombs, artillery fire, or destruction of industrial facilities can release TICs. Traditionally, enemy commanders have regarded CW agents as a part of their conventional arsenal. The Chemical Weapons Convention (CWC), which banned the use of CW agents and was signed by 175 countries/states as of October 2005, will take many years to fully implement. The CWC was opened for signature on 13 January 1993. In accordance with Article XVIII of the CWC, the signature period ended on 28 April 1997, the day before the CWC entered into force. Countries/states that signed the CWC during this period (the "Signatory States") must also ratify it through their standard national processes; countries/states that did not sign during this period, but now wish to become States Parties to the CWC, must accede to it. Not all countries have signed the CWC. In spite of the CWC and other diplomatic efforts, CW agents will be available to threat forces in regions where US forces may be deployed.

b. Chemical warfare agents are readily obtainable. The ease of obtaining these weapons greatly increases the complexity and extent of the total threat. For example, nonmilitary organophosphate insecticide factories may also be used to produce nerve