

COMBAT MEDIC SPECIALIST FIELDCRAFT

Limited Primary Care

PART 1 OF A 3 PART SERIES

FIRST EDITION

Senior Editor

Michael W. Davis, NREMTP

SFC (Ret), Texas Army National Guard



BORDEN INSTITUTE

US Army Medical Department Center and School
Medical Center of Excellence
Fort Sam Houston, Texas

OFFICE OF THE SURGEON GENERAL

United States Army
Falls Church, Virginia

BORDEN INSTITUTE EDITORIAL STAFF

Edward A. Lindeke, COL (Ret), MS, US Army | *Director, Borden Institute*

Gina Frank | *Senior Production Editor*

Lisa O'Brien, PhD, LtCol (Ret), BSC, US Air Force | *Volume Editor*

Chris Gamboa-Onrubia, MBA | *Creative Director, Fineline Graphics LLC*

Venetia Valiga | *Illustrator and Layout Editor*

Robert Dredden | *Illustrator*

Ernest Barner, MSG (Ret), 68W, US Army | *Public Affairs Officer*

CERTAIN PARTS OF THIS PUBLICATION PERTAIN TO COPYRIGHT RESTRICTIONS. ALL RIGHTS RESERVED. NO COPYRIGHTED PARTS OF THIS PUBLICATION MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL (INCLUDING PHOTOCOPY, RECORDING, OR ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM), WITHOUT PERMISSION IN WRITING FROM THE PUBLISHER OR COPYRIGHT OWNER.

CONTENT USERS AND TRAINING STANDARDS. This book is intended for use by the United States Department of Defense. It incorporates validated Combat Medic Specialist program curricula that are current as of the date of publication. Contents are subject to change.

Published by the Office of The Surgeon General

BORDEN INSTITUTE

US Army Medical Department Center and School

Medical Center of Excellence

Fort Sam Houston, Texas

Library of Congress Cataloging-in-Publication Data

Names: Davis, Michael W. (NREMP), editor. | Borden Institute (U.S.), issuing body.

Title: Combat medic specialist fieldcraft. Limited primary care / senior editor, Michael W. Davis.

Other titles: Limited primary care

Description: First edition. | Fort Sam Houston, Texas : Borden Institute, US Army Medical Department Center and School, Health Readiness Center of Excellence ; Falls Church, Virginia : Office of The Surgeon General, United States Army, 2023. | "Part 1 of a three-part series." | Includes bibliographical references and index. | Contents: Sick Call and Medical Documentation — Infection, Asepsis, and Sterile Technique — Pharmacology — Medication Administration — Injections — Venipuncture — Eyes, Ears, Nose, and Throat Primary Care — Respiratory Primary Care — Abdominal Primary Care — Orthopedics Primary Care — Basic Wound Care — Skin Diseases Primary Care. | Summary: "This book is part I of a III part series and will cover the complete course of instruction for Army Medical Department medics (military occupational specialty: 68W), from sick call, through care under fire, to provider resilience. Other topics include handling casualties, documenting injuries and care provided, reducing the spread of infection, managing shock, caring for burn victims, maintaining airways, and addressing injuries to all parts of the body. Tactical Combat Casualty Care is explained in detail. Each chapter begins with a list of core concepts, defines key terms, and provides review questions throughout the text. Many chapters also illustrate specific procedures with step-by-step "skill drills."—

Identifiers: LCCN 2023008581 (print) | LCCN 2023008582 (ebook) | ISBN 9781737131113 (spiral bound) | ISBN 9781737131113 (ebook)

Subjects: MESH: Military Medicine—methods | Primary Health Care | Combat Medics | Wounds and Injuries | Resource-Limited Settings | United States

Classification: LCC RC971 (print) | LCC RC971 (ebook) | NLM W 84.6 AA1 | DDC 616.9/8023—dc23/eng/20230313

LC record available at <https://lcn.loc.gov/2023008581>

LC ebook record available at <https://lcn.loc.gov/2023008582>

Printed in the United States of America

30 29 28 27 26 25 24 23 10 9 8 7 6 5 4 3 2

First Printing

Message from the Surgeon General

COMBAT MEDICS are ubiquitous in the Army's medical footprint, providing outstanding care from sick call through tactical combat casualty care. These highly skilled and compassionate medics are deserving of the trust they earn from the service members they support. In turn, they deserve the best training available throughout their careers. The *Combat Medic Specialist Fieldcraft* textbook adds a critical tool through which the Army's second-largest Military Occupational Specialty will train to extend its lifesaving capabilities across the spectrum of conflict. Through multi-platform publishing and global availability, this textbook provides a single, comprehensive, and updatable resource for Combat Medics everywhere.



RAYMOND S. DINGLE

Lieutenant General, US Army

The Surgeon General and

Commanding General, USAMEDCOM

Combat Medic Specialist Fieldcraft

IS DEDICATED TO

Sergeant First Class Benjamin L. Sebban and
All Our Brave Combat Medics Through History

SERGEANT FIRST CLASS (SFC) BENJAMIN L. SEBBAN exemplified the combat medic ethos. He served with great honor throughout his United States Army career. During Operation Iraqi Freedom, he was the senior medic for the 73rd Cavalry Regiment (Airborne Reconnaissance). It was here that his training, love for his Soldiers, and courage all came together in a great act of heroism that cost him his life.

SFC Sebban was known for his attentiveness to the paratroopers in his unit. He constantly patrolled with them, ensuring everyone was cared for and had what they needed to succeed in combat. He roved about the patrol base, checking to make sure everyone had clean socks, caring for blistered feet, or just talking to weary paratroopers just off mission. SFC Sebban also prioritized the medics assigned to him. As a master trainer, he pushed them to be masters of their craft by providing realistic, tough, and effective training. It was common to see the medics working in the aid station with night vision goggles to practice critical skills, such as vascular access, in conditions that mirror combat environments.

On 17 March 2007, SFC Sebban was on duty in Diyala Province, Iraq, when he saw a civilian truck laden with explosives accelerating toward a combat outpost. Stepping from behind a Humvee, SFC Sebban moved toward the vehicle and warned his fellow paratroopers of the impending attack, yelling three times, until the vehicle explosion knocked him down. Although mortally wounded by shrapnel injuries to his abdomen, groin, and legs, SFC Sebban immediately moved to the aid station and treated his fellow wounded paratroopers until he collapsed and succumbed to his wounds. SFC Sebban's valiant actions safeguarded the lives of 86 paratroopers and caused enemy insurgent forces to retreat. SFC Sebban's courageous actions that day earned him the Silver Star Medal for gallantry in battle.

Medics like SFC Sebban are the reason soldiers run headlong into a gunfight to engage the enemy or to help a fellow soldier. Soldiers know that if they or their battle buddies are injured, a combat medic will be with them to provide world-class treatment at the point of injury. The US Army has the best-trained medics in the world and, just like SFC Sebban, they will give their all to treat, care for, and serve those around them with the highest dedication to duty.

Contents

Co-Editors	vi
Contributors	vii
Acknowledgements	viii
Foreword	ix
Preface	xi
Introduction	xii
CHAPTER 1 Sick Call and Medical Documentation	1
CHAPTER 2 Infection, Asepsis, and Sterile Technique	13
CHAPTER 3 Pharmacology	33
CHAPTER 4 Medication Administration	47
CHAPTER 5 Injections	93
CHAPTER 6 Venipuncture	147
CHAPTER 7 Eyes, Ears, Nose, and Throat Primary Care	157
CHAPTER 8 Respiratory Primary Care	175
CHAPTER 9 Abdominal Primary Care	183
CHAPTER 10 Orthopedics Primary Care	199
CHAPTER 11 Basic Wound Care	241
CHAPTER 12 Skin Diseases Primary Care	261
Abbreviations and Acronyms	275
Product Manufacturers	277
Photographic Support	278
Index	279

Co-Editors

MaShelly S. Ammerman SFC, US Army	Christopher L. Jeter-Chandler, MSW, MPH
Robert W. Brummitt, BA SFC (Ret), US Army	Jeffrey T. Lanter, MAEd/AET SFC (Ret), US Army
Jeremy J. Clarno, PA-C CPT (Ret), US Army	Sean B. Monk, BS SFC, US Army
Dessa Clinton, PHD, LPN SFC (Ret), US Army	Donald L. Parsons, PA-C LTC (Ret), US Army
Bennie Crawford CPO (Ret), US Navy	Chandlor Randall SFC, US Army
Tyler Fountain SFC (Ret), US Army	Houston Robertson MSG (Ret), US Army
Michelle R. Gold, AAS, EMT SFC (Ret), US Army	Najib Samad SFC, US Army
Meredith J. Hansen, MPH, PA-C LTC (Ret), US Army	Tara T. Taylor, MSW MSG (Ret), US Army
Andrew J. Hughes SFC, US Army	Connie R. Welch, PA-C, MEd MAJ (Ret), US Army

Contributors

Maria Aliftiras	Jacody F. Lewis
Kirenia Bedford	Cruz F. Lopez
Robert Blume	John C. Maitha
Jeffery Braun	Kevin F. Maskell
Edward R. Campbell	Ivan J. Matos
Scott Cash	James McCauley
Andrew T. Charlton	Paul Nancarrow
James Depree	Mark A. Narvaez
Virginia L. Creed	Sidney A. Norman
Steve Gaddy	Johnny Paul
Samuel L. Garcia	Nadia M. Pearson
Roy Gomez	Jacob W. Rouse
Tory A. Gray	Kathleen M. Samsey
James Haly	Michelle Self
Stephen Harper	Steven M. Self
Kendra Harralson	DuJuan L. Smith
Jennifer M. Jackson	Scott M. Stroup
Crystal Jarrell	Billy Teeter
Mellonie Jones	Bennie L. Wright
Benjamin K. Kocher	Terrel Wright
James A. Laing	

Acknowledgements

WE GIVE SPECIAL THANKS and tremendous appreciation to Ms. Meredith Hansen and Ms. Connie Welch for their unflagging support and leadership throughout the textbook's voyage of development. Without their substantial efforts, this book would not exist. Ms. Hansen steered the project out of port and into vast open waters. Ms. Welch led the project through stormy seas and brought it safely home. Many thanks also to Mr. Donald Parson, who reviewed most of the chapters of this book, right up until the day of his retirement. Finally, a tip of the hat to Schertz Emergency Medical Services, Schertz, Texas, for their support and volunteer contributions to many photographs in this book.

Foreword

THE CRY "MEDIC!" may be the most emboldening sound on the battlefield. It has been screamed by thousands of Soldiers during past wars, and Combat Medics will continue to respond in future conflicts. It is the privilege of my Army career to move toward that cry and earn the title "Doc" from the Soldiers I served with, was deployed with, and fought alongside.

This text, *Combat Medic Specialist Fieldcraft*, codifies the foundational concepts every Army Combat Medic must understand and employ on demand. However, it represents a mere fraction of what is truly required to excel in this critical wartime specialty. After 11B (Infantryman), 68W is the second largest military occupational specialty (MOS) in the Army. As warfighters, we go wherever the fight takes us—by land, sea, or air. Combat Medics remain ready to shoot, move, communicate, and survive on today's complex Multi-Domain Operations (MDO) battlefield while performing our critical medical tasks. This means that we must prioritize and practice holistic health and fitness (H2F) daily to ensure we possess the physical, mental, and moral resilience to deliver lifesaving care at the point of need. Contrary to popular belief, we rarely "rise to the occasion" when chaos ensues. Instead, we revert to our highest level of training, so we must train as we intend to fight. Combat Medics must be tactically and technically proficient. Both skill sets are perishable and require tough, realistic, and routine training to achieve the status of expert and professional.

The Army is in an era of extensive modernization. The Army of 2028 must be capable of conducting MDO and Large-Scale Combat Operations (LSCO) as part of an integrated Joint Force in a single theater, and it must be ready to do so in multiple theaters by 2035. Army Medicine plays a crucial role in the ability to deploy, fight, and win the nation's wars across all domains. We endeavor to remain relevant by modernizing "how we fight, what we fight with, and who we are." This means your education, as a Combat Medic, will not end when you close this textbook upon completion of Advanced Individual Training (AIT). In fact, that moment begins the next chapter of your journey and requires you to seek further knowledge in triage, damage control resuscitation, and Prolonged Casualty Care (PCC). Military medicine is a rapidly evolving discipline that requires adaptability, intellectual curiosity, and dedication.

Preface

The new generation of Combat Medics cannot expect timely casualty evacuation or rely upon the “Golden Hour” experienced in Iraq and Afghanistan during the Global War on Terrorism. Future conflicts require a robust system of ground evacuation and capable, highly trained Combat Medics with the attributes required to conserve the fighting strength for extended periods of time.

The title “Doc” comes with enormous responsibility and a legacy of courageous men and women who willingly put their lives on the line to save others. Their motivation was not for fortune, fame, or glory, but simply for the love that defines brotherhood and sisterhood—a bond that defies reason and propels Soldiers to heroic acts beyond comprehension. 68W is not only an MOS; it is a calling. You are inheriting a tradition of honor, expertise, and selfless sacrifice, and I want to thank you for answering the call.

Army Medicine is Army Strong!

Diamond D. Hough

Command Sergeant Major, US Army

US Army Medical Command

DURING TRAINING, sweat and dedication save lives and reduce despair on the battlefield. Warfighters are effective because they trust in the skills and abilities of their embedded healthcare providers, Combat Medics. Army Medical professionals and pre-hospital trauma subject matter experts analyzed, updated, and packaged the most current clinical practice guidelines to best instruct the next generation of 68Ws to provide medical overmatch at the point of injury and wherever else necessary. The continuum of care reinforcing readiness begins long before kinetic operations with routine sick call and progresses through care under fire toward individual resilience and recovery. This edition covers a myriad of topics ranging from providing care, preventing infection, and handling casualties to documenting actions under the overarching principles of tactical combat casualty care. Chapters begin with key terms and core concepts, then transition to review questions and step-by-step skill drills. Combat Medics must be competent and confident in their abilities to preserve life even in the most challenging and austere conditions. Army Medicine is committed to providing world-class training for all professionals who Conserve Fighting Strength.

Army Medicine Starts Here!

Clark J. Charpentier

Command Sergeant Major

US Army Medical Center of Excellence

Introduction

THIRTY YEARS AGO, my MOS 91B Combat Medic book consisted of a paper-bound, black-and-white, 400-page book with grainy, barely legible illustrations. The content mirrored books published for the National Registry Emergency Medical Technicians (NR-EMT) course, as well as treatment regimens gleaned from the Korean and Vietnam Wars. This book touched on diseases, injuries, and various treatment methods, with a medium focus on combat care. It also contained in-depth studies into the anatomy and physiology of the human body. Today's combat-focused 68W MOS is drastically different and changes every year to keep up with advances in both technology and science.

68Ws represent the second largest enlisted specialty in the US Army, with approximately 36,000 medics. Currently, a 68W student receives 10 different specialty books during training. There is no single, unified textbook that can be updated and accessed worldwide. Combat Medics cannot immediately retrieve material that is being taught at the proponent. Until now! The solution was to develop an official, approved training textbook for the 68W Combat Medics. The Borden Institute (the Medical Center of Excellence publishing arm) in collaboration with the Department of Combat Medic Training and the Department of Combat Medic Education (now the Combat Medical Specialist Training Program in the Department of Operational Medicine) energetically produced a 30-chapter text, which covers limited primary care to tactical combat casualty care.

This new 68W Combat Medic textbook will position all medics worldwide to provide the best possible care to our Warfighters, care that saves lives! Input will focus on quality, currency, and usability. This publication will be available as a spiral-bound book and online, enabling Soldiers and authorized users access everywhere the Army is located. I can also ensure that it will support initial, sustainment, and readiness training, and it will enhance overall operational readiness. The new 68W Combat Medic textbook will focus on the following areas: Tactical, Technical, and Clinical. In an effort to remain highly relevant to our Combat Medics, this text also draws material from other Combat-Medicine-centric courses such as Brigade Combat Trauma Team Training (BCT3), Joint Forces Combat Trauma Management Course (JFTCMC), and Tactical Combat Medical Care Course (TCMC). Other advantages to the publication and distribution of this book include efforts to align all 68W Combat

Medic training globally, with updates synchronized around the 68W MOS Program of Instruction cycle. In addition, it should be adaptable to all US Military services. This is especially important to our Navy Corpsmen and Air Force Medics as we attempt to move forward toward a joint medic concept. Lastly, and I think most significantly, is that this book is written by you! It is a compilation of all relevant and up-to-date 68W tasks developed by Combat Medic subject matter experts with extensive field and clinical experience. Updates will be available to accommodate the most current medical advances and ensure that the most current information is always available.

I hope that everyone out in the force is as excited as we are (at the Medical Center of Excellence) about this book. It will have a high impact on Combat Medic training effectiveness as well as operational readiness!

James Musnicki

Sergeant Major

US Army Medical Center of Excellence

Sergeant Major Musnicki currently serves as the sergeant major of academic affairs to the Office of the Commandant, US Army Medical Center of Excellence.

DOSAGE SELECTION. The authors and publisher have made every effort to ensure the accuracy of dosages cited herein. However, it is the responsibility of every practitioner to consult appropriate information sources to ascertain correct dosages for each clinical situation, especially for new or unfamiliar drugs and procedures. The authors, editors, publisher, and the Department of Defense cannot be held responsible for any errors found in this book.

USE OF TRADE OR BRAND NAMES. Use of trade or brand names in this publication is for illustrative purposes only and does not imply endorsement by the Department of Defense.

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