

Table of Contents

Emergency War Surgery Handbook 2003

Read Me First!

Handbook Introduction

CD Introduction

Chapter 1 . Triage of Combat Casualties

Chapter 13 . Airway

Chapter 25 . Open Joint Injuries

Chapter 2 . Levels of Medical Care

Chapter 14 . Hemorrhage Control

Chapter 26 . Wounds and Injuries of the Spinal Column and Cord

Chapter 3 . Aeromedical Evacuation

Chapter 15 . Shock and Resuscitation

Chapter 27 . Hand Injuries

Chapter 4 . Combat Stress Control

Chapter 16 . Battlefield Damage Control

Chapter 28 . Head Injuries

Chapter 5 . Prisoners of War

Chapter 17 . Vascular Access

Chapter 29 . Face and Neck Injuries

Chapter 6 . Weapons Effects

Chapter 18 . Anesthesia

Chapter 30 . Ocular Injuries

Chapter 7 . Burn Injuries

Chapter 19 . ICU Care

Chapter 31 . Thoracic Injuries

Chapter 8 . Radiological Injuries

Chapter 20 . Infections

Chapter 32 . Abdominal Injuries

Chapter 9 . Biological Warfare Agents

Chapter 21 . Soft Tissue Injuries

Chapter 33 . Genitourinary Tract Injuries

Chapter 10 . Chemical Injuries

Chapter 22 . Extremity Fractures

Chapter 34 . Gynecological Injuries and Obstetric Emergencies

Chapter 11 . Environmental Injuries

Chapter 23 . Pelvic Injuries

Chapter 35 . Vascular Injuries

Chapter 12 . Bites and Stings

Chapter 24 . Amputations

Chapter 36 . Pediatric Care

Introduction

Is it really time for another revision of the *Emergency War Surgery Handbook*? We believe it is, and time for a fundamental change in format. This book has been designed and illustrated so that, if given a choice of bringing a **single** book on a rapid or prolonged deployment either for a war or an operation other than war, the present day military general surgeon would choose this one. The military surgeon must assume a leadership role in combat casualty care. The surgeon must know what to expect, and how to configure and prepare the team in an austere and rapidly changing tactical environment with available and necessary equipment. They must know how to take care of an unfamiliar battlefield wound or injury and manage mass casualties. Finally, they must understand the next echelon of care, including what capabilities are there, and how to safely evacuate their patient to that level. The information in this book is designed to answer these questions in a succinct format.

The last edition of the *EWSH* was published in 1988. Since then, several events have profoundly affected US military medicine and surgery. The dissolution of the Soviet Union destabilized Eastern Europe. There is ongoing conflict in Bosnia and Kosovo. Desert Shield/Storm was the largest deployment of US military forces since Vietnam. Operation Enduring Freedom (OEF) in Afghanistan led to one of the quickest military and medical build-ups ever seen. With international support, advanced weapons, and a volunteer force of the finest soldiers, sailors, airmen and marines in the world, both of these conflicts were 'over' in an astoundingly short time with a minimum of casualties. Historically there has been time to "build up" and "learn from experience" during war. The rapidity of the modern battlefield is unlikely to allow this. The military, including medicine, should be ready from the outset.

Restructured field military medical facilities are smaller, mobile, "building blocks." Critical Care Air Transport Teams (CCATT) have revolutionized casualty care by transporting stabilized patients to higher levels of care during active resuscitation. These changes have resulted in the lowest Died of Wounds (DOW) rate during OEF than in the history of combat (1:1500). Efforts to standardize equipment across services are underway, with the use of smaller, lightweight diagnostic and therapeutic devices. Joint interdependence in the treatment and evacuation of our wounded has followed that of our military combat operations.

The reduction in the size of active forces has included a reduction in military hospital number, size and capability. As a result, managed care (TRICARE) has moved military patients away from military hospitals. The advent of minimally invasive surgery and newer non-operative techniques for trauma have led to fewer major surgical procedures.

All of this has reduced the number of procedures that are available to maintain the skills of the military surgeon, and the system, in the care of the wounded patient.

Despite these changes in practice, a military general surgeon is far more likely to be deployed today than at any other time in our nation's history. In the previous edition of this handbook, BG Thomas E. Bowen quoted Plato about the likelihood of future conflict: "Only the dead have seen the end of war!" Will we, as military surgeons, be capable and prepared to render the level of combat casualty care befitting the sons and daughters of America?

From the Gulf War, grew a challenge to improve the preparedness of our medical systems and, specifically, our military surgeons' ability to handle significant combat trauma. Surgeons are trained in the fundamental technical skills needed for combat casualty care. What is currently lacking is experience in the care of war casualties. Initiatives including trauma training sites at civilian centers and supplementary military trauma courses were undertaken by all services. The Trauma Training Center experience, and increased emphasis on cadaver and animal courses focused on combat casualty care, will bridge some of the experience gap.

This handbook is an effort to provide additional, "on the scene" and "just in time" information to prepare the military surgeon for his or her *raison d'être*, the care of combat casualties. We also recognize that, on occasion, other trained, nonsurgeon medical providers may find themselves in remote locations facing critical injuries that they have the basic skills to manage, but lack the experience to do so. We hope this manual will provide the information needed to save the most precious resource our military and country has: our soldiers, sailors, airmen and marines.

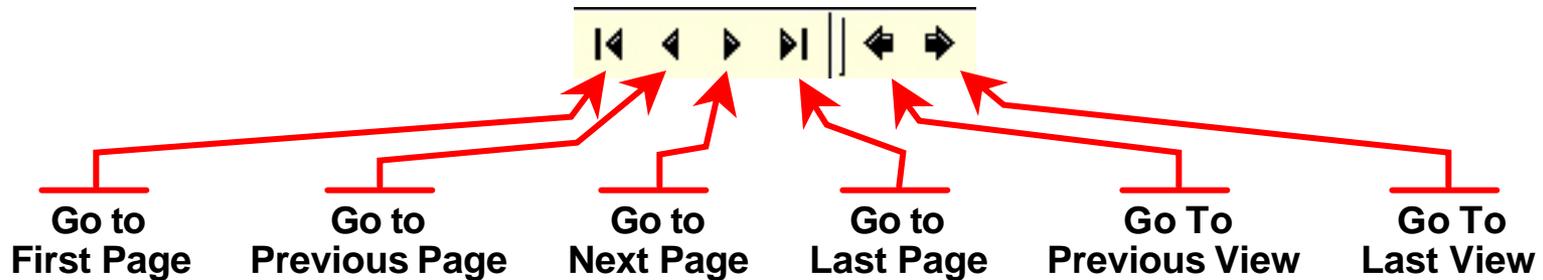
CD Introduction

Navigating:

Document-to-Document: The information on this CD consists of multiple Portable Document Format (PDF) files. Each time a new PDF document is opened the book marks on the left of your screen will change.

The current document you are viewing is the Table of Contents (TOC) for the CD. When a secondary file is opened the bookmarks on the left of the screen will display “Return to TOC” which is this TOC (Table Of Contents) file.

Page-to-Page: The PDF files can be read within this reader or may be printed for use using the instructions under “Printing” listed below. The page navigation arrows at the top of your computer screen allow the following movement:



Within the Page: The material has been organized so a selected title can appear by making a selection from the bookmarks shown on the left. Clicking on the bookmark will show the page here. Clicking on the plus-mark boxes () will open a bookmark to reveal sub titles. Text colored blue indicate a hyper link to a different location within the document or, as in the case on this page, to a function on your computer (printing).

Printing: This file may printed to “hard copy” by clicking [HERE](#). The resulting print will not be in color unless a color printer is available on your computer. The secondary files can be printed individually by choosing File and Print from the top line menu bar of the Adobe Acrobat Reader.

Click [HERE](#) for the Chapter Introduction.

Click [HERE](#) to view the Table of Contents (TOC).

Emergency War Surgery 2003

Draft Version 1.0

By order of The Surgeon General, US Army, and under the direction of AMEDD C&S, a group of triservice experts has been in the process of preparing *Emergency War Surgery 2003* (EWS 03) as a replacement for *NATO War Surgery Manual* (the most recent edition of which was published in 1988).

This is an incomplete draft version of *EWS 03*, released prematurely in an effort to meet the imminent needs of deployed healthcare providers, especially military surgeons. The limitation of this version is that it contains only a small number of the planned illustrations. A new format is used that will make the contents more useable in the field.

EWS 03 is supplied in PDF format; an Adobe Acrobat reader is supplied on this CD. An identical version of *EWS 03* is also available on AKO.

In its preliminary state, this version of *EWS 03* may contain textual errors as well as concepts that might not meet the test of time. The authors are interested in receiving user feedback regarding the contents and format before summer 2003, when the final printed book and electronic version will be published.

Please send your comments to andy.szul@na.amedd.army.mil.