Preface to the Second Edition

Six years have passed since the first edition of Conflict and Catastrophe Medicine was published. Those 6 years have not been peaceful: conflict has continued in Iraq, Afghanistan, Africa, and the Middle East.

Terrorist attacks have continued around the world and London has had its first experience of suicide bombings.

The landscape for humanitarian work is dangerous and challenging.

The aim of this second edition is in line with the first edition – to provide an entry-level resource for people working (or considering work) in a hostile environment.

Contributors with real hard one practical experience have been invited to share their views, and they do this with a raw honesty in a variety of writing styles.

The second edition of Conflict and Catastrophe Medicine has benefited from these contributions, and we hope our prospective readers will do so as well.

The book editors are donating their royalties from this book to the charity ‘Help for Heroes’.

Adriaan Hopperus Buma
Alan Hawley
David G. Burris
James M. Ryan
Peter F. Mahoney
Preface to the First Edition

This work is intended as an *entry-level* text aimed at medical, nursing and paramedical staff undertaking work in a hostile environment.

It covers aid across a spectrum of hostile environments encompassing natural disasters, man-made disasters and conflict in all its forms, and extending to cover remote areas and austere industrial settings. The common thread in these situations is an increased risk of injury or death, which extends to both the local population and the expatriate workers.

Providing care in these environments needs an understanding of the situation, and how this constricts and limits what can be achieved. This understanding bridges the fields of medicine, politics, economics, history and international relations.

Many humanitarian and equivalent organisations have long recognised the difficulties which can be experienced, and run a wide variety of courses, workshops and exercises to broaden the skill and knowledge of the worker.

We hope this work will help in these endeavours, and provide a link to the more specialist texts and training available.

It should give the prospective volunteer a feel for the depth and breadth of the subject, and make volunteers realise the importance of external factors which impact upon medical care. It should also heighten their respect and understanding of other professionals in the field, such as engineers and logisticians.

Finally, this work should educate and inform those who now, or in the future, volunteer to deploy into an environment of conflict or austerity.

* Jim Ryan
  * Peter F. Mahoney
  * Ian Greaves
  * Gavin Bowyer
Foreword

The experienced authors and editors provide us with an expanded and improved valuable resource. The first edition of *Conflict and Catastrophe Medicine* was of great value, particularly to those studying for the Examination for the Diploma in the Medical Care of Catastrophes under the auspices of the Apothecaries of London. Having worked extensively with all of the Editors, I have learned considerably from all of them based on their vast individual and collective experiences as well as the academic and teaching abilities of all involved. Admiral Hopperus Buma, COL/Professor Burris, General Hawley, COL (Ret.)/Professor Ryan, and COL/Professor Mahoney representing perspectives from the Netherlands, the UK, and the USA have had broad civilian and military experiences at multiple levels in government and in healthcare delivery throughout the world. These editors/authors have augmented and complimented their own experiences with specific contributions by other authors who have had significant recent experiences.

The six sections in the Table of Contents provide a rapid review and help identify specific areas of interest ranging from a broad spectrum of medical responses to both natural and man-made disasters, including military conflicts. The topics range from health planning in action in the Rwanda Crisis and from “Operation Phoenix” with the British Medical Aid Program in Sarajevo in the Balkans to multiple other topics including conflict recovery and ethics involved with those who have the misfortune to be injured or who are deprived of even the basics for human survival.

This is a “must read” for anyone working in the broad field of conflict and catastrophe medicine to include those in non-government organizations (NGOs), military medical personnel around the world, and those in government addressing these global challenges. Specifically, this will be the primary source for review for those being examined for the Diploma in the Medical Care of Catastrophes. The material is informative and interesting being well organized. Hopefully, reading this material and teaching from this book will create an exciting incentive in others to contribute to those less fortunate around the world as “globalization” becomes more part of our common existence.

Norman M. Rich
## Contents

### SECTION ONE:  
Introduction: Players and Paradigms

1. Baghdad Christmas  
   *David R. Steinbruner* ................................................................. 3

2. New Paradigms: The Changed World Since 9/11  
   *James M. Ryan* ................................................................. 5

3. The World Seems to be Crumbling Around Us  
   *David R. Steinbruner* .................................................. 13

4. The Spectrum of Conflict  
   *Alan Hawley* ....................................................... 17

5. The Players: Humanitarians, Militaries, Industry and Private Security Companies  
   **A – Humanitarian Organizations and Their Coordination in Humanitarian Assistance**  
   *M. Kett and A. van Tulleken* .................................................. 31  
   **B – Military Medical Assistance to Civilian Health Sectors**  
   *Martin C.M. Bricknell* ................................................................. 49  
   **C – Private Security Companies and First-Line Care**  
   *T. Spicer and K. Morland* .................................................. 61  
   **D – Oil and Gas: Industry in Remote and Volatile Areas**  
   *Bob Mark* ................................................................. 70

6. Interfaces  
   **A – Medical Ethics Is Never Easy**  
   *David R. Steinbruner* ................................................................. 75  
   **B – Village Medical Outreach or MEDCAP: A Policy Perspective**  
   *Martin C.M. Bricknell, Robin Cordell and David C. Mcloughlin* .......... 77

7. Conflict and the Media  
   *Daloni A. Carlisle* ................................................................. 89

8. Remote Medicine  
   *Steven A. Bland* ................................................................. 101
A – Medicine at the Ends of the Earth: The Antarctic
    Iain C. Grant .......................................................... 107
B – High Altitude
    Sundeep Dhillon .................................................. 114

SECTION TWO:
Disasters, Public Health, and Populations

9. Disasters: An Overview
    Tony Redmond .................................................... 125
    A – The London Bombings 7th July 2005: Forward Medical Response
        Steven A. Bland ................................................. 143
10. Responding to Acute Humanitarian Crises: Health Needs Assessment and Priorities for Intervention
    Aroop Mozumder .................................................. 151
11. The Military Approach to Medical Planning
    Martin C.M. Bricknell ............................................. 177
    Martin C.M. Bricknell and Gareth Moore ...................... 189
13. Surveillance and Control of Communicable Disease in Conflicts and Disasters
    Tim Healing ...................................................... 197
    A – Introduction ................................................ 197
    B – Health Surveillance ....................................... 199
14. Health Planning in Action: Rwanda Crisis
    Alan Hawley ...................................................... 223
15. Health Planning in Action “Operation Phoenix”: A British Medical Aid Program to Sarajevo
    Tony Redmond and John F. Navein .......................... 241
16. Health Care of Prisoners and Detainees
    Maarten Hoejenbos and Adriaan Hopperus Buma ............ 251
17. Populations and People
    David R. Steinbruner ......................................... 261

SECTION THREE:
Introduction: Living and Working

18. Getting There and Being Involved
    A – Hello Folks
        David R. Steinbruner .......................................... 267
B – Getting Involved
Steve Mannion .................................................. 268

C – “R and R”: Moving Between Worlds
David R. Steinbruner ........................................ 281

D – Team Building and Maintenance
Kenneth I. Roberts ........................................... 284

19. Safety and Security
A – Staying Safe and Effective: In a Humanitarian Context
(Or as Safe as Is Reasonably Possible When You Know You Should Have Stayed at Home!!!)
Garry M. Vardon-Smith ..................................... 287

B – Thinking Ballistic: Aspects of Protection
Kenneth I. Roberts ........................................... 300

C – Mines and Weapons Awareness
Kenneth I. Roberts ........................................... 303

D – The Oil Camp
Bob Mark ....................................................... 306

20. Voices from the Field
A – Just a Word About Toilets
David R. Steinbruner ........................................ 315

B – Conflict Medicine: A View from the Ground
Luke J. Staveley-Wadham ................................... 317

21. Applied Communications in Conflict and Catastrophe Medicine
John F. Navein and Simon J. O’Neill .................... 323

22. Mental Health
A – Practical Psychological Aspects of Humanitarian Aid
Ian P. Palmer .................................................. 345

B – Psychosocial Resilience and Distress in the Face of Adversity, Conflict, Terrorism, or Catastrophe
Richard Williams and David Alexander .................. 360

C – Requiem: Going Home ................................. 374
David R. Steinbruner

SECTION FOUR:
Introduction: Hospitals and Health Systems

23. Conflict Recovery-Health Systems in Transition
James M. Ryan .................................................. 379

24. Eating an Elephant: Intervening in Hospitals, Pristina
Tony Redmond .................................................. 391
25. Conflict Surgery: A Personal View  
   *Andrew Bruce* ......................................................... 393

26. Military Health Services Support in Conflict  
   *Martin C.M. Bricknell and Roderick J. Heatlie* ...................... 397

27. Military Medical Assistance to Security Sector Reform  
   *Martin C.M. Bricknell and D.F. Thompson* .......................... 405

28. Hospital Blues  
   *David R. Steinbruner* .................................................. 413

**SECTION FIVE:**  
**Introduction: Clinical Care**

29. Trauma and Surgery  
   A – Introduction: Scene-Setting  
   *Walter Henny and Adriaan Hopperus Buma* ......................... 417  
   B – Trauma and Triage  
   *Walter Henny and Adriaan Hopperus Buma* ......................... 418  
   C – Soft Tissues and Skeleton  
   *Ralph de Wit and James M. Ryan* ................................. 428  
   D – Ballistics and Blast  
   *Ralph de Wit and David G. Burris* ............................... 438  
   E – Abdominal Complaints and Acute Surgical Emergencies  
   *Walter Henny and Adam Brooks* .................................. 446  
   F – Maxillofacial, Eye, and ENT  
   *Jan Roodenburg and Peter Dyer* .................................. 462  
   G – Head Injury  
   *Andrew Maas and Walter Henny* .................................. 471  
   H – Anaesthesia and Analgesia  
   *Chris Bleeker* ............................................................. 478

30. Acute Medical Problems  
   *David G. Burris, Manolis Gavalas, Claire Walford and Shautek Nazeer* ...... 493

31. Women’s Health  
   *Charles Cox and Hervinder Kaur* ................................... 527

32. Children’s Health  
   *M. Gavalas, S. Nazeer, Claire Walford, and A. Christodoulides* ..................... 541

33. Conflict, Terrorism, and Disasters:  
   The Psychosocial Consequences for Children  
   *Richard Williams and David Alexander* .......................... 553
### SECTION SIX: Introduction: Resources

34. Materials and Information  
   *James I.D.M. Matheson and Adriaan Hopperus Buma* .......................... 571  
   A – Checklists, Suppliers, and Specialist Advice ............................ 571  
   B – Publications ......................................................... 575  
   C – Internet ............................................................... 579

35. Rehabilitating Diagnostic Laboratories  
   *Timothy Healing* .......................................................... 591

36. Enablers and Confounders: Achieving the Mission  
   *Ken Millar* ..................................................................... 597

37. Ministry Overlaps Within Health Sectors  
   *Martin C.M. Bricknell and Donald F. Thompson* ......................... 611

38. Accreditation in Field Medicine  
   *Ken Millar* ..................................................................... 613

39. Humanitarian Work in the Era of Modernising Medical Careers  
   *James I.D.M. Matheson* .................................................. 619  
   Code of Behaviour ........................................................... 625

Index .................................................................................. 627
Contributors

David A. Alexander
Director Aberdeen Centre for Trauma Research
Professor of Mental Health at University of Aberdeen
Aberdeen
Scotland, UK

Steven A. Bland
Emergency Department
Queen Alexandra Hospital
Portsmouth
UK

Chris Bleeker
Institute for Defence and Partnership Hospitals
University Hospital Nijmegen
The Netherlands

Martin C.M. Bricknell
HQ Allied Rapid Reaction Corps
UK

Adam Brooks
Academic Department of Military Surgery & Trauma
RCDM
Edgbaston, Birmingham
UK

Andrew S.W. Bruce
Department of Orthopaedics
Doncaster Royal Infirmary
Doncaster, South Yorkshire
UK

David G. Burris
Uniformed Services University of the Health Sciences
Department of Surgery
Bethesda, MD
USA

Daloni A. Carlisle
Sevenoaks
Kent, UK

A. Christodoulides
Senior Specialist in Accident and Emergency Medicine
Larnaca General Hospital
Cyprus

Robin Cordell
1st (UK) Armoured Division
Herford, Germany

Charles W.F.M. Cox
Women's Unit, New Cross Hospital
Wolverhampton
West Midlands
UK

Ralph J. de Wit
Department of Surgery
Medisch Spectrum Twente
Enschede, The Netherlands

Sundeep Dhillon
Institute of Research and Development, Edgbaston
Birmingham, UK

Peter V. Dyer
Maxillofacial Unit
Royal Lancaster Infirmary
Lancaster, UK

Manolis Gavalas
Emergency Department
UCH, London
UK
Rowland Gill
Society of Apothecaries
London, UK

Iain C. Grant
British Antarctic Survey Medical Unit
Derriford Hospital
Plymouth, Devon, UK

Alan Hawley
The Army Medical Directorate
Former Army Staff College
Camberley, Surrey
UK

Timothy Healing
Independent Consultant in Medical Humanitarian Aid
Oxford, Oxfordshire
UK

Roderick James Heatlie
SO1 Joint Medical, Development Concepts and Doctrine Centre
MOD Shrivenham
Swindon, UK

Walter Henny
Colonel, Royal Netherlands Army reserve formerly University Hospital Rotterdam
The Netherlands

Maarten J.J. Hoejenbos
Surgeon Captain ret.
Royal Netherlands Navy
Aerdenhout, The Netherlands

Adriaan P.C.C. Hopperus Buma
Inspector General Military Health Care Ministry of Defence (MOD NL)
Hilversum, The Netherlands

Hervinder Kaur
Obstetrics & Gynaecology
Royal Wolverhampton NHS Trust
Wolverhampton, West Midlands
UK

Maria E. Kett
Leonard Cheshire Disability and Inclusive Development Centre
University College London
London
UK

Andrew I.R. Maas
Department of Neurosurgery
University Hospital Antwerp
Antwerp, Belgium

Peter F. Mahoney
Defence Professor Anaesthesia and Critical Care DMA&CC
Royal Centre for Defence Medicine
Birmingham, UK

Steve Mannion
Blackpool Orthopaedic Department
Blackpool Victoria Hospital
Blackpool, UK

Bob Mark
Frontier Medical Services
Vantage Point Business Park
Mitcheldean, Gloucestershire
UK

James I.D.M. Matheson
Faculty of Conflict and Catastrophe Medicine and Health, St George’s University of London
Tooting, London
UK

David C. McLoughlin
RAF Centre of Aviation Medicine
RAF Henlow
Bedfordshire, UK

Kenneth N.A. Millar
HQ Land Command
Wilton, Salisbury
UK

Gareth Moore
Combat Service Support Division
Headquarters Allied Rapid Reaction Corps
Mönchengladbach
Germany
Contributors

Kenny Morland
Aegis Defence Services
London, UK

Aroop Mozumder
COS Health (RAF)
RAF High Wycombe
High Wycombe
Buckinghamshire, UK

John F. Navein
Modernising Healthcare Partnership
Stratford-on-Avon, UK

Shauket Nazeer
University College Hospital
Cecil Flemming Building
London, UK

Simon J. O’Neill
ICS Limited, Great Hampden
Buckinghamshire, UK

Ian P. Palmer
Head of the Medical Assessment Programme
Ministry of Defence UK
Pensions, Compensation and Veterans’ Unit
Visiting Professor of Military Psychiatry
to the Institute of Psychiatry
London
UK

Anthony D. Redmond
Emergency Medicine
Manchester Medical School
Salford, Manchester
UK

Kenneth I. Roberts
Army Health Unit
Army Medical Directorate,
Camberley, Surrey
UK

Jan L.N. Roodenburg
Department of Maxillofacial Surgery
University Medical Centre Groningen
Groningen
The Netherlands

James M. Ryan
Emeritus Professor, Faculty of Conflict &
Catastrophe Medicine
St George’s University of London
Tooting, London, UK
&
Uniformed University of the Health Sciences
Department of Surgery
Bethesda, MD, USA

Tim S. Spicer
Aegis Defence Services
London, UK

Luke J. Staveley-Wadham
Department of Medicine
Brighton and Sussex Medical School
Brighton, East Sussex
UK

David R. Steinbruner
Emergency Department
Memorial Hospital, Colorado Springs
CO, USA

Donald F. Thompson
Biological Defense OSD/Combating WMD,
Washington, DC
USA

Alexander G. van Tulleken
Centre for International
Health and Development
University College London
London, UK

Garry Vardon-Smith
Department of Security and Risk Consultancy
Centreville, VA
USA

Claire S. Walford
University College London Hospitals NHS
Trust
A&E Department
London, UK

Richard Williams
Welsh Institute for Health and Social Care
University of Glamorgan
Glamorgan, Wales
UK
Chris Bleeker
Institute for Defence and Partnership Hospitals
University Hospital Nijmegen
The Netherlands

Walter Henny
Colonel, Royal Netherlands Army reserve
formerly University Hospital Rotterdam
The Netherlands

Maarten J.J. Hoejenbos
Surgeon Captain ret.
Royal Netherlands Navy
Aerdenhout, The Netherlands