

PREHOSPITAL and DISASTER MEDICINE

Médecine Pré-Hospitalière et Médecine de Catastrophe
Medicina Prehospitalaria y de Catástrofes
病院にかかるときの処置と
災害医療

Volume 16, Number 3

July–September 2001

Special Reports

Internally Displaced Persons
Chest Compressions for Asthma
Management of Disasters by Horizontal Organizations

Original Research

Health Surveillance following Floods
Relief Personnel in Complex Emergencies
Predictive Model for Mass Gatherings
Rural vs. Urban EMS Personnel
Effects of Hurricane Mitch in Honduras

Comprehensive Review

Topical Malfenide Hydrochloride in Wound Management

Continuing Education

Fred C. Cuny Memorial Series
Organizational Development

Abstracts of Scientific Papers

International Conference and Exhibition on
Asian Emergency Care and Defence Medicine
Singapore
September 2001

The Official Journal of the
World Association for Disaster and Emergency Medicine
and the
Nordic Society of Disaster Medicine

To the Rescue



NEW
ZOLL M Series
Defibrillator Monitor Pacemaker

**Smaller. Lighter.
Brighter. And
Really Tough.**

Life on the road is rough. You need a defibrillator that can handle it. Lightweight. Fast and ready. You need the M Series. Eleven pounds of power. Packaged to meet rigorous military design standards. With an FED display that is unmatched. View it from any angle. In any light. Anywhere. The M Series Defibrillator Monitor Pacemaker. New from ZOLL. Take it on the road.

**Call 800-348-9011
or visit www.zoll.com**

ZOLL
It's about time.

© 1998 ZOLL Medical Corporation, Burlington, MA 01803

Table of Contents

Editor's Corner

- Rising to the Challenge**114
Marvin L. Birnbaum, MD, PhD

Special Reports

- Internally Displaced Persons**116
Xavier Leus, MD, MPH, MS; Jane Wallace, BSE; Alessandro Loretto, MD

- External Chest Compression in the Management of Acute Severe Asthma—A Technique in Search of Evidence**124
Malcolm M. Fisher MBChB, FANZCA, FFICANZCA, MD, FRCA; Anne P. Whaley MA, MBBS, MRCP, FRCA; Roger R. Pye, MBBS, BSc, FRACP

- The Concept of Assisted Management of Large-Scale Disasters by Horizontal Organizations** ...128
Frederick M. Burkle, Jr., MD, MPH, FAAP, FACEP; Robin Hayden, BS

Original Research

- Emergency Health Surveillance After Severe Flooding in Louisiana, 1995**138
Cynthia L. Ogden, PhD; Lynn I. Gibbs-Scharf, MPH; Melvin A. Kohn, MD, MPH; Josephine Malilay, PhD

- Medical Relief Personnel in Complex Emergencies: Perceptions of Effectiveness in the Former Yugoslavia**145
Michael J. VanRooyen, MD, MPH; M. James Eliades, MD; Jurek G. Grabowski, MPH; M.E. Stress; Josip Juric, MD; Frederick M. Burkle, Jr., MD, MPH

- Mass Gathering Medicine: A Predictive Model for Patient Presentation and Transport Rates**150
Paul Arbon, PhD; Franklin H.G. Bridgewater, MB, BS; Colleen Smith, Med

- A Comparison of Rural and Urban Emergency Medical System (EMS) Personnel: A Texas Study** ..159
Chwee Lye Chng, PhD, FAAHB; John Collins, PhD; Starr Eaddy, PhD, EMT

- Effects of Hurricane Mitch on a Community in Northern Honduras**166
C.K. Guill, MD; W. X. Shandera, MD

Comprehensive Review

- Topical Mafenide Hydrochloride Aqueous Spray in Initial Management of Massive Contaminated Wounds with Devitalized Tissue**172
Janice A. Mendelson, MMSc, MD

Continuing Education

Frederick C. Cuny Memorial Series

Lesson 13: Organizational Development175

Fred C. Cuny

Supplement

Abstracts from the International Conference & Exhibition on Asian Emergency Care & Defence

Medicine

SingaporeS101

Guidelines for Authorsv

Guidelines for Advertisersvii

Calendarix

Editorial Office

University of Wisconsin-Madison USA
Marvin L. Birnbaum, MD, PhD, Editor-in-Chief

Associate Editor
Colleen Heinkel

Production Editor
Donna Schaan

Advertising
Mary Duss

Subscriptions
Colleen Heinkel

Editorial Office
University of Wisconsin-Madison

Publisher
World Association for Disaster and
Emergency Medicine
Madison, Wisconsin USA

Prehospital and Disaster Medicine (ISSN 1049-023X) is published quarterly in the months of January, April, July, and October by the World Association for Disaster and Emergency Medicine. *Prehospital and Disaster Medicine* incorporates the *Journal of the World Association for Emergency and Disaster Medicine* and the *Journal of Prehospital Medicine*.

Editorial Information: Submit manuscripts and editorial inquiries to: Marvin L. Birnbaum, PhD, MD, Editor, *Prehospital and Disaster Medicine*, Clinical Science Center, 600 N. Highland (E5/615), Madison, WI 53792, USA; Telephone/Facsimile (01) (608) 263-9641; E-mail: mlb@medicine.wisc.edu

Subscription Information: One year (four issues)—Institutions: (U.S.) \$90; Individuals: \$65; Canadian and international subscribers must add \$6 per year for postage. Claims of non-receipt or damaged issues must be filed within three months of cover date. POSTMASTER: Send address changes to *Prehospital and Disaster Medicine*, 732 N Midvale Blvd, Suite 201, Madison, WI 53705 USA.

Advertising Information: Mary Duss; *Prehospital and Disaster Medicine*, Clinical Science Center, 600 N. Highland (E5/615), Madison, WI 53792 USA

Abstracts: Comprehensively abstracted by the National Library of Medicine (Medline), Cumulative Index to Nursing and Allied Health (CINAHL) and Health Star Cumulative Index. The database is available online via BRS, Data-Star, and DIALOG, and on CD-ROM through CD Plus, Compact Cambridge and Silver Platter. Abstracts and search capability available on the Internet at: <http://pdm.medicine.wisc.edu>.

Copyright © 2001 by the World Association for Disaster and Emergency Medicine. Periodicals postage paid at Madison, WI and at additional mailing offices

EDITOR-IN-CHIEF

**Marvin L. Birnbaum, MD,
PhD**

University of
Wisconsin–Madison
Madison, Wisconsin USA

ASSOCIATE EDITORS

Wolfgang Dick, Dr Med
Johannes Gutenberg Universität
Mainz, Germany

Kimball Maull, MD
Carraway Injury Control
Institute
Birmingham, Alabama USA

Steven Rottman, MD
University of California–
Los Angeles
Los Angeles, California USA

PAST EDITORS

R Adams Cowley, MD
Deceased
(JWAEDM 1986–1987)

Peter Safar, MD
Safar Center
University of Pittsburgh
Pittsburgh, Pennsylvania USA
(JWAEDM 1981–1985)

**Michael Gunderson,
REMT-P**
Institute for Prehospital
Medicine
Tempe, Arizona USA

CONSULTING EDITORS

S. William A. Gunn, MD
European Centre for Disaster
Medicine
Geneva, Switzerland

Peter Safar, MD
Safar Center
University of Pittsburgh
Pittsburgh, Pennsylvania USA

Martin Silverstein, MD
Uniformed Services University
of the Health Sciences
Bethesda, Maryland USA

Ronald Stewart, MD
Victoria Hospital
Halifax, Nova Scotia, Canada

EDITORIAL BOARD

Jakov Adler, MD
Jerusalem, Israel

Ahmed Ammar, MD
Cairo, Egypt

V. Anantharaman, MD
Singapore General Hospital
Singapore

Bishara Atiyeh, MD
American University
Beirut, Lebanon

Jack Ayres, JD, REMT-P
University of Texas Health
Science Center
Dallas, Texas USA

Jan Babik, MD
Kosice Burn Center
Kosice-Saca, Slovakia

Peter Baskett, MD
Frenchay Hospital
Bristol, UK

Richard A. Bissell, PhD
University of Maryland–
Baltimore Campus
Baltimore, Maryland USA

**Fredrick M. Burkle, MD,
MPH**
Johns Hopkins University
Baltimore, Maryland USA

Jeff Clawson, MD
Medical Priority Consultants,
Inc.
Salt Lake City, Utah USA

Felipe Cruz-Vega, MD
Social Security
Mexico City, Mexico

Richard O. Cummins, MD
University of Washington
Seattle, Washington USA

Craig DeAtley, PA-C
George Washington University
Medical Center
Washington, D.C. USA

**Claude de Ville de Goyet,
MD**
Pan-American Health
Organization/World Health
Organization

James DuCharme, MD
Royal Victoria Hospital
Montréal, Québec Canada

Judith Fisher, MD
British Association for
Immediate Care
London, UK

Malcolm Fisher, MD
Royal North Shore Hospital
Sydney, Australia

Alain Flaujat, MD
Editor, Amelisap
Olonzao, France

Erik S. Gaull
TriData Corporation
Arlington, Virginia USA

Sergey Goncharov, MD
All-Russian Disaster Medicine
Center
Moscow, Russia

**Michael Gunderson,
REMT-P**
Institute for Prehospital
Medicine
Tempe, Arizona USA

Mark S. Johnson
Alaska Department of Public
Health
Juneau, Alaska USA

Mark Keim, MD
Center for Disease Control and
Prevention
Atlanta, Georgia, USA

Mark Klyachko, PhD
Center on Earthquake
Engineering
Petropavlovek, Kam, Russia

Radana Konigova, MD
Charles University
Prague, Czech Republic

Per Kulling, MD
Stockholm, Sweden

**Baxter Larmon, PhD,
EMT-P**
University of California–
Los Angeles Medical Center
Los Angeles, California USA

Todd J. LeDuc
Broward County Fire Rescue
Ft. Lauderdale, Florida USA

Prof. Li Zhong-Hao, MD
Beijing Emergency Medical
Center
Beijing, China

Susan D. McHenry
National Highway Traffic
Safety Administration
Washington, D.C. USA

Sergio Magalini, MD
Universita Cattolica del Sacro
Cuore
Rome, Italy

Michele Masellis, MD
Osp. Reg. Civico
Palermo, Italy

Eric Noji, MD
Center for Disease Control and
Prevention
Atlanta, Georgia, USA

**Karl-Axel Norberg, MD,
PhD**
Stockholm, Sweden

Muneo Ohta, MD
Senri Medical Center
Osaka, Japan

Paul Paris, MD
Center for Emergency
Medicine
University of Pittsburgh
Pittsburgh, Pennsylvania
USA

Georg Petroianu, MD
University of Heidelberg
Mannheim, Germany

R Abdul Radjak, MD
Ministry of Health
Jakarta, Indonesia

Daniel Rodriguez, MD
San Jose, Costa Rica

Leonid B. Roshal, MD
Institute of Pediatrics
Academy of Medical Sciences
Moscow, Russia

Don Schramm
University of Wisconsin
Madison, Wisconsin USA

Knut Ole Sundnes, MD
Baerum Hospital
Oslo, Norway

Frank Thomas, MD
Latter Day Saints Hospital
Salt Lake City, Utah USA

Shao Xiaohong, MD
Peking Union Medical College
Beijing, China

Samuel Stratton, MD
Los Angeles County
Los Angeles, California USA

Takashi Ukai, MD
Osaka City General Hospital
Osaka, Japan

Yasuhiro Yamamoto, MD
Department of Emergency and
Critical Medicine
Tokyo, Japan

Harsh Wardham, MD
Sundar Lal Jain Hospital
Delhi, India

The Australian Medical Disaster Coordination Group

Australasian College for Emergency Medicine

and

Monash University Centre for Ambulance & Paramedic Studies

as sponsoring organisations,

WARMLY INVITE



**THE WORLD ASSOCIATION FOR DISASTER AND
EMERGENCY MEDICINE**

(founded in 1976 as the Club of Mainz)

to

MELBOURNE AND AUSTRALIA

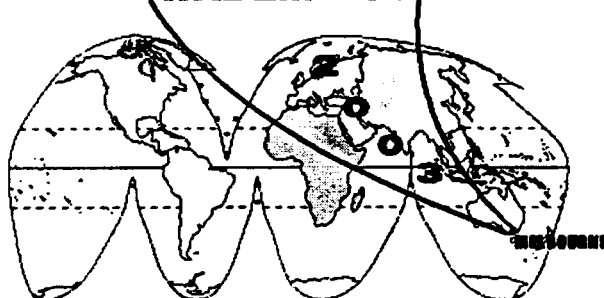
for its

13th WORLD CONGRESS ON

DISASTER AND EMERGENCY MEDICINE

"The Science and the Art of Medical Disaster Coordination"

WADEM - 13



"WADEM DOWN UNDER"