PREHOSPITAL and DISASTER MEDICINE

Médecine Pré-Hospitalière et Médecine de Catastrophe Medicina Prehospitalária y de Catástrofes

> 病院にかかる前の処置と 災害医療

Volume 13, Number 1

January-March 1998

Editorials

Anti-Personnel Landmines In-humane Acts

Special Reports

Health Crisis and the Internet Airborne Field Hospitals Hospital Disaster Management Simulation System

Original Research

Emergency Medical Services during Reconstruction Gender Issues and Partner Preferences among EMTs Ambulance Service Regulatory Programs in California Learning Styles and Preferences for EMCAs in Canada Death Education Instructors

> **Case Report** The Tale of the Tragedy of Neftegorsk

Brief Report Lung Function during Hoist Rescue Operations

Collective Review The Efficacy of Advanced Life Support

Continuing Education

Principles of Disaster Management

The Official Journal of the World Association for Disaster and Emergency Medicine and the https://doi.org/10.1017/51049023X00032921 Published o International Society for Disaster Medicine

To the Rescue





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



© 1998 ZOLL Medical Corporation, Burlington, MA 01803

Prehospital and Disaster Medicine

Official Journal of the World Association for Disaster and Emergency Medicine

Each Important Issue Brings You:

- Original research from international authors in the sciences of emergency and disaster medicine and management.
- The most up-to-date summaries (and criticism) of worldwide research in emergency medical services.
- Concise analysis of how emergency and disaster services operate around the world—and ways you can learn from them.

YES!	I'll Subscribe!	Save 15%!	Save 25%!
Individual Institutional	1 year (4 Issues) \$55 \$78	2 years (8 Issues) \$94 \$132	3 years (12 Issues) \$124 \$175
	you are entitled to the 2		ers of affiliated organization
□ Payment Enc Card#	losed 🗆 Bill Me		□ MasterCard Exp. Date
Signature			
Name			
Title			
Address			
City		State	Zip
	Outside U.S. add	l \$16 per subscription p	er year. BS97(

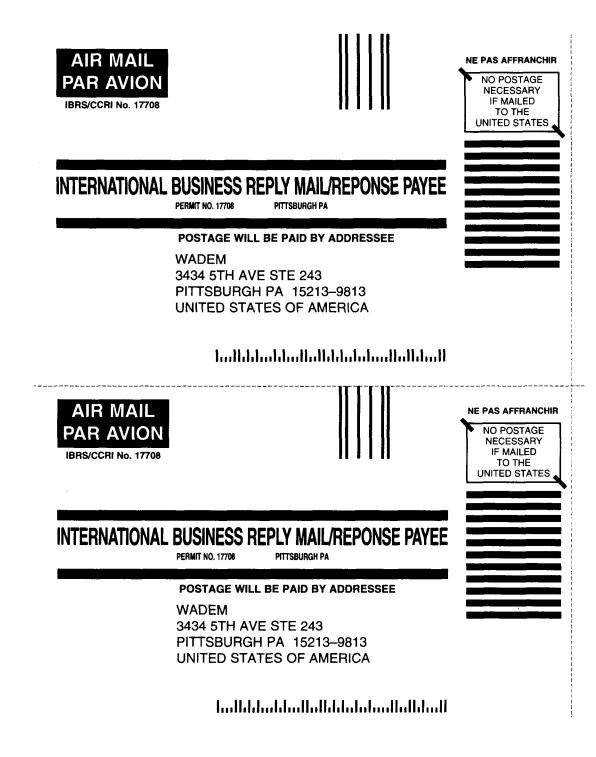
Get Your Subscription to Prehospital and Disaster Medicine FREE!

Here's how.

Join the World Association for Disaster and Emergency Medicine for only \$120 per year and receive:

- An annual subscription to Prehospital and Disaster Medicine.
- Preferred rates on registration at the World Congress and other WADEM meetings.
- •A semi-annual newsletter.
- A membership directory.
- Special Affiliated Society Membership advantages.

🗖 Yes, I'll Join!	🗖 Pleas	e Send Me	More Inform	ation
Payment Enclosed Card# Signature			-	
Name				
Title				
Address				
City		State	Zip	
				BM9701



VOLUME 13, NUMBER 1 JANUARY-MARCH 1998

Table of Contents

Editor's Corner Where-With-All
Editorials Anti-Personnel Landmines
Forging Freedom from Fear .4 Jaap A. Walkate
Special Report
Crisis Management on the Internet: A Snapshot of Progress in the Americas, November 1997 9 Pan American Health Organization
Airborne Field Hospital in Disaster Area: Lessons from Armenia (1988) and Rwanda (1994)14 Samuel N. Heyman, MD; Arie Eldad, MD; Michael Wiener, MD
Hospital Disaster Management Simulation System
Original Research Emergency Medical Services in the Reconstruction Phase following a Major Earthquake: A Case Study of the 1988 Armenia Earthquake
Gender Issues and Partner Preferences Among a Sample of Emergency Medical Technicians34 Sheryl Gonsoulin, RN, MN; C. Eddie Palmer, PhD, CCS
An Inventory of Ambulance Service Regulatory Programs in California
Distribution of Learning Styles and Preferences for Learning Environment Characteristics Among Emergency Medical Care Assistants (EMCAs) in Ontario, Canada
The Cadre of Death Education Instructors in Paramedic Programs

Continued

anuary-March 1998

Prehospital and Disaster Medicine

Case Report	
The Tale of the Tragedy of NeftegorskMark S. Johnson	
Brief Report Lung Function During Hoist Rescue Operation Rolf E. Haagensen, MD; Karl-Ake Sjöborg, MD; Sta	is
Collective Review The Efficacy of Advanced Life Support: A Revie Richard A. Bissell, PhD; Dawn Gyory Eslinger, MS;	ew of the Literature
Continuing Education	
Fredrick C. Cuny Memorial Series	Introduction
Guidelines for Authors Guidelines for Advertisers	
	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 incorpo- rates 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: Mar-
Editorial Office University of Wisconsin-Madison, USA	vin L. Birnbaum, PhD, MD, Editor, Prehospital and Disaster Medicine, Clini-
Marvin L. Birnbaum, MD, PhD, Editor-in-Chief	cal Science Center, 600 N. Highland (E5/615), Madison, WI 53792, USA; Telephone/Facsimile (01) (608) 263-9641; E-mail: mlb@medicine.wisc.edu
James Pointer, MD, Associate Editor-in-Chief	
Donna Schaan, Production Editor	Subscription Information: One year (four issues)-Institutions: (U.S.) \$78; Individuals: \$55; Canadian and international subscribers must add \$16 per
Ernesto A. Pretto, MD, Business Manager	year for postage. Claims of non-receipt or damaged issues must be filed with-
D 1 2	in three months of cover date. POSTMASTER: Send address changes to WADEM, 3434 5th Ave., Suite 243, Pittsburgh, PA 15260, USA.
Production Donna Schaan	
Donna ochaan	Advertising Information: Matt Wolfson, WADEM, 3434 5th Ave., Suite 243, Pittsburgh, PA 15260, USA.
Advertising and Subscriptions	
Matt Wolfson	Abstracts: Comprehensively abstracted by the Cumulative Index to Nursing and Allied Health (CINAHL). The database is available online via BRS,
World Association for Disaster and Emergency Medicine	and Anied Hearth (CHVAFIL). 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 Indexes available on the Internet at: http://pdm.medicine.wisc.edu.

Copyright © 1998 by the World Association for Disaster and Emergency Medicine.

Second-class circulation postage paid at Pittsburgh, PA and at additional mailing offices.

Standard Mail Enclosed.

ADVERTISING GUIDELINES

Advertising Policy and Guidelines

General Statement

Prehospital and Disaster Medicine (PDM) is a scientifically based, peer-reviewed, medical journal. It is the policy of the editorial office of PDM that all advertising material be sound scientifically and thus meet the following guidelines:

1) Claims must be supported scientifically, and references provided - either within the advertisement or made available upon request;

2) Every effort must be directed to minimize the likelihood of possible erroneous interpretations of the claims; and 3) Advertisements should be aimed at a sophisticated, medical audience.

Review

4

Each advertisement considered for publication is submitted to the editorial office for review. Any advertisement that does not meet the guidelines will be returned to the advertiser with suggestions for revisions; the editorial office is available for consultation at any time.

Use of these guidelines and the process used for review add to the credibility of PDM and of the product. Questions may be directed to Marvin L. Birnbaum, MD, PhD, Editor-in-Chief; (608) 263-9641; e-mail: mlb@medicine.wisc.edu

Prehospital and Disaster Medicine

Prehospital and Disaster Medicine

EDITOR-IN-CHIEF Marvin L. Birnbaum, MD, PhD University of Wisconsin-Madison Madison, Wisconsin USA

ASSOCIATE EDITOR-IN-CHIEF James Pointer, MD Novato, Califormia, USA

ASSOCIATE EDITORS Wolfgang Dick, Dr Med Johannes Gutenberg Universität Mainz, Germany

Kimball Maull, MD Loyola University Máywood, Illinois USA

Ernesto A. Pretto, MD University of Pittsburgh Pittsburgh, Pennsylvania 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, REMTP Rural Metro Corporation Scottsdale, Arizona USA (JPM 1987–88)

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 King Fahd University Hospital Al-Khobar, Saudi Arabia

V. Anantharaman, MD Singapore General Hospital Singapore

Paul B. Anderson Lincoln Medical Education Foundation Rural EMS Institute Lincoln, Nebraska USA

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

Fabrizio Bassani, MD World Health Organization Geneva, Switzerland

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

Fredrick M. Burkle, MD,

John A. Burns School of Medicine and School of Public Health University of Hawaii Honolulu, Hawaii USA

Jeff Clawson, MD Medical Priority Consultants, Inc.

Salt Lake City, Utah USA

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

Craig DeAtley, PA-C George Washington University Medical Center

Washington, D.C. USA Prof. Jan de Boer, MD

International Society for Disaster Medicine Free University Hospital Amsterdam, The Netherlands

Marcel Dubouloz, MD Genève, Switzerland

James DuCharme, MD Royal Victoria Hospital Montréal, Quèbec 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

George Foltin, MD Bellevue Hospital Center New York University Medical Center

New York, New York USA Eric 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

Borje Hallen, MD Karolinska Sjukhuset Stockholm, Sweden

Connie A. Jastremski, RN, MS

Syracuse, New York USA Mark S. Johnson Alaska Department of Public Health

Juneau, Alaska USA Mark Klyachko, PhD Center on Earthquake Engineering

Petropavlovek, Kam. Russia Radana Konigova, MD Charles University Praque, Czech Republic

Per Kulling, MD Swedish Poison Information Centre

Stockholm, Sweden John C. Lane, MD University of Campinas Medical Center Sao Paolo, Brazil

Baxter Larmon, PhD, EMT-P

University of California-Los Angeles Medical Center Los Angeles, California USA

Todd J. LeDuc Broward County Commission Ft. Lauderdale, Florida USA

Sten Lennquist University Hospital Linköping, Sweden

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

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

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

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

Edward A. Michelson, MD Northwestern University Chicago, Illinois USA Michael Moles, MD

Prince Philip Hospital Hong Kong University Hong Kong

Professor B. Nemitz University Hospital Amiens, France

Eric Noji, MD World Health Organization Geneva, Switzerland

Karl-Axel Norberg, MD Stockholm, Sweden

Judy Olson, BSN, MEd University of Wisconsin–Madison Madison, Wisconsin USA

James O. Page, JD Emergency Care Information Center Carlsbad, California USA

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

Lawrence W. Rose, MD Bethesda, Maryland USA

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

Sandra M. Schneider, MD University of Rochester Medical Center Rochester, New York USA

Don Schramm Disaster Management Center 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 Chinese Academy of Medical Science Beijing, China

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

Takashi Ukai, MD Osaka City General Hospital Osaka, Japan

Vincent Verdile, MD Albany Medical Center Albany, New York USA

Yasuhiro Yamamoto, MD Department of Emergency and Critical Medicine Tokyo, Japan Donald Yealy, MD University of Pittsburgh Pittsburgh, Pennsylvania USA

Harsh Wardham, MD Sundar Lal Jain Hospital Delhi, India

https://doi.org/10.1017/S1049023X00032921 Published online by Cambridge University Press

EDITORIAL BOARD

Call for Abstracts 11th World Congress on Disaster and Emergency Medicine Osaka, Japan 11–13 May 1999

SCIENTIFIC PROGRAM

The Scientific program will focus on Emergency Medicine, Prehospital Care, and Disaster Medicine. It will be composed of Plenary Sessions, Symposia, Panel Discussions, Free Paper Sessions and Poster Sessions. The theme of the symposia and panel discussions are planned as follows:

Disaster Medicine Great Hanshin-Awaji Earthquake Anti-personnel Landmines Warning Systems Volcanic Eruptions Responses for Radiation Accidents Mass Evacuation for War and Civil Conflict Quality Management for Disaster Medicine International Assistance *Emergency Medicine* Multiple-trauma Patients New CPR Fluid Therapy in the Prehospital Care Advanced Therapy of AMI Quality Management for Emergency Medicine EMS Systems Development

PARTICIPATION

World Association for Disaster and Emergency Medicine members and non-WADEM members, nurses, paramedical personnel, non-medical personnel concerned with emergency/disaster medicine and accompanying persons.

ABSTRACTS

Abstracts must be written in English and submitted by e-mail or post to the 11th WADEM Secretariat. The deadline for receiving abstracts and application forms is 30 November, 1998. The secretariat will send a letter with the results of the review process and more detailed information by the end of January 1999. All inquiries should be submitted to the Secretariat of 11th World Congress of WADEM, 1-1,Tsukumodai, Suita City, Osaka 565- 0862 Japan; Telephone: 81-6-834-7364; Fax: 81-6-872-1846; E-mail: <u>wadem11@osk3.3wab.ne.jp.</u> Abstract forms also are available in the Calendar Section on the PDM web site: http://pdm.medicine. wisc.edu

GRANTS

Some funds are available to assist with the expenses in attending the 11th WADEM World Congress for those persons whose abstracts have been selected for presentation. Those wishing to apply for assistance should send a letter stating the reasons, as well as their curriculum vitae, along with the Abstract Application Form, to the 11th WADEM secretariat by 30 November, 1998. Selection will be based on need. Notification of the results will be provided before March 1999.

REGISTRATION and ACCOMODATIONS

Early Registration Discount and WADEM Discount provided. Register with the Secretariat of the 11th World Congress.

Travel arrangements available through the Hanshin Travel Service, No. 3-19, Umeda 2-chome, Kitaku, Osaka 530-0001 Japan-Tel: 81-6-347-6003; Fax: 81-6-345-2011; e-mail: mh59157@her.hanshin.co.jp

FOR MORE INFORMATION, see PDM Home Page: http://pdm.medicine.wisc.edu

Organization of Scientific Papers

- 1. Abstract-Concise summaries in the following format: Introduction: need for the study; Hypothesis: what was tested (experimental studies only) If qualitative, statement of problem addressed; Methods: summary of methods used with subsections as appropriate (type of subjects, number of subjects, study design, statisti-cal tests; **Results:** summary of principal findings; **Conclusion:** implications of findings. If the work is qualitative, the types of instruments used and the scope and type of work must be annotated. If a disaster is involved, the dates, type, scope, location, and numbers of casualties and deaths must be summarized in tabular
- form for indexing. Do not exceed 375 words. 2. Introduction—Provides justification for the effort with appropri-ate references annotated. If quantitative, the concluding sentence should define the hypothesis. If qualitative, the problem should be
- stated clearly. 3. Methods—The Methods section should be descriptive to a degree that other investigators would be able to reproduce the findings. Statistical methods used must be annotated. Approval by an Institutional Review Committee must be included when appropriate
- 4. Results-Results must be written in text and may be accompanied by tables and figures. The text must explain all data included in tables and figures, but should not be unnecessarily redundant. All direct results from the study must appear in this section. No discussion of the results may be included.
- 5. Discussion—The Discussion should provide an interpretation of the Results in terms of meaning and application. Results should not be repeated. Computations or extrapolations that may help explain the results may be provided. Limitations of the study should be defined and suggestions for future research should be included. References that support or negate explana-
- tions provided are appropriate. 6. Conclusion—The findings in terms of implications for the practice of prehospital, emergency, and/or disaster medicine should be summarized in a few sentences.

General Submission Requirements

- 1. Previous Publication—A manuscript will be considered only if it has not been published previously and is not under consideration for publication elsewhere.
- 2. Copyrights—After acceptance for publication, the copyright to the manuscript rests with Prehospital and Disaster Medicine.
- 3. Cover Letter-Each manuscript should be accompanied by a cover letter from the primary author who attests to the original nature of the material, that the paper has not been published elsewhere, is not under consideration by any other publication, and that the authors agree to transfer copyright to Prehospital and Disaster Medicine if accepted for publication. The institution(s) in which the work was performed, the sponsoring institution(s), and the respective departments must be annotated. If the work was supported all or in part by grants or endowments, the granting institution(s) should be indicated. If the paper has been, or is to be presented orally, indicate the title of the forum, sponsoring institution, and the date of presentation. Specify the name of the author with whom any correspondence should be directed, and, correspondence street address, telephone number, telefacsimile (FAX) number, and e-mail address if appropriate.
- Language—All manuscripts must be submitted in English.
 Paper, Margins, and Type Style—Manuscripts should be submitted on plain white paper, 8.27" by 11.69" (A4 210 mm by 297) mm). Do not right justify the margins. To allow the use of optical character scanners that read the manuscripts into the computers, use standard type styles. Do not use bold, italicized, superscript, or subscript characters, and make no extraneous marks on the printed manuscript page. Double space all text.
- 6. Cover Page--Each manuscript should include a cover page that includes the title of the paper, first names, middle initials, last names, and highest academic degrees of all authors. Reiterate from the cover letter the name of the author with whom any correspondence should be directed and the street address, telephone number, telefacsimile (FAX) number, and e-mail address if appropriate. Do not indicate author names or institutions anywhere in the manuscript other than on the cover page.

- 7. Key Words-On a separate page, show the title of the manuscript and eight or more key words or phrases to facilitate indexing.
- 8. Generic Names—Whenever possible, use generic names. Brand names may be indicated parenthetically and the name and location of the manufacturer must be provided in parentheses followed by a generic description of the medication, drug, product, or equipment. Also do not use We or Our when describing the researchers. The fact that the research was conducted by the authors is implicit.
- 9. References References should be cited in sequential order in which they appear in the text. All references should be parenthetically cited by full-sized Arabic numbers in the text, tables, and legends for illustrations. Titles of journals referenced must be annotated using standard Index Medicus abbreviations and must be underscored. Unpublished data or personal communications should be indicated in parentheses directly following the reference and should include the dates of such correspondence (Personal Communication, Safar P, October 1989). The following format for references should be used:

Journals-White SJ, Hamilton WA, Veronesi JF: Comparison of field techniques used to pressure infuse intravenous fluids. Prehospital and Disaster Medicine 1991;6:429-434.

Books-Schwartz GR, Safar P, Stone JH, et al, eds: Principles and Practice of Emergency Medicine. 2d ed. Philadelphia: W. B. Saunders Co., 1985, pp 1198–1202. *Chapters*—Lindberg R: Pathology of Head Injuries. In: Cow-

ley RA, Trump BF (eds), <u>Pathophysiology of Shock.</u> Baltimore: Williams and Wilkins, 1982, pp 588-592.

- 10. Abbreviations-Abbreviations for groups of words may be used only for unusually cumbersome titles or for commonly accepted abbreviations. Whenever such abbreviations are used, they must be annotated with the initial mention of words within the manuscript followed by the abbreviation in parentheses. Standard scientific abbreviations may not be sub- or super-scripted. All hemodynamic pressures should be expressed in mmHg. Gas tensions should be expressed in torr.
- 11. Tables-Tables must be numbered as referenced in the text and each typed on a separate page, placed at the end of the manuscript. Do not include tables in the body of the text.
- 12. Figures-Illustrative materials must be of professional quality and camera ready (e.g., glossy camera-ready reproductions or PMTs). All such materials should be submitted as large as possible, up to 8.27" by 11.69" (A4 210 mm by 297 mm) and have sufficient resolution for clarity when subsequently reduced to 3inch margin size. Color illustrations must be discussed with the editor. Legends of figures are to be typed with double spacing on a separate page with reference to the number of the figure. The manuscript title, figure number, and an arrow to indicate the top of the illustration must be annotated on the back of each figure.
- 13. Permissions-Illustrations or tables from other publications must be accompanied by written permission from the author and publishers of the document in which they originally appeared.
- 14. Electronic Versions of Manuscripts-If a personal computer word processor was used to prepare the manuscript, a diskette with the name of the manuscript document file must accompany the manuscript once it has been accepted for publication. If possible, send two copies of the file, one in the word processor program and the other in ASCII file format. A 3.5-inch, double side, double density diskette is preferred from either a MS-DOS or Macintosh system. Please indicate the type of computer (IBM clone, Apple Macintosh Classic, etc.), the name of the word processor software program, and the name of the disk files. Please label the disk to include the paper's title and the primary author's surname. 15. Copies—Include four copies and one original.

Additional Information

Contact Marvin L. Birnbaum, MD, PhD, Editor, Prehospital and Disaster Medicine, Clinical Science Center (E5/615), 600 N. Highland, Madison, WI 53792 USA, (608) 263-9641; e-mail: mlb@medicine.wisc.edu.

Website: http://pdm.medicine.wisc.edu

Prehospital and Disaster Medicine