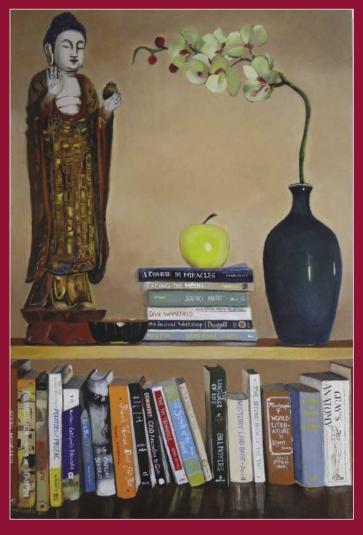
PREHOSPITAL and DISASTER MEDICINE

Volume 27, Number 5

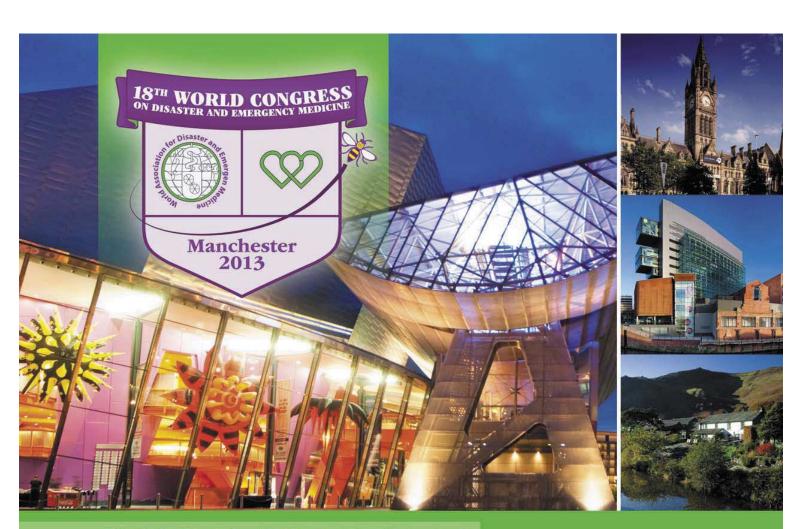
October 2012





CAMBRIDGE UNIVERSITY PRESS

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



SAVE THE DATE 28th to 31st May 2013

18th World Congress on Disaster and Emergency Medicine | Manchester, UK World Association for Disaster and Emergency Medicine (WADEM)

On behalf of WADEM, the Local Organising Committee of the 18th World Congress would like to invite you to join us in Manchester for this dynamic Congress. The focus will be on standards, practice and assessment in International Development, Disaster Response and Humanitarian Assistance.

There will be keynote addresses by leading global authorities, panels exploring the issues and extensive discussion in both a cosmopolitan and historical city environment.

Participants are invited to contribute by presenting their research papers orally and by poster to demonstrate new and challenging research in the field. There will be a range of pre and post congress events and short courses for education and training.

Key Dates

Abstract submission opens
On-line registration opens
Abstract submission deadline
Author notification of acceptance
Early registration deadline
Regular registration deadline



www.wcdem2013.org

OCTOBER 2012

Table of Contents

Editorial
Plagiarism and Copyright Violation
Original Research
Mental Health Needs Assessment After the Gulf Coast Oil Spill—Alabama and Mississippi, 2010
A Redundant Resource: A Pre-Planned Casualty Clearing Station for a FIFA 2010 Stadium in Durban
Posttraumatic Stress in Professional Firefighters in Japan: Rescue Efforts after the Great East Japan Earthquake (Higashi Nihon Dai-Shinsai)
The Effect of the AED and AED Programs on Survival of Individuals, Groups and Populations
Mobile Decontamination Units—Room for Improvement?
Disaster Preparedness in an Australian Urban Trauma Center: Staff Knowledge and Perceptions
Willingness to Participate in Disaster Management Among Indian Dental Graduates
Disaster Metrics: Quantitative Estimation of the Number of Ambulances Required in Trauma-Related Multiple Casualty Events
Assessing EMS Scope of Practice for Utility and Risk: The New Mexico EMS Interventions Assessment Project, Phase One Results
Marc-David Munk, MD, MPH, MHCM; Lynne Fullerton, PhD; Laura Banks, DVM, MPH; Sarah Morley, MLS; Robert McDaniels, MS; Stuart Castle, MPH; Kyle Thornton, EMT-P; Michael E. Richards, MD
Differences in Medical Care Usage between Two Mass-Gathering Sporting Events
Hospital in the Field: Prehospital Management of GHB Intoxication by Medical Assistance Teams

ii Table of Contents

Comprehensive Review	
Intraosseous Access in the Prehospital Setting: Literature Review	468
The Clinical Application of Mobile Technology to Disaster Medicine Timothy Case, MA, MPhil, MBBChir; Cecily Morrison, PhD; Alain Vuylsteke, MD	473
Brief Report Cambodian Bon Om Touk Stampede Highlights Preventable Tragedy. Edbert B. Hsu, MD, MPH, Frederick M. Burkle, Jr., MD, MPH, DTM	481
Epidemiological Surveillance Linked to an Outreach Psychological Support Program after the Xynthi Storm in Charente-Maritime, France, 2010	483
Musculoskeletal Injuries Among Victims of the Battagram, Pakistan Earthquake in October 2005 Ghulam Mustafa Kaim Khani, FCPS; Akhtar Baig, FCPS; Mujahid Humail, FRCS; Manzoor Memon, MS; M.A. Quarashi, FRCS	489
Disaster Curricula in Medical Education: Pilot Survey Jared Smith, BS, NREMT-P; Matthew J. Levy, DO, MSc; Edbert B. Hsu, MD, MPH; J. Lee Levy, MD, MSc	492

Editorial Office

World Association for Disaster and Emergency Medicine (WADEM), Madison, Wisconsin USA

> Editor-in-Chief Samuel J. Stratton, MD, MPH

> > **Development Editor**Mona Johnson

Editorial Assistant Jackson Helmer

Publisher

Cambridge University Press 32 Avenue of the Americas New York, NY 10013-2473 USA Prehospital and Disaster Medicine (ISSN 1049-023X) is published bimonthly in the months of February, April, June, August, October, December, by Cambridge University Press for 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: All manuscripts must be submitted through the Journal's online submission platform, ScholarOne Manuscripts: http://mc.manuscriptcentral.com/pdm.

2012 Subscription Information: Institutions print and electronic: US\$516.00 in the USA, Canada, and Mexico; UK£313.00+VAT elsewhere. Institutions electronic only: US\$375.00 in the USA, Canada, and Mexico; UK£227.00+VAT elsewhere. Individuals print and electronic: US\$153.00 in the USA, Canada, and Mexico; UK£93.00+VAT elsewhere. Individuals electronic only: US\$113.00 in the USA, Canada, and Mexico; UK£68.00+VAT elsewhere. Single Part: US\$94.00 in the USA, Canada, and Mexico; UK£57.00+VAT elsewhere. Prices include postage and insurance. Airmail or registered mail is extra. Back volume prices are available upon request. Claims of non-receipt or damaged issues must be filed within three months of cover date.

Comprehensively indexed 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 DIA-LOG, 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 © 2012 by the World Association for Disaster and Emergency Medicine.

Cover Artwork

My Bookshelf, an oil painting by Gary Cucchiaro

Gary Cucchiaro is a mostly self-taught artist whose passion for art dates back to his elementary school days. He resides in Southern California. For more information, please email garycucc@gmail.com.

EDITORIAL BOARD

Prehospital and Disaster Medicine

EDITOR-IN-CHIEF

Samuel Stratton, MD, MPH

University of California-Los Angeles

Los Angeles, California, USA

EMERITUS EDITOR-IN-CHIEF

Marvin L. Birnbaum, MD, PhD

University of Wisconsin-Madison Madison, Wisconsin, USA

DEPUTY EDITORS David A. Bradt, MD, MPH

Royal Melbourne Hospital Melbourne, Australia

Geert Seynaeve, MD

Brussels, Belgium

Darren Walter

University Hospital of South Manchester Manchester, UK

ASSOCIATE EDITORS Wolfgang F. Dick, MD, PhD

Mainz, Germany

Kimball Maull, MD, FACS

Department of Surgery Hamad General Hospital Doha, Qatar

Steven Rottman, MD

University of California– Los Angeles Los Angeles, California, USA

SECTION EDITOR

Humanitarian Affairs

Frederick M. Burkle, MD, MPH, DTM

Senior Fellow and Scientist, Harvard Humanitarian Initiative Harvard University Cambridge, Massachusetts, USA Senior Public Policy Scholar Woodrow Wilson International Center for Scholars

EDITORIAL BOARD

Carol Amaratunga, PhD

Adjunct Professor School of Child and Youth Development University of Victoria Research Associate of the Justice Institute of British Columbia

Paul Arbon, PhD

Canada

School of Nursing and Midwifery Flinders University Adelaide, South Australia

Frank Archer, MD

Monash University Melbourne, Australia

Jeffery Arnold, MD

Department of Emergency Medicine Santa Clara Valley Medical Center San Jose, California, USA

Yaron Bar-Dayan, MD, MHA

Israeli Defense Forces Home Front Command Or-Yehuda, Israel

Joost Bierens, MD, PhD

Amsterdam, The Netherlands

Tareg Bey, MD

Department of Emergency Medicine University of California-Irvine, Irvine, California, USA

Richard A. Bissell, PhD

University of
Maryland-Baltimore
Baltimore, Maryland, USA

Felipe Cruz-Vega, MD

Office of Social Security Mexico City, Mexico

Robert A. De Lorenzo, MD, MSM, FACEP

Medical Corps United States Army San Antonio, Texas, USA

Claude de Ville de Goyet, MD

Brussels, Belgium

Judith Fisher, MD

Consultant Washington, DC, USA

Erik S. Gaull

George Washington University Washington, DC, USA

Michael Gunderson

President Integral Performance Solutions Lakeland, Florida, USA

Keith Hotlermann, MD

George Washington University Washington, DC, USA

Mark Johnson, MPA

Retired Chief of EMS Juneau, Alaska, USA

Mark Keim, MD

Center for Disease Control and Prevention Atlanta, Georgia, USA

Todd J. LeDuc, EMT-P

Deputy Fire Chief Broward Sheriff Fire Rescue Ft. Lauderdale, Florida, USA

Gloria Leon, PhD

Professor of Psychology University of Minnesota Minneapolis, Minnesota, USA

Graeme McColl

Emergency Management Team National Health Board Ministry of Health Christchurch, New Zealand

Andrew Milsten, MD, MS, FACEP

University of Massachusetts Emergency Medicine Baltimore, Maryland, USA

Jerry Overton

President/CEO
Chairman
IAED Emergency Clinical
Advice System & Standards
Board
Salt Lake City, Utah, USA

Paul Paris, MD

Center for Emergency Medicine University of Pittsburgh Pittsburgh, Pennsylvania, USA

Lynda Redwood-Campbell, MD, MPH

Department of Family Medicine McMaster University, Hamilton, Ontario, Canada

Edward Ricci, PhD

University of Pittsburgh Pittsburgh, Pennsylvania, USA

Leonid Roshal, MD

Institute of Pediatrics Academy of Medical Sciences Moscow, Russia

Don Schramm

University of Wisconsin-Madison Madison, Wisconsin, USA

Knut Ole Sundnes, MD

Baerum Hospital Oslo, Norway

Takashi Ukai, MD

Hyogo Emergency Medical Center Hyogo, Japan

Michael Van Rooyen, MD

Associate Professor, Harvard Medical School, Brigham and Women's Hospital Boston, Massachusetts, USA Aims and Scope: The mission of *Prehospital and Disaster Medicine* (PDM) is the distribution of information relevant to the practice of out-of-hospital and in-hospital emergency medical care, disaster health, and public health and safety. PDM provides an international forum for the reporting and discussion of scientific studies, both quantitative and qualitative, that have relevance to the above practices. The major objectives are: (1) the improvement of the types and quality of the care delivered to patients with perceived medical emergencies and to victims of multi-casualty accidents or disasters, including the public health and safety aspects of such events; and (2) the prevention and/or mitigation of the occurrence of such events and of the effects of these events upon the human population and environment.

Editorial Office: Prehospital and Disaster Medicine, 3330 University Avenue, Suite 130, Madison, Wisconsin 53705, USA. Telephone: (+1) (608) 819-6604; Facsimile (+1) (608) 819-6055; E-mail: pdm@wadem.org

Publishing, Production, and Advertising Office: Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473, United States.

Subscription Offices: (for USA, Canada, and Mexico) Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473, United States; (for UK and elsewhere) Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK.

2012 Subscription Information: Prehospital and Disaster Medicine (Print ISSN 1049-023X; Electronic ISSN 1945-1938) is published bimonthly in the months of February, April, June, August, October, and December by Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473, United States/Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK for the World Association for Disaster and Emergency Medicine. 2012 Annual subscription rates: Institutions print and electronic: US\$516.00 in the USA, Canada, and Mexico; UK£313.00+VAT elsewhere. Institutions electronic only: US\$375.00 in the USA, Canada, and Mexico; UK£227.00+VAT elsewhere. Individuals print and electronic: US\$153.00 in the USA, Canada, and Mexico; UK£68.50+VAT elsewhere. Single Part: US\$94.00 in the USA, Canada, and Mexico; UK£57.00+VAT elsewhere. Prices include postage and insurance. Airmail or registered mail is extra. Back volume prices are available upon request.

Submissions: All manuscripts must be submitted through the Journal's online submission platform, ScholarOne Manuscripts, at http://mc.manuscriptcentral.com/pdm. Please review the Author Instructions and Author Checklist available online before finalizing a submission.

Indexing: National Library of Medicine (MEDLINE), Cumulative Index to Nursing and Allied Health (CINAHL), and Heath Star Cumulative Index.

© World Association for Disaster and Emergency Medicine 2012. All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms, and contacts are available at: http://www.cambridge.org/rights/permissions/permission. htm. Permission to copy (for users in the United States) is available from Copyright Clearance Center Transactional Reporting Service, 222 Rosewood Drive, Danvers, MA 01923, USA. http://www.copyright.com, email: info@copyright.com.

Printed in United States of America on acid-free paper.

Postmaster: Send address changes in the USA and Canada to *Prehospital and Disaster Medicine*, Subscription Department, Cambridge University Press, 100 Brook Hill Drive, West Nyack, NY 10994-2133, USA.

Periodical postage rate paid at New York, NY and additional mailing offices.

JOURNALS

Go Mobile

CJO Mobile (CJOm) is a streamlined Cambridge Journals Online (CJO) for smartphones and other small mobile devices



- Use CJOm to access all journal content including FirstView articles which are published online ahead of print
- Access quickly and easily thanks to simplified design and low resolution images
- Register for content alerts or save searches and articles – they will be available on both CJO and CJOm
- Your device will be detected and automatically directed to CJOm via: journals.cambridge.org

