PREHOSPITAL and DISASTER MEDICINE

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

プレホスピタル(病院前救護)と災害医療

Volume 25, Number 2 March–April 2010



http://pdm.medicine.wisc.edu

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

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

Dräger



Dräger – technology for life

Fighting to save and protect lives, whilst maintaining the highest possible level of safety, requires uncompromising performance. Dräger offers solutions to meet today's challenges; providing products and services that protect, support and monitor the wellbeing of your patients in any situation. Visit our website to discover how our solutions can meet your challenges. **www.draeger.com**

Dräger. Technology for Life®

PDF1687

https://doi.org/10.1017/S1049023X00007787 Published online by Cambridge University Press

VOLUME 25, NUMBER 2
MARCH - APRIL 2010

Table of Contents

Editor's Corner

STOP!!!!! 97
Marvin Birnbaum, MD, PhD

Special Report

Pandemic Influenza Triage in the Clinical Setting 99
Steven J. Rottman, MD; Kimberly I. Shoaf, DrPH; Jennifer Schlesinger, MPH; Eva Klein Selski, BS; Joey Perman, MPP; Kerry Lamb, MPH; Janet Cheng, MPH
-WITH-
Editorial Comments by Jennifer E. Miller, MS (Bioethics) 105

Original Research

Psychosocial Effects of Patient Surge in Large-Scale Emergencies: A Quality Improvement Tool for Hospital and Clinic Capacity Planning and Response 107
Lisa S. Meredith, PhD; James L. Zazzali, PhD, MPH; Sandra Shields, LMFT, CTS; David P. Eisenman, MD, MSPH; Halla Alsabagh, MSW
-WITH-
Editorial Comments by Col. (Reserve) Yaron Bar-Dayan, MD, MHA 105

Evaluation of Medical Command and Control Using Performance Indicators in a Full-Scale, Major Aircraft Accident Exercise 118
Dan Gryth, MD, PhD; Monica Rådestad, RN; Heléne Nilsson, RN; Ola Nerf, RN; Leif Svensson, MD, PhD; Maaret Castrén, MD, PhD; Anders Rüter, MD, PhD
-WITH-
Editorial Comments by Marvin L. Birnbaum, MD, PhD 124

Recurrent Medical Response Problems during Five Recent Disasters in the Netherlands 127
Jorine Juffermans, MD, MPH; Joost J.L.M. Bierens, MD, PhD, MCDM
-WITH-
Editorial Comments by Samuel J. Stratton, MD, MPH 137

Physical Health of Members of the Public Who Experienced Terrorist Bombings in London on 07 July 2005 139
Michael A. Catchpole, FRCP; Oliver Morgan, PhD

Where There Are No Emergency Medical Services—Prehospital Care for the Injured in Mumbai, India 145
Nobhojit Roy, MS, MPH; V. Murlidhar, MS; Ritam Chowdhury, MBBS, MPH; Sandeep B. Patil, MS; Priyanka A. Supe, MBBS; Poonam D. Vaishnav, MBBS; Arvind Vatkar, MBBS

Describing a Problem: Rear Seatback Failure and Unsecured Cargo 152
Samuel P. Mandell, MD; Robert Kaufman, BS; Christopher D. Mack, MS; Eileen M. Bulger, MD

Paramedic Intercepts with Basic Life Support Ambulance Services in Rural Minnesota 157
Lucas A. Myers, NREMT-P; Christopher S. Russi, DO, FACEP; Jeffrey L. Schultz, NREMT-P

Canadian Operational and Emotional Prehospital Readiness for a Tactical Violence Event 164
Daniel Kollek, MD, CCFP (EM); Michelle Welsford, MD, ABEM, FACEP, FRCPC; Karen Wanger, MDCM, FRCPC, FACEP
-WITH-
Editorial Comments by Ashley G. Anderson, Jr., MD, MS 170

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

Can Undergraduate Paramedic and Nursing Students Accurately Estimate Patient Age and Weight? 171
Mr. Brett Williams, MHlthSc, PhD (Candidate); Dr. Malcolm Boyle, MClinEpi, PhD; Prof. Peter O'Meara, PhD

Special Report

Use of Alternate Healthcare Facilities as Alternate Transport Destinations during a Mass-Casualty Incident 178
Erik S. Glassman, MS, CCEMT-P, FP-C, EMT-T; Steven J. Parrillo, DO, FACOEP, FACEP

Case Report

Mass-Gathering Medical Care: Retrospective Analysis of Patient Presentations over Five Years at a Multi-Day Mass Gathering 183
William D. Grant, EdD; Nicholas E. Nacca, BS; Louise A. Prince, MD, FACEP; Jay M. Scott, BS, EMT-P

Brief Report

Increased Incidence of Domestic Animal Bites following a Disaster Due to Natural Hazards 188
G. Scott Warner, MD, FACP, FCCP

Editorial Office
University of Wisconsin-Madison USA

Editor-in-Chief
Marvin L. Birnbaum, MD, PhD

Production Editor
Dana Schmidman

Editorial Assistants
Sarah Covington
Jackson Helmer

Advertising
Andrew Lavelle

Subscriptions
Andrew Lavelle

Web Editor
Jackson Helmer

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

Prehospital and Disaster Medicine (ISSN 1049-023X) is published bimonthly in the months of January, March, May, July, September, and November 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 Ave, Mail Code 6733, Madison, WI 53792 USA; Telephone (+1) (608) 263-9641; Facsimile (+1) (608) 265-3037; E-mail: mlb@medicine.wisc.edu or pdm@medicine.wisc.edu.

Subscription Information: One year (six issues)—Institutions: [US] $400; Individuals: $120; International subscribers 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*, PO Box 55158, Madison, WI 53705-8958 USA.

Advertising Information: Andrew Lavelle; *Prehospital and Disaster Medicine*, Clinical Science Center, 600 N. Highland (6733), Madison, WI 53792 USA; E-mail: pdm@medicine.wisc.edu.

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 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 © 2010 by the World Association for Disaster and Emergency Medicine.
Periodicals postage paid at Madison, WI and at additional mailing offices.

STATEMENT OF OWNERSHIP

Statement of Ownership—Management and Circulation—Required by 39 U.S.C. 3685
1. Publication title: Prehospital and Disaster Medicine
2. Publication number 1049-023X
3. Filing date: 23 November 2009
4. Issue frequency: Bi-Monthly
5. Number published annually: 6
6. Annual subscription price: $120.00 Individual/$400.00 Institution
7. Mailing address of known office of publications: 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
8. Mailing address of the headquarters of the general business office of the publisher: Same.
9. Publisher: World Association for Disaster and Emergency Medicine, 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
10. Owner: World Association for Disaster and Emergency Medicine, 3330 University Avenue, Suite 130 (Dane County) Madison, WI 53705-2167 USA
11. Known: bondholders, mortgages, and other security holders owning or holding 1 percent or more of total amounts of bonds, mortgages or other securities: None.
12. The purpose and function and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during the preceding 12 months.

Extent and Nature of Circulation:
1. Total copies: 717-aveg. per issue during proceeding 12 months/738 last issue.
2. Paid/Requested Circulation: Outside country mail subscriptions 325
3. Others mailed through USPS 2
4. Free distribution outside the mail 5
5. Copies not immediately distributed 22 (used for education and promotion)

I certify that all information furnished is true and complete.
Marvin L. Birnbaum, MD PhD, Editor-in-Chief and Director of the WADEM Business Office

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

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 Board 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.

Further information and rates available at our Website: http://pdm.medicine.wisc.edu.

Review

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.

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; (+1) (608) 263-9641; E-mail: mlb@medicine.wisc.edu.

INFORMATION FOR READERS

Subscription Prices (6 issues)

Institutional	[US]	$400
Individual		$120

"Institutional Subscribers" are defined as multiple reader subscribers and include public and private libraries, schools, hospitals, and clinics; city, county, state, provincial, and national government bureaus and departments; and all commercial and private institutions and organizations.

Individual subscriptions must be in the name of, billed to, and paid by individuals.

Send all subscription orders and questions to: *Prehospital and Disaster Medicine*, PO Box 55158, Madison, WI 53705-8958 USA.

Subscription by e-mail: pdm@medicine.wisc.edu; call (+1) (608) 263-2069; or fax (+1) (608) 265-3037. Credit cards are welcome.

Change of Address or Missing Issues

Inform the *Prehospital and Disaster Medicine* office as soon as possible when you plan to move. (Four to six weeks notice is required for uninterrupted service.) Send: (1) old address; (2) new address; and (3) effective date of change.

Back Issues

A limited supply of back issues not included in your subscription is available. Contact the Editorial Office for availability.

Online Version

Issues are posted on the *Prehospital and Disaster Medicine* Website. Except for the two most current issues, articles can be downloaded without charge. The two most current issues are password protected for subscribers.

Abstracts

All of the abstracts of papers through the most recent volume are available on the *Prehospital and Disaster Medicine* Website.

Cover Artwork:	*Sequence III*
Medium:	Casein and Gold Leaf on Oriental Papers
By:	Glenn Bradshaw

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

INSTRUCTIONS FOR AUTHORS

Organization of Manuscripts

Manuscripts in one of five different categories can be submitted for review and publication in *Prehospital and Disaster Medicine* (PDM): (1) Original Research; (2) Special Report; (3) Comprehensive Review; (4) Case Report; or (5) Brief Report. All manuscripts submitted for publication must include an abstract that summarizes the work. Other types of manuscripts must have the approval of the Editor before being submitted or may be invited by the Editor or a member of the Editorial Board. All Abstracts submitted by the Secretariat of a Congress will be edited by the Editorial Staff into the best English possible prior to publication. Please specify the type of manuscript being submitted. The characteristics specific to each of these categories are described briefly below:

1. **Original Research**—structured research that uses quantitative and/or qualitative data collection and processing methods to establish a hypothesis or prove a cause:effect relationship(s) is included in this category. The manuscript must be structured as follows:

   Abstract—Concise summary in the following format (*not to exceed 375 words*):

   Introduction: need for the study.

   Hypothesis/Problem: 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, statistical tests). If the work is qualitative, the types of instruments used and the scope and type of work must be described. *If a disaster is involved, the dates, type of event, location, scope, magnitude, and numbers of casualties and deaths must be summarized in tabular form for indexing.*

   Results: summary of principal findings.

   Conclusion: implications of findings.

   Introduction—Provide justification for the effort with appropriate references annotated. If quantitative, the concluding sentence should define the hypothesis. If qualitative, the problem being addressed should be stated clearly.

   Methods—Descriptive to a degree that other investigators would be able to reproduce the study. Statistical methods used must be annotated. Approval by an Institutional Review Committee **must** be included when appropriate.

   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 redundant. All direct results from the study must appear in this section. *No discussion of the results may be included.*

   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 explanations provided are appropriate.

   Conclusions—The findings in terms of implications for the practice of prehospital, emergency, and/or disaster medicine should be summarized in a few sentences.

2. **Special Report**—Describes some aspect of our science or activities that provide information necessary for the progression of the science. The *Introduction* should highlight the problem being addressed and the reasons that it needs to be addressed. Sections of the report should be subtitled. The presentation should include citations as to the sources of the material and should be followed by a *Discussion* that includes the significance of the report in terms of the science. The manuscript should be finished with the *Conclusions* reached.

3. **Comprehensive Review**—A review of the literature to be used to clarify areas in which there seems to be disagreement. Comprehensive Reviews seek to establish the evidence-base for the area being addressed. The format used should be identical to that described for Special Reports.

4. **Case Report**—Uses one or more cases of specific patients or events/responses to highlight a current aspect of medical care or of a phenomenon. Case Reports also may have value in the development of definitive research projects by the same or other investigators. The *Introduction* should describe the reasons for the report. The actual *Case Report(s)* should be described in the next section, and like the above, the *Discussion* should describe the significance of the reports including a comprehensive review of the pertinent literature. The *Conclusion* should be similar to the format noted above.

5. **Brief Report**—A short report that may predict a trend, but the work does not meet all of the criteria required for Original Research. Preliminary reports also are included in this category. The format used should be identical to that used for the Original Research described above.

General Submission Requirements

Manuscripts—Manuscripts are preferred in electronic form (disk, CD, or e-mail) with a cover letter, cover page, and manuscript. Electronic format: the cover letter, cover page, and manuscript should be sent as separate electronic files on one diskette or CD in Microsoft Word. Please label the diskette or CD and include the paper's title and the primary author's surname. Electronic files may be submitted to our office via e-mail to the following address: ds5@medicine.wisc.edu or pdm@medicine.wisc.edu. If the manuscript is submitted by mail, please include paper version of the cover letter, cover page, and one paper copy of the manuscript to accompany the disk. If submitting the article in paper form only, please send one cover letter, the cover page, and manuscript. If electronic format is not available, we will accept manuscripts in paper form.

Previous Publication—A manuscript will be considered only if it has not been published previously and is not under consideration for publication elsewhere.

Copyrights—After acceptance for publication, the copyright to the manuscript, including all tables and figures, rests with *Prehospital and Disaster Medicine.*

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

Cover Letter—Each manuscript should be accompanied by a signed 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 in a forum orally or as a poster, 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, facsimile (fax) number, and e-mail address if appropriate. The type of manuscript also should be specified.

Cover Page—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, facsimile (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.

Language—All manuscripts must be submitted in English. Also, do not use *I, We,* or *Our* when describing the researchers. The fact that the research was conducted by the authors is implicit.

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. In addition, list eight or more keywords or phrases in alphabetical order separated by semicolons to facilitate indexing or electronic searches.

Paper, Margins, and Type Style—Manuscripts should be submitted on plain white paper, letter size up to A4, 8.27" by 11.69" (210 mm by 297 mm). *Do not right justify the margins.* Use standard type styles. Double space all text.

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.

References—References **must** be cited in the 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. Repeated use of a reference must bear the number of the first time this reference is used. Titles of journals referenced must be annotated using standard *Index Medicus* abbreviations and must be italicized. 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 **must** be used:

Journals—White SJ, Hamilton WA, Veronesi JF: Comparison of field techniques used to pressure infuse intravenous fluids. *Prehosp Disast Med* 1991;6:429–434.

Books—Schwartz GR, Safar P, Stone JH, *et al* (eds), *Principles and Practice of Emergency Medicine.* 2d ed. Philadelphia: WB Saunders Co., 1985, pp 1198–1202.

Chapters—Lindberg R: Pathology of Head Injuries. In: Cowley RA, Trump BF (eds), *Pathophysiology of Shock.* Baltimore: Williams and Wilkins, 1982, pp 588–592.

Website—International Crisis Group: Impact of the Bali bombings. Available at http://www.crisisweb.org/projects/asia/indonesia/reports/A400804_24102002.pdf. Accessed 09 June 2003.

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.

Figures—Illustrative materials **must** be of professional quality, should be submitted as large as possible, up to 8.27" by 11.69" (A4 210 mm by 297 mm), and be **at least 600 dpi resolution**. Color illustrations must be discussed with the editor. All graphs and charts must be saved in a JPG/TIFF format and are to include a legend. Photos also can be mailed to the PDM office. They must be high gloss and 600 dpt.

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.

Publication Schedule—Manuscripts should be published within 4 to 6 months of acceptance and receipt of revisions.

Additional Information

Contact Marvin L. Birnbaum, MD, PhD, Editor, *Prehospital and Disaster Medicine*, 3330 University Avenue, Madison, WI 53705 USA, (+1) (608) 263-9641; E-mail: mlb@medicine.wisc.edu.

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

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press

EDITORIAL BOARD Prehospital and Disaster Medicine

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, FACS
Department of Surgery
Hamad General Hospital
Doha, Qatar

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

DEPUTY EDITORS
David A. Bradt, MD, MPH
Royal Melbourne Hospital
Melbourne, Australia

Geert Seynaeve, MD
Brussels, Belgium

Samuel Stratton, MD
University of California-Irvine
Los Angeles, California USA

Darren Walter
University Hospital of South Manchester
Manchester, UK

SECTION EDITORS
Humanitarian Affairs
Fredrick 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

International Health Law and Ethics
Michael Hoffman, JD
Washington, DC USA

PAST EDITORS
Peter Safar, MD
Deceased
(JWAEDM 1981–1985)

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

EDITORIAL BOARD
Carol Amaratunga, PhD
Justice Institute of British Columbia
New Westminster, British Columbia Canada

Ahmed Ammar, MD
King Fahd Medical Complex
Riyadh, Saudi Arabia

Paul Arbon, PhD
School of Nursing and Midwifery
Flinders University
Adelaide, South Australia

Prof. Frank Archer, MD
Monash University
Melbourne, Australia

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

Col. Dr. 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
Orange, California USA

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

Felipe Cruz-Vega, MD
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
Consultant
Brussels, Belgium

Judith Fisher, MD
Consultant, Disaster Medicine
Pleasant Hill, California USA

Erik S. Gaull
George Washington University
Washington, DC USA

P. Gregg Greenough, MD, MPH
Director of Research, Harvard Humanitarian Initiative
Boston, Massachusetts USA

Michael Gunderson
President, Integral Performance Solutions
Lakeland, Florida USA

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

Keith Holtermann, MD
George Washington University
Washington, DC USA

Mark S. Johnson, MPA
Retired Chief of EMS
Juneau, Alaska USA

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

Per Kulling, MD
National Board of Health and Welfare
Stockholm, Sweden

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
Ministry of Health
New Zealand

Andrew Milsten, MD, MS, FACEP
University of Maryland Emergency Medicine
Baltimore, Maryland USA

Jerry Overton, MPA
President/CEO
Road Safety International
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 B. Roshal, MD
Institute of Pediatrics
Academy of Medical Sciences
Moscow, Russia

Don Schramm
University of Wisconsin-Madison
Madison, Wisconsin USA

Ronald Stewart, MD
Victoria Hospital
Halifax, Nova Scotia Canada

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

https://doi.org/10.1017/S1049023X00007767 Published online by Cambridge University Press