DISASTER MEDICINE and PUBLIC HEALTH PREPAREDNESS

An Official Publication of the Society for Disaster Medicine and Public Health, Inc





IN THIS ISSUE:

Burn patients in war zones
Radiation anxiety in Fukushima after nuclear power plant accident
Older adults and social support in disasters
First responder mental health interventions
Pediatric ER responses to COVID-19





Disaster Medicine and Public Health Preparedness

Editor-in-Chief James J. James, MD, DrPH, MHA

Chief Executive Officer, Society for Disaster Medicine and Public Health. Inc.. USA

Deputy Editors

Amir Khorram-Manesh, MD

Associate Professor of Surgery Gothenburg University Gothenburg, Sweden

David Markenson, MD, MBA

Medical Director, Center for Disaster Disaster Medicine, New York Medical College, Valhalla, Stephen S. Morse, PhD

Professor of Epidemiology & Director, Infectious Disease Epidemiology Certificate, Mailman School of Public Health, Columbia University, New York, New York, USA

Jeff Schlegelmilch, MPH, MBA

Deputy Director, National Center for Disaster Preparedness, Earth Institute, Columbia University, New York, NY, USA

Eric S. Weinstein MD, MSc, DM

Research Associate, CRIMEDIM, Novara, Italy

Associate Editors

James Aiken, MD

LSUHSC School of Medicine, New Orleans, Louisiana, USA

Mea Allen, MEd

Boston Public Health Commission, Office of Public Health, Boston, Massachusetts, USA

Nebil Archour, PhD

Anglia Ruskin University, School of Allied Health, UK

Lisa Baker

Samford University, College of Health Sciences, Birmingham, Alabama, USA

Daniel J.Barnett, MD, MPH

Associate Professor, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Francesco Barone-Adesi, MD

University of Eastern Piedmont, Novara, Italy

Charles W. Beadling, MD, FAAFP, IDHA, DMCC

Associate Professor, Uniformed Services University of the Health Sciences, Bethesda, Maryland, Principal Investigator of the African Peacekeeping Rapid Response Partnership (APRRP) program at the USUHS Center for Global Health Engagement, USA

Rita V. Burke, PhD, MPH

Assistant Professor of Research Surgery and Preventive Medicine Pediatric Surgery, Children's Hospital Los Angeles, California, USA

Frederick M. Burkle, Jr., MD, MPH, DTM, FAAP. FACEP

Harvard School of Public Health, Cambridge, Massachusetts, USA

Laura J. Cavanaugh, MD, FAAP

Pediatrician, Private Practice, Atlanta, Georgia, USA

Jennifer L. Chan, MD, MPH

Assistant Professor, Department of Emergency Medicine, Northwestern Feinberg School of Medicine, Chicago, Illinois, USA

Thomas Chandler, PhD

Columbia University, National Center for Disaster Preparedness, New York, New York, USA

Mike Clarke, PhD

Professor/Director of MRC Methodology Hub, School of Medicine, Dentistry and Biomedical Sciences, Center for Public Health Institute for Health Sciences, Queens University, Belfast, UK

Andrea Conti, MD

Università degli Studi del Piemonte Orientale Amedeo Avogadro, CRIMEDIM - Research Center in Emergency and Disaster Medicine, Novara, Italy

Alessandro Costa, MD

UPO, Vercelli, Piemonte, Italy

Joseph Cuthbertson, PhD

Monash University, Monash University Disaster Resilience Initiative, Clayton, Victoria, Australia

Cham E. Dallas, PhD

Professor and Director, Institute for Disaster Management, Department of Health Policy and Management, University of Georgia, Medical College of Georgia, Augusta, Georgia, USA

Marcelo Dell'Aringa, MD

Università degli Studi del Piemonte Orientale Amedeo Avogadro, CRIMEDIM, Novara, Italy

Donald, A. Donahue, Jr., DHEd, MBA, MSJ

University of Maryland Baltimore, Maryland, USA; and Potomac Institute for Policy Studies, Virginia, USA

Shinichi Egawa, MD, PhD

Division of International Cooperation for Disaster Medicine, IRIDeS, Tohoku University, Sendai, Japan

Brian W. Flynn, EdD

Department of Psychiatry, Center for the Study of Traumatic Stress, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA

Anat Gesser-Edelsburg, PhD

Head of Health Promotion Program, School of Public Health, Faculty of Social Welfare and Health Science, University of Haifa, Israel

Johan L. Heemskerk, MD

Mayo Clinic Florida, Jacksonville, Florida, USA; and Onze Lieve Vrouwe Gasthuis, Amsterdam, Netherlands

Attila J. Hertelendy, PhD

Florida International University, College of Business, Miami, Florida, USA

Edbert B. Hsu, MD, MPH

Director of Training, Johns Hopkins Office of Critical Event Preparedness and Response, Baltimore, Maryland, USA

Stephanie Kayden, MD, MPH

Director, International Emergency Medicine Fellowship, Brigham and Women's Hospital, Boston, Massachusetts, USA

Kelly Klein, MD

UT Southwestern, Surgery, Dallas, Texas, USA

Gavin MacGregor-Skinner, BVSc, MSc, MPH,

Penn State University, College of Medicine, Hershey, Pennsylvania, USA

Joshua C. Morganstein, MD

Commander, U.S. Public Health Service Department of Psychiatry, Center for the Study of Traumatic Stress, Uniformed Services University School of Medicine, Bethesda, Maryland, USA

Frederick C. Nucifora Jr., DO, PhD, MHS

Department of Psychiatry and Behavioral Science, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA

Matteo Paganini, MD

Universita degli Studi del Piemonte Orientale Amedeo Avogadro, CRIMEDIM - Research Center in Emergency and Disaster Medicine and Computer Science applied to Medical Practice, Novara, Italy

Sneha Patel, MPH, MSW

Columbia University Mailman School of Public Health, Population and Family Health, New York, New York, USA

Luca Ragazzoni, MD

Research Center in Emergency and Disaster Medicine and Computer Science Applied to Medical Practice (CRIMEDIM), Department of Translational Medicine, Novara, Italy

Michael J. Reilly, DrPH, MPH, NREMT-P, CEM

Center for Disaster Medicine, New York Medical College, Valhalla, New York, USA

Kandra Strauss-Riggs, MPH

National Center for Disaster Medicine and Public Health, Uniformed Services University of the Health Sciences, Rockville, Maryland, USA

Christopher Tedeschi, MD

Columbia University, Department of Emergency Medicine, New York, New York, USA

Kevin Taaffe, PhD

Clemson University, Industrial Engineering, Clemson. South Carolina. USA

Tian Xie, MD

University of South China, School of Management, Hengyang, China

Volunteer Managing Editor Alice O'Donnell

Editorial Board

John Armstrong, MD, FACS

University of South Florida, USA

Lewis R. Goldfrank, MD

New York University / New York City Poison Center, USA

John L. Hick, MD

University of Minnesota, USA

James G. Hodge, Jr., JD, LLM

Arizona State University, USA

Gabor Kelen, MD, FRCP(C), FACEP

Johns Hopkins University, USA

William Lanier, MD

Mayo Clinic, USA

Yasuhiro Otomo, MD, PhD

Tokyo Medical and Dental University Hospital of Medicine, Japan

Betty Pfefferbaum, MD, JD

University of Oklahoma Health Sciences Center, USA

Irwin Redlener, MD

Columbia University, USA

Hou Shi-ke, MD

Affiliated Hospital of Logistic University, Tianjin City, China W. Craig Vanderwagen, MD

Martin, Blanck, and Associates, USA

Statistical Editors

Guohua Li, MD, DrPH

Columbia University College of Physicians and Surgeons, USA

Michael A. Stoto, PhD

Georgetown University School of Nursing and Health Studies, USA

Associate Board

Georges Benjamin, MD, FACP

American Public Health Association, USA

Arthur Cooper, MD, MS, FACS, FAAP, FCCM

Harlem Hospital Center, New York, USA

Chair of Global Committee

Raymond E. Swienton, MD, FACEP

University of Texas Southwestern, USA

Un the Cover:

Fully functional field ICU, from Louri NA, Alkhan JA, Isa HH, et al. Establishing a 130-bed field intensive care unit to prepare for COVID-19 in 7 days in Bahrain military hospital (this issue).

Tent mobile hospital used by Chinese medical team in Nepal earthquake rescue, from Chen X, Lu I, Shi J, et al. Application and prospect of a mobile hospital in disaster response. *Disaster Med Public Health Prep* 2020;14(3):377-383.

Disaster Medicine and Public Health Preparedness

FEBRUARY 2021 Vol 15/No 1

Letters to the Editor

- How Public Health Agencies Use the Public Health Emergency Preparedness Capabilities Jennifer Horney, Eric G. Carbone, Molly Lynch, Cheng Shuang Ji, Terrance Jones
- 3 Resilience and Behavioral Health Parity Key to Disaster Preparedness Mitchell Berger

Commentary

Saving Lives Now From Ebola in Africa James G. Hodge, Hannah-Kaye Fleming

Brief Reports

- Management Challenges of Informal Volunteers: The Case of Kermanshah Earthquake in Iran (2017) Simintaj Sharififar, Amir Khoshvaghti, Katayoun Jahangiri
- Dealing With Burn Patients in War Zones Antonios Koutras, Athanasios Syllaios, Ioannis Tsilikis, Georgios Kalinterakis, Prokopis-Andreas Zotos, Ifigeneia Zouliati, Adamantios Michalinos, Ioannis Karavokyros, Dimitrios Schizas, Emmanouil Pikoulis
- 20 Determinants of Increased Tobacco Consumption Following a Major Disaster Shihoko Koyama, Takahiro Tabuchi, Jun Aida, Ken Osaka, Isao Miyashiro

Original Research

- 25 Emergency and Disaster Preparedness of European Hospital Pharmacists: A Survey Laurence Schumacher, Pascal Bonnabry, Nicolas Widmer
- 34 Experts' Views on the Gaps in Public Health Emergency Preparedness in Israel: A Qualitative Case Study Anat Gesser-Edelsburg, Ricky Cohen, Alon Diamant
- 42 Relationship Between Use of Media and Radiation Anxiety Among the Residents of Fukushima 5.5 Years After the Nuclear Power Plant Accident
 Maiko Fukasawa, Norito Kawakami, Chihiro Nakayama, Seiji Yasumura
- 50 Older Adults and Social Support in a Disaster Context: Did Relocation Matter for Access to Social Network Resources After the 2015 South Carolina Flood? Marian Botchway, Ana Teixeira, Spencer Moore
- 58 Historical Disaster Exposure and Household Preparedness Across the United States Natasha P. Malmin
- Pictorial Representation of Threat Perception and Its Association With Emergency Preparedness Moran Bodas
- 70 Associations Between Social Support and Subjective Symptoms in Disaster-Stricken Ishinomaki, Japan Akie Midorikawa-Inomata, Mariko Inoue, Aya Ishiguro, Shoko Matsumoto, Kazue Yamaoka, Eiji Yano
- Factors Influencing the Prioritization of Injured Patients for Transfer to a Burn or Trauma Center Following a Mass Casualty Event
 Elizabeth A. Lancet, Wei Wei Zhang, Patricia Roblin, Bonnie Arquilla, Rachel Zeig-Owens, Glenn Asaeda, Brad Kaufman, Nikolaos A. Alexandrou, James J. Gallagher, Michael L. Cooper, Timothy Styles, David J. Prezant, Celia Quinn

Concepts in Disaster Medicine

- Wtilizing Advanced Telecommunication Strategies to Enhance the Response of Emergency Medical Services Volunteers
 - Ziv Dadon, Evan Avraham Alpert, Eli Jaffe
- 92 Hospital Operation During a Disaster Hospital Multi-Component Emergency Center (HMCEC) Salman Zarka, Eyal Furman, Olga Polyakov

Systematic Reviews

- 99 Use of Simulated Patients in Disaster Medicine Training: A Systematic Review Pier Luigi Ingrassia, Luca Pigozzi, Mattia Bono, Luca Ragazzoni, Francesco Della Corte
- 105 Systematic Review of Displacement and Health Impact From Natural Disasters in Southeast Asia Subin Jang, Yuko Ekyalongo, Hyun Kim
- Establishing the Effectiveness of Interventions Provided to First Responders to Prevent and/or Treat Mental Health Effects of Response to a Disaster: A Systematic Review W. TylerWinders, NirmaD.Bustamante, Stephanie ChowGarbern, Corey Bills, Amin Coker, Indi Trehan, Maxwell Osei-Ampofo, Adam C. Levine

Report from the Field

127 A Retrospective Analysis of Mortality From 2015 Gorkha Earthquakes of Nepal: Evidence and Future Recommendations Bipin Adhikari, Parash Mani Bhandari, Dipika Neupane, Shiva Raj Mishra

Online Section: COVID-19

Brief Reports

- Protection and Response of a Tertiary Hospital in South Korea to the COVID-19 Outbreak Hye Jin Shi, Jae Back Lee, Min Kyung Choi, Young-Rock Jang, Yong-Kyun Cho, Joong Sik Eom
- e6 Awareness Among Undergraduate Students of Mangalore City Regarding Novel Coronavirus (COVID-19): A Questionnaire Study
 Deeksha Das, Ramya Shenoy, Megha Mukherjee, Bhaskaran Unnikrishnan, Nikita Rungta
- e10 Predicting SARS-CoV-2 Infection Trend Using Technical Analysis Indicators Marino Paroli, Maria Isabella Sirinian

Original Research

How Much Do Young Italians Know About COVID-19 and What Are Their Attitudes Toward SARS-CoV-2? Results of a Cross-Sectional Study
Giuseppe La Torre, Lorenza Lia, Barbara Dorelli, Mattia Marte, Marta Chiappetta, Augusto Faticoni, Lorenzo Lucaccini Paoli, Daniele Grassucci, Marcello Gelardini, Carla Ardizzone

Concepts in Disaster Medicine

- Pediatric Emergency Department Responses to COVID-19: Transitioning From Surge Preparation to Regional Support
 Emily A. Hartford, Ashley Keilman, Hiromi Yoshida, Russell Migita, Todd Chang, Brianna Enriquez, Deborah R. Liu
- Face Masks for All and All for Face Masks in the COVID-19 Pandemic: Community Level Production to Face the Global Shortage and Shorten the Epidemic Eduardo Missoni, Benedetta Armocida, Beatrice Formenti
- **e34** Establishing a 130-Bed Field Intensive Care Unit to Prepare for COVID-19 in 7 Days in Bahrain Military Hospital

Nayef A. Louri, Jalal Abdulla Alkhan, Hayyan Hamad Isa, Yaser Asad, Abdulla Alsharooqi, Khalifa Ahmed Alomari, Nahed Kamal Hasan, Fahad Bin Khalifa Al Khalifa, Ghaida Fareed Ahmed, Muna Yaqoob Alasmi, Dana Khalifa Al-Khalifa, Khalid Bin Ali Al Khalifa

Report from the Field

e44 Public-Private-People Partnerships (4P) for Improving the Response to COVID-19 in Iran Hamed Seddighi, Sadegh Seddighi, Ibrahim Salmani, Mehrab Sharifi Sedeh

Corrigendum

e50 Face Masks for All and All for Face Masks in the COVID-19 Pandemic: Community Level Production to Face the Global Shortage and Shorten the Epidemic – Corrigendum Eduardo Missoni, Benedetta Armocida, Beatrice Formenti

CONTACT INFORMATION

Editorial Office

Society for Disaster Medicine and Public Health, Inc., 40 Market Street

Onancock, Virginia 23417

E: dmphpjournal@gmail.com

The views expressed in each article are those of the authors and do not necessarily reflect the official policy or position of the Society for Disaster Medicine and Public Health, Inc., its Board or its membership.

Manuscript Submission and Instructions for Authors

May be found online at http://mc.manuscriptcentral.com/dmp

DMPHP Reprints & Permissions

Article Reprints/E-prints Inquiry

For use by commercial entities or educational institutions:

special_sales@cambridge.org

Permissions Inquiry

For rights and permissions inquiries, please visit www.cambridge.org/about-us/rights-permissions

Advertising

For details about advertising rates and opportunities in *Disaster Medicine and Public Health Preparedness*, or to request a media pack, please contact M. J. Mrvica Associates, 2 West Taunton Avenue, Berlin, NJ 08009; Phone: 856-768-9360; Fax: 856-753-0064; Email: mjmrvica@mrvica.com.

Subscription Rates and Service

Subscription Information

Disaster Medicine and Public Health Preparedness (ISSN: 1935-7893; EISSN: 1938-744X) is published bi-monthly by Cambridge University Press, One Liberty Plaza, New York, NY 10006. Copyright © 2021 by the Society for Disaster Medicine and Public Health, Inc.

Annual Subscription Rates

Annual institutional print and electronic subscription rates: US \$822.00 in the USA, Canada and Mexico; UK £514.00 + VAT elsewhere. Institutional electronic rates only: US \$630.00 in the USA, Canada and Mexico; UK £393.00 + VAT elsewhere. Prices include surface postage and insurance. The electronic version of the journal is a free benefit to members of the Society.

Information on *Disaster Medicine and Public Health Preparedness* and all other Cambridge journals is available at http://www.cambridge.org/. Full text for this journal may be found at http://cambridge.org/dmp.

When citing this journal, please abbreviate as Disaster Med Public Health Preparedness. Indexed in MEDLINE.

Disaster Medicine and Public Health Preparedness participates in the Health InterNetwork Access to Research Institute Initiative (HINARI), which provides free or very-low-cost online access to major journals in biomedical and related social sciences to local, nonprofit institutions in developing countries. Please visit www.who.int/hinari for more information.

Copyright ©2021 Society for Disaster Medicine and Public Health, Inc.

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, except when permission is obtained through a bona fide copyright clearinghouse, such as the Copyright Clearance Center (USA) or the Copyright Licensing Agency (UK).

Periodicals postage paid at New York, NY, and additional mailing offices. Return Postage Guaranteed. **Postmaster**: Send address changes in the USA and Canada to: *Disaster Medicine and Public Health Preparedness*, Cambridge University Press, Journals Fulfillment Dept., One Liberty Plaza, New York, NY 10006.