Forum on Medical and Public Health Preparedness for Disasters and Emergencies

2016 Annual Report
We are honored to share leadership of the Health and Medicine Division’s (HMD’s) Forum on Medical and Public Health Preparedness for Disasters and Emergencies (the forum), a neutral convening venue for public- and private-sector leaders to improve the nation’s preparedness for, response to, and recovery from disasters, public health emergencies, and emerging threats. Since its inception in 2007, the forum has fostered in-depth policy discussion and collaboration to identify barriers and explore solutions to ensure and sustain national security, promote recovery, and enhance resilience. The active participation of the forum members and other interested stakeholders continues to make the forum relevant to the dynamic enterprise that keeps Americans healthy and alive during disasters by building healthy, resilient, and sustainable communities.

We are committed to strengthening our capacity to prepare for, respond to, and recover from disasters and public health emergencies. We meet this commitment several ways including, serving as a catalyst for public–private partnerships; helping to define the scope of the field and setting the stage for future policy action; bringing ongoing attention and visibility to important preparedness issues; exploring new approaches for resolving problem areas; and elevating the understanding and visibility of medical and public health preparedness in the broader research, public policy, and other relevant communities.

The forum is self-governing. Its membership identifies the topics it wishes to address and develops the agenda for the forum’s regular meetings and special workshops. As a result, topics span a broad range of issues in research, policy, and practice. The forum has thus far focused on the following broad topic areas: medical surge capacity, disaster preparedness education and training, medical countermeasures, psychological and community resilience, and disaster research.

In 2016, the forum conducted three meetings of the membership, exploring public health, health care, and emergency medical services (EMS) response during and in the immediate aftermath of a multisite terrorist attack; key factors and challenges associated with domestic integrated vector management strategies employed to mitigate Zika virus; ongoing steps related to advancing the research and development of life-saving medical countermeasures to address emerging infectious diseases; and furthered the forum’s strategic planning and selection of
future topics. The forum also convened two workshops related to the application of the disaster risk reduction model in health approaches and community-level strategies to countering violent extremism and radicalization.

In 2017, the forum will continue its exploration of several key areas, including

- Strengthening the U.S. health care and public health systems capacity to detect, prevent, plan for, respond to, and recover from naturally occurring infectious disease outbreaks and intentional or accidental releases of dangerous pathogens.

- Enhancing resilience for individuals and communities through disaster risk reduction, including a “health in all policies” approach in post-disaster recovery planning efforts, engaging and collaborating with nontraditional sectors, and exploring special considerations needed to strengthen a community after a mass casualty incident.

- Improving situational awareness, threat intelligence sharing, risk communication, and collaboration among multi-sector disaster response networks during large-scale health care and public health emergencies.

- Understanding the risks to the health care and public health sectors associated with the vulnerabilities of other interdependent sectors; consequences of cascading and prolonged failures of infrastructure; threats from chemical, biological, radiological, nuclear, and high-yield explosives; and the increasing threat and consequences of cyber attacks.

As co-chairs, we bring diverse professional experiences in government and the private sector, a collaborative partnership we hope to see reflected in the work of the forum. We look forward to working with you and our other colleagues to ensure that the forum continues its tradition of education, active contribution, and consensus building toward greater medical and public health preparedness.

Dan Hanfling  
Co-Chair

Suzet McKinney  
Co-Chair
Reflecting Back
Forum Activities in 2016

Forum Meetings
The forum’s three meetings in 2016 focused on several important topics. This year’s topic exploration included response, workforce protection, management, communication, public health, health care, EMS response during and in the aftermath of a multisite and/or prolonged terrorist attack by exploring current policy and practice gaps, domestic integrated vector management (IVM) strategies employed to mitigate Zika virus, and the research and development of life-saving medical countermeasures to address emerging infectious diseases. The forum also participated in a strategic planning process that assessed current and previous meeting topics, workshops, and priorities of the forum. In addition to its meetings, the forum convened the workshops described below.

Applying the Disaster Risk Reduction Model for Health Systematically in the United States (April 2016)
At the 2016 Preparedness Summit, a national conference on public health preparedness, the forum convened a panel of individuals with expertise in local, state, and international disaster response to explore and discuss the concepts of disaster risk reduction (DRR), their application within U.S. communities
through novel and contemporary practices, and specific strategies that can be implemented at the local level through cross-sector collaboration. The workshop panelists and attendees explored DRR and its practical implications and discussed the importance of a “culture of prevention” to better ensure healthy outcomes. Workshop discussants also facilitated the identification of DRR strategies that can be implemented at a local level through collaboration with community members. A Proceedings of a Workshop—in Brief (PIB) was released in August 2016 and can be found at http://nationalacademies.org/hmd/reports/2016/exploring-disaster-risk-reduction-through-community-level-approaches-to-promote-healthy-outcomes.aspx.

**Health Approaches in Community-Level Strategies to Countering Violent Extremism and Radicalization (September 2016)**

The forum organized a 2-day public workshop aimed at discussing ways to incorporate health approaches into community-level strategies to counter violent extremism. The workshop speakers and discussants reviewed the evolving threat of ideologically motivated violence and radicalization within communities across the United States, and explored the cross-sector and interdisciplinary emerging and novel policy and practice frameworks and issues in countering ideologically motivated violence. The workshop further explored the root causes of vulnerability to recruitment to ideologically motivated violence and radicalization and reviewed relevant conceptual models in health. The prepublication of the Proceedings of a Workshop released in February 2017.
Looking Forward
Forum Activities in 2017

Forum Meetings
In 2017, the forum will host meetings of its membership in March and August. The forum will host a member meeting following the March workshop, Opportunities for the Future of Healthcare and Public Health Preparedness, Response, and Recovery, where it will discuss and provide feedback on the workshop; discuss and select topics for the August meeting; discuss the Areas of Opportunity for Medical Countermeasures Research, Development, and Distribution commissioned paper; and discuss ongoing member and National Academies initiatives relevant to the forum. The forum will host a second member meeting in August focusing on topics selected by the forum at the March meeting.
Workshops

**Opportunities for the Future of Health Care and Public Health Preparedness, Response, and Recovery**

An ad hoc committee will organize a 1.5-day public workshop in Washington, DC. Through this workshop, the committee will convene individuals with expertise in medical and public health preparedness, response, and recovery research; public policy; and practice to examine related medical and public health preparedness, response, and recovery challenges; explore new and innovative approaches and opportunities for resolving these challenges; and discuss the direction of possible future policy actions.

**The Future of Disaster Health Volunteerism: 2042**

An ad hoc committee will plan and conduct a 3-hour public workshop, The Future of Disaster Health Volunteerism: 2042, at the 2017 Preparedness Summit in Atlanta, Georgia. Through this workshop, the committee will convene a panel of individuals with expertise in local, state, and international disaster health volunteerism and disaster preparedness, response, and recovery. Contemporary examples of the complex disaster volunteering web will be examined and discussions will center on how a stronger and better volunteer capacity might be developed for the future.
The top areas of focus for the coming year are described below.

**Areas of Focus**

**Global Health Security**
Global health security focuses on ongoing efforts to accelerate progress toward a world that is safe and secure from emerging infectious diseases and other threats. The forum will concentrate its discussion on strengthening the U.S. health care and public health systems’ capacity to detect, prevent, plan for, respond to, and recover from naturally occurring outbreaks and intentional or accidental releases of dangerous pathogens.

**Individual and Community Resilience**
Individual and community resilience is the sustained ability of a person and a large group of people residing in close proximity to utilize available resources to respond to, withstand, and recover from adverse situations following a catastrophic event. The forum will explore opportunities and barriers to enhancing the resilience of individuals and communities through DRR; ensure that health is included in post-disaster recovery planning efforts; work with nontraditional sectors; and explore special considerations needed to strengthen a community after a mass casualty incident.

**Communication and Coordination**
Ensuring timely communication and effective coordination within all levels of government and among government, the private sector, and the public during large-scale disasters and incidents are critical to ensuring the health and welfare of the nation. The forum will center its attention on ways to improve situational awareness, threat intelligence sharing, risk communication, and collaboration among multi-sector disaster response networks, including public, academic, private, governmental, and nongovernmental organizations.
Critical Infrastructure Protection
Critical infrastructure protection focuses on the ongoing efforts to secure the assets, systems, and networks (physical or virtual) vital to the security, public health, and safety of the nation. The forum centers its discussion on the health care and public health sectors and interdependent sector vulnerabilities; consequences of cascading failures of infrastructure; threats from chemical, biological, radiological, nuclear, and high-yield explosives; and the increasing threat and consequences of cyber attack.

Medical Countermeasures
Medical countermeasures are an area the forum plans to further explore in the coming year. Medical countermeasures are products that are approved by the U.S. Food and Drug Administration for use during large-scale public health emergencies. In 2016, the forum commissioned an evaluative paper, the findings of which will assist them in examining priorities for future topics related to medical countermeasures. The paper, Areas of Opportunity for Medical Countermeasures Research, Development, and Distribution, was sent to the forum in early 2017.
On April 21, 2016, the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine convened a workshop during the 2016 Preparedness Summit, a national conference on public health preparedness. Participants discussed the concepts of DRR, their application within U.S. communities through novel and contemporary practices, and specific strategies that can be implemented at the local level through cross-sector collaboration.
Exploring Disaster Risk Reduction Through Community-Level Approaches to Promote Healthy Outcomes

Proceedings of a Workshop—in Brief

On April 21, 2016, the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine convened a workshop during the 2016 Preparedness Summit, a national conference on public health preparedness. Participants discussed the concepts of disaster risk reduction (DRR), their application within U.S. communities through novel and contemporary practices, and specific strategies that can be implemented at the local level through cross-sector collaboration.

DISASTER RISK REDUCTION AND APPLICATIONS TO HEALTH

More than 2,500 years ago near Mount Qingsheng in China, the Min River frequently flooded nearby cities, resulting in many deaths. The area also saw long periods of drought that led to famine and insecurity. A grand engineering effort was undertaken to regulate the flow of the river to prevent flooding deaths and irrigate the farmland in the region.

One result of that effort, called the Duijiangyan Weirs, is still in use today, said Mark Keim, a principal with DisasterDoc LLC. It is self-regulating, keeps the entire valley flood free, has saved millions of lives over time, and has promoted the economic vitality of the entire region. Noting that the weir represents a commitment to a multi-sector DRR strategy millennia ago, Keim asked the group, “How many lives [did] that generation of people save? Do you think in your lifetime you want to save some lives? You’re not only saving those of us that are on the earth with you now. Think about saving millions of lives into the future.”

DRR is often a nexus for public health, disaster management, environmental justice, and climate change adaptation efforts, and DRR strategies have been implemented across the globe. But what is the public health professional’s role in DRR? “We can’t stop the hazard,” Keim said. “We can’t stop tsunamis. Many times even in the responses [to disasters] we don’t lead those efforts. What is our role in disaster reduction? Our role is to prevent the death of every single person that’s in that disaster.”

Today, natural and man-made hazards1 result in disasters2 of increasing frequency and severity and present a threat to the security, public health and safety, and economic vitality of individuals and communities around the globe (NASEM, 2016). Rather than simply preparing to withstand these hazards and recover from disasters, Keim said, many nations aim to reduce the damage caused by natural hazards by creating a culture of prevention via DRR strategies.

1 For more information on the Preparedness Summit, see http://preparednesssummit.org/2016-preparedness-summit (accessed June 13, 2016).
2 A hazard refers to a dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury or illness, health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (UNISDR, 2014).
3 A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic, or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources (UNISDR, 2015).
Forum Members
(as of December 31, 2016)

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Robert Wood Johnson Foundation, Princeton, NJ
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(as of December 31, 2016)

Financial support for the forum is derived from federal agencies, patient advocacy organizations, industry, and a nonprofit membership society.

- Administration for Children and Families (HHS)
- American College of Emergency Physicians
- American Hospital Association
- American Red Cross
- Association of Public Health Laboratories
- Association of State and Territorial Health Officials
- Centers for Disease Control and Prevention (HHS)
- Child Care Aware of America
- Council of State and Territorial Epidemiologists
- East West Protection, LLC
- Emergency Nurses Association
- GlaxoSmithKline Pharmaceuticals
- Healthcare Ready
- Infectious Diseases Society of America
- Meridian Medical Technologies
- National Association of Chain Drug Stores
- National Association of County and City Health Officials
- National Association of Emergency Medical Technicians
- National Highway Traffic Safety Administration (DOT)
- National Institute of Allergy and Infectious Diseases (NIH)
- National Institute of Environmental Health Sciences (NIH)
- National Library of Medicine (NIH)
- Office of the Assistant Secretary for Preparedness and Response (HHS)
- Robert Wood Johnson Foundation
- Seqirus
- Trauma Center Association of America
- Uniformed Services University of the Health Sciences (DoD)
- U.S. Department of Defense
- U.S. Department of Homeland Security
- U.S. Food and Drug Administration (HHS)
Timeline

2007 | **September 16** Lewis Goldfrank begins service as the forum’s first Chair **September 26-27** 1st Meeting of the Preparedness Forum

2008 | **January 22-23** 2nd Meeting **March 3-4** Dispensing Medical Countermeasures: Workshop **May 20-21** 3rd Meeting **October 20-21** 4th Meeting

2009 | **January 28-29** 5th Meeting **March-May** Crisis Standards of Care: Workshop Series **June 10-11** Medical Surge Capacity: Workshop **June 12** 6th Meeting **September 3-4** Influenza-Like Illnesses: Clinical Algorithms: Workshop **October 29-30** National Health Security Strategy: Workshop **November 17** 7th Meeting **November 18** Medical Countermeasures Dispensing: Emergency Use Authorization and the Postal Model: Workshop

2010 | **January 13** 8th Meeting **February 22-24** The Public Health Emergency Medical Countermeasures Enterprise: Workshop **April-May** H1N1 Vaccination Campaigns: Workshop Series **June 7-8** 9th Meeting **August 3-4** Rural Mass Casualty Response: Workshop **September 16** Robert Kadlec and Lynne Kidder begin service as Forum’s Co-Chairs **October 7** 10th Meeting

2011 | **February 18** Forum Briefing to Senate Staffers on Pandemic and All-Hazards Preparedness Act **February 24** 2012 Preparedness Summit Plenary Town Hall Session on PAHPA **March 29-30** Advancing Regulatory Science for Medical Countermeasure Development: Workshop **March 31** 11th Meeting **June 15** 12th Meeting **October 19** 13th Meeting

2012 | **February 9** Public Engagement for Distribution and Dispensing of Antiviral Medications: A Workshop in Fort Benton, MT **February 16** Public Engagement for Distribution and Dispensing of Antiviral Medications: A Workshop in Chattanooga, TN **February 23** Long-Term Recovery of the Health Care Service Delivery Infrastructure—A Panel Session for the 2012 Public Health Preparedness Summit in Anaheim, CA **March 2** Public Engagement for Distribution and Dispensing of Antiviral Medications: A Workshop in Los Angeles, CA **April 11-12** 14th Meeting **July 17-18** 15th Meeting **November 16** Research and Data Priority Needs After Hurricane Sandy: Meeting in Collaboration with the New York Academy of Medicine

2013 | **January 9-10** 16th Meeting **January 23-24** Response to Improvised Nuclear Device Attack: Workshop **March 14** Engaging the Public in Critical Disaster Planning and Decision Making: Workshop at the 2013 Public Health Preparedness Summit in Atlanta, GA **March 14** Decision Support and
Modeling Resources for States and Local Health Departments: Workshop at the 2013 Public Health Preparedness Summit in Atlanta, GA April 7-8 17th Meeting June 10-11 Preparedness Considerations for Children and Families: Workshop October 29-30 18th Meeting November 18-19 The Impact of the Patient Protection and Affordable Care Act on U.S. Preparedness Resources and Programs: Workshop


2016 | February 25-26 24th Meeting April 21 Applying the Disaster Risk Reduction Model for Health Systematically in the United States: A Panel Session at the 2016 Preparedness Summit June 14-15 25th Meeting September 7-8 Health Approaches in Community-Level Strategies to Countering Violent Extremism and Radicalization: A Workshop November 4 Closed Business Meeting November 7 Upstream Prevention Approaches for Countering Radicalization to Violent Extremism: Activity Planning Meeting
About the Forum
The Forum on Medical and Public Health Preparedness for Disasters and Emergencies (formerly the Forum on Medical and Public Health Preparedness for Catastrophic Events) was established in 2007 by the National Academies of Sciences, Engineering, and Medicine’s Board on Health Sciences Policy. The forum convenes public- and private-sector leaders to improve the nation’s preparedness for, response to, and recovery from disasters, public health emergencies, and emerging threats. The forum fosters in-depth policy discussion and collaboration to identify barriers and explore solutions to ensure and sustain national security, promote recovery, and enhance resilience. Additional information about the forum is available online at www.nas.edu/medprepforum.

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(since August 2016)
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