



INSTITUTE OF MEDICINE

OF THE NATIONAL ACADEMIES

**Research Priorities in Emergency
Preparedness and Response for Public
Health Systems**

Board on Health Sciences Policy

Abbreviated Statement of Task

In response to a request from the Center for Disease Control and Prevention's Coordinating Office for Terrorism Preparedness and Emergency Response (COTPER) the Institute of Medicine will convene an *ad hoc* committee to conduct a fast-track study and issue a letter report to the director of COTPER. The committee will delineate a set of 3-5 near-term research priority areas for emergency preparedness and response in public health systems that are relevant to the specific expertise resident at schools of public health, with special attention given to:

- Protecting vulnerable populations in emergencies
- Strengthening response systems
- Preparing the public health workforce
- Improving timely emergency communications
- Improving information management to increase use

Committee Membership

Kenneth Shine (Chair), The University of Texas System

Martha Hill (Vice-Chair), Johns Hopkins University School of Nursing

Dan Blazer, Duke University Medical Center

Theodore Chan, UCSD School of Medicine

Vincent T. Covello, The Center for Risk Communication

Ed Gabriel, Walt Disney Company

Julia Gunn, Boston Public Health Commission

Sharona Hoffman, Case Western Reserve University

Paul Jarris, Association of State and Territorial Health Officials

Âna-Marie Jones, Collaborating Agencies Responding to Disasters

Richard C. Larson, Massachusetts Institute of Technology

John Lumpkin, Robert Wood Johnson Foundation

Ricardo Martinez, The Schumacher Group

Joanne Nigg, University of Delaware

Patricia Quinlisk, Iowa Department of Public Health

David Ross, Public Health Informatics Institute

Background on the CPHP Program

Centers for Public Health Preparedness

- Originated in 1999 by the CDC to establish a cohesive, integrated approach to training that focused on the domestic public health workforce
- Purpose was to leverage existing expertise and educational materials developed by academic public health institutions and create linkages to public health practice
- Currently 27 CPHPs located within accredited schools of public health

PAHPA Changes to CPHP Program

CPHPs must perform work in one of three areas:

- Development, implementation, and dissemination of competency-based programs to train public health practitioners, integrating and emphasizing “essential public health security capabilities”;
- Evaluation of the public health preparedness and response needs of the school’s community and development (if necessary) and dissemination of relevant education materials as well as evaluation of the effectiveness of new training and materials; and
- **Public health systems research that is consistent with an agenda to be developed by the Secretary of DHHS**

Source: (Public Law 109–417; 120 STAT. 2861).

Committee Timeline and Working Definitions

Committee Timeline



Committee Public Meeting and Workshop (December 18-20, 2007)

Public Health Systems Research: Survey of the Field, Gaps and Near Terms Needs

Perspectives from stakeholders (e.g. ASPH, ASTHO, CSTE, APHA, APHL, governmental public health agencies)

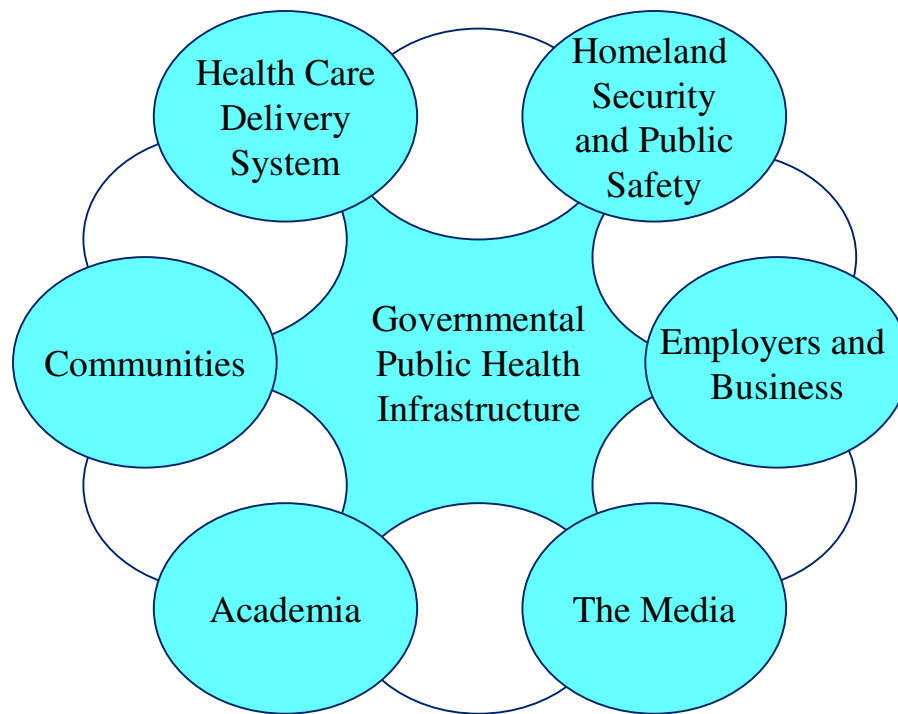
Panel Discussions

- § Preparing the Public Health Workforce
- § Improving Information Management
- § Improving Timely Emergency Communications
- § Protecting Vulnerable Populations in Emergencies
- § Strengthening Response Systems

Definitions

Public health emergency preparedness (PHEP) is the capability of the public health and health-care systems, communities, and individuals to prevent, protect against, quickly respond to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities. Preparedness involves a coordinated and continuous process of planning and implementation that relies on measuring performance and taking corrective action (Nelson et al., 2007, p. S9).

Public Health Preparedness System



Modified from the *Future of Public Health in the 21st Century*, the shaded ovals represent the key actors who can work individually or together as part of a public health system to create the conditions necessary for public health emergency preparedness, response, and recovery. While each of these actors are separate entities, a robust public health system for preparedness requires that each work together when appropriate. The unshaded ovals represent the necessary overlap between the key actors as well as the many less obvious actors that play a significant role in integrating the public health preparedness system.

Findings and Guiding Principles of CPHPs

Findings

- Organization and operation of systems of public health preparedness need to utilize an all-hazards approach
- Systems need to include state, local, tribal, and federal public health agencies; emergency response and health-care systems; homeland security and public safety; employers and business; the media; academia; communities, and individual citizens
- Particular attention needs to be paid to interfaces between these many interconnected systems

Findings (continued)

- Research requires the participation of experts in public health as well as social and behavioral sciences, engineering, operations research, law, business, economics, ethics, and communications and the media
- Research needs to address questions that directly impact “on the ground” efforts to protect, improve, and sustain health outcomes and generate results that are generalizable
- Public health emergencies will vary in scale, timing, predictability, and the potential to overwhelm routine capabilities and to disrupt the provision of daily life and health-care services

Findings (continued)

- Research needs to be translational—designed to result in practical, applicable, and sustainable outcomes
- Research needs to explicitly address the behavioral and social health of individuals and community resilience after an episode
- A limited number of program grants could grow into broader support for the network of research centers

Guiding Principles for the Organization of Centers

Given the limited resources centers need to:

- focus on research depth, rather than breadth
- establish a network with other funded centers
- have the capacity to work in partnership with other schools of public health and relevant academic centers that have complementary research expertise.

Each center needs to:

- assemble investigators from the appropriate backgrounds and disciplines (including those not typically represented in SPHs) to allow them to bring their specific competency to the research that they propose to undertake
- have strong connection with the public health practice community

Guiding Principles for the Evaluation of Proposals

Evaluation of research proposals need to consider:

- the extent to which multidisciplinary, interdisciplinary and/or crossdisciplinary knowledge, expertise and collaboration are employed to maximize effective and efficient response
- clear efforts to define criteria and metrics for effective programs
- vulnerable populations, workforce, and behavioral health included as as cross-cutting themes
- connection with the public health practice community

Recommendations

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Recommendation 1: Enhance the Usefulness of Training

Recommendation 2: Improve Communications in Preparedness and Response

Recommendation 3: Create and Maintain Sustainable Preparedness and Response Systems

Recommendation 4: Generate Criteria and Metrics to Measure Effectiveness and Efficiency

Recommendation 1

Enhance the Usefulness of Training

CPHPs should conduct research that will create best practices for the design and implementation of training (e.g. simulations, drills, and exercises) and facilitate the translation of their results into improvements in public health preparedness.

Recommendation 2

Improve Communications in Preparedness and Response

CPHPs should conduct research that will identify and develop communications in relation to preparedness and response that effectively exchange vital and accurate information in a timely manner with diverse audiences.

Recommendation 3

Create and Maintain Sustainable Preparedness and Response Systems

CPHPs should conduct research that will identify the factors that affect a community's ability to successfully respond to a crisis with public health consequences, and the systems and infrastructure needed to foster constructive responses in a sustainable manner.

Recommendation 4

Generate Criteria and Metrics to Measure Effectiveness and Efficiency

CPHPs should conduct research that will generate criteria for evaluating public health emergency preparedness, response, and recovery and metrics for measuring their efficiency and effectiveness.

For More Information:

Study Website: <http://www.iom.edu/PHSRpriorities>

Download Letter Report

Download Workshop Presentations

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