**SUMMARY REPORT**
**of the**
**NATIONAL BIODEFENSE SCIENCE BOARD**
**PUBLIC MEETING**
**September 22, 2010**

## VOTING MEMBERS PRESENT

Patricia Quinlisk, M.D., M.P.H., *Chair*
Roberta Carlin, M.S., J.D.
Albert J. Di Rienzo
Kenneth L. Dretchen, Ph.D.
John D. Grabenstein, R.Ph., Ph.D., *Acting Chair early in meeting*
James J. James, M.D., Dr.P.H., M.H.A., Brigadier General (Retired)
John S. Parker, M.D., Major General (Retired)
Eric A. Rose, M.D.

## NBSB VOTING MEMBERS NOT PRESENT

Ruth L. Berkelman, M.D. (On a leave of absence)
Stephen V. Cantrill, M.D.
Thomas J. MacVittie, Ph.D.
Andrew T. Pavia, M.D.
Patrick J. Scannon, M.D., Ph.D.

## EX OFFICIO MEMBERS PRESENT

Hugh Auchincloss, M.D., Principal Deputy Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, U.S. Department of Health and Human Services

Diane Berry, Ph.D., Chief Scientist, Director, Threat Characterization and Countermeasures, Office of Health Affairs, U.S. Department of Homeland Security

Shawn L. Fultz, M.D., M.P.H., Senior Medical Advisor, Office of Public Health and Environmental Hazards, U.S. Department of Veterans Affairs *(designated by Victoria Davey, Ph.D., M.P.H.)*

Bruce Gellin, M.D., M.P.H., Director, National Vaccine Program Office, Office of the Secretary, Office of Public Health and Science, U.S. Department of Health and Human Services (*by phone*)

Peter Jutro, Ph.D., Deputy Director, National Homeland Security Research Center, U.S. Environmental Protection Agency

Ali S. Khan, M.D., M.P.H., RADM, Assistant Surgeon General, U.S. Public Health Service; Director, Office of Public Health Preparedness and Response, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services

Anne Kinsinger, Associate Director, Biology, U.S. Geological Survey, U.S. Department of the Interior, (*by phone, designated by Deanna Archuleta*)

George W. Korch Jr., Ph.D., Senior Science Advisor, Office of the Assistant Secretary for Preparedness and Response, U.S. Department of Health and Human Services (*by phone*)

Randall L. Levings, D.V.M., Scientific Advisor, National Center for Animal Health, U.S. Department of Agriculture
Patricia A. Milligan, R.Ph., C.H.P., Senior Advisor for Emergency Preparedness, U.S. Nuclear Regulatory Commission
John Skvorak, D.V.M., Ph.D., COL, Commander, U.S. Army Medical Research Institute for Infectious Diseases, U.S. Department of Defense

**NBSB'S DISASTER MENTAL HEALTH (DMH) SUBCOMMITTEE MEMBERS PRESENT**

Betty Pfefferbaum, M.D., J.D., *Chair*
Elizabeth Boyd, Ph.D.
Lisa Brown, Ph.D.
Stevan Hobfoll, M.A., Ph.D.
Gerard A. Jacobs, Ph.D.
Russell Thomas Jones, Ph.D.
David Schonfeld, M.D., FAAP

**NBSB'S DMH SUBCOMMITTEE EX OFFICIO MEMBERS PRESENT**

Dan Dodgen, Ph.D., *Executive Director*
Marc Shepanek, Ph.D**.**
Dori Reissman, M.D., M.P.H., CAPT, U.S. Public Health Service
Rachel E. Kaul, LCSW, CTS
Ingrid Hope, RN, M.S.N.

**STAFF OF THE NATIONAL BIODEFENSE SCIENCE BOARD**

Leigh Sawyer, D.V.M., M.P.H., CAPT, U.S. Public Health Service; *Executive Director*
Donald Malinowski, M.S., Program Analyst
Jomana Musmar, M.S., Policy Analyst
MacKenzie Robertson, Program Analyst
Brook Stone, M.F.S., LT, U.S. Public Health Service, Program Analyst

## CALL TO ORDER AND CONFLICT OF INTEREST RULES

**Leigh Sawyer, D.V.M., M.P.H., Executive Director, National Biodefense Science Board (NBSB), Office of the Assistant Secretary for Preparedness and Response (ASPR), CAPT, U.S. Public Health Service (USPHS), U.S. Department of Health and Human Services (HHS)**

CAPT Sawyer called the public meeting to order at 9:05 a.m. EDT. She indicated that John Grabenstein would chair the first half of the public meeting until Chair Patricia Quinlisk arrived. CAPT Sawyer called the roll, provided a brief overview of the NBSB and the Federal Advisory Committee Act, and reviewed conflict of interest rules. CAPT Sawyer said a corrected version of the draft DMH Subcommittee report is available online.

## AGENDA OVERVIEW

**John D. Grabenstein, R.Ph., Ph.D., NBSB Member (*acting for Patricia Quinlisk, M.D., M.P.H., Chair, NBSB*)**

Dr. Grabenstein reviewed the agenda (see Appendix), noting that the ASPR, Nicole Lurie, M.D., M.S.P.H., asked the DMH Subcommittee to assess HHS' progress in integrating behavioral health into emergency preparedness and response activities.

## DMH SUBCOMMITTEE REPORT PRESENTATION

### Betty Pfefferbaum, M.D., J.D., Chair, DMH Subcommittee

#### *Findings*

Dr. Pfefferbaum summarized the efforts of the DMH Subcommittee since its formation in June 2008, which included recommendations and a detailed report to the HHS Secretary in November 2008 on protecting, preserving, and restoring individual and community mental health in catastrophic health event settings. In 2009, the NBSB adopted the DMH Subcommittee's recommendations on mitigating adverse behavioral health outcomes during the H1N1 public health emergency. The report and recommendations presented to the NBSB address the integration of mental and behavioral health issues into the Federal response to disasters. The 2008 report included eight recommendations; those recommendations, along with background information, and the extensive scientific literature review that support them formed the foundation for the current report.

In conducting its assessment, the DMH Subcommittee held several teleconferences designed to encourage open dialogue with the ex officio members (or their designees) of the DMH Subcommittee representing various Federal Agencies. Ex officio members presented their perspectives on aspects of the policies, plans, and operating procedures that touch on disaster mental and behavioral health issues within their own Agencies. In addition to the Federal perspective, the DMH Subcommittee held a teleconference with representatives from the Multi-state Disaster Behavioral Health Consortium (MDBHC), a group comprised of mental and behavioral health leads from 32 member States. Dr. Pfefferbaum noted that both the National Health Security Strategy and the Federal Emergency Management Agency's draft National Disaster Recovery Framework include community resilience as objectives; meeting those objectives requires systematic, sustained integration of mental and behavioral health issues into the disaster and emergency preparedness, response, and recovery process.

The DMH Subcommittee concluded that some progress has been made toward integration, but much remains to be done. The most pressing and significant problem that hinders integration of disaster mental and behavioral health is the lack of appropriate policy at the highest Federal level, compounded by the lack of a clear statement as to where the authority to devise, formulate, and implement such policy would reside. Better integration is needed for several reasons:

- Mental and behavioral health issues have not been addressed systematically or consistently.
- Efforts to address mental and behavioral issues suffer when organizations are restructured or key personnel leave.
- Existing efforts are neither comprehensive nor universally effective.
- Without integration, efforts may be duplicated needlessly or contradict one another, and lessons learned may not be transferred.

- Without integration, responders are unaware of available, effective resources.

The recommendations in the report focus on developing policy and ensuring that organizational and structural elements are in place to translate policy into action. Successful integration requires meaningful metrics and accountability. Policies should address the following:

- Communication during disasters may be inconsistent, resulting in confusion and failure to comply with recommendations. More education and training of responders about mental and behavioral health issues would help responders deliver consistent messages.
- Disaster preparedness, response, and recovery require a stronger evidence base. No single Federal agency can adequately address the broad research agenda, so shared ownership and coordination of the research agenda are needed.
- The Federal role in disaster mental and behavioral health is unclear; e.g., long-term mental health consequences are not addressed.
- Federal policy development should include public and stakeholder input.
- Coordination among Federal, State, and local entities is needed.

Dr. Pfefferbaum emphasized that integration does not require consolidation of all Federal programs, nor does it mean eliminating effective existing programs. Rather, different programs should contribute their expertise and services as part of a coherent, organized structure with clear lines of responsibility, accountability, and communication. To achieve integration, the following structural issues should be addressed:

- Availability of comprehensible, easy-to-adapt resources for responders and the general public
- Awareness of and access to subject matter expertise
- A clear mandate, formal authority, and specific funding to foster collaborative efforts
- Responsibility for ensuring that training content and quality are adequate
- Research on effectiveness of various training models
- Sustainable funding for State mental health coordinators and disaster behavioral health planning
- Recognition that States address mental health separately from public health
- Incorporation of State, local, and tribal authorities in comprehensive disaster mental health planning
- Development of an overarching concept of operations (CONOPS) for including mental and behavioral health in planning
- Identification and empowerment of champions of mental and behavioral health, with high-level leadership, policy-based direction, clear lines of authority and accountability, and sufficient resources and personnel

***Discussion***

Dr. Pfefferbaum emphasized that training first responders in psychological first aid allows them to respond with sensitivity to behavioral health issues in the context of a

disaster. David Schonfeld , M.D., said the American Academy of Pediatrics is encouraging more attention to mental health in preparedness, planning, and response. He noted that better integration will help change the culture within the Federal government and among responders so that mental health is incorporated into disaster response and not just as part of recovery.

CAPT Dori Reissman, M.D., M.P.H., distinguished mental health from behavioral health, noting that planners and responders often focus on behavior in an emergency—such as complying with evacuation orders—more than addressing mental health disorders. Stevan Hobfoll, M.A., Ph.D., said the National Institutes of Health (NIH) has pushed the research agenda toward biological models of mental illness, resulting in a lack of research funding for and subsequent disintegration of community and social psychiatry and psychology. As a result, little is known about reactions to trauma on a social level.

***Recommendations***

Dr. Pfefferbaum summarized the proposed recommendations for the HHS Secretary:

1. The Secretary, in coordination with other Federal Agencies, should develop a policy regarding disaster mental and behavioral health that encompasses the strengths and activities of all Federal Agencies, and also develop a strategy to implement that policy. Specifically, the policy should identify appropriate Federal roles regarding mental and behavioral health aspects of disaster and emergency preparedness, response, and recovery. The policy should be developed in consultation with other Federal Agencies; State, local, and tribal agencies; non-governmental organizations (NGOS); civic and community groups such as faith-based organizations; and appropriate subject matter experts. The policy should include:

    - A clearly articulated statement of the nature and scope of the Federal Government's roles and responsibilities with respect to disaster mental and behavioral health in preparedness for, response to, and recovery from disasters and emergencies;

    - Identification and delegation of responsibility and authority to designated Federal Agencies and other entities to prepare for a full range of psychosocial consequences resulting from disasters and emergencies and to provide for assessment and adequate and appropriate interventions and treatments for emotional and behavioral health disorders resulting from disasters;

    - Development of mechanisms to integrate disaster mental and behavioral health capabilities and responsibilities across Federal Departments and Agencies.

2. The Secretary should identify and empower an office or Agency to serve as the operational leader for disaster mental and behavioral health integration within HHS, with authority to:

- Synchronize and oversee efforts of HHS offices and Agencies, defining goals and measuring progress toward achieving them;

- Develop a high-level CONOPS for including mental and behavioral health in disaster and emergency preparedness, response, and recovery efforts across the Federal enterprise;

- Bring together personnel from all sections of HHS, as was done in the case of the H1N1 pandemic, to marshal existing expertise, identify and obtain additional needed expertise, integrate strategy, share emerging data, and facilitate a credible and unified HHS response.

3. The Secretary should task senior HHS leaders, including but not limited to the directors of NIH, ASPR, CDC, AHRQ, and SAMHSA, with developing a set of coordinated and prioritized research goals and necessary support for disaster mental and behavioral health. This research agenda should be coordinated with other relevant Federal entities, including DoD, VA, DHS, and DoED.

4. The Secretary should create and maintain a structure by which disaster mental and behavioral health subject matter experts will regularly assess and report to the Secretary on progress toward integration as well as on other disaster mental and behavioral health issues. Continuation of the DMH Subcommittee would be one logical mechanism to accomplish this essential goal.

The Subcommittee identified examples of awareness of the need for integration and progress toward it, but, Dr. Pfefferbaum said, too many examples were driven by motivated individuals, not formal policy. She thanked the HHS staff, report writers, Subcommittee members, and NBSB members who contributed to the report.

***Discussion***

John S. Parker, M.D., suggested the report include a comment that some disasters have such a large mental/behavioral health component that it is not recognized, such as the recent economic recession. Dr. Rose noted that communication is not specifically addressed in the recommendations. Dr. Schonfeld replied that the 2008 recommendations do address communication, and the current report suggests that HHS act on the 2008 recommendations.

Bruce Gellin, M.D., M.P.H., confirmed that HHS sets policy in various ways, and Dr. Grabenstein hoped the NBSB would encourage the Secretary to address the DMH Subcommittee recommendations in a memorable way. Kenneth L. Dretchen, Ph.D., suggested identifying a specific office to take the lead for integration; Daniel Dodgen, Ph.D., said the Secretary may want to determine which office can best ensure collaboration within the Department.

Albert Di Rienzo asked whether other countries offered good models for integration. While international literature was considered for this report, Dr. Hobfoll said much more research is needed.

Dr. Grabenstein suggested spelling out more clearly in the recommendations that every HHS agency response plan should include a disaster mental and behavioral health component (e.g., an annex, an appendix) and a clear call to HHS to implement the 2008 recommendations. James James, M.D., Dr.P.H., M.H.A., said many other concerns should also be incorporated into preparedness and response plans, such as pediatric and geriatric health issues. Dr. Dodgen said HHS is making some progress; for example the ASPR is convening an interagency working group to address a variety of integration issues. He also clarified that the CONOPS proposed in the recommendations refers to overarching guidance on the mental and behavioral health resources, capabilities, and processes that are available and should be applied in a disaster setting. Russell Jones, Ph.D., emphasized the need for a group like the DMH Subcommittee to follow up on the recommendations to ensure continued attention to disaster mental and behavioral health issues. Dr. Hobfoll said people with expertise in disaster mental and behavioral health should take part in the highest level of deliberations about preparedness and response planning.

Noting that attention to the mental health needs of responders is not addressed in the current recommendations, but is recommended in the 2008 report, Dr. Grabenstein and Dr. Parker suggested that the current report include the 2008 recommendations or include the 2008 report as an appendix.

***Public Comment***

William J. Rodriguez, M.D., Ph.D., a pediatrician, noted that children's mental health needs came up in the report, but not the recommendations. He said that because children are in a developmental stage of their lives, they are doubly affected by mental health issues such as separation anxiety. Dr. Rodriguez said, "We are always playing catch-up," in addressing health issues among children, but this report represents an opportunity to get ahead and recognize that children are doubly vulnerable in disasters.

***Discussion***

Dr. Pfefferbaum said the DMH Subcommittee would add a separate recommendation that the Secretary act on the 2008 recommendations and provide the language for NBSB review later in the day. Dr. Parker emphasized that without the knowledge base provided by the 2008 report and the 2009 H1N1 report, the current report's findings and recommendations could be misunderstood. Dr. Dodgen identified some of the barriers to integration, which are described in more detail in the 2008 report. Dr. Quinlisk added that the lack of sustained funding for dedicated mental health experts at the State level remains a significant barrier. Other broader issues were raised about the need for continued vigilance to ensure follow-through on recommendations, the importance of incorporating behavioral health into response as a means of setting the tone for recovery, and the current research focus on treating mental illness as opposed to preventing it.

Dr. Grabenstein proposed that the NBSB summarize the recommendations in a

transmittal letter to the Secretary and call out the 2008 report as the foundation for the current report. Dr. Parker said the 2009 H1N1 report describes a good example of successful integration, and Dr. Pfefferbaum agreed to highlight that in the current report.

Following lunch, Dr. Pfefferbaum described how the DMH Subcommittee incorporated the changes suggested earlier in the day. The Subcommittee agreed to add the language proposed that specifies which agencies and departments should be involved in developing a coordinated research agenda. Following additional discussion, Dr. Pfefferbaum assured the NBSB that the report would undergo a final edit.

***Vote on Report, "Integrating Mental and Behavioral Health in Federal Disaster Preparedness, Response, and Recovery: Assessment and Recommendations"***

Following a motion by Eric Rose, M.D. (seconded by Dr. Quinlisk), the Board voted unanimously in favor of the following:

> **MOTION**
>
> NBSB adopts the DMH Subcommittee report, "Integrating Mental and Behavioral Health in Federal Disaster Preparedness, Response, and Recovery: Assessment and Recommendations" with the changes discussed.

Dr. Grabenstein thanked the DMH Subcommittee for their efforts. He proposed a draft transmittal letter to the Secretary for consideration by the Board. The Board discussed whether to specify that funding should be part of the recommendations. It was agreed that the Secretary will determine how best to spend money and distribute resources. Dr. Pfefferbaum said she would edit the report and recommendations accordingly. Dr. Grabenstein said the wording of the Board's transmittal letter would be reconciled with the final report.

Following a motion by Dr. James (seconded by Dr. Parker), the Board voted unanimously in favor of the following:

> **MOTION**
>
> Dr. Quinlisk will work with the NBSB Executive Director to finalize a transmittal letter to the Secretary to accompany the DMH Subcommittee's report.

## FUTURE OF THE NBSB WORKING GROUP PRESENTATION

**Patricia Quinlisk, M.D., M.P.H., Chair, NBSB and Chair, Future of the NBSB Working Group**

Dr. Quinlisk explained that, at the request of the ASPR, the Future of the NBSB Working Group drafted a letter to Secretary Sebelius proposing short- and long-term priorities for the Board to address. She asked for Board comments on the draft letter, which had already been circulated among members several times.

***Discussion***

Dr. Parker described the process of information gathering, discussion, and deliberation that led to the draft letter. He noted that the Working Group proposed various options for

ensuring that the Board continues to function effectively with a rotating mix of new and incumbent members.

Following a motion by Dr. Rose (seconded by Roberta Carlin, M.S., J.D.), the Board voted unanimously in favor of the following:

**MOTION**

The Board approves the letter to the Secretary describing potential future priorities for the NBSB. The letter will be sent to the Secretary with no changes.

## NEXT STEPS

Dr. Quinlisk invited Board members to identify specific issues on which they would like to receive updates or briefings in the near future. Dr. Grabenstein suggested moving forward with any of the topics proposed in the letter to the Secretary (characteristics of at-risk populations, community resilience, e-health technologies, U.S. Food and Drug Administration engagement, health security workforce development, the National Health Security Strategy, the National Disaster Medical System, emerging infectious diseases, prioritization of medical countermeasures planning, and distribution and dispensation plans). The discussion yielded a variety of other specific ideas:

- Technology and communication:
  - Role of technology in resilience (e.g., online communication and rapid information-sharing)
  - Effective communication using new technologies (two-way communication, consumption of information, technology use by disabled populations, credibility of sources)
  - Assessing the validity and effectiveness of the content of communications
  - Role of regulators in e-health
- Lessons on community resiliency from the Deepwater Horizon oil spill
- Other lessons from the Deepwater Horizon oil spill (e.g., gaps in scientific knowledge about human health in relation to the environment)
- Evaluation of the final report assessing the Public Health Emergency Medical Countermeasures Enterprise
- Status of the CDC's MedKits
- Status of the CDC's biosurveillance efforts on mental health issues before, during, and after disasters

**ACTION ITEMS**

- Dr. James will provide NBSB staff with contacts for a presentation on epidemiological and behavioral science research on e-health technologies.
- NBSB staff will invite George Korch, Ph.D., from the Office of the ASPR, to present to the Board about the Public Health Emergency Medical Countermeasures Enterprise assessment.
- Peter Jutro, Ph.D., will provide NBSB staff with contacts for a presentation on how young people share and consume information using new technologies.

- Technology and communication will be featured on the agenda of the next Board meetings. Members should suggest specific people or subtopics to the NBSB staff in advance of the meeting.

## WRAP UP AND ADJOURN

CAPT Sawyer said NBSB 2011 meetings are tentatively scheduled for April 28–29 and September 22–23. However, the Board may choose to convene a meeting before the end of 2010 in person or via teleconference. CAPT Sawyer reminded the Board that it may be prudent to determine whether there are specific topics for which the ASPR seeks input before planning the next meeting.

**ACTION ITEM**

Dr. Quinlisk and the NBSB Executive Director will draft a letter to the ASPR describing the Board's interest in addressing the overlapping issues of resiliency, communication, and technology in the anticipation that the ASPR will provide some guidance to the Board on topics to pursue.

CAPT Sawyer thanked NBSB staff for their hard work. Dr. Quinlisk thanked the Board members and adjourned the meeting at approximately 2:30 p.m. EDT.

NBSB NATIONAL BIODEFENSE SCIENCE BOARD

**Public Meeting**
**Wednesday, September 22, 2010**
**9:00 AM – 3:30 PM Eastern Time**

**Doubletree Hotel Bethesda**
**8120 Wisconsin Ave.**
**Bethesda, MD 20814**

**Questions please email: nbsb@hhs.gov**

**http://www.phe.gov/Preparedness/legal/boards/nbsb/Pages/default.aspx**

---

| | |
|---|---|
| **9:00 a.m. – 9:30 a.m.** | **Call to Order, Roll Call, and Conflict of Interest Rules**<br>*Leigh Sawyer, D.V.M., M.P.H.*<br>*Executive Director, National Biodefense Science Board*<br>*CAPT, U.S. Public Health Service*<br>*U.S. Department of Health and Human Services* |
| | **Welcome and Agenda Overview**<br>*Patricia Quinlisk, M.D., M.P.H.*<br>*Chair, National Biodefense Science Board* |
| **9:30 a.m. – 10:30 a.m.** | **Disaster Mental Health (DMH) Subcommittee Report Presentation**<br>*Betty Pfefferbaum, M.D.*<br>*Chair, DMH Subcommittee*<br>*National Biodefense Science Board* |
| | **Discussion** |
| **10:30 a.m. – 10:50 a.m.** | **Break** |
| **10:50 a.m. – 11:45 a.m.** | **Public Comment and Discussion** |
| **11:45 a.m. – 1:00 p.m.** | **Lunch on Your Own** |
| **1:00 p.m. – 1:15 p.m.** | **NBSB Vote on DMH Subcommittee Recommendations**<br>*Patricia Quinlisk, M.D., M.P.H*<br>*Chair, National Biodefense Science Board* |

| | |
|---|---|
| **1:15 p.m. – 2:15 p.m.** | **Future of the NBSB Working Group Presentation**<br>*Patricia Quinlisk, M.D., M.P.H*<br>*Chair, Future of the NBSB Working Group* |
| | **Discussion** |
| **2:15 p.m. – 2:30 p.m.** | **Break** |
| **2:30 p.m. – 2:50 p.m.** | **Public Comment and Discussion** |
| **2:50 p.m. – 3:00 p.m.** | **NBSB Vote**<br>*Patricia Quinlisk, M.D., M.P.H.*<br>*Chair, National Biodefense Science Board* |
| **3:00 p.m. – 3:20 p.m.** | **Next Steps**<br>*Patricia Quinlisk, M.D., M.P.H.*<br>*Chair, National Biodefense Science Board* |
| **3:20 p.m. – 3:30 p.m.** | **Wrap Up and Adjourn**<br>*Patricia Quinlisk, M.D., M.P.H.*<br>*Chair, National Biodefense Science Board* |