Disaster Mental Health Recommendations

Report of the Disaster Mental Health Subcommittee of the National Biodefense Science Board

As presented to the National Biodefense Science Board November 18, 2008

THE NATIONAL BIODEFENSE SCIENCE BOARD

The National Biodefense Science Board (NBSB) was established by the Secretary of the U.S. Department of Health and Human Services (HHS) pursuant to section 319M of the Public Health Services Act (42 U.S.C. 247d-7f) as added by section 402 of the Pandemic and All Hazards Preparedness Act (PAHPA) (Pub. L. 107-417), effective December 19, 2006. The Board provides expert advice and guidance to the Secretary of HHS on scientific, technical, and other matters of special interest to HHS regarding current and future chemical, biological, nuclear, and radiological agents, whether naturally occurring, accidental, or deliberate. The Board may also provide advice and guidance to the Secretary on other matters related to public health emergency preparedness and response.

THE DISASTER MENTAL HEALTH SUBCOMMITTEE

Homeland Security Presidential Directive 21, paragraph 31, directs the Secretary of Health and Human Services, in coordination with the Secretaries of Defense, Veterans Affairs, and Homeland Security, to establish a Federal Advisory Committee for Disaster Mental Health. The directive states that the committee shall consist of appropriate subject matter experts and, within 180 days after its establishment, shall submit to the Secretary of Health and Human Services recommendations for protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions. To execute this directive, the Disaster Mental Health Subcommittee was established under the NBSB, an established Federal Advisory Committee with both legal and discretionary authorities providing advice and guidance to the Secretary of Health and Human Services.

SUBCOMMITTEE COMPOSITION AND RECOMMENDATION DEVELOPMENT

The Disaster Mental Health Subcommittee includes NBSB members; designated ex-officios from the U.S. Departments of Defense (DoD), Veterans Affairs, and Homeland Security, among other Federal Departments; and subject matter experts in areas such as service delivery providers, research, at-risk groups, consumers, State and local mental health and substance abuse authorities, policy, public health, epidemiology, occupational safety and health, emergency management, training, and chaplains.

In order to develop recommendations for the NBSB, the Disaster Mental Health Subcommittee identified three content areas related to disaster mental and behavioral health preparedness and response:

- Intervention
- Education and Training
- Communication and Messaging

Three writing groups consisting of Disaster Mental Health Subcommittee members were formed to develop recommendations for these interrelated areas with final revision and approval by the full subcommittee. The three groups met multiple times via teleconference and the entire subcommittee came together for a face-to-face meeting on two occasions, once on June 19–20, 2008, and again on September 23, 2008, in preparation for making the recommendations.

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"Disaster mental and behavioral health," as used throughout this report, includes the interconnected psychological, emotional, cognitive, developmental, and social influences on behavior and mental health and the impact of those factors on preparedness, response, and recovery from disasters or traumatic events. These factors directly and indirectly influence individual and community risks for health and safety outcomes such as substance use and abuse, aggression and non-adherence to public health recommendations (e.g., medication regimens, infection control, and evacuation or restricted movement), and the success of emergency response strategies and public directives. Strategies to mitigate the mental and behavioral health consequences of disasters include all three content areas identified by the Disaster Mental Health Subcommittee: applying appropriate interventions, including infrastructure and organizational guidance; educating and training service providers, leaders, and the public; and enhancing and targeting communication and messaging.

BACKGROUND: INTERVENTION

Disaster mental and behavioral health interventions are considered most effective when they are practical, flexible, empowering, compassionate, and respectful of the needs of affected individuals and their social systems. Interventions should address both psychological and social/community needs. In addition, population monitoring, triage, and screening activities should be seamless, coordinated, and integrated to ensure that specific needs are addressed in a timely and appropriate manner. It is important to match actual need with the implementation strategy (e.g., who delivers the intervention and how the intervention unfolds) and the timing of the intervention. Interventions must be developed and implemented to match different categories of disasters and the numbers of casualties (few, moderate, or mass casualty event) and reflect available resources over time (e.g., early dependency on locally available resources). This approach requires real-time disaster mental and behavioral (psychosocial) monitoring at a population/systems level to identify emergent unmet needs and to inform a continuum of tactical response and strategic planning. The design and implementation of an intervention must fit the ecology of the culture, place, and type of trauma at a systems level to optimize the effectiveness of any psychosocial treatment. Interventions aimed at facilitating adaptive coping in times of uncertainty attempt to achieve a sense of safety, calm, self- and communal efficacy, hope, social connectedness, ability to process complex health information, and other outcomes yet to be illuminated through research efforts.

Interventions should be based on empirically defensible and evidence-based practices. To accomplish this, research is needed to develop and test the efficacy of interventions that promote resiliency and prevent or mitigate disaster-related disorders. Quality assurance protocols and real-time research are also needed to evaluate intervention effectiveness. Response and recovery organizations should incorporate the most recent research findings, including near real-time intervention efforts, into planning and operations.

Appropriate command and control strategies for mental and behavioral health are currently variable and should be explored, adapted, and developed to allow for more consistent application. These kinds of strategies would require more integration of functions across the Emergency Support Function (ESF) 8: Public Health and Medical; ESF 6: Mass Care; ESF 15: Volunteers and Donations as well as the Worker Safety and Health Support Annex of the National Response Framework. These support functions require the inclusion of the data

collection strategies mentioned above, expert consultation to incident leadership, enhanced accountability and resource tracking, targeted intervention, and the provision of direct services to affected populations.

The interplay of needs assessment, health surveillance, screening and triage, an array of research activities and targeted command and control strategies is paramount to helping those affected by disasters and is best supported by disseminating evidence-based best practices. The Intervention Recommendations in this report are designed to address a broad span of public health and social concerns, including coordination, service provision, and health surveillance.

BACKGROUND: EDUCATION AND TRAINING

Disaster responders, health care, mental health, and substance abuse professionals; spiritual care providers; community leaders and decision makers; and educators tend to be highly trained in their respective areas of expertise. However, extreme levels of stress, often referred to as traumatic stress, can adversely impact cognitive, emotional, behavioral, and physiological functioning to a significant degree. The ability of any helper or leader to apply his or her expertise and/or leadership function to effectively provide assistance in a public health emergency or a major disaster may be significantly impaired if the helper or decision maker is adversely impacted by the traumatic event.

The primary strategy for reducing the likelihood of traumatic stress and/or reducing the magnitude and duration of a traumatic stress reaction is to have members of the public understand traumatic stress and know how to increase resilience and reduce vulnerability. A second strategy for minimizing the impact of traumatic events is to ensure that responders are trained in basic skills to help their colleagues cope with and recover from ordinary stress. This strategy also enables the responder to provide psychological support to those whom the responder is serving as well as to pay attention to his or her own reactions and needs. A third strategy is to help members of the general public increase their resilience, reduce their vulnerability, and become proficient in self-care and in psychologically supporting their family, friends, co-workers, and community. Such training reduces the number of individuals having ordinary or transient reactions to stress who are inappropriately or unnecessarily referred to. In addition, training could promote a reduction of stigma among the general population toward receiving professional support for traumatic stress reactions.

Disaster mental health, as defined here, is the provision of psychological support to affected individuals and communities by trained mental health professionals. In the past decade, various disasters of extraordinary size and impact, such as the terrorist attacks of September 11, 2001, and Hurricane Katrina, have demonstrated limitations in this model. The logistics of recruiting a sufficient number of trained mental health professionals and distributing them to provide services to all of the affected population prove burdensome or outright impractical in large scale events.

Many of these points were recognized by the Institute of Medicine (IOM) Committee on Preparing for the Psychological Consequences of Terrorism. That committee recommended the development of a more effective public health model for psychological support that could serve as a companion to the current disaster mental health model. The November 2007 Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support in Emergency Settings specifies the need for culturally responsive professional and grassroots models of psychological support, developed together with the communities the programs are intended to serve. The Education and Training Recommendations in this report provide concrete suggestions for bolstering the existing disaster mental health model and for implementing a grassroots public health model for psychological support that is more appropriate in serving all those in need, including vulnerable and at-risk populations.

BACKGROUND: COMMUNICATION AND MESSAGING

Communication is an essential mental and behavioral health intervention in disaster preparedness and response. Information during a crisis can facilitate life-saving and altruistic behaviors and discourage actions that impede an effective response or rend the social fabric. Over the past several decades, behavioral and social scientists have learned a great deal about how people think, feel, and act during disasters. This knowledge should inform the process and content of communication. Disaster mental and behavioral health specialists with expertise in crisis and risk communication can play important roles in maximizing political leaders' effectiveness in communicating with the public during crises.

Disaster-related communication efforts have focused heavily on the development of key messages presented, ideally, in "one voice" (i.e., one-way communications from authorities to the public). While this approach entails understanding and anticipating the public's information needs, it captures neither the richness of the public's ability to help solve problems nor the complexity of information needs that prompt people to take protective actions. Moreover, it does not fully take advantage of what has been learned about the ways people behave in disasters. For example, evacuation behavior illustrates the importance of informal networks and the role of non-verbal communication. Consider that people generally decide whether to comply with an official warning to evacuate only after gathering more information to validate the threat. This additional information comes through consulting with family, neighbors, friends, or co-workers and by checking other news sources. Establishing a true dialogue and engaging with the public before, during, and after an event promotes a sense of collective competency in mastering the challenges posed by the event and a sense of collective efficacy, essential ingredients to a community's resilience. The Federal government should support research that identifies promising practices that seek to establish community dialogues before disasters occur. This research should be sure to include practices designed for vulnerable and at-risk populations.

The identification of groups at higher risk for psychological distress can inform the development of special messages targeted for these populations. Many disasters affect "hidden victims," i.e., those who do not readily come to mind as being under stress, yet are. For example, building inspectors, who must tell families that they cannot return home to damaged buildings, can be under tremendous stress. Developing news reports, or using other means to educate the public about why buildings are not habitable, and acknowledging the difficulty of not being able to return home, may help members of the community focus their anger on the disaster rather than on an inspector.

The Communications Recommendations provided in this report highlight the ways in which Federal and, ultimately, national disaster preparedness can be enhanced by the incorporation of mental and behavioral health principles into communication. Communication and mental and behavioral health education, training, and intervention are linked and represent areas that can bolster community resilience. Disaster mental and behavioral health experts can play an important role in integrating and improving these areas to ensure optimal individual and community mental and behavioral health before, during, and after a disaster.

CROSS-CUTTING PRINCIPLES

The following principles are intended to guide all disaster mental and behavioral health intervention, education and training, and communication and messaging. These principles are to be fully integrated into all of the recommendations and action steps proposed by the Disaster Mental Health Subcommittee.

- Disaster mental and behavioral health must be defined comprehensively to include the highly interconnected psychological, emotional, cognitive, and social influences on behavior and mental health and its impact on preparedness, response, and recovery from disasters or extreme emergency events.
- Disaster mental and behavioral health interventions should be practical, flexible, empowering, compassionate, and respectful of the needs of affected individuals and their social systems.
- Responsiveness to culture and diversity must be supported in principle and in practical fact. Issues of culture and diversity should be carefully vetted and implemented into all plans, programs, curricula, and efforts related to disaster preparedness, response, and mental health.
- Vulnerable, at-risk populations should be addressed in all facets of disaster planning, preparedness, recovery, and research, including disaster mental and behavioral health efforts.
 - "Vulnerable populations" are defined functionally and in a manner consistent with the definition used in the implementation of PAHPA. This definition focuses on functional capabilities for which a vulnerable person may require additional assistance before, during, or after an emergency. The functional areas include maintaining independence, communication, transportation, supervision, and medical care.
 - Vulnerable populations include children and older adults. The needs of these two significant populations should be examined and addressed as part of disaster functions in general and disaster mental and behavioral health services in particular. Services should be developed and delivered in partnership with individuals and groups that serve children and older adults (e.g., families, child care facilities, schools, community groups, senior centers, long-term care facilities, faith-based groups, and primary care physicians).
 - Vulnerable populations also include people from diverse cultures, individuals who have limited English proficiency or are non-English speaking, individuals with disabilities, and those who are transportation disadvantaged.
- It is desirable to avoid burdening States/Territories, Federally-recognized tribes, and local entities with additional responsibilities without providing commensurate funding or resources. Funding and resources help to ensure that recommendations, goals, and

initiatives are accomplished in a manner that is timely, consistent, documented, and evaluated.

• Disaster mental and behavioral health preparedness and response efforts should include Federal, State/Territory, tribal, and local collaboration. Full actualization of disaster mental and behavioral health's potential requires integration of traditional partners and knowledge of, outreach to, and collaboration and integration with non-traditional elements in government, academia, and the private sector.

FORMAT OF RECOMMENDATIONS

The recommendations, with brief background and action steps, are organized according to the three Disaster Mental Health Subcommittee writing groups (Intervention, Education and Training, and Communication and Messaging). While they are numbered for ease of reference, the numbers are not intended to convey either priority or sequence of implementation.

ROLE OF THE DISASTER MENTAL HEALTH SUBCOMMITTEE IN ACTION STEPS

As necessary, the Disaster Mental Health Subcommittee will establish workgroups to support the completion of the action steps within its purview and to recommend policy, programmatic, or funding actions required to implement the broader recommendations in this report. Workgroups will be led by Disaster Mental Health Subcommittee members and will include additional nationally recruited subject matter experts and representatives of stakeholder groups as necessary. Specific workgroups proposed are detailed in the *Next Steps* section of this report.

RECOMMENDATION 1 (INTERVENTION)

Integrate mental and behavioral health into all public health and medical preparedness and response activities.

- (1a) At the Federal level, coordinate mental and behavioral health service efforts through a unified concept of operations (CONOPS) that addresses pre-, intra-, and post-event phases of disaster and that includes:
 - Near real-time reach-back capacity to allow for mental and behavioral health expert input and consultation;
 - Representation of mental and behavioral health functions, including consultative and clinical roles, within operational frameworks across local, State, and national levels aligned with the National Incident Management System; and
 - Standard mental and behavioral health triage of at-risk individuals and populations linked with needs-assessment activities and surveillance of emerging health effects and behavioral risk factors.
- (1b) At the national level, facilitate State-based disaster mental and behavioral health planning and operations through the following:
 - Include language on mental health, substance abuse, and behavioral health in all appropriate legislation, regulations, and grants (e.g., the Pandemic and All-Hazards Preparedness Act).
 - Integrate disaster mental and behavioral health planning and exercising into performance benchmarks of new or existing Federally-funded emergency management programs or grants.

BACKGROUND/FINDINGS

Background related to Recommendation 1a

Nationally, there is a need for an overarching and standardized operational framework (i.e., CONOPS) coordinating Federal efforts to respond to the emerging disaster mental and behavioral health needs of affected populations. Key organizations such as HHS (USPHS and NDMS) and DoD (USNORTHCOM/NORAD) have been working on this need and are converging on many operational concepts to coordinate and leverage resources across multiple sectors for the evolving mental and behavioral health needs resulting from a catastrophic health event. This framework must be agile at the operational level to address how various scenarios impact contextual features of an event—such as the impact of adherence on public health or emergency response strategies (e.g., taking the appropriate medicine/vaccine, evacuation, sheltering, or taking proper precautions to avoid the spread of infection), deterioration of social order, and/or reactions to massive numbers of casualties or deaths.

Disaster mental and behavioral health response can be strengthened from a common operational picture, enabling mutual aid request triggers, risk communication strategies, resource allocation, targeted monitoring of population health and the recovery environment, and the provision of appropriate interventions such as psychological first aid. These converging operational concepts were implemented in the recent Congressionally-mandated national-level exercises involving top executive officials (known as TOPOFF 4), and enabled a near real-time common situational awareness of at-risk populations across many jurisdictional response partners (e.g., local, State,

American Red Cross, USPHS teams). Similarly, concepts were utilized by American Red Cross in the response to Hurricane Ike and are scheduled to be implemented for the Vigilant Shield 08 exercise by DoD's NORAD/USNORTHCOM Office of the Command Surgeon.

Background related to Recommendation 1b

The Pandemic and All Hazards Preparedness Act (Pub. L. 109-417) provides oversight for public health and medical planning for all hazards; however, current legislative language does not address mental and behavioral health consequences associated with public health emergencies. The National Health Security Strategy and the Federal grant program for eligible entities revolves around the "Preparedness Goals" listed at section 2802(b) of the Public Health Service Act (42 U.S.C. 300hh-11(b)). Targeted disaster mental and behavioral health plans and expertise need to be in place at the State/Territory, tribal, and local levels to truly serve the needs of affected populations. Such plans are necessary to coordinate and integrate assessment and treatment services that address the psychological, social, and behavioral consequences for both short- and long-term needs of affected constituents.

State/Territory or tribal-level planning has often failed to include mental health and substance abuse agency authorities or experts, as there is minimal oversight of the limited requirements to do so. Additionally, appropriate functions (e.g., mental and behavioral health response teams) and expertise should be an integrated part of both emergency operations and pre-event planning. Without consistency in these issues and alignment with NIMS, the nation will not have an adequate level of readiness, nor a capability to respond at the State and local level. Greater preparedness can be achieved through joint exercises, with the inclusion of realistic mental and behavioral health challenges to the exercise scenario. Targeted legislative language and performance criteria for Federal funding opportunities are essential to drive appropriate levels of readiness to respond to the mental and behavioral health needs of affected sub-populations. Current disaster mental and behavioral health grant and funding mechanisms have rigid timelines that often do not correspond to the needs of the community being served or may have restrictive funding rules limiting support of critical recovery services. These funding mechanisms would benefit from recommendations to address realignment of timelines and fiscal policies. Furthermore, mental and behavioral health interventions should be aligned more closely with emerging knowledge about the time course of adjustment reactions, the emergence of serious and potentially chronic conditions, and factors that impact illness trajectories and intervention effectiveness.

ACTION STEPS

- 1a.1 Select and logistically equip a panel of expert consultants in disaster mental and behavioral health to function in near real-time as an advisory body to aid decision makers who are responding to mass casualty threats and other extreme public health events (e.g., disaster, epidemic, or terrorist act).
- 1a.2 Convene experts with operational experience in disaster mental and behavioral health CONOPS to review existing CONOPS strategies and make recommendations on key operational functions and positions to create a standard CONOPS structure and prescripted mission assignments.

- 1a.3 Pilot and evaluate this standardized disaster mental and behavioral health CONOPS in selected Homeland Security Exercise and Evaluation Program Exercises, including those with mass casualty components (e.g., exercises utilizing the Catastrophic Incident Supplement).
- 1b.1 Work with HHS policy leadership to promote the inclusion of language on mental health, substance abuse, and behavioral health in all appropriate legislation, regulations, and grants.
- 1b.2 Work with HHS policy leadership to develop a rationale for funding, in an amount sufficient to complete the task, to assist States/Territories and tribes to implement disaster mental and behavioral health planning called for in revised legislative, regulatory, and grant language.
- 1b.3 Provide technical assistance to Federal grantor agencies to establish grant scope, mechanisms, and reporting criteria that include NIMS-compliant mental and behavioral health in disaster planning efforts either through actions or delegation of authority.
- 1b.4 Develop a white paper or detailed recommendations addressing the realignment of timelines and policies of current Federal emergency response funding opportunities to better meet the mental and behavioral health needs of affected populations.
- 1b.5 Provide technical support to States/Territories and tribes to develop and facilitate regionally-coordinated mental and behavioral health response and recovery efforts.
- 1b.6 Include professional guild associations in Disaster Mental Health Subcommittee workgroups to promote the use of psychological first aid and evidence-based interventions throughout the nation and across the phases of an event.

RECOMMENDATION 2 (INTERVENTION)

Enhance the research agenda for disaster mental and behavioral health.

Convene a working group of the Disaster Mental Health Subcommittee to review the research portfolios of Federal research funders across the U.S. government (including the NIH, AHRQ, and CDC within HHS, and other relevant Federal Departments and agencies) to identify gaps in knowledge, areas of recent progress, and priorities for research in disaster mental and behavioral health program evaluation, early intervention, treatment for disaster-related problems, and dissemination of training in disaster mental and behavioral health interventions. Set a national agenda for this research that is supported by the Federal agencies that fund research initiatives in these areas.

BACKGROUND/FINDINGS

To make maximal use of resources for the continuum of interventions to ameliorate the range of expectable mental and behavioral health effects (e.g., time-limited distress, adherence to public health directives, and new incidence disorders) that are exacerbated or caused by a disaster, it is important that evidence-based, cost-effective services be provided. The limited research conducted to date on such interventions undermines the most effective use of these funds. Priority, therefore, should be given to maximizing the research that can be supported in this critical area.

There is currently relatively little research evaluating the effectiveness of disaster mental health interventions. Evidence suggests that some commonly used interventions, such as simple education and stress debriefing, do not necessarily prevent the development of post-traumatic stress disorder or depression. There has been little formal program evaluation of existing services. For example, crisis counseling programs are commonly established following Presidentially-declared disasters, but there has been little research investigating the impact of these and other widely-delivered services. Recently, feasibility and usefulness of such evaluation efforts have been established. Evaluations should include measurement of survivor outcomes and be supported by adequate funding for the development and expansion of these research programs.

More generally, research on early post-trauma interventions and other post-disaster and supportive mental heath services (e.g., bereavement counseling) has had little impact on post-disaster care, despite promising findings with timely utilization of some brief cognitive-behavioral interventions targeting acute stress reactions and excessive alcohol use. Interventions addressing a broad spectrum of post-disaster adjustment reactions require study. Key early interventions to target in outcomes research include:

- Psychological first aid
- Psycho-education
- Brief cognitive-behavioral interventions
- Web- and telephone-delivered services
- Early triage, screening, and surveillance for adjustment reactions and post-traumatic symptoms and disorders
- Social support interventions
- Group-based interventions
- Couples- and family-focused interventions
- Bereavement and traumatic grief interventions
- Worry interventions addressing cognitions about illness and infection
- Interventions to increase group cohesion
- Interventions to increase community self-efficacy
- Self-help groups
- Utilization of services
- Modifications required to optimally address the needs of vulnerable populations and the diversity of those in need of services
- Means to conduct program evaluations of disaster mental and behavioral health services and programs, including crisis counseling services

There is also little research on screening and treatment of individuals who develop mental health problems after exposure to disasters. Disaster survivors who go on to develop post-traumatic stress disorder and other problems might have benefited from rapid triage and established screening and treatment; however, these techniques have not yet been evaluated with disaster survivors.

Finally, when promising practices in disaster mental and behavioral health care are identified, they must be learned and delivered by providers. When evaluating mental health programs, early

interventions, treatments, and methods of dissemination of training for DMH providers, particular consideration should be given to the effects on people of color and other marginalized groups.

Conventional professional training workshops are often ineffective in changing practice, so dissemination systems based on best training practices should be established and evaluated.

ACTION STEPS

- 2.1 Review the research portfolios of Federal agencies that fund research on the design and evaluation of interventions and treatment services that can address the psychological needs of citizens after a disaster or major crisis event to identify gaps in knowledge, areas of recent progress, and priorities for research in disaster mental and behavioral health program evaluation, early intervention, treatment for disaster-related problems, and dissemination of disaster mental health interventions.
- 2.2 Convene a panel of Federal partners (e.g., NIH, AHRQ, CDC, SAMHSA, and OFRD within HHS, and DoD, VA, DHS, and other relevant Federal Departments and agencies) to review recommendations and develop integrated funding initiatives across agencies to address gaps.
- 2.3 Work with Federal partners to leverage funding to allow for implementation of the recommendations/integrated funding plan.

RECOMMENDATION 3 (INTERVENTION)

Enhance assessment of mental and behavioral health needs during emergencies.

Integrate epidemiological strategies to capture information for public policy and resource allocation. Utilize existing national health surveillance systems and State/local-based systems to rapidly assess and track mental and behavioral health needs and recovery processes in affected populations (e.g., the Centers for Disease Control and Prevention's research, including the Behavioral Risk Factor Surveillance System, Youth Behavioral Risk Surveillance System, National Hospital Discharge Survey, and National Health Interview Survey; the Substance Abuse and Mental Health Services Administration's National Household Drug Utilization Survey; the American Red Cross Mental Health Triage information; and local systems such as the Los Angeles County Rapid Mental Health Triage System).

BACKGROUND/FINDINGS

In order to make rational decisions about deployment and adjustment of resources in response to major emergency events, including when and where to transition from crisis counseling to more therapeutic models of intervention, it is essential to understand needs in affected populations over time. Coordination among several Federally-supported survey efforts (e.g., the SAMSHA household survey, the CDC's NHIS survey, the CDC's BRFSS survey) could result in real-time data on thousands of households a week to screen for victims/evacuees and relatives of people who were victims and provide a thorough national, regional, or local screen to monitor recovery. This type of effort is vital for knowing whether various health and human services are reaching people (e.g., whether resources are following evacuees and others that may be impacted). Other important and time-sensitive knowledge to be gained includes: dispersion of the affected population; active health conditions/needs; severity of conditions; percentages of individuals

getting treatment; barriers to getting care; aggravating circumstances/stressors; current and planned living situation/housing needs; status of any environmental testing that has been done (toxic exposures); status of children and older adults in households; employment, disability, and other vulnerable population needs; and Medicare, Medicaid, and insurance status.

Additionally, realizing the capacity for real-time rapid triage, epidemiology, and surveillance will make possible new and important learning concerning the following: confidence/trust in government preparedness and responsiveness; family/household preparedness; trusted sources of information/support; disruptions and behavioral impact; perceived need for mental health and other care; utility and penetration of education and warnings about protective strategies; compliance with public directives; post-disaster behaviors; new/exacerbated acute and chronic health needs; pre-existing health conditions; problems with daily living; how to create effective systems of care that meet varying needs; effectiveness of public health and clinical interventions; optimal timing, intensity, and focus of interventions to minimize adverse outcomes; markers of risk, resistance, resilience, and recovery; and highly predictive early diagnostics for chronic disorders.

ACTION STEPS

- 3.1 Develop a succinct statement of need/opportunity (e.g., what the health and human service information needs are/will be after events that result in major population disruption and displacement, how current methods to gather vital information are fragmented and inadequate, and how with advance planning the government could coordinate to use its existing infrastructure to maximize its ability to meet needs and minimize costs).
- 3.2 Develop a short list of exemplary pieces of information at the population level that would be desirable to have for planning and delivering health and human services over time (e.g., current and planned living situation, health care needs, access to health services, status of any testing that has been done for toxin exposure, employment, and status of household children, etc.). This should be done for all different sets of hypothetical events (e.g., earthquake, flood, nuclear event, and biological event). Material should be evaluated (pilot tested) with targeted groups prior to an event to ensure that information is readable and understandable and that the message can be acted on.
- 3.3 Identify a list of existing information-gathering vehicles (e.g., Federally-supported surveys on health and education as well as special census programs).
- 3.4 Convene an exploratory meeting with the key survey groups.

RECOMMENDATION 4 (EDUCATION AND TRAINING)

Enhance disaster mental and behavioral health training for professionals and paraprofessionals.

Promote psychological resilience and effective delivery of psychological support by professionals and paraprofessionals through education in disaster mental health and/or training in psychological first aid.

BACKGROUND/FINDINGS

Disaster responders face tremendous stress in their work. Many responders and their families are themselves directly affected by the disaster. Responders are deployed to affected areas, which require separation from their own families and the need to rise above their own needs to help others. Many individuals who respond serve those who have been affected in the emergency and who may also be experiencing traumatic levels of stress. Responders who experience traumatic levels of stress may not only become casualties themselves, but are also likely to become less capable of maintaining their effectiveness in serving those in need. It is important to increase the resilience of our nation's responders, from decision makers and management to front-line workers, and provide them with the tools and resources to meet their own disaster-related psychological and psychosocial needs, the needs of their families, and the needs of those they are called upon to serve.

Many of those who respond to emergencies are members of professional disciplines that require specialized education and/or licensure. To enhance awareness among emergency responders of the psychological impact of disaster and the strategies and techniques for providing psychological support to those affected by such tragedies, greater emphasis should be placed on making decision makers, leaders, professional disciplines, response agencies, and individual responders accountable for obtaining specialized education and training in disaster mental health and/or psychological first aid. Licensure and accreditation of relevant professionals should include requirements for minimal knowledge and skills related to psychological first aid and disaster mental health.

"Psychological first aid," as used in this context, refers to psychological support that is both used to improve one's own resilience and is provided by non-mental health professionals to family, friends, neighbors, co-workers, and students. Psychological first aid focuses on education regarding traumatic stress and on active listening. The term also incorporates more sophisticated psychological support given by primary care providers to their patients. Properly executed, psychological first aid is adapted to the needs of each group or community (i.e., group of people with shared interests) implementing it, ensuring that the psychological first aid that is introduced in the community does not conflict with the world view of the group. It also emphasizes the inclusion of effective strategies for psychological support that may be specific to that group. This is done in concert with a representative community committee which helps to ensure responsiveness to the specific community. Psychological first aid includes understanding one's role; the difference between anticipated stress reactions and traumatic stress; how to engage in active listening; when and where to refer individuals for additional assessment and intervention; and the importance of supervision, ethical behavior, and self-care.

While psychological first aid as a whole has not been extensively researched, education and active listening have been thoroughly investigated as strategies for crisis intervention. Psychological first aid can help enhance a sense of self and collective efficacy, connectedness, and hope (empirically-based essential elements of immediate and mid-term mass trauma intervention). In psychological first aid, mental health professionals serve as trainers/consultants in adapting the model to individual communities (including vulnerable and at-risk populations), supervisors of psychological first aid networks, and bridges to the higher continuum of care.

"Disaster mental health," on the other hand, refers to crisis intervention, psychological support, and consultation and liaison provided to clients, communities, families, and individuals in the aftermath of disaster by mental health professionals. Disaster mental health includes preparedness activities and long-term recovery for individuals and communities. Disaster mental health training for mental health professionals includes understanding the etiology of traumatic stress and how to provide rapid triage, crisis intervention, and other related services in disaster settings.

It is important to extend psychological support training beyond mental health (e.g., psychiatry, psychology, counseling, social work, and marriage and family therapy) and health care professionals (e.g., medicine, pediatrics, nursing, and epidemiology) to include the full range of emergency responders (e.g., law enforcement, fire service, emergency medical responders), coroners and morgue staff, disaster relief personnel (e.g., American Red Cross and National Voluntary Organizations Active in Disaster), faith-based professionals and leaders, disaster response leaders (e.g., incident commanders, emergency managers, and civil service and elected government leaders), and educators.

ACTION STEPS

- 4.1 Meet with associations representing stakeholders to encourage adoption of enhanced disaster mental and behavioral health training standards and approaches. These groups will include:
 - Mental and behavioral health professional associations to encourage them to require training in disaster mental health in their graduate training programs.
 - Relevant mental and behavioral health licensing boards to encourage them to draft requirements for training in disaster mental health and for training and supporting psychological first aid networks for the professions they regulate.
 - Health, public health, emergency responder, and educator professional associations, voluntary organizations active in disaster (VOAD), and faith-based groups to encourage them to require training in psychological first aid for their members, to both improve the ability of these professionals to manage traumatic stress in the event of a public health emergency and to provide psychological support for their colleagues and the people they serve.
 - Emergency manager, health manager, and community leader professional associations to encourage them to require training for their members in: a) psychological first aid, b) disaster mental health, c) best practices in early intervention (based on current evidence base and best expert consensus), and d) emergency communications.
- 4.2 Convene a workgroup of the Disaster Mental Health Subcommittee to serve as an expert panel to provide technical assistance and develop guidance on disaster mental and behavioral health education and training issues, including critical preparedness education and decision making for community decision makers and disaster management officials.
- 4.3 Appoint mental and behavioral health professionals as members of the Federal Education and Training Interagency Group (FETIG), an academic Joint Program for Disaster Medicine and Public Health at the Uniformed Services University of the Health Sciences,

to ensure appropriate attention is directed to cultural and developmental diversity for this and other recommendations by the Disaster Mental Health Subcommittee.

4.4 Recommend an approach and funding mechanism to ensure the development, evaluation, and dissemination of disaster mental health curricula for mental health professionals and psychological first aid curricula for other health professionals, emergency response professionals, educators, disaster response personnel, disaster managers, and community leaders. The curricula development process should include the thorough review of existing efforts. Developed curricula should be culturally responsive and supported to the extent possible by research and should be evaluated throughout their implementation. It is proposed that a national center be established, with such funds as are needed to complete the task, to develop psychological first aid curricula and provide technical assistance, training, and systematic evaluation.

Recommendation 5 (Education and Training)

Promote the population's psychological resilience.

Promote psychological resilience of individuals, families, and communities through the development of a national strategy for the integration, dissemination, and ongoing evaluation of psychological first aid.

BACKGROUND/FINDINGS

Individuals who are experiencing traumatic stress as a result of emergencies may be ineffective in coping with their own stress and/or in contributing to the recovery of the community. The IOM Committee on Preparing for the Psychological Consequences of Terrorism recommended that a national program of psychological first aid be developed for the general population in order to augment the disaster mental health model of psychological support currently used in the nation. To increase the public's resilience in response to terrorism and public health emergencies, and to encourage the public to seek training in psychological first aid, the Federal government should work with national organizations that educate the general public in health issues to develop psychological first aid as a public health education program similar to first aid. This psychological first aid training must address cultural competence and vulnerable and at-risk populations. It is also recommended that HHS work with professional mental health associations to encourage the development of mental health professionals who can assist in implementing psychological first aid programs that are culturally responsive for individual communities and who can serve as supervisors for community psychological first aid networks.

Psychological first aid essentially targets the general population as the source of basic grassroots psychological support and educates the public about when someone may need to be referred to mental health professionals, and how to make such a referral. The success of psychological first aid as a strategy depends on the penetration of the training in the population. If a significant portion of the population is trained in psychological first aid, then, in the event of a public health emergency or disaster, there will always be someone nearby to provide psychological support. A populace educated in psychological first aid will help ensure that the limited available time of disaster mental health professionals is reserved for those who are most in need. In addition, the skills and principles of psychological first aid can be used extensively even outside the context of

a disaster or major crisis event and, therefore, will be of practical use to the population on a daily basis and have the potential to benefit society as a whole.

ACTION STEPS

- 5.1 Meet with national organizations active in educating the general public in health education (e.g., American Red Cross, Society for Public Health Education, American Public Health Association, and HHS/CDC-supported Centers for Public Health Preparedness) to explore the development of national psychological first aid programs.
- 5.2 Meet with professional associations representing mental health professions to encourage them to develop education to prepare mental health professionals to serve as master trainers, community supervisors, and cultural consultants in psychological first aid for their graduate training and continuing education programs, so that more mental health professionals will be better prepared to help communities develop psychological first aid networks and to support those networks.
- 5.3 Explore and recommend a funding mechanism to ensure the development of psychological first aid curricula for the general public that are culturally responsive and supported to the extent possible by research. It is proposed that a national center be established, with such funds as are needed to complete the task, to develop psychological first aid curricula for the public and provide technical assistance, training, and systematic evaluation.

RECOMMENDATION 6 (EDUCATION AND TRAINING)

Ensure that the needs of at-risk individuals and issues of cultural responsiveness are being addressed in all efforts of the National Biodefense Science Board.

Support the development of mechanisms to ensure that the needs of vulnerable and at-risk populations and issues of cultural responsiveness are appropriately considered and served in the articulation and execution of the Board's recommendations and in public health activities related to emergency preparedness and response.

BACKGROUND/FINDINGS

People from diverse cultures, individuals who have limited English proficiency or who do not speak English, individuals with disabilities, those who are transportation disadvantaged, older adults, and children are often more vulnerable in disasters than the general population. This is true both because of pre-existing conditions and because of contextual issues that affect their ability to recover. For example, the prevalence of exposure to pre-disaster traumatic stress may be higher than average in economically disadvantaged urban environments. Therefore, these individuals may be at greater risk for experiencing extremely stressful events as traumatic, and the subsequent development of psychopathology. In addition, issues related to stress exposure levels, race, gender, pre-existing psychiatric disorders, family history, exposure to violence, childhood traumatic events, lack of support, race-related stressors (e.g., social and economic effects of racial prejudice or stigmatization and bicultural identification), and underutilization of mental health services have yet to be systematically examined, but are critical to consider when designing and implementing disaster mental and behavioral health services. To prevent and/or reduce such disproportionately negative outcomes in these and other vulnerable groups,

RECOMMENDATIONS

responsiveness to culture and attention to diversity is essential in prevention, intervention, and post-intervention disaster planning and response.

Culture influences how people experience a disaster, how reactions are expressed, how the effects are interpreted, what is considered helpful, and what it takes to become whole again. Failure to view the effects of disaster within the context of survivors' culture and other contextual variables may lead to response efforts that are ineffective or even damaging, both wasting resources and failing to serve the targeted communities effectively. In the confusing and fast-paced aftermath of disaster, these contextual issues are often overlooked and interventions tend to be aimed at the "mainstream" until problems with that approach are detected. Education and training on disaster mental and behavioral health planning and response thus becomes especially important because attention to these contextual issues can be infused throughout the training, helping planners and responders to be more aware of the needs of vulnerable groups prior to the onset of a disaster and, therefore, to be more effective in successfully serving these groups. Psychological first aid is particularly sensitive and responsive to these sorts of cultural and contextual issues, making it a good vehicle for disaster training.

Belonging to a group that differs from the majority culture should not prevent people from obtaining optimal recovery. It is important to deliver services that are responsive to the needs of diverse populations to ensure that their health and mental and behavioral health recovery is commensurate with the general population. Optimizing positive decision making, problem-solving, and the ability to follow critical directives is essential to keeping people safe and restoring mental and behavioral health following a disaster. To this end, every emergency responder and provider of mental and behavioral health services for disaster survivors should receive training in the provision of culturally responsive services.

Additionally, the input of mental health and public health professionals and other stakeholders representing vulnerable and at-risk groups is recommended. The Disaster Mental Health Subcommittee can assist the NBSB to create a mechanism to identify at-risk stakeholders and subject matter experts to serve as a resource to the NBSB to provide expertise and technical assistance regarding the needs of vulnerable and at-risk populations and issues of cultural responsiveness. Furthermore, the Disaster Mental Health Subcommittee and the NBSB should work to propose changes related to vulnerable and at-risk populations and cultural responsiveness for broader national disaster, public health, and medical preparedness and response documents and guidance.

ACTION STEPS

- 6.1 Create a mechanism to identify at-risk stakeholders and subject matter experts to serve as a resource to the NBSB and its subcommittees and workgroups. Those identified would provide expertise and technical assistance to ensure that the needs of vulnerable and at-risk populations, and issues of cultural responsiveness, are appropriately considered and served in the articulation, implementation, and evaluation of the Board's recommendations.
- 6.2 The Disaster Mental Health Subcommittee and the NBSB shall propose changes for broader national disaster, public health, and medical preparedness and response documents and guidance (e.g., the next update to the National Response Framework

ESF 6 and ESF 8) to include language specifically addressing special needs of vulnerable, at-risk populations and issues of cultural responsiveness in training, service provision, and related activities.

RECOMMENDATION 7 (COMMUNICATION AND MESSAGING)

Develop a disaster mental and behavioral health communication strategy.

- Develop mass communication messages that deliver psychoeducation, information on sources of help, and other mental and behavioral health topics related to specific hazards/threats and disaster phases.
- Develop education and training regarding the integration of mental and behavioral health/social science principles and emergency risk communication.
- Develop a process to identify, educate, and train a cadre of mental and behavioral health experts to serve as consultants, interviewees for Federal television/Internet broadcasts, and resources for the media.
- Establish and enforce a policy, with respect to all disaster and emergency health issues, that:
 - *Requires that, prior to soliciting/undertaking new Federally-funded communication initiatives, a review of similar and/or related activities of other Federal components will be performed and documented to ensure integration and prevent duplication.*
 - *Requires that all communication activities (directly operated or supported through grants, contracts, or cooperative agreements) document and ensure that they are informed by current evidence-based psychosocial factors.*

BACKGROUND/FINDINGS

Communication plays a central role in influencing individual and collective behavior, feelings, and thoughts. During a disaster, accurate, timely, and credible information distributed through a variety of sources and media is a central determinant of human impact, operational effectiveness, and social and economic consequences.

The field of emergency risk communication has evolved to address this critical period when the listener's capacity to process complex information is constricted. In contrast to the risks posed by flood waters or falling debris where there are familiar cues, communicating risks of invisible and novel agents such as radiation and bacteria is a far greater challenge. Indeed, explaining complex scientific concepts in plain language and graphics is difficult, and the opportunity for misunderstanding high. The preparation and testing of messages before an event actually happens is a valuable tool for maximizing the potential that instructions given during an actual event will be comprehended.

Mental and behavioral health experts can play a valuable role in the development of messages that are respectful, compassionate, understandable, and effective. They can also work with public information officials to stop the perpetuation of disaster myths (such as public panic and looting), which can lead to faulty planning, failure to provide important information, and misallocation of resources. Behavioral health care providers are familiar with listening to and

talking with distressed individuals and those experiencing crises. Over the course of practice and through didactics, many practitioners develop an appreciation of the nuances of language and how the recipients can negatively experience some words or phrases that are meant to be comforting. Recognition of the need for cultural competence in dealing with groups that are different from one's own is also critical to empathic communication.

Mental and behavioral health practitioners can work closely with political leaders and public affairs officers to develop strategic communications that support a range of empirically-based essential elements of information of immediate and mid-term mass trauma intervention. These include promotion of:

- a sense of safety
- a sense of calm
- a sense of self- and collective efficacy
- connectedness
- hope

ACTION STEPS

- 7.1 Identify a group of subject matter experts, including experts on disaster mental and behavioral health communications and messaging issues; experts in crisis, risk, and health communications; key Federal government public affairs personnel; and major emergency and health communication associations.
- 7.2 Identify key psychological/mental health topics that pre-, intra-, and post-event messages should address. Attention should be paid to the ways that message requirements may vary for terrorist incidents versus natural disasters.
- 7.3 Identify target audiences for the communication.
- 7.4 Identify potential gaps in current messages targeting major threats/hazards and their consequences and recommend priorities for future message development to the Secretaries of DHS and HHS.
- 7.5 Identify appropriate audiences and develop tailored curricula on the integration of behavioral health/social science principles and emergency risk communication, and identify a dissemination strategy for the curriculum.
- 7.6 Create a process for the identification, education, and training of a cadre of behavioral health experts from across the nation to serve as interviewees for Federal television/Internet broadcasts, consultants to leadership, and resources for the media.
- 7.7 Identify and recommend appropriate funding for a Federal agency to create and sustain a database of the cadre of mental and behavioral health experts.

RECOMMENDATION 8 (COMMUNICATION AND MESSAGING)

Develop an accessible Internet-based communication toolkit.

At present, no single Federal source consolidates communication/message research and products developed for a variety of events (e.g., pandemic influenza, terrorism, and environmental contamination from chemical stockpile/industrial accidents). The best solution for this consolidation is the development of a Federal communication Web site.

BACKGROUND/FINDINGS

A Federal communications Web site would assist State and local governments, NGOs, and others to work with their stakeholders to develop programs tailored to their needs. It would leverage investments and serve as a springboard for the investigation of new areas of work rather than the inadvertent replication of previous contributions.

The Web site would host tested pre-event mass communication content for the Internet, radio, and television addressing the information needs for general members of the public including those with special needs, leaders, and the media. It could also serve as a vehicle to further two-way communication, both with communicators and with the public. The Web site could host a discussion section promoting interaction among communications professionals. Another section could feature promising strategies for developing a dialogue with the public in advance of an event on key policies and practices that will influence the response. The dialogue could then continue through and after the event. For example, the development of priority groups for the distribution of a limited resource, such as a vaccine, relies on more than science. The public plays a key role in weighing other social, ethical, and cultural factors influencing policy, such as affording children a higher priority level than would be determined strictly by a morbidity/mortality consideration. By successfully engaging the public in difficult dialogues before an event, trust and confidence will be enhanced should a disaster occur. The Web site, then, would address both communication content and process.

ACTION STEPS

- 8.1 Identify a specific Federal agency to have responsibility for the Web site and recommend sufficient funds to develop the site and to keep it updated.
- 8.2 Perform an environmental scan¹ on U.S. Government-funded communication/messaging projects—internal and external—summarizing their methodology, budget, and findings/deliverables.
- 8.3 Ensure that the design, layout, and organization of the Web site provides maximum utility by seeking input from key Federal communication/public affairs experts familiar with government communication and messaging projects. Ensure that the three major audiences of the general public, the media, and leaders (formal and informal) are addressed and that the Web site includes a mechanism for sharing promising practices and questions.

¹ An environmental scan is a broader search than a traditional literature review of professional and scientific journals. In addition to scholarly work, an environmental scan includes Web-based materials (as well as published pieces) written by Federal and State government sources, national associations, and research institutions. Environmental scans allow researchers to glean information on nontraditional resources and current work appearing outside the usual academic channels.

Following incorporation of NBSB feedback to develop a final, approved Recommendations Report, the Disaster Mental Health Subcommittee will create a two-year implementation plan for the approved recommendations. This plan will identify the priorities, specific action steps, responsibilities, and timelines for carrying out the recommendations within the Subcommittee's purview.

The recommendations as written in this report require the formation of up to four workgroups of the Disaster Mental Health Subcommittee to address DMH CONOPS development, research and assessment, education and training, and communication and messaging. Workgroups would be led by Disaster Mental Health Subcommittee members and would include additional nationally recruited subject matter experts and representatives of stakeholder groups as necessary. The two-year implementation plan will detail the structure, goals, and proposed membership of these workgroups.

For broader recommendations that require policy, programmatic, or funding changes, the twoyear implementation plan will include specific action steps, responsibilities, and timelines to develop mechanisms to approach policy change, strategies to leverage recommended funding, and the stakeholders and governmental entities to engage in these processes.

BRFSS/CDC/HHS	Behavioral Risk Factor Surveillance System/CDC/HHS	
CDC/HHS	Centers for Disease Control and Prevention/HHS	
CONOPS	Concept of Operations	
DHS	U.S. Department of Homeland Security	
DoD	U.S. Department of Defense	
ESF	Emergency Support Function	
DMH	Disaster Mental Health	
FETIG	Federal Education and Training Interagency Group	
HHS	U.S. Department of Health and Human Services	
IOM	Institute of Medicine	
NBSB	National Biodefense Science Board	
NDMS/HHS	National Disaster Medical System/HHS	
NGO	Non-Governmental Organization	
NHIS/CDC/HHS	National Health Interview Survey/CDC/HHS	
NIH/HHS	National Institutes of Health/HHS	
NIMS	National Incident Management System	
NORAD	North American Aerospace Defense Command	
OFRD/HHS	Office of Force Readiness and Deployment/HHS	
PAHPA	Pandemic and All-Hazards Preparedness Act	
PTSD	Post-traumatic stress disorder	
SAMHSA/HHS	Substance Abuse and Mental Health Services Administration/HHS	
TOPOFF	DPOFF Top Officials	
USNORTHCOM	U.S. Northern Command	
USPHS	United States Public Health Service	
VA	U.S. Department of Veterans Affairs	
VOAD	Voluntary Organization Active in Disaster	

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- Acierno, R., Resnick, H. S., Flood, A., & Holmes, M. (2003). An acute post-rape intervention to prevent substance use and abuse. *Addictive Behaviors*, 28, 1701–1715.
- Acierno, R., Rheingold, A. A., Resnick, H. S., & Stark-Riemer, W. (2004). Preliminary evaluation of a video-based intervention for older adult victims of violence. *Journal of Traumatic Stress*, 17, 535–542.
- Araya, R., Rojas, G., Fritsch, R., Gaete, J., Rojas, M., Simon, G., et al. (2003). Treating depression in primary care in low-income women in Santiago, Chile: A randomized controlled trial. *Lancet*, 361, 995–1000.
- Arnold, J. L., Dembry, L. M., Tsai, M. C., Dainiak, N., Rodoplu, U., Schonfeld, D. J., et al. (2005). Recommended modifications and applications of the Hospital Emergency Incident Command System for hospital emergency management. *Prehospital Disaster Medicine*, 20(5), 290–300.
- Babic, M. J. (2004). Quantifying danger. Findings, 19(2), 12-19.
- Basoglu, M., Livanou, M., & Salcioglu, E. (2003). A single session with an earthquake simulator for traumatic stress in earthquake survivors. *American Journal of Psychiatry*, 160, 788– 790.
- Basoglu, M., Livanou, M., Salcioglu, E., & Kalender, D. (2003). A brief behavioural treatment of chronic post-traumatic stress disorder in earthquake survivors: Rresults from an open clinical trial. *Psychological Medicine*, *33*(4), 647–654.
- Basoglu, M., Salcioglu, E., & Livanou, M. (2007). A randomized controlled study of singlesession behavioural treatment of earthquake-related post-traumatic stress disorder using an earthquake simulator. *Psychological Medicine*, *37*(2), 203–213.
- Basoglu, M., Salcioglu, E., Livanou, M., Kalender, D., & Acar, G. (2005). Single-session behavioral treatment of earthquake-related posttraumatic stress disorder: A randomized waiting list controlled trial. *Journal of Traumatic Stress, 18*(1), 1–11.
- Bergstrom, J., Hollandare, F., Carlbring, P., Kaldo-Sandstrom, V., Ekselius, L., & Andersson, G. (2003). Treatment of depression via the Internet: A randomized trial of a self-help programme. *Journal of Telemedicine and Telecare*, 9(Suppl. 2), 85–91.
- Bisson, J. I. (2003). Single-session early psychological interventions following traumatic events. *Clinical Psychology Review*, 23(3), 481–499.
- Blau, P. (1964). Exchange and power in social life. New York: Wiley.
- Boin, A., Hart, P., Stern, E., & Sundelius, B. (2006). *The politics of crisis management*. New York: Cambridge University Press.
- Boin, A., McConnell, A., & Hart, P. (2008). *Governing after crisis*. New York: Cambridge University Press.
- Brown, L. M., Cohen, D., & Kohlmaier, J. (2007). Older adults and terrorism. In B. Bongar, L.
 M. Brown., L. Beutler, P. Zimbardo & J. Breckenridge (Eds.), *Psychology of terrorism* (pp. 288–310). New York: Oxford University Press.
- Brown, L. M., Hyer, K., & Polivka-West, L. (2007). A comparative study of laws, rules, codes and other influences on nursing homes' disaster preparedness in the Gulf Coast states. *Behavioral Sciences & the Law*, 25(5), 655–675.
- Bryant, R. A., Harvey, A. G., Dang, S. T., Sackville, T., & Basten, C. (1998). Treatment of acute stress disorder: A comparison of cognitive-behavioral therapy and supportive counseling. *Journal of Consulting and Clinical Psychology*, 66(5), 862–866.

- Bryant, R. A., Moulds, M. L., & Nixon, R. V. (2003). Cognitive behaviour therapy of acute stress disorder: A four-year follow-up. *Behaviour Research and Therapy*, 41(4), 489– 494.
- Brymer, M., Jacobs, A., Layne, C., Pynoos, R., Ruzek, J., Steinberg, A., Vernberg, E., & Watson, P. (2006). *Psychological first aid: Field operations guide* (2nd ed.). National Child Traumatic Stress Network and National Center for PTSD.
- Butler, A.S., Panzer, A.M., & Goldfrank, L.R. (Eds.). (2003). Preparing for the psychological consequences of terrorism: A public health strategy. Committee on Responding to the Psychological Consequences of Terrorism, Board on Neuroscience and Behavioral Health, Institute of Medicine. Washington, DC: National Academies Press.
- Carlbring, P., Ekselius, L., & Andersson, G. (2003). Treatment of panic disorder via the Internet: A randomized trial of CBT vs. applied relaxation. *Journal of Behavior Therapy and Experimental Psychiatry*, *34*(2), 129–140.
- Carr, A. C., Ghosh, A., & Marks, I. M. (1988). Computer-supervised exposure treatment for phobias. *Canadian Journal of Psychiatry*, *33*(2), 112–117.
- Centers for Disease Control and Prevention. (2006). Assessment of health-related needs after Hurricanes Katrina and Rita—Orleans and Jefferson Parishes, New Orleans area, Louisiana, October 17–22, 2005. *MMWR Morbidity and Mortality Weekly Report*, 55(2), 38–41.
- Chemtob, C. M., Nakashima, J., & Carlson, J. G. (2002). Brief treatment for elementary school children with disaster-related posttraumatic stress disorder: A field study. *Journal of Clinical Psychology*, 58(1), 99–112.
- Chemtob, C. M., Nakashima, J. P., & Hamada, R. S. (2002). Psychosocial intervention for postdisaster trauma symptoms in elementary school children: A controlled community field study. *Archives of Pediatrics & Adolescent Medicine*, *156*(3), 211–216.
- Chesser, A., Ablah, E., Hawley, S. R., Wolfe, D., St Romain, T., Grube, C. D., et al. (2006).
 Preparedness needs assessment in a rural State: themes derived from public focus groups.
 Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 4(4), 376–383.
- Christensen, H., Griffiths, K. M., & Jorm, A. F. (2004). Delivering interventions for depression by using the internet: randomised controlled trial. *BMJ*, *328*(7434), 265.
- Clarke, G., Reid, E., Eubanks, D., O'Connor, E., DeBar, L. L., Kelleher, C., et al. (2002).
 Overcoming depression on the Internet (ODIN): A randomized controlled trial of an Internet depression skills intervention program. *Journal of Medical Internet Research*, 4(3), E14.
- Compton, M. T., Kotwicki, R. J., Kaslow, N. J., Reissman, D. B., Wetterhall, S. F. (2005). Incorporating mental health into bioterrorism response planning. *Public Health Reports*, *120*(Suppl. 1), 16–19.
- Covello, V. T. (2003). Best practices in public health risk and crisis communication. *Journal of Health Communication, 8*(Suppl. 1), 5–8; discussion, 148–151.
- Covello, V. T., Fischhoff, B., Kasperson, R. E., & Morgan, M. G. (1993). Comments on the "mental model" meets the "planning process" (Letter to the editor). *Risk Analysis, 13*, 493.
- Covello, V. T., Minamyer, S., & Clayton, K. (2007). *Effective risk and crisis communication* during water security emergencies. Summary Report of EPA Sponsored Message Mapping Workshops. Retrieved from http://www.epa.gov/nhsrc/pubs/600r07027.pdf.
- Covello, V. T., Peters, R. G., Wojtecki, J. G., & Hyde, R. C. (2001). Risk communication, the

West Nile virus epidemic, and bioterrorism: Responding to the communication challenges posed by the intentional or unintentional release of a pathogen in an urban setting. *Journal of Urban Health*, 78(2), 382–391.

- Cropanzano, R., & Mitchell, M. S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, *31*(6), 874–900.
- Davis, E. (2004). The emergency preparedness initiative: Guide on the special needs of people with disabilities for emergency managers, planners, & responders. Available from http://www.nod.org
- Dombroski, M., Fischhoff, B., & Fischbeck, P. (2006). Predicting emergency evacuation and sheltering behavior: A structured analytical approach. *Risk Analysis*, 26(6), 1675–1688.
- Donahue, S. A., Jackson, C. T., Shear, K. M., Felton, C. J., & Essock, S. M. (2006). Outcomes of enhanced counseling services provided to adults through Project Liberty. *Psychiatric Services*, 57(9), 1298–1303.
- Earle, P. S., & Wald, D. J. (2007, December). PAGER—Rapid assessment of an earthquake's impact: U.S. Geological Survey Fact Sheet 2007–3101. Retrieved from http://pubs.usgs.gov/fs/2007/3101/.
- Emerson, R. M. (1981). Social Exchange Theory. In M. Rosenberg & R. H. Turner (Eds.), *Social psychology: Sociological perspectives*. New York: Basic Books, Inc.
- Fischoff, B. (2005, December 14). *Scientifically sound pandemic risk communication*. Paper presented at the meeting of the House of Representatives Science Committee, Gaps in the National Flu Preparedness Plan: Social Science Planning and Response. <u>http://www.healthsystem.virginia.edu/internet/ciag/conference/articles/s2006/fischhoff_p</u> andemic_risk_communication.pdf.
- Foa, E. B., Hearst-Ikeda, D., & Perry, K. J. (1995). Evaluation of a brief cognitive-behavioral program for the prevention of chronic PTSD in recent assault victims. *Journal of Consulting and Clinical Psychology*, 63(6), 948–955.
- Foa, E. B., Keane, T. M., Friedman, M. J., & Cohen, J. (2000). Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress studies. New York: Guilford Press.
- Freudenberg, W. R. (2001). Risky thinking: Facts, values and blind spots in societal decisions about risk. *Reliability Engineering and System Safety*, 72, 125–130.
- Gentilello, L. M., Rivara, F. P., Donovan, D. M., Jurkovich, G. J., Daranciang, E., Dunn, C. W., et al. (1999). Alcohol interventions in a trauma center as a means of reducing the risk of injury recurrence. *Annals of Surgery*, 230(4), 473–480; discussion, 480–473.
- Gibson, L. E., Hamblen, J. L., Zvolensky, M. J., & Vujanovic, A. A. (2006). Evidence-based treatments for traumatic stress: An overview of the research literature with an emphasis on disaster settings. In F. H. Norris, S. Galea, M. J. Friedman & P. J. Watson (Eds.), *Research methods for studying mental health after disasters and terrorism* (pp. 208–225). New York: Guilford Press.
- Gignac, M. A., Cott, C. A., & Badley, E. M. (2003). Living with a chronic disabling illness and then some: Data from the 1998 Ice Storm. *Canadian Journal of Aging*, 22(3), 249–259.
- Gilbody, S., Bower, P., Fletcher, J., Richards, D., & Sutton, A. J. (2006). Collaborative care for depression: A cumulative meta-analysis and review of longer-term outcomes. *Archives of Internal Medicine*, *166*(21), 2314–2321.
- Gillespie, K., Duffy, M., Hackmann, A., & Clark, D. M. (2002). Community based cognitive therapy in the treatment of posttraumatic stress disorder following the Omaha bombing.

Behaviour Research and Therapy, 40(4), 345–357.

- Glendon, A. I., Dorn, L., Davies, D. R., Matthews, G., & Taylor, R. G. (1996). Age and gender differences in perceived accident likelihood and driver competences. *Risk Analysis*, 16(6), 755–762.
- Glik, D. C. (2007). Risk communication for public health emergencies. *Annual Review of Public Health*, 28, 33–54.
- Glik, D. C., Drury, A., Cavanaugh, C., & Shoaf, K. (2008). What not to say: risk communication for botulism. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science,* 6(1), 93–107.
- Hamblen, J. L., Gibson, L. E., Mueser, K. T., & Norris, F. H. (2006). Cognitive behavioral therapy for prolonged postdisaster distress. *Journal of Clinical Psychology*, 62(8), 1043– 1052.
- Himle, M. B., & Miltenberger, R. G. (2004). Preventing unintentional firearm injury in children: The need for behavioral skills training. *Education and Treatment of Children*, 27, 161– 177.
- Hobfoll, S. E., De Vries, M. W., & North Atlantic Treaty Organization, Scientific Affairs, Division (1995, 1995). *Extreme stress and communities: impact and intervention*, Dordrecht; Boston.
- Hobfoll, S. E., Watson, P., Bell, C. C., Bryant, R. A., Brymer, M. J., Friedman, M. J., et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: empirical evidence. *Psychiatry*, 70(4), 283–315; discussion, 316–269.
- Hoge, M. A., Huey, L. Y., & O'Connell, M. J. (2004). Best practices in behavioral health workforce education and training. *Administration and Policy in Mental Health*, 32, 91– 106.
- Jones, R. T., Hadder, J. M., Carvajal, F., Chapman, S., & Alexander, A. (2006). Conducting research in diverse, minority, and marginalized communities. In F. H. Norris, S. Galea, M. J. Friedman & P. J. Watson (Eds.), *Methods for disaster mental health research* (pp. 265–277). New York: Guilford Press.
- Katon, W. J., & Seelig, M. (2008). Population-based care of depression: team care approaches to improving outcomes. *Journal of Occupational and Environmental Medicine*, 50(4), 459– 467.
- Klein, B., & Richards, J. C. (2001). A brief Internet-based treatment for panic disorder. *Behavioral and Cognitive Psychotherapy*, 29(1), 113–117.
- La Greca, A., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (1996). Symptoms of posttraumatic stress in children after Hurricane Andrew: A prospective study. *Journal of Consulting and Clinical Psychology*, 64(4), 712–723.
- March, J. S., Amaya-Jackson, L., Murray, M. C., & Schulte, A. (1998). Cognitive-behavioral psychotherapy for children and adolescents with posttraumatic stress disorder after a single-incident stressor. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37(6), 585–593.
- Marks, I. M., Cavanagh, K., & Gega, L. (2007). *Hands-on help: Computer-aided psychotherapy*. Hove, UK: Psychology Press.
- McCallum, D. B., Hammond, S. L., & Covello, V. T. (1991). Communicating about environmental risks: How the public uses and perceives information sources. *Health Education Quarterly*, *18*(3), 349–361.
- McGuinness, K. M., Coady, J. A., Perez, J. T., Williams, N. C., McIntyre, D. J., & Schreiber, M.

D. (2008). Public mental health: The role of population-based and macrosystems interventions in the wake of Hurricane Katrina. *Professional Psychology: Research and Practice*, *39*(1), 58–65.

- Meyer, G., Roberto, A. J., & Atkin, C. K. (2003). A radio-based approach to promoting gun safety: Process and outcome evaluation implications and insights. *Health Communication*, *15*(3), 299–318.
- Mulligan-Smith, D., Puranik, S., & Coffman, S. (1998). Parental perception of injury prevention practices in a multicultural metropolitan area. *Pediatric Emergency Care*, 14(1), 10–14.
- National Advisory Committee on Children and Terrorism. (2003, June). *National Advisory Committee on Children and Terrorism: Recommendations to the Secretary*. Retrieved from http://www.bt.cdc.gov/children/PDF/working/Recommend.pdf.
- National Cancer Institute. (2005). *Theory at a glance: A guide for health promotion practice* (NIH Publication No. 05-3896). Retrieved from http://www.cancer.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf.
- National Institute of Mental Health. (2002). *Mental Health and Mass Violence: Evidence-Based Early Psychological Intervention for Victims/Survivors of Mass Violence. A Workshop to Reach Consensus on Best Practices* (NIH Publication No. 02-5138). Retrieved from <u>http://www.nimh.nih.gov/health/publications/massviolence.pdf</u>.
- National Response Framework (2008). *Emergency Support Function #15–External Affairs* Annex, from <u>http://www.fema.gov/pdf/emergency/nrf/nrf-esf-15.pdf</u>
- National Response Framework (2008). *Public Affairs Support Annex*, from http://www.fema.gov/pdf/emergency/nrf/nrf-support-pa.pdf.
- Neria, Y., Gross, R., Marshall, R., & Susser, E. (Eds.). (2006). 9/11: Mental health in the wake of terrorist attacks. Cambridge, UK: Cambridge University Press.
- Newman, M. G., Kenardy, J., Herman, S., & Taylor, C. (1997). Comparison of palmtopcomputer-assisted brief cognitive-behavioral treatment to cognitive-behavioral treatment for panic disorder. *Journal of Consulting and Clinical Psychology*, 65, 178–183.
- Norris, F. (2005). Range, magnitude, and duration of the effects of disasters on mental health: Review update 2005. Retrieved from <u>http://www.redmh.org/research/general/effects.html</u>
- Norris, F., & Bellamy, N. (in press). Evaluation of a national effort to reach Hurricane Katrina survivors and evacuees: The crisis counseling assistance and training program. *Administration and Policy in Mental Health and Mental Health Services*.
- Norris, F., Hamblen, J., & Rosen, C. (in press). Service characteristics and counseling outcomes: Lessons from a cross-site evaluation of crisis counseling after Hurricane Katrina. *Administration and Policy in Mental Health and Mental Health Services*.
- Norris, F. H., Donahue, S. A., Felton, C. J., Watson, P. J., Hamblen, J. L., & Marshall, R. D. (2006). A psychometric analysis of Project Liberty's adult enhanced services referral tool. *Psychiatric Services*, 57(9), 1328–1334.
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry*, 65(3), 240–260.
- Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981–2001. *Psychiatry*, 65(3), 207–239.

- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1–2), 127–150.
- Norris, F. H., Speier, A., Henderson, A. K., Davis, S. I., Purcell, D. W., Stratford, B. D., Baker, C. K., Reissman, D. B., & Daley, W. R. (2005). Health and needs assessment of residents in Orleans and Jefferson Parishes after Hurricane Katrina. *Morbidity and Mortality Weekly Report*, 55(2).
- Pandemic and All-Hazards Preparedness Act of 2006, Pub. L. No. 109-417, 109th Cong, 2nd Sess. S 11220–11237 (2006).
- Parker, M. N., & Jones, R. T. (1999). Minority status stress: Effects on the psychological and academic functioning of African American students. *Journal of Gender, Culture, and Health, 4*(1), 61–82.
- Patel, V. H., Kirkwood, B. R., Pednekar, S., Araya, R., King, M., Chisholm, D., et al. (2008). Improving the outcomes of primary care attenders with common mental disorders in developing countries: A cluster randomized controlled trial of a collaborative stepped care intervention in Goa, India. *Trials*, 9, 4.
- Pegus, C., Bazzarre, T. L., Brown, J. S., & Menzin, J. (2002). Effect of the Heart At Work program on awareness of risk factors, self-efficacy, and health behaviors. *Journal of Occupational and Environmental Medicine*, 44(3), 228–236.
- Perez, J. T., Coady, J., De Jesus, E. L., McGuinness, K. M., & Bondan, S. (2006). Operation Unified Assistance population-based programs of the U.S. Public Health Service and international team. *Military Medicine*, 171, (10 Suppl. 1), 53–58.
- Perilla, J. L., Norris, F. H., & Lavizzo, E. A. (2002). Ethnicity, culture, and disaster response: Identifying and explaining ethnic differences in PTSD six months after Hurricane Andrew. *Journal of Social and Clinical Psychology*, 21(1), 20–45.
- Pfefferbaum, B., Reissman, D. B., Pfefferbaum, R. L., Klomp, R. W., & Gurwitch, R. H. (2007). Building resilience to mass trauma events. In L. Doll, S. Bonzo, J. Mercy, & D. Sleet (Eds.), Handbook on injury and violence prevention interventions cross-cutting intervention issues, 347–356. New York: Springer.
- Proudfoot, J., Goldberg, D., Mann, A., Everitt, B., Marks, I., & Gray, J. A. (2003). Computerized, interactive, multimedia cognitive-behavioral program for anxiety and depression in general practice. *Psychological Medicine*, 33, 217–227.
- Proudfoot, J., Ryden, C., Everitt, B., Shapiro, D. A., Goldberg, D., Mann, A., et al. (2004). Clinical efficacy of computerised cognitive–behavioural therapy for anxiety and depression in primary care: randomised controlled trial. *British Journal of Psychiatry*, 185, 46–54.
- Przeworski, A., & Newman, M. G. (2004). Palmtop computer-assisted group therapy for social phobia. *Journal of Clinical Psychology*, 60(2), 179–188.
- Pynoos, R., Schreiber, M., Steinberg, A., Pfefferbaum, B., Saddock, B., & Saddock, V. (Eds.). (2005). *Children and terrorism. Comprehensive textbook of psychiatry* (8th ed.). New York: Lippincott, Williams and Wilkins.
- Reissman, D. B., Klomp, R. K., & Randolph, J. [in process of clearance]. *Pandemic Influenza Plan - Supplement 11: Workforce Support* (revised). U.S. Department of Health and Human Services.
- Reissman, D.B. & Howard, J. (2008). Responder safety and health: Preparing for future

disasters. Mt. Sinai Journal of Medicine, 75, 1–7.

- Reissman, D.B., Watson, P.J., Klomp, R.K., Tanielian, T.L., & Prior, S.D. (2006). Pandemic flu preparedness: Adaptive responses to an evolving challenge. *Journal of Homeland Security and Emergency Management* 3(2), article 13.
- Reissman, D.B., Spencer, S., Tanielian, T., & Stein, B.D. (2005). Integrating behavioral aspects into community preparedness and response systems. In Y. Danieli, D. Brom, & J. Sills (Eds.) *The Trauma of Terrorism: Sharing knowledge and shared care, an international handbook*, 9. New York: Haworth Maltreatment and Trauma Press.
- Reissman, D. B., Klomp, R. K., Kent, A. T., & Pfefferbaum, B. (2004). Exploring psychological resilience in the face of terrorism. *Psychiatric Annals*, *34*(8), 626–632.
- Reissman, D., Schreiber, M. D., Shultz, J. M., & Ursano, R. J. (2008). Disaster mental and behavioral health. In K.L. Koenig & C.H. Schultz, (Eds.), *Disaster medicine*. Cambridge, UK: Cambridge University Press.
- Reissman, D. B., Schreiber, M., Klomp, R. W., Hoover, M., Kowalski-Trakofler, K., & Perez, J. (2006). The virtual network supporting the front lines: Addressing emerging behavioral health problems following the tsunami of 2004. *Military Medicine*, 171(10 Suppl. 1), 40– 43.
- Resnick, H., Acierno, R., Holmes, M., Kilpatrick, D. G., & Jager, N. (1999). Prevention of postrape psychopathology: Preliminary findings of a controlled acute rape treatment study. *Journal of Anxiety Disorders*, *13*(4), 359–370.
- Resnick, H., Acierno, R., Kilpatrick, D. G., & Holmes, M. (2005). Description of an early intervention to prevent substance abuse and psychopathology in recent rape victims. *Behavior Modification*, 29(1), 156–188.
- Ripley, A. (2008). *The unthinkable: Who survives when disaster strikes and why*. New York: Crown Publishers.
- Rosenheck, R., Fontana, A., & Cottrol, C. (1995). Effect of clinician-veteran racial pairing in the treatment of posttraumatic stress disorder. *American Journal of Psychiatry*, 152(4), 555–563.
- Ruggiero, K. J., Resnick, H. S., Acierno, R., Coffey, S. F., Carpenter, M. J., Ruscio, A. M., et al. (2006). Internet-based intervention for mental health and substance use problems in disaster-affected populations: A pilot feasibility study. *Behavior Therapy*, 37(2), 190– 205.
- Scherer, C. W., & Juanillo Jr., N. K. (2003). The continuing challenge of community health risk management and communication. In T.L. Thompson, A.M. Dorsey, K.I. Miller & R. Parrott (Eds.), *Handbook of health communication*, 221–239. Mahwah, NJ: Lawrence Erlbaum Associates.
- Scholes, C., Turpin, G., & Mason, S. (2007). A randomised controlled trial to assess the effectiveness of providing self-help information to people with symptoms of acute stress disorder following a traumatic injury. *Behaviour Research and Therapy*, 45(11), 2527– 2536.
- Schreiber, M. (2005). Learning from 9/11: Toward a national model for children and families in mass casualty terrorism. In Y. Danieli, R. L. Dingman & J. Zellner (Eds.), On the ground after September 11: Mental health responses and practical knowledge gained (pp. 605– 610). New York: Haworth Maltreatment and Trauma Press.
- Schreiber, M., & Sayegh, L. (2008) [in preparation]. *Toward integrated disaster mental health operations and services in defense support to civil authorities response.*

- Selmi, P. M., Klein, M. H., Greist, J. H., Sorrell, S. P., & Erdman, H. P. (1990). Computeradministered cognitive-behavioral therapy for depression. *American Journal of Psychiatry*, 147(1), 51–56.
- Shalev, A. Y. (2006). *Prevention of PTSD by early treatment: Who needs treatment, who wants treatment and who comes to treatment*. Paper presented at the Psychobiology of Trauma and Resilience Across the Lifespan.
- Shaw, J. A., Applegate, B., & Schorr, C. (1996). Twenty-one-month follow-up study of schoolage children exposed to Hurricane Andrew. *Journal of the American Academy of Child and Adolescent Psychiatry*, *35*(3), 359–364.
- Slovic, P. (1999). Trust, emotion, sex, politics, and science: Surveying the risk-assessment battlefield. *Risk Analysis*, 19(4), 689–701.
- Slovic, P., Monahan, J., & MacGregor, D. G. (2000). Violence risk assessment and risk communication: The effects of using actual cases, providing instruction, and employing probability versus frequency formats. *Law and Human Behavior*, 24(3), 271–296.
- Thienkrua, W., Cardozo, B. L., Chakkraband, M. L., Guadamuz, T. E., Pengjuntr, W., Tantipiwatanaskul, P., et al. (2006). Symptoms of posttraumatic stress disorder and depression among children in tsunami-affected areas in southern Thailand. *JAMA*, 296(5), 549–559.
- U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response & Office for At-Risk Individuals, Behavioral Health, and Human Services Coordination. (2008, June). *HHS Behavioral Health Survey: Assets, Capabilities, Gaps, and Recommendations.*
- U.S. Department of Health and Human Services. (2003). *The Secretary's Emergency Public* Information and Communications Advisory Committee Report. Washington, DC.
- U.S. Department of Health and Human Services. (2001a). *Mental health: Culture, race, and ethnicity—a supplement to mental health: A report of the Surgeon General.*
- U.S. Department of Homeland Security (2007, March 8). *National Exercise Program* (Report Number WJTSC 07-1). Retrieved from <u>http://www.fas.org/irp/agency/dhs/nep.pdf</u>.
- U.S. Department of Homeland Security, Federal Emergency Management Agency (2008, January). *National Response Framework. Emergency Support Function #15 – External Affairs Annex.* Retrieved from <u>http://www.fema.gov/pdf/emergency/nrf/nrf-esf-15.pdf</u>.
- U.S. Department of Homeland Security, Federal Emergency Management Agency (2008, January). *National Response Framework. Public Affairs Support Annex*. Retrieved from <u>http://www.fema.gov/pdf/emergency/nrf/nrf-support-pa.pdf</u>.
- Unutzer, J., Katon, W., Callahan, C. M., Williams, J. W., Jr., Hunkeler, E., Harpole, L., et al. (2002). Collaborative care management of late-life depression in the primary care setting: A randomized controlled trial. *JAMA*, 288(22), 2836–2845.
- Ursano, R. J., Fullerton, C. S., Weisaeth, L., & Raphael, B. (2007). Public health and disaster mental health: Preparing, responding and recovering. In R.J. Ursano., C. S. Fullerton, L. Weisaeth. & B. Raphael (Eds.), *Textbook of disaster psychiatry*. London: Cambridge University Press.
- Vanderford, M. L. (2004). Breaking new ground in WMD risk communication: the pre-event message development project. *Biosecurity and Bioterrorism: Biodefense Strategy*, *Practice, and Science*, 2(3), 193–194.
- Vanderford, M. L., Nastoff, T., Telfer, J. L., & Bonzo, S. E. (2007). Emergency communication

challenges in response to Hurricane Katrina: Lessons from the Centers for Disease Control and Prevention. *Journal of Applied Communication Research*, *35*, 9–25.

- Vanderwagen, W. (2006). Health diplomacy: Winning hearts and minds through the use of health interventions. *Military Medicine*, 171(10 Suppl. 1), 3–4.
- Vernberg, E. M., Steinberg, A. M., Jacobs, A. K., Brymer, M. J., Watson, P. J., Osofsky, J. D., Layne, C. M., Pynoos, R. S., & Ruzek, J. I. (2008). Innovations in disaster mental health: Psychological First Aid. *Professional Psychology: Research and Practice*, 39, 381–388.
- Vineburgh, N., Benedek, D., Fullterton, C., Gifford, R., & Ursano, R. (2008). Workplace resources for crisis management: Implications for public-private sector planning, policy and response to disasters. *International Journal of Public Policy*, *3*(5/6), 378–388.
- Vineburgh, N., Ursano, R., Hamaoka, D., & Fullterton, C. (2008). Public health communication for disaster planning and response. *International Journal of Public Policy*, 3(5/6), 292– 301.
- Wang, P. S., Gruber, M. J., Powers, R. E., Schoenbaum, M., Speier, A. H., Wells, K. B., et al. (2007). Mental health service use among Hurricane Katrina survivors in the eight months after the disaster. *Psychiatry Services*, 58, 1403–1411.
- Wang, P. S., Gruber, M. J., Powers, R. E., Schoenbaum, M., Speier, A. H., Wells, K. B., et al. (2008). Disruption of existing mental health treatments and failure to initiate new treatment after Hurricane Katrina. *American Journal of Psychiatry*, 165(1), 34–41.
- Wang, P. S., Simon, G. E., Avorn, J., Azocar, F., Ludman, E. J., McCulloch, J., et al. (2007). Telephone screening, outreach, and care management for depressed workers and impact on clinical and work productivity outcomes: A randomized controlled trial. *JAMA*, 298, 1401–1411.

Excerpt taken from Homeland Security Presidential Directive 21 Subject: Public Health and Medical Preparedness

Homeland Security Presidential Directive 21 (HSPD-21) establishes a National Strategy for Public Health and Medical Preparedness, which builds upon principles set forth in *Biodefense for the 21st Century* (April 2004) and will transform our national approach to protecting the health of the American people against all disasters.

Biodefense for the 21st Century provides a foundation for the transformation of our catastrophic health event response and preparedness efforts. Although the four pillars of that framework—Threat Awareness, Prevention and Protection, Surveillance and Detection, and Response and Recovery—were developed to guide our efforts to defend against a bioterrorist attack, they are applicable to a broad array of natural and manmade public health and medical challenges and are appropriate to serve as the core functions of the Strategy for Public Health and Medical Preparedness.

To accomplish our objectives, we must create a firm foundation for community medical preparedness. We will increase our efforts to inform citizens and empower communities, buttress our public health infrastructure, and explore options to relieve current pressures on our emergency departments and emergency medical systems so that they retain the flexibility to prepare for and respond to events.

Ultimately, the Nation must collectively support and facilitate the establishment of a discipline of disaster health. The specialty of emergency medicine evolved as a result of the recognition of the special considerations in emergency patient care, and similarly the recognition of the unique principles in disaster-related public health and medicine merit the establishment of their own formal discipline. Such a discipline will provide a foundation for doctrine, education, training, and research and will integrate preparedness into the public health and medical communities.

The Disaster Mental Health Subcommittee will consider issues regarding the following implementation item of HPSD-21:

(31) The impact of the "worried well" in past disasters is well documented, and it is evident that mitigating the mental health consequences of disasters can facilitate effective response. Recognizing that maintaining and restoring mental health in disasters has not received sufficient attention to date, within 180 days after the date of this directive, the Secretary of Health and Human Services, in coordination with the Secretaries of Defense, Veterans Affairs, and Homeland Security, shall establish a Federal Advisory Committee for Disaster Mental Health. The committee shall consist of appropriate subject matter experts and, within 180 days after its establishment, shall submit to the Secretary of Health and Human Services recommendations for protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions.

CHARTER

DISASTER MENTAL HEALTH SUBCOMMITTEE of the National Biodefense Science Board

MISSION

Individuals, families, support networks, and communities must be prepared for and capable of withstanding public health and medical emergencies.

The Disaster Mental Health Subcommittee, directed by Homeland Security Presidential Directive (HSPD) - 21 and established under the National Biodefense Science Board (NBSB), will provide advice and guidance to the NBSB. NBSB will deliberate on that advice and guidance and advise the Secretary on matters of special interest to the Department of Health and Human Services (HHS) regarding protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions, with the long term goal of enhancing capabilities at the State and local levels for addressing disaster mental health.

AUTHORITY

Homeland Security Presidential Directive (HSPD) - 21, "Public Health and Medical Preparedness," was signed by the President on October 18, 2007.

HSPD-21, Paragraph 31

"The impact of the 'worried well' in past disasters is well documented, and it is evident that mitigating the mental health consequences of disasters can facilitate effective response. Recognizing that maintaining and restoring mental health in disasters has not received sufficient attention to date, within 180 days after the date of this directive, the Secretary of Health and Human Services, in coordination with the Secretaries of Defense, Veterans Affairs, and Homeland Security, shall establish a Federal Advisory Committee for Disaster Mental Health. The committee shall consist of appropriate subject matter experts and, within 180 days after its establishment, shall submit to the Secretary of Health and Human Services recommendations for protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions."

NBSB

The NBSB is mandated by the Pandemic and All-Hazards Preparedness Act (Section 402, P.L. 109-417) and tasked with providing expert advice and guidance to the Secretary of HHS on scientific, technical, and other matters of special interest to the Department regarding current and future chemical, biological, nuclear, and radiological agents, whether naturally occurring, accidental, or deliberate. The Board may also provide advice and guidance to the Secretary on other matters related to public health emergency preparedness and response. The Board is

governed by the Federal Advisory Committee Act (5 U.S.C. app. 2), which sets forth standards for the formation and use of advisory committees.

FUNCTION

The Disaster Mental Health Subcommittee (hereafter referred to as the Subcommittee) shall develop robust mechanisms for protecting, preserving, and restoring individual and community mental and behavioral health in catastrophic health event settings; ensure that core public health and medical (including mental and behavioral health) training and education curricula address the need to improve individual, family, and institutional public health and medical preparedness; and establish and maintain a flow of accurate, credible, and relevant information between Federal partners and individuals, families, communities, and institutions that will enhance public health and medical preparedness.

STRUCTURE

Membership of the Subcommittee shall consist of NBSB members, NBSB ex-officio agency representatives, and invited experts; additionally, there shall be a Chair and an Executive Director. Members of the Subcommittee shall be selected from among the Nation's preeminent scientific, public health, and medical experts, and may include representation from the following areas: service delivery providers, research, at-risk groups, consumers, state and local mental health and substance abuse authorities, policy, public health, epidemiology, occupational safety and health, emergency management, training, and spiritual care. Members shall be invited by the Assistant Secretary for Preparedness and Response (ASPR) to serve on the Subcommittee.

The Subcommittee will submit its recommendations to the NBSB for consideration, deliberation, and voting. Following this deliberation, the NBSB will provide recommendations, advice, and guidance to the Secretary.

The Subcommittee will form workgroups as deemed necessary to carry out recommendations approved by the NBSB. Workgroups will be led by Subcommittee members and will contain additional national subject matter experts and representatives of stakeholder groups as needed. Invitation to join a Subcommittee workgroup does not constitute membership in the Subcommittee, as full Subcommittee membership requires formal invitation from the Assistant Secretary for Preparedness and Response.

The Secretary of the Department of Health and Human Services has the authority to convene a meeting of the Subcommittee at any time to provide guidance and subject matter expertise or to formulate event specific recommendations.

MEETINGS

The Subcommittee is expected to meet bi-monthly and may be convened on an as-needed basis. Meetings can be held in person or via teleconference. Meeting minutes will be kept and distributed among the members of the Subcommittee. Additional meetings of Subcommittee workgroups may be convened via teleconference as needed. The Subcommittee may invite persons with specialized expertise, as needed, to make presentations, participate in meetings, and provide additional information.

REPORTS

Within 180 days after its establishment, NBSB shall consider, deliberate, and vote on the Subcommittee's recommendations and submit to the Secretary NBSB's recommendations for protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions. The Subcommittee may issue additional reports to the NBSB for consideration, as the Subcommittee or NBSB determines necessary.

DURATION

The Subcommittee will convene to carry out the function of protecting, preserving, and restoring individual and community mental and behavioral health in catastrophic health event settings; ensuring that core public health and medical (including mental and behavioral health) training and education curricula address the need to improve individual, family, and institutional public health and medical preparedness; and establishing and maintaining a flow of accurate, credible, and relevant information between Federal partners and individuals, families, communities, and institutions that will enhance public health and medical preparedness. The Subcommittee will also respond to requests from the NBSB for the duration of the Charter of the NBSB or until deemed unnecessary.