The National Biodefense Science Board (NBSB) was asked by the Office of Preparedness and Emergency Operation (OPEO) within the Office of the Assistant Secretary for Preparedness and Response (ASPR) to engage relevant State and local government; academic, professional, and private sector entities; and experts to provide feedback regarding the review of the National Disaster Medical System (NDMS) and national medical surge capacity that was required by the Pandemic and All-Hazards Preparedness Act (Public Law 109-417) and as specified by Paragraph 28 of Homeland Security Presidential Directive (HSPD)-21.

The NBSB Disaster Medicine Working Group established the NDMS Assessment Panel. The panel was chaired by Dr. Stephen Cantrill, a member of the NBSB, and supplemented with 24 experts representing a wide range of government, public, and private sector subject matter experts in NDMS and medical surge capacity.

The NDMS Assessment Panel concluded its review and submitted a report to the NBSB and recommendations for deliberation at the NBSB Public meeting on September 23, 2008. Following discussion by the members and the public, the NBSB voted on the revised recommendations of the Disaster Medicine Working Group presented on behalf of the NDMS Assessment Panel.

The recommendations of the NBSB are listed below.

1. **ENVISIONING THE FUTURE**

   Currently NDMS is a loosely integrated “system” of a deployable medical response component to serve a limited number of patients, a patient evacuation component relying heavily on military transport capability, and a definitive care component provided by volunteer member hospitals. It does not represent an overall system to provide for the medical needs of patients at a time of national need.

   **RECOMMENDATION 1.1**
   Develop a clear, current strategic vision for the NDMS including how it integrates with the mandate of Emergency Support Function (ESF)-8 Public Health and Medical Services and how resource sharing partnerships between the NDMS, the states and the healthcare industry might be enhanced for improved medical response during a disaster.
RECOMMENDATION 1.2
Establish an ongoing civilian advisory group for the National Disaster Medical System and for the U.S. Department of Health and Human Services (HHS) ESF-8 efforts in general. This group should meet on a regular basis and assist in the ongoing assessment and improvement of our nation's disaster medical response.

2. INTEGRATING THE PAST
Multiple previous studies and after-action reports have identified opportunities for improvement in the NDMS, however, there does not appear to be an organized methodology to track and monitor attempts to address these identified issues resulting in lost opportunities to continually improve the performance of the NDMS.

RECOMMENDATION 2.1
Establish a formal mechanism to track the implementation of recommendations and lessons-learned from appropriate after-action reports and other evaluations. This process should identify the factors which have precluded effective implementation of previous recommendations, such as insufficient staff, staff turnover, unclear responsibilities, lack of funding, etc., so that these primary issues may be addressed.

3. STRENGTHENING THE TEAM
Medical response personnel are one of the mission critical resources, which allows the NDMS to fulfill its mission of assisting State and local authorities in dealing with the medical impacts of major peacetime disasters.

RECOMMENDATION 3.1
Every effort should be made to achieve full staffing and operational status for all NDMS Response Teams. This includes dealing with identified issues in the following Response Team areas: concept of operations, equipment and logistics, command and control, communications and training.

RECOMMENDATION 3.2
Establish a uniform and consistent training curriculum across each of the types of volunteer teams consistent with the education and training requirements as defined under HSPD-21. These efforts must be complementary and build upon a national, standardized approach for resource typing, uniform training, field deployment and logistics support.

RECOMMENDATION 3.3
Implement an accounting/tracking system that can properly register the true capacity of non-overlapping NDMS medical response personnel who can be deployed for an event. Consideration should be given to improving the NDMS personnel capability and gap analysis for multiple specified national scenarios, including consideration of conflicting obligations and time to respond.

4. SERVING THE PATIENT
By definition members of the public will only ever interact with the National Disaster Medical System in times of incredible stress and strain to the public and the healthcare system. The NDMS needs to ensure that its procedures and policies do not add unnecessary physical, emotional or financial stresses to the individuals that it serves. Particular attention needs to be paid to smooth and efficient mass evacuation of patients from impacted areas including the continuity of patient medical information during and after transport.
RECOMMENDATION 4.1
Review and expand the definition, if necessary, of what constitutes an NDMS patient. Serious consideration should be given to including any individual evacuated across state lines (regardless of mode of evacuation) due to a disaster, who requires medical evaluation or care, to be an NDMS patient for a specified limited period of time (including long-term care patients).

RECOMMENDATION 4.2
Reimbursement for care of disaster victim patients should not be limited to just NDMS hospitals, but should include all hospitals, outpatient clinics, nursing homes, alternate care facilities, shelters, etc, wherever care is provided during the time of the event or the following impact period. Reimbursement should continue at 110% of the Centers for Medicare and Medicaid Services’ rate.

RECOMMENDATION 4.3
Establish a standard patient movement concept of operation. This plan should explicitly address the needs and management of at-risk individuals including children, pregnant women, senior citizens, and individuals with medical disabilities and other special needs, in the event of a disaster or public health emergency.

RECOMMENDATION 4.4
Field usability of the NDMS Electronic Medical Record (EMR) currently under development must be the goal of primary importance for its implementation. To the degree possible, integration of the NDMS EMR platform with future patient tracking and medical resource availability systems should be encouraged. The NDMS EMR platform should use medical IT best practices and protocols that will allow the greatest degree of interoperability with existing and future EMR systems. NDMS should take the lead in defining the minimal patient data set that is required in a patient tracking system.

RECOMMENDATION 4.5
Undertake a comprehensive review of federal health-related regulations and determine how such regulations pose barriers to the efficient and effective administration of patient care during times of extreme medical need. Develop criteria to specify when health-related federal regulations should be considered for temporary suspension in areas affected by a disaster and potentially those areas receiving the evacuated patients and convey these criteria to the healthcare community to assist in their disaster preparedness planning.

5. ENGAGING PARTNERS
The complete integration of federal resources with state and local resources is problematic. The process would benefit from establishing an improved understanding of each other’s capabilities and needs in advance. This is felt to be a significant issue especially for the Disaster Mortuary Operational Response Teams in terms of dealing with issues such as body disposition, which remains a local responsibility.

RECOMMENDATION 5.1
Consistent with Recommendation 1.1 the NDMS should improve and expand its efforts to build sustainable partnerships with State and local resources.
RECOMMENDATION 5.2
Establish improved alliances between NDMS and the public/private healthcare sector to provide assistance in field care, patient transport and definitive patient care. These alliances should be designed to provide additional assets to augment NDMS operations during a time of national need.

6. ALLOCATING RESOURCES
It is clear that funding levels for the NDMS are inadequate to support even the current level of the NDMS operation.

RECOMMENDATION 6.1
Every effort should be made to secure adequate, sustained, increased funding for the NDMS so it may successfully accomplish its critically important mission.

7. MOVING TOWARD THE FUTURE

RECOMMENDATION 7.1
The ASPR should consider this report and recommendations of the NBSB. The NBSB would respectfully request feedback at our spring/summer 2009 meeting concerning each recommendation above as to whether it has: 1) already been implemented; 2) will be implemented or 3) will not be implemented, with reasons if possible.

RECOMMENDATION 7.2
As follow-up to the NBSB report, the HHS/ASPR should request a study by the Institute of Medicine that would assess and evaluate the current status and progress of the NDMS program and make recommendations for future directions.

In addition to these specific recommendations, the NBSB is including for your consideration the full report of the Disaster Medicine Working Group NDMS Assessment Panel that was adopted by the NBSB. This report provides greater context to many of the NBSB's recommendations listed here.

Time and again our nation is faced with adversity taking the shape of natural disasters, major transportation accidents, technological disasters, and acts of terrorism including weapons of mass destruction events; therefore, the NBSB feels that the above recommendations should be taken into thoughtful consideration, in efforts to protect, preserve, and advance the NDMS of HHS.

Sincerely,

/s/ Patricia Quinlisk, M.D., M.P.H.

Patricia Quinlisk, M.D., M.P.H.
Chair, National Biodefense Science Board

Attachments: Disaster Medicine Working Group NDMS Assessment Panel Report