



**Testimony before the House Committee on Homeland Security's Subcommittee on
Management, Investigations, and Oversight
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Good morning Chairman Carney and members of the House Committee on Homeland Security's Subcommittee on Management, Investigations, and Oversight. My name is Shannon Fitzgerald and I am the Director of the Office of Public Health Preparedness, with the Pennsylvania Department of Health (Department). As the Department's lead on matters related to public health preparedness and response, Secretary Everette James has asked me to address the important issue of medical surge capacity and answer any questions that you may have. Thank you for this opportunity.

Medical surge capacity is a broad subject with many areas of focus. I am going to focus on four specific areas of medical surge capacity and how the Pennsylvania Department of Health has contributed to enhancing medical surge capacity across the state. The four areas are defined in the June 2008 United States Government Accountability Office report to Congressional Requests titled, "Emergency Preparedness, States are planning for medical surge, but could benefit from shared guidance for allocating scarce medical resources." The four areas include: "(1) increasing hospital capacity, including beds, workforce, equipment, and supplies; (2) identifying and operating alternate care sites when hospital capacity is overwhelmed; (3) registering and credentialing volunteer medical professionals; and (4) planning for appropriate altered standards of care in order to save the most lives in a mass casualty event."¹

The Department works diligently with healthcare, government and non-profit partners to build and support medical surge capacities and capabilities throughout the state.

The first area of medical surge capacity that I will discuss is increasing hospital capacity. Since 2002 Pennsylvania has received the Department of Health and Human Services, Office of the Assistance Secretary for Preparedness and Response, Hospital Preparedness Program (HPP) funding. This funding must be utilized to exercise and improve preparedness plans for all-hazards and enhance the capacities and capabilities of healthcare systems. In the 2009-2010 HPP grant year, the Department received over \$14 million in HPP funding. Almost 60% of the funding was distributed to 175 hospitals with emergency departments for preparedness activities. The hospitals are required to utilize this funding to meet the HPP overarching requirements that include, National Incident Management Systems, Needs of At-Risk Populations, Education and Preparedness Training and Exercises, Evaluation and Corrective Actions; Level One Sub-Capabilities including, Interoperable Communication Systems, Tracking of Bed Availability, Emergency System for Advance Registration of Volunteer Health Professionals also called

¹ GAO-08-668 "Emergency Preparedness: States are planning for medial surge, but could benefit from shared guidance for allocating scarce medical resources," June 2008.

ESAR-VHP, Fatality Management, Medical Evacuation/Shelter in Place, Partnership/Coalition Development; and Level Two-Sub-Capabilities including, Alternate Care Sites, Mobile Medical Assets, Pharmaceutical Caches, Personal Protective Equipment, Decontamination, Medical Reserve Corps and Critical Infrastructure Protection. Hospitals have utilized the HPP funding since 2002 to meet these objectives and to purchase medical surge items including, but not limited to the following:

- supplies and equipment to support medical surge activities (i.e., beds, cots, ventilators, linens, evacuation sleds and chairs, trauma kits, burn supplies, utility carts, wheel chairs, automatic external defibrillators and suction units);
- negative pressure isolation supplies and equipment;
- pharmaceutical caches of medications to provide prophylaxis to staff members and their families during disaster situations;
- communication and information technology equipment (i.e., radios, telephones, computer equipment, televisions, electronic notification boards);
- facility support supplies and equipment (i.e. emergency generators, incident command needs, mobile medical assets, portable lighting, security items, trailers);
- personal protective equipment for staff;
- decontamination supplies and equipment;
- education and training expenses;
- exercise expenses;
- laboratory surge equipment; and
- conduct emergency preparedness and response planning.

The Department has enhanced our laboratory capacity with the purchase of two biosafety level 3 (BSL-3) mobile laboratories which can be deployed to any site in the Commonwealth within hours. The mobile laboratories are equipped with robotic prep-stations and real-time polymerase chain reaction (PCR) instrumentation for rapid pathogen identification. All of the equipment can be powered via landline or on-board diesel generators. The mobile laboratories can conduct swine and avian influenza testing and test for select agents, toxins and chemical terrorism agents.

Verifying the availability of hospital resources during an emergency is essential. The Department uses the state-owned and operated Facility Resource Emergency Database (FRED) to notify hospitals of potential events and to collect real-time data from hospitals, using a Web-based application. The system can collect any data required for the event, including the availability of various types of hospital beds, including adult intensive care beds, medical/surgical beds, burn beds, pediatric beds, etc. The system can also collect data on the number of ventilators and pharmaceuticals available. The Department tests this system on a monthly basis and utilizes this system to collect the bed data (Hospital Available Beds for Emergencies and Disasters/HAvBED) required by the U.S. Department of Health and Human Services during the 2009 H1N1 influenza response.

Another example of how the Department has contributed to increasing medical surge capability is through a burn training program. The Department has provided funding to support burn training for over 1,200 medical providers throughout the Commonwealth. The eight-hour course is designed to ensure pre-hospital and hospital personnel are ready in the event of accidents or disasters involving burn injury. The course provides guidelines in the assessment and

management of the burn patient during the first 24 hours post-injury until the patient can be transported to one of the limited number of burns beds in the Commonwealth or country. The Department has also provided funding for the creation of a burn surge program in the Northeast region of Pennsylvania. This program provides a higher level of burn care at 24 regional hospitals and three mobile surge facilities in the Northeast region. The grant funded the creation of 27 burn carts for use at these hospitals and facilities. Each cart contains supplies and information to care for up to three moderately burned patients for three days. Training on the use of the carts for burn care was provided by the Lehigh Valley Health Network's Regional Burn Center to each hospital receiving a cart.

The second area of medical surge capacity is alternate care sites. The Pennsylvania Department of Health has purchased mobile medical assets, including portable hospitals and medical surge trailers, which can serve as alternate care sites wherever there is a need in the Commonwealth.

The Department has purchased eight portable hospital systems to increase the medical surge capacity in the Commonwealth. Each of these systems comes in two 28-foot trailers and contains all of the supplies and equipment needed to set up 50 hospital beds in a tent capable of providing a negative pressure environment. Each system has the materials necessary to care for up to 350 patients (or one patient per bed for one week). The portable hospitals increase the statewide bed capacity by 400 beds and can be set up anywhere in the Commonwealth, thus increasing the number of available alternate care sites and allowing flexibility for the alternate care sites to be placed where most needed.

The eight systems are stored in geographic locations throughout the state and can be entirely deployed within 90 minutes of arrival on the scene utilizing a crew of not more than six individuals. Each system includes the following medical surge equipment and supplies:

- supplies for receiving and classification (i.e., office supplies, tables, chairs, walkie talkies and megaphones);
- medical and patient care supplies;
- mortuary supplies;
- diagnostic supplies;
- housekeeping equipment and miscellaneous supplies;
- transportation system (one climate controlled trailer for medical supplies and equipment and one trailer for support materials); and
- support equipment (i.e., hospital tents, heater, negative pressure capability, generators, waste systems, water systems and oxygen systems).

The Pennsylvania Department of Health has also purchased nineteen medical surge trailers. Each of these trailers contain the supplies and equipment needed to set up 50 medical cots in a fixed facility. The medical equipment and supplies are assembled, stored in trailers, and pre-deployed to geographic locations throughout the Commonwealth. This resource utilizes a standard-size basketball court, as well as the perimeter of the court to place additional supplies or equipment. Each trailer will include the following medical surge equipment and supplies:

- supplies for receiving and classification (i.e., office supplies, table, chairs);
- medical and patient care supplies; and
- transportation system (trailer).

In addition to the mobile medical assets mentioned in this testimony, most hospitals have identified alternate care sites for short term and long term emergencies. Many hospital designated sites are located within the hospital campus or hospital owned facilities off campus.

To support medical surge operations within a hospital setting and at alternate care sites, the Department has tested and is in the process of implementing a patient tracking system. The Commonwealth-wide patient tracking system relies on bar-coded bands that will be placed on patients at a mass casualty scene. The bands are read by a scanner and important limited patient information will be loaded into a Web-based application viewable by emergency response partners.

The third area of medical surge capacity is volunteer medical professionals. The Pennsylvania Department of Health is meeting the federal Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) requirement through its State Emergency Registry of Volunteers in Pennsylvania (SERVPA) program. Pennsylvania has established an online registry for volunteers interested in responding to or assisting with a disaster or other emergency. The registry collects basic information from volunteers in advance of an emergency response situation. The registry verifies healthcare professional licenses with an automated link with the Department of State's licensure registry. SERVPA currently has 6,400 registered volunteers. Over 63% of the volunteers registered are healthcare personnel. In addition, Pennsylvania has 14 Medical Reserve Corps (MRC) teams with almost 3,000 volunteers.

Another personnel resource to support medical surge needs are the three State Medical Response Teams (SMRTs) which are supported by the Department. The SMRTs have purchased supplies and equipment and have trained personnel that are ready to deploy to a mass casualty or other emergency within a couple of hours to assist with patient triage and patient care. The SMRT from southeastern Pennsylvania deployed to the G-20 event in Pittsburgh in 2009. The combination of resources provided by the SMRT and an EMS Strike Team could have provided patient support for up to 350 patients per hour, including 24 burn patients, without tapping any of the local medical and hospital resources.

Pennsylvania has a robust medical surge personnel resource within the emergency medical services (EMS) system. Over 54,000 EMS personnel assist over 1.8 million patients per year. The EMS system is organized into 16 Regional EMS Councils, 1,014 ambulance services, 517 quick response services and 63 air ambulances. The Department supports 150 EMS Strike Teams made up of six EMS personnel each. These Strike Teams can be taken out of service and deployed without impacting local service delivery. Several EMS Strike Teams were deployed to Louisiana to support the efforts to respond to Hurricanes Katrina (2005) and Gustov (2008). EMS personnel have been trained on how to stand up and operate the portable hospitals and medical surge trailers and are the first line of personnel to be deployed with these systems.

The Department deployed many of these volunteer health professional resources to assist with the H1N1 public health vaccination clinics during the 2009 H1N1 influenza pandemic.

The combination of these volunteer and professional groups, and other strategies employed by hospitals, including having staff work 12 hour shifts, provide an extensive network of trained personnel to support a medical surge event.

The final area of medical surge capacity is altered standards of care. The Pennsylvania Department of Health is in the process of finalizing a nine volume (chapter) medical surge capacity guidance document intended to provide a coordinated, statewide health and medical surge strategy guidance and direction to a wide audience, including healthcare practitioners, healthcare facility or system administrators, community-based public health and public safety planners and responders, volunteers, as well as local, regional and state agencies. All nine volumes have been drafted and vetted through a multidisciplinary working group consisting of representatives from public health, emergency management and hospital. The following subject areas are covered in the nine volumes:

- Volume I: System of Systems Approach: A comprehensive overview;
- Volume II: Management System: The seamless integration of multiple levels of medical direction, control, communications, and coordination;
- Volunteer III: Alternate Care Sites: The use of a community-based triage system to maximize load sharing and reduce surge pressures;
- Volume IV: Modified Delivery of Healthcare with Scarce Resources: Providing the best possible medical care to the largest number possible;
- Volume V: Transportation System: Building depth and redundancy for Emergency Medical Services (EMS), mortuary affairs, and vendor-managed materiel movement throughout the system and among patient care facilities;
- Volume VI: Resource Management System: Measures to ensure protracted and sustained operations of healthcare facilities and alternate care sites;
- Volume VII: Mass Fatality Management System: Leveraging community mortuary affairs assets for the dignified and environmentally safe handling and disposition of remains;
- Volume VIII: Community Outreach and Education System: Coordinating a mutually supportive public information network and campaign to achieve desired results; and
- Volume IX: Behavioral Health Support System: Providing comfort and psychological care to responders, patients, and families.

Volume IV addresses the modified delivery of healthcare with scarce resources. It is intended to assist healthcare organizations in preparing for emergency situations where resources are inadequate to meet the necessary healthcare needs in the usual manner, compelling a change in healthcare delivery strategy. The objectives for modified healthcare delivery include the following:

- maintain a physically and medically safe environment for staff, current patients, and visitors, and protect the functional integrity of the healthcare organization;
- achieve and maintain optimal medical surge capacity and capability with available resources;
- modify healthcare delivery, through managed change, to maintain a safe environment and achieve the best possible medical outcomes; and
- return to normal operations as rapidly as possible and return response resources to ready status.

In addition to the medical surge guidance document, the Department's Emergency Operations Plan describes Pennsylvania's plan for facilitating the organization, mobilization, and operation of health resources in response to natural or manmade incidents, including a medical surge capacity annex describing the operations plan for the portable hospital systems and medical surge trailers. The Department works closely with healthcare partners to develop, implement and support emergency preparedness trainings and exercises that demonstrate medical surge capacity.

Building and sustaining medical surge capacity is a multi-jurisdictional effort requiring leadership and coordination. We will continue to work with our partners at the federal, state and local level to collaborate on medical surge capacity preparedness activities.

On behalf of Secretary James, thank you for inviting the Department of Health to present this testimony. I am happy to answer your questions.