

WRITTEN STATEMENT OF

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**BEFORE THE
HOUSE COMMITTEE ON HOMELAND SECURITY**

HEARING ON

**"THE CHALLENGE OF PROTECTING MASS GATHERINGS
IN A POST-9/11 WORLD"**

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Introduction

Chairman Thompson, Ranking Member King, Distinguished Members of the Committee and guests, thank you for the opportunity to appear before you today. My name is Dr. Tom Blackwell and I am an emergency physician at Carolinas Medical Center, a designated Level 1 trauma center in Charlotte, North Carolina. I also serve as Medical Director for the Mecklenburg Emergency Medical Services Agency, which is the 9-1-1 EMS provider for the City of Charlotte and Mecklenburg County. Additionally, I am a Clinical Associate Professor of Emergency Medicine at the University of North Carolina-Chapel Hill School of Medicine and the University of North Carolina-Charlotte.

Carolinas Medical Center, is the flagship hospital of Carolinas HealthCare System and is a state designated Academic Medical Center Teaching Hospital. Carolinas HealthCare System is the largest healthcare system in the Carolinas and the third largest public healthcare system nationally.

I have dedicated the last ten years of my career to improving our community's and this Nation's ability to address surge capacity medical needs and to respond to incidents resulting from natural and man-made disasters. Today, I would like to share with you my experience in developing our local capacity to respond to a mass casualty event in our region. I would like to emphasize that when you prepare for mass casualty incidents at mass gatherings, the same preparation applies with mass casualties resulting from a natural disaster; thus my comments this morning will apply to both situations.

In our region, we have addressed many of the issues in the Committee's Report *Public Health, Safety and Security for Mass Gatherings* and have created solutions that will preserve human life and infrastructure. Since 1998, I have been integrally involved in two comprehensive medical management initiatives in Charlotte, both of which have direct implications for mass gathering events and disaster management.

1. The development of the Advanced Local Emergency Response Team, or ALERT which is a multiagency team of law enforcement, fire, and medical staff trained to respond to a weapon of mass destruction.
2. The design, development, and implementation of a state-of-the-art mobile hospital.

Put simply, I am the doctor in the field at ground zero who will be there when any incident unfolds. As such, I believe that I am able to provide to you a unique perspective from the ground up as to how we address patient care issues.

Development of ALERT

Charlotte is the second largest banking center in the country and is the only city in the world that has two nuclear power plants within 25 miles from the center of our uptown district.. It hosts the NFL Carolina Panthers and the NBA Charlotte Bobcats. The Lowe's Motor Speedway, home to several prominent NASCAR events, sits just outside of

Charlotte in Cabarrus County, North Carolina. In addition, Charlotte hosts a number of other annual mass gathering events such as the Central Intercollegiate Athletic Association (CIAA) Basketball Tournament and the Wachovia Championship Golf Tournament. The Charlotte-Douglas International Airport is the 10th largest airport and the largest hub for US Airways. Charlotte has the sixth most Fortune 500 companies and is home to many international businesses.

Our wake up call came in February 1998, when a man entered the Mecklenburg County Court House in uptown Charlotte carrying a bomb. The Court House is a mass gathering at 9:00 and 2:00 every day when district court convenes. This man told deputies that he had a second device that could be remotely detonated in the trunk of his car several blocks away. A rapid search of his home revealed ingredients for constructing a bomb, in addition to potential chemicals and biological agents on site. While the incident was successfully resolved, the emergency response revealed several issues that we, as a community, needed to address. Collaborative agreements were fostered between emergency management, law enforcement agencies, the fire department, EMS, public health, and hospitals. The result of our labor was the formation of the Advanced Local Emergency Response Team (ALERT) to ensure preparedness for urban terrorism and weapons of mass destruction, as well as natural disasters (such as hurricanes and floods). The team makeup is comprised of local law enforcement, fire, and emergency medical staff, and incorporates resources to effectively and efficiently respond to any terrorist incident or natural disaster.

ALERT has been training for terrorism and mass casualty responses including tactical operations involving bombs, biological, and chemical agents detection/disposal, decontamination, triage and scene treatment, hospital response, and incident command. ALERT exemplifies the kind of "culture of collaboration" among various private and public entities that the Committee's Report *Public Health, Safety and Security for Mass Gatherings* so appropriately recognized is essential to protecting our citizens and preserving the community's infrastructure.

Two areas that are most critical in medical response and readiness are real-time detection and surge capacity. Real-time detection is a prerequisite to containing disease outbreak, particularly in a mass gathering environment. Our ALERT program includes a medical on-line surveillance tool that was integrated into a state-wide detection system. This system is able to track disease or potential disease spread, and provides epidemiologic feedback to the region or area affected. Another critical issue facing communities and mass gathering venues today is surge capacity -- ensuring the availability of appropriate and adequate resources required to manage an enormous influx of ill or injured patients. In the 2006 Institute of Medicine Report entitled "*The Future of Emergency Care in United States Health System*," one of the three reports "*Hospital-Based Emergency Care: At the Breaking Point*" focused on surge capacity. The report outlined the degree of emergency department overcrowding and hospital closings. This, along with the fact that many hospitals across this Nation operate at surge capacity on a daily basis, makes it extremely difficult to successfully handle any incident that results in mass casualties, particularly from mass gatherings where tens of thousands of people could be affected.

Development of Mobile Hospital

Learning from the anthrax attacks, our deliberations surrounding the ALERT initiative, and the overcrowded state of our hospitals, we set out to design and construct a mobile hospital that was different in design from the traditional tent systems that have been used in the past. Initiated in 2002, we wanted to build a medical facility that could quickly move to the site of a disaster, be rapidly deployed on arrival, and be able to provide comprehensive medical and surgical care so as preserve hospital resources for the most critical patients. Amid the growing concern of biological threats, including infectious disease outbreaks which raises the issues of isolation, containment, and quarantine, it was essential that the mobile hospital serve patients that could not and should not be transferred to local hospitals. Transferring patients who may have an infectious disease could contaminate and jeopardize the integrity of a hospital's infrastructure for indefinite periods of time. Our design incorporated a 2-bed operating room, 4-bed intensive care unit, and an 8-bed emergency department in an expandable 53-ft. trailer. While 14-beds are helpful, a mass casualty incident or pandemic outbreak could result in hundreds or even thousands of patients. Thus, to plan and accommodate the expected large number of patients, we developed a shelter system that could be deployed from the trailer that can support an additional 250 beds.

The Department of Homeland Security was incredibly supportive of our approach and plan. We applied for a grant and received funding from the Department to build the prototype hospital. In April of 2004, we unveiled the Carolinas MED-1 mobile emergency department. The MED-1 unit is owned and operated by Carolinas Medical Center, and includes emergency physicians, trauma and orthopaedic surgeons, anesthesiologists, nurses, and paramedics as the healthcare team. Additional support personnel includes drivers, clinical engineers, and security staff provided by the Charlotte-Mecklenburg Police Department.

After much training, planning, and operational exercises, the MED-1's first deployment came in the immediate aftermath of Hurricane Katrina. MED-1's emergency response unit and team was dispatched to Mississippi to provide care to the survivors of the hurricane under an Emergency Management Assistance Compact between the states of Mississippi and North Carolina. Mr. Chairman, it was our great fortune to serve the communities of Waveland and Bay St. Louis, and to support Hancock Medical Center which was incapacitated by the storm.

Carolinas MED-1 set-up in a K-Mart shopping center parking lot, located approximately one mile from Hancock Medical Center. Approximately 150 refugee families were living in make-shift structures on hot asphalt, all without any significant medical care. Within an hour of our arrival, we began seeing patients. On day two, we conducted our first surgical operation, transferred our first pregnancy who was soon to deliver, and saw our first traumatic injury. The trauma involved a twelve-year old boy who was riding an all terrain vehicle when he was struck by a car. The local EMS provider noted that the child had stopped breathing as they arrived at MED-1. Our team was able to resuscitate and stabilize

the child, provide head injury therapeutics, and complete a full diagnostic evaluation including labs and x-rays. He was transferred by Coast Guard helicopter to the Level 1 trauma center in Jackson, Mississippi. It is my great pleasure, Mr. Chairman to let you know that this boy eventually walked out of the hospital intact and with no permanent nor long-term problems. Epidemiologists would comment on the cost-benefit ratio of a MED-1 unit. In my opinion, that 12-year old's life was worth the cost of 1000 MED-1s.

During the seven weeks of deployment in Mississippi, we saw more than 7,500 patients. The MED-1 staff along with the hundreds of physicians, nurses, EMTs and paramedics, and other allied health personnel from across North Carolina will forever have a bond with the people of Waveland and Bay St. Louis. Our prototype, again funded and supported by the Department of Homeland Security, was a true success story from the devastation invoked by Hurricane Katrina.

Six months later, Carolinas MED-1 was called back into service to serve as a standalone emergency department to assist in the excessive surge capacity conditions present in New Orleans during the first Mardi Gras celebration following the Hurricane Katrina and Rita. The unit quickly became the primary receiving facility for the City of New Orleans EMS and other services in the surrounding parishes. During the 2 weeks of deployment, 575 patients were treated. Dr. Juliette Saussy, the Director of Emergency Medical Services for New Orleans has been working for the last two years to obtain funding for a full-time MED-1 for her city.

Presently, Carolinas MED-1 is deployed to Columbus, Indiana to provide emergency department services in the wake of the severe flooding that destroyed Columbus Regional Hospital. Our first patient to arrive was in respiratory failure. A breathing tube was required and inserted, he was placed on a ventilator, antibiotics were immediately administered, and he was transferred by helicopter to Methodist Hospital in Indianapolis. Today, MED-1 and the Columbus Regional Hospital staff is seeing approximately 60-70 patients a day.

Overall, each of our deployments has been a tremendous success. We developed MED-1 to meet a critical need in Charlotte and elsewhere, and developed a company to produce more MED-1's to meet local preparedness needs in other parts of the country. Los Angeles County procured its second MED-1 and is in the process of building a program similar to the one in North Carolina. Several County Supervisors have expressed a great desire to deploy the unit to mass gatherings within the County such as the Tournament of Roses Parade, Rose Bowl, and the Los Angeles Marathon. Plans are also being developed to use MED-1 to provide routine outpatient medical care to the people of Los Angeles County. Frequent use will translate to quality training for the medical staff, thus ensuring proficiency when a true disaster occurs.

Conclusion and Recommendations

Based on my experience with ALERT and MED-1, as you think about mass gathering medical support, I have several specific recommendations for your consideration.

Recommendation #1: Coordination between federal, state, and local authorities is essential both before and after a terrorist attack or natural disaster.

Mass casualty incidents don't recognize county or state lines, and our responses shouldn't either. We designed MED-1 to be set up in just 20-minutes. After Hurricane Katrina, MED-1 began providing patient care services shortly after arrival at the K-Mart parking lot. However, it took four days from the time Hurricane Katrina hit for MED-1 to actually be deployed. At the time, extensive conversations were conducted between the federal government, Mississippi, North Carolina, and Carolinas Medical Center. Each time we deploy, there is a great deal of paperwork and contracting that has to occur between the public and private entities before we are able to move MED-1 toward the patients that need the care. We must consider ways to simplify the process by which MED-1 and other critical assets get deployed to minimize time delays. That means ensuring coordination between the various entities ahead of time to the greatest extent possible.

More specifically, the Emergency Management Assistance Compact, (EMAC) is a congressionally ratified organization that provides form and structure to interstate mutual aid thus allowing a disaster impacted state to request and receive assistance from other member states quickly and efficiently. Based on my experience deploying MED-1 several times out of state, we need for all states to amend their EMAC legislation so that the same immunity that applies to State employees will also apply to all employees that work with the responding State to provide the help that is needed. MED-1 and the employees who agree to be part of an emergency response often deploy with or as a part of a State's emergency response assets. An amendment to the EMAC model state laws that are enacted in each state would save valuable time that is now being spent on drafting and executing contracts between the hospitals and the responding State so that the hospital employees will be covered by the immunity given to the State.

Recommendation #2: All law enforcement, fire services, emergency medical services, public health and hospitals, and local emergency management agencies must participate in disaster planning and response.

ALERT's success is due in large part to the participation of all relevant private and government entities. This participation is reflected in four key elements: ALERT's operational guidelines are established collaboratively; ALERT members plan, prepare, and respond as one unit; ALERT's equipment is standardized and has been approved by all member agencies; and ALERT personnel wear a standardized team uniform with nametags for personal recognition and familiarization, thus fostering cohesion and nourishing ALERT's team concept. The relationships fostered through our joint preparedness activities ensures our cohesive and comprehensive response to any incident.

Recommendation #3: Developing comprehensive all-hazards preparedness plans and consistent training on those plans.

Medical preparedness planning includes an understanding of who is going to do what and how regarding evacuation, containment, medical care, triage, transport, and recovery. To ensure that preparedness plans are complete and to identify and fill gaps in the plans, it is critical to test and evaluate the plans through ongoing and sustained training and adjust where necessary. It is a never-ending, fluid process and we are always learning from our training and experiences with both ALERT and MED-1.

Recommendation #4: Procurement or availability of assets and resources required to save lives, ease suffering, and successfully mitigate the medical consequences of a terrorist attack or natural disaster.

Local medical needs include ongoing financial support for equipment, personnel, and training. Just maintaining MED-1 on an annual basis and having it ready to go costs over \$800,000. Ensuring adequate response and recovery in the event of a mass casualty incident at a mass gathering costs money. Critical assets like real-time detection of a biological release should be made available at all mass gathering venues. It is not plausible to think that any public hospital or local government agency will have the resources on hand to provide the funds necessary for full preparedness. While many of the assets and programs we do have are grant funded, sustainment dollars are equally significant to keep these initiatives operational and functional.

Lastly, I would like to emphasize that the time is now to seek solutions that support healthcare needs at special events and mass gatherings. As a nation, our preparedness for terrorist attacks also serves to ensure our preparedness for the more common occurrence of various types of natural disasters which are plaguing the United States more and more each year.

I thank you again, Mr. Chairman and members of the Committee for your time, and I will be pleased to answer any questions you may have.