



**driving readiness in
dynamic times**

Disaster Planning for California Hospitals




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**Responding to America’s Deadliest
Shooting – The Physician Perspective**

Michael Cheatham, MD
Chief Surgical Quality Officer
Orlando Regional Medical Center

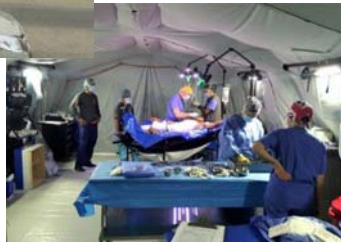




**Pulse Nightclub:
Deadliest Mass Shooting In U.S. History**

**Michael L. Cheatham, MD, FACS
Chief Surgical Quality Officer**





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Pulse Nightclub Tragedy



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Pulse Nightclub Tragedy



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Pulse Nightclub Tragedy



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Orlando Regional Medical Center (ORMC)

- The only Level I Trauma Center in central Florida
 - 808 beds
 - ~5000 trauma admissions annually
 - 24/7 in-house trauma surgeons/residents
 - 10–15% penetrating trauma



Arnold Palmer Hospital for Children Winnie Palmer Hospital for Women & Babies



ORMC's Disaster Preparation

- Over the past 20 years, ORMC has refined its disaster plan
- Tested and revised by three major hurricanes, tornadoes, countless drills and “mini-MCI” events every Friday and Saturday night



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ORMC's Disaster Preparation

- Monthly “trauma alert” training drills with EMS



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ORMC's Disaster Preparation

- Tri-county “active shooter” drill 3 months previously



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“It was the best and worst day of my career.”

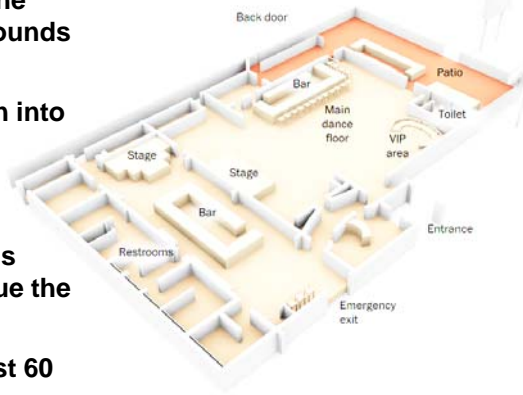
—Chadwick Smith, MD

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Pulse Nightclub – June 12, 2016

- 300 people were celebrating “Latin Night”
- A lone gunman entered the club and fired over 250 rounds into the crowd
- Police forced the gunman into the restrooms allowing victims to be evacuated
- After 2½ hours of negotiations, SWAT teams stormed the club to rescue the remaining hostages
- 49 people died and almost 60 were injured



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2:00 a.m.

- Orlando Fire Department notifies ORMC that an “active shooter” situation is occurring nearby
- ORMC Emergency Department is placed on lock-down



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2:10 a.m.

- **First victim arrives at ORMC with a gunshot wound to the abdomen**
- **Three victims, each with gunshot wounds to the chest, arrive within minutes**
- **EMS notifies hospital that an MCI event with 20 victims has occurred**



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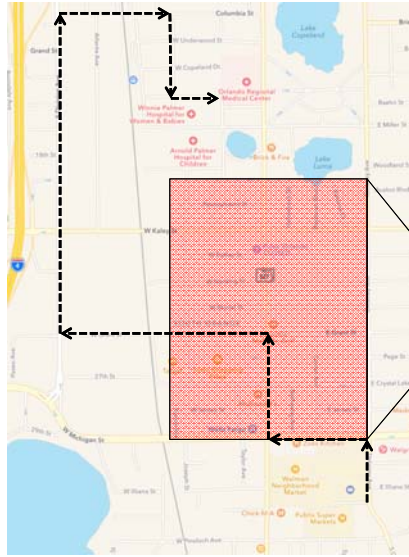
2:20 a.m.

- **Dr. Chadwick Smith, on-call trauma surgeon, calls the two closest trauma surgeons to the hospital**
- **Decision is made to call two more trauma surgeons**
- **Pediatric trauma surgeon on-call receives MCI page and offers to assist**
- **Patients begin arriving at the rate of one per minute**

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2:30 a.m.



- **Access to the medical center is hampered by the proximity of the active shooter scene**



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2:35 a.m.

- **Many initial victims arrive with absent vital signs**
- **9 patients succumb to their injuries soon after arrival to the Trauma Center**
- **First wave of patients consists of 38 victims in 42 minutes**



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2:35 a.m.

- **Three patients require emergency department thoracotomies**
- **Multiple chest tubes are inserted**
- **Physical examination, portable x-ray and bedside ultrasound are used for diagnosis**
- **First patient is taken to the operating room**

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2:40 a.m.

- **ORMC operating room capacity is rapidly expanded**
- **Arnold Palmer Hospital & Winnie Palmer Hospital on-call teams brought to ORMC**
- **4 operating rooms are open within 60 minutes and 6 rooms within 120 minutes**
- **Patients are brought to the trauma surgeons who stay in their operating rooms**
- **Orthopedic and vascular surgeons are called in**

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3:00 a.m.

- “Hospital Incident Command System” (HICS) is implemented
- Hospital administration works with law enforcement to arrange clear avenues for staff entry to the hospital from the north



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3:00 a.m.

- Hospital MCI page brings in a rapid influx of almost 500 physicians, nurses, and others to care for the victims
- Staff are staged and deployed to appropriate areas as needed



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3:25 a.m.



- “Gunfire” is reported in the emergency department
- “Code Silver” active shooter plan is implemented
- Heavily armed police officers/Sheriff’s deputies clear the ED of any threat
- Staff shelters in place while continuing to care for victims

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3:30 a.m.

- Intensive care and step-down unit patients are triaged to increase critical care bed capacity
- Stable victims are rapidly moved to ICUs and hospital floors to accommodate incoming victims
- Medical intensivists direct resuscitation in the Trauma ICU while trauma surgeons operate

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4:00 a.m.

- **All victims not held hostage have been evacuated**
- **The initial 38 victims are re-evaluated, resuscitated and stabilized**
- **Disaster supply carts are used to rapidly restock the ED with needed supplies**

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5:02 a.m.

- **A loud explosion is heard in the distance as SWAT breaches the nightclub to rescue remaining hostages**
- **A second wave of 11 victims arrives including a SWAT team member who has been shot in the head**
- **Triage and resuscitation begins again**
- **Police report an additional 40 victims in the club**
- **ORMC prepares for a third wave of victims**

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7:30 a.m.

- Available trauma team members meet in the ED
- The master victim list is reviewed in detail
- Each patient is re-examined, studies are reviewed, procedures are completed
- Remaining patients are transferred from the ED

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9:00 a.m.

- Hundreds of family members and friends come to the hospital requesting information
- A “Family Assistance Area” is established and staffed with hospital personnel
- Regular updates are provided to families where possible



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9:00 a.m.

- Families are provided with an email address to send photographs and other details to assist in identifying victims
- Hospital administration works with the trauma team to identify each of the victims
- Over 200 emails are received from family and friends trying to locate victims

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9:30 a.m.

- After initially being closed to all but Pulse victims by EMS, the Level I Trauma Center is reopened for trauma alerts and transfers from the community



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10:30 a.m.

- **Hospital administrators meet with city and county officials, law enforcement, EMS and FBI at the scene**
- **First of multiple press conferences is held**



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Was HIPAA Waived?

- **Release of information to families discussed with local officials, law enforcement and FBI**
 - **ORMC emphasized the need to identify victims and the hundreds of family members and friends requesting information**
 - **FBI emphasized this was an ongoing investigation**
 - **Mayor Buddy Dyer requested a waiver of HIPAA from the White House and U.S. Department of Health & Human Services**

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HIPAA Privacy and Disclosure in Emergency Situations

- HIPAA was not waived for the Pulse Tragedy

“Health care providers can share patient information as necessary to identify, locate and notify family members, guardians, or anyone else responsible for the individual’s care of the individual’s location, general condition, or death”

U.S. Department of Health and Human Services
Sept. 2, 2005

2:00 p.m.

- Trauma surgeons and hospital administrators meet with several hundred family and friends
- HIPAA discussed and verbal consent received
- List of all identified victims and their status is read
- All but one of the ORMC victims is identified by that afternoon



The Victims

- **49 killed**
 - **40 victims died in the club**
 - **9 victims died upon arrival to ORMC**
- **58 wounded**
 - **40 victims brought to ORMC**
 - **1 SWAT officer brought to ORMC**
 - **17 victims taken to local hospitals**

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Operative Procedures

- **29 operative procedures were performed and 441 units of blood transfused on Pulse victims in the first 24 hours**
- **Two operating rooms were made available the day after the event to facilitate ongoing procedures for the victims**
- **54 operative procedures were performed on Pulse victims in the first 7 days**
- **78 operative procedures have been performed to date**

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Disaster Preparedness

Hospital Disaster Preparedness

- Hospitals must prepare and drill to handle the worst that humanity or the environment can produce
- Such events are increasingly inevitable
- All hospitals must have a comprehensive plan to deal with multiple casualties and limited resources
- Each hospital should plan to be self-sufficient
- Disaster planning should integrate outside agencies with local hospital and trauma systems

Definitions

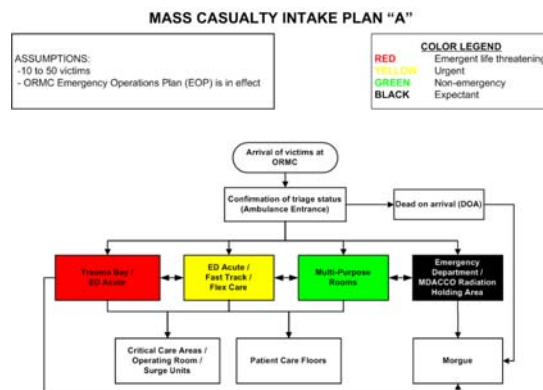
- **Mass casualty event**
 - Any event that overwhelms a hospital's usual capacity to care for the victims
- **Surge capacity**
 - The ability to rapidly increase available beds to care for victims of a mass casualty event
- **Triage**
 - Allocation of scarce resources in the face of overwhelming demand to provide maximum resources to those most likely to benefit

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Mass Casualty Incident (MCI) Plans

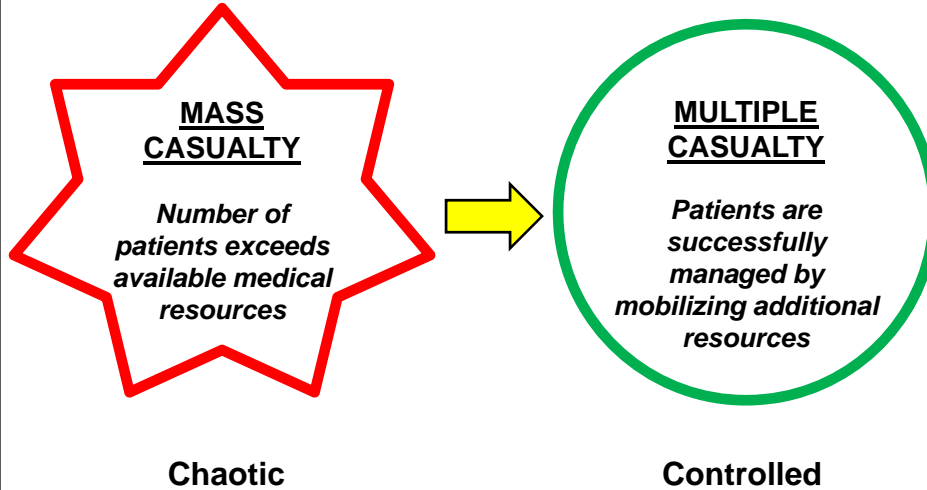
- **Must be individualized for each hospital**



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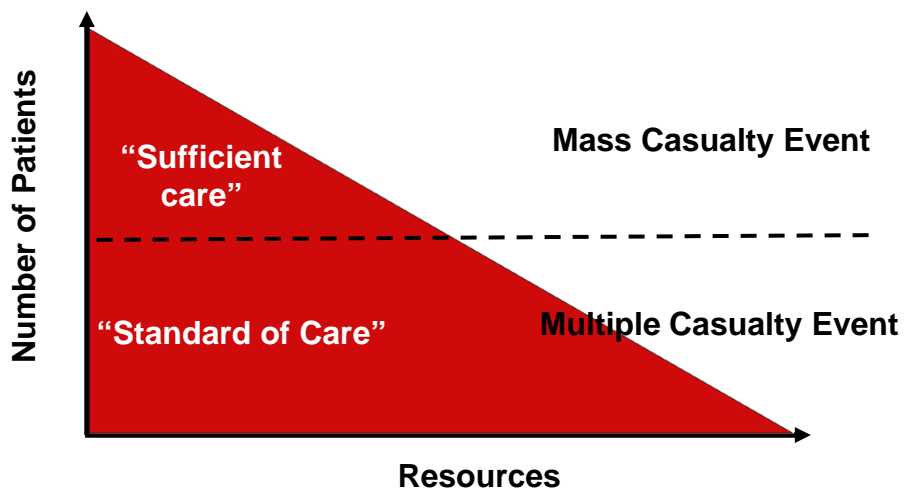
Mass vs. Multiple Casualty Events



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Standard vs. Sufficient Care



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The Problem with Sufficient Care

- Most health care providers are unfamiliar with the concept of sufficient care
- We are used to doing everything possible for a patient
- Disaster situations require triage of patients and resources
- This can be difficult for some providers to accept

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“Routine” vs. “Crisis” Response

- The ability to recognize a crisis and respond effectively is an essential skill in disaster management
- Size or scale alone does not define a crisis
- The transition from “routine” to “crisis” depends on how quickly those in charge recognize and respond to the disaster situation



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Routine vs. Crisis Response Elements

Routine	Crisis
<ul style="list-style-type: none"> • Need for minor changes to standard operating procedure 	<ul style="list-style-type: none"> • Standard response plan invalid
<ul style="list-style-type: none"> • Familiar organizational structure 	<ul style="list-style-type: none"> • New, untried organizational structure
<ul style="list-style-type: none"> • Sufficient resources 	<ul style="list-style-type: none"> • Inadequate resources
<ul style="list-style-type: none"> • Sufficient training • Expert driven 	<ul style="list-style-type: none"> • Lack of experience
<ul style="list-style-type: none"> • Plans based upon known threats 	<ul style="list-style-type: none"> • Lack of a plan • Many “unknown unknowns”

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Routine vs. Crisis Leadership Requirements

<u>Routine</u>	<u>Crisis</u>
<ul style="list-style-type: none"> • Familiarity with the condition • Substantive expertise • Demonstrated interpersonal skills ability • Reliance on “recognition-primed” decision making <ul style="list-style-type: none"> – “I’ve seen this before” 	<ul style="list-style-type: none"> • Expertise in multiple operations • Flexible “first responder” mindset • Strong personality • Risk taking ability • Willingness to create a wide organization (a “sudden network”) • Rapid assessment of resources • Focuses on what is important • Decisiveness (takes command)

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Routine vs. Crisis Response

- **Disaster response leadership is not for everyone**
- **We must choose our disaster response leaders wisely**
- **We want to keep our disaster responses “routine”**

Lessons Learned

Proximity of the Pulse Nightclub



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Proximity of the Pulse Nightclub

- Club's proximity was a benefit
- Victims were transported by police car, truck, ambulance and foot
- Allowed earlier cessation of bleeding and rapid resuscitation
- Some of these victims would otherwise have died
- Many victims arrived without warning or EMS handoff



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**“...a team filled with camaraderie and respect”
—Coach John Wooden**

- **Picking your team is vital to success in stressful situations**
- **All but one of our trauma surgeons have worked together for 10–20 years**
- **Each said “I’m on the way”**



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Collaborative Team Building Pays Off

- **We pride ourselves on having a collaborative, multi-disciplinary team approach to patient care**
- **Many of our team members performed roles outside their usual job description**
- **471 team members came in to assist in the response**

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Optimize Your Resources

- **Needing additional OR staff, we rapidly combined the on-call OR staffs from ORMC, Arnold Palmer Hospital and Winnie Palmer Hospital**
- **This brought manpower and resources to the victims rather than dividing victims among facilities**
- **Pairing up staff can alleviate the unfamiliarity of a new facility or unit**

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Law Enforcement

- **We had planned to be self-sufficient**
- **For this event, law enforcement was everywhere and essential**
 - Patient transport
 - “Code Silver”
 - Hospital security
- **We found their radios did not reach inside the hospital**
 - They could not participate in our Incident Command Center



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Blood-Borne Pathogens

- Many victims reported exposure to other's blood
- Patients were offered baseline testing for Hepatitis B, Hepatitis C and human immunodeficiency virus (HIV)
- Patients without previous Hepatitis B vaccination were started on a vaccination program
- Post-exposure prophylaxis against Hepatitis C and HIV was not recommended
- These recommendations were made to others inside the club through local television and newspapers

MMWR 2008; 57(RR06):1-19

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Don't Underestimate Your Residents

- Our surgical, orthopedic and emergency medicine residents immediately responded
- Many worked tirelessly over the next 36 hours to care for the victims
- We would not have been able to respond as we did without them



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Support Your Fellow Hospitals!

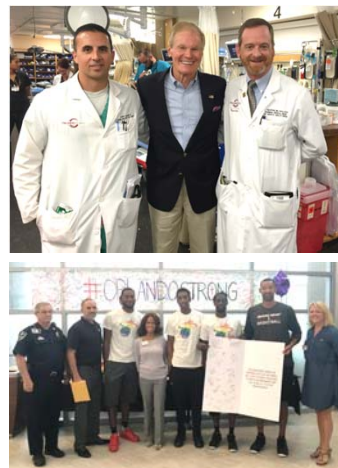


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Support Your Fellow Hospitals!

- Food may not be the best way to help
- Donations and gifts require manpower to process
- VIP visits early can detract from patient care
- VIP visits later can help encourage patients



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Plan for EVERYBODY's Family

- Our disaster plan was designed for our patient's families
- Deceased victims were not identified for 24 hours
- We did not plan to be the primary source of support and communication for families of all victims in the community
- We had to rapidly expand our family assistance plan to accommodate some 500 family members and friends

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Identifying Victims

- We have designed a website that can be activated in a disaster and assist in gathering information

Mass Casualty Incident Patient Identification Form

We are actively attempting to identify all of the patients that we have received. To help us identify your loved one, please complete and submit the form below. Please provide your contact information so that we can reach you in case there are additional questions. Please know that we are doing everything possible to identify and reunite you with your loved one as quickly as possible.

Last Name:

First Name:

Age:

Gender: Male Female

Please provide us with details such as hair and eye color, any identifying trademarks, tattoos, or piercings, anything, etc., that will help us identify your loved one.

Photograph Upload: Please upload a recent photograph of your loved one (200x300 or larger file type only).

Your name:

Your relationship to patient (please enter): Husband Wife Parent Child Significant other Friend

Your phone number:





Your email address:

MASS CASUALTY INCIDENT PATIENT IDENTIFICATION WEBSITE ADMINISTRATION PAGE

The MCI Patient Identification Website is ACTIVE.

[Click Here to Start Website Admin](#)

The following patient identifications have been submitted:

Number	Patient Name	Date of Birth	Age	Gender	Details	Contact	Photo	MCI# Notified
1	JAMES, JIM	Dec 28, 1948	72	Female	Paternal aunt, paternal baby brother, brother's father or aunt's aunt	John Smith MCI@OrlandoHealth.com		Husband
2	SMITH, LARRY	Dec 28, 1948	74	Male		John Smith MCI@OrlandoHealth.com		CPD
3	JAMES, DAN	Dec 28, 1948	72	Male	Deceased wife (1st of 2nd)	John Smith MCI@OrlandoHealth.com		FD
4	SMITH, DAN	Dec 28, 1948	72	Male		John Smith MCI@OrlandoHealth.com		Wife

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Staff Counseling

- Our disaster plan did not anticipate the post-event counseling needs for an event of this magnitude
- The number of victims, the catastrophic nature of their injuries and the belief that an active shooter situation had occurred in the hospital all placed a significant psychological burden on our team members
- We began counseling sessions within hours
- More than 1500 of our team participated in these sessions over the first 10 days

Hartford Consensus

- No one should die from uncontrolled bleeding
- In a mass casualty situation → **THREAT**
 - Threat suppression
 - Hemorrhage control
 - Rapid Extrication to safety
 - Assessment by medical providers
 - Transport to definitive care
- The public should be trained to engage in lifesaving actions such as tourniquets and hemostatic dressings

Summary

- **You can never fully anticipate the impact of a disaster event**
- **We believe the outcome would have been different were it not for our disaster planning and drills over the past 2 decades**
- **Ultimately, it was the dedication and hard work of each of our team members that allowed 40 victims to return to their families**

Questions



Thank you!

Michael Cheatham, MD
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