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HEALTHCARE EMERGENCY PREPAREDNESS INFORMATION GATEWAY

LESSONS LEARNED FROM THE PULSE NIGHTCLUB SHOOTING:

An Interview with Staff from Orlando Regional Medical Center

On June 12, 2016, a gunman opened fire in Orlando's Pulse nightclub, killing 49 people and wounding at least 66. Dr. John Hick (ASPR TRACIE's Senior Editor) interviewed the responding trauma surgeons, emergency physicians, and the director of emergency preparedness in charge of Orlando Regional Medical Center's response to this horrific incident to learn more about their experiences and lessons learned. The staff noted several challenges, including issues related to the infrequent use of the mass casualty notification system by emergency medical services (EMS) agencies, staff silencing their cell phones while off-duty, staff experiencing difficulties with getting to work (due to closed roads), the confusion associated with the rumor of an active shooter at the hospital, and the family reunification process. Despite these challenges, the staff felt that the response worked well overall—due, in part, to conducting exercises and planning ahead, they never ran out of supplies and were able to identify all patients within 24 hours.

Orlando Regional Medical Center (ORMC), the only Level 1 trauma center in central Florida, manages more than 85,000 emergency department (ED) visits annually. During each shift, there is at least one trauma attending in-house (and a back-up), with a team of four surgery residents and a Surgical Intensive Care Unit (ICU) fellow. On June 12, Dr. Chadwick Smith (Trauma Surgeon and Director of Surgical ICU) was the trauma surgeon on duty. Dr. Gary Parrish (Medical Director of the ED) was working clinically and Dr. Michael Cheatham (Trauma Surgeon, Chief Surgical Quality Officer, and Chair of the Department of Surgical Education) arrived at the hospital shortly after the incident took place.

John Hick (JH)

How did you first learn about the incident?

Gary Parrish (GP)

It was early Sunday morning and the trauma bay was quiet, with a few patients in the waiting room. There were four graduating senior emergency medicine (EM) residents working in the ED and another senior EM resident working across the street in the pediatric ED. At around 2:00 in the morning, we heard many sirens as law enforcement vehicles traveled down Orange Avenue, a main thoroughfare ins. Orlando. Shortly thereafter, we received notice from the Orlando Fire Department (OFD) and the Orlando Police Department (OPD) that there was a shooting at a nearby nightclub with up to 20 victims. It is not unusual for us to hear about incidents with potential large numbers of victims—almost always, it ends up being fewer. But in this case, we were concerned because we heard the police activity outside the hospital doors.

JH

Is it true that the Orlando fire station is less than a block from the nightclub, and they were on scene almost immediately?

GP

Yes, OFD Station 5 is only a few yards from the nightclub, and there was a rapid response by a large number of emergency medical providers and law enforcement personnel.

JH

Does your jurisdiction use a system to notify hospitals of a mass casualty incident?

GP

Yes, we have an EMS software system for notification and communication of incidents such as this. The system is designed to alert hospitals of potential incoming patients and allow hospitals to respond with their current capacity and ability to receive patients. In the case of mass casualty events, the system has the ability to keep facilities updated with ongoing information. We received initial notification of mass casualties from this system around 2:20 a.m. Although other forms of communication were subsequently used (e.g., mobile phones, radios, and landlines), keeping updates current in the software system was challenging.

JH

Once you realized this was an extraordinary situation, did you activate your disaster plan or did you pull in the trauma teams and divide duties?

Chadwick Smith (CS)

The EM resident called me and I called Dr. Ibrahim and Cheatham in. As patients continued to arrive, I called the rest of my partners, then the fellow and residents. At one point, we thought there was a shooter in the hospital and everything was quickly locked down. So staff couldn't come in to the ED. They ended up going to the ICU or operating rooms and waited until we could get patients up to them.

JH

It sounds like you mainly made calls from your cell phone. Does the hospital have a notification system?

CS

There is a system that allows us to notify department heads of each unit, but as far as getting a hold of partners, it was up to me at that point.

- *Incorporate mass-casualty alert systems into regular exercises.*
- *Work with local law enforcement to set up alternate routes to the facility before an incident and include this information in your facility's plan.*
- *Use a notification process with a "hunt feature" to reach as many employees as possible.*
- *As possible and practical, work with law enforcement to ensure that all areas of the facility are clear before cancelling an active shooter code, and address rumors as quickly as possible.*
- *"Doe names" can become challenging to track when there are a high number of victims. Consider pre-printing stickers for beds or simplifying the system.*
- *Consider creating a website that can be activated after a mass-casualty incident to facilitate patient identification and family reunification. If that is not practical, use an existing family reunification tool (e.g., the American Red Cross' Safe and Well website).*
- *Involve local law enforcement in pre-hospital communication exercises to prevent related challenges during an incident.*

Michael Cheatham (MC)

The hospital has a mass-casualty paging system that allows staff to send messages (including text messages) to team members. It was used to help responding team members get to the hospital that night. Because the club was three blocks away from the hospital, anyone trying to get to the hospital from the south—like I was—was unable to reach it using the traditional path. Staff had to go through multiple police roadblocks—as did ambulances—taking a circuitous route around a 30-block, cordoned-off area that surrounded the club. Once we had Hospital Incident Command up and running, we communicated with OPD to help determine a safe route in for team members, and we then texted this information to the team.

> *"We activated several emergency operations plans in response to this incident: Mass Casualty Incident Plan; Hospital Incident Command System; Lock Down Plan; and Code Silver (Active Shooter Plan)."*
>
> *- Eric Alberts*

GP

This is one area that I believe needs improvement. Because landline phones are falling by the wayside, and more people are depending on mobile devices, people have gotten very effective at silencing their mobile devices at night when they sleep. While we do have a mass electronic notification system, at 2:00 a.m., there were still some challenges reaching staff, even with direct phone calls. We really need a better notification process with a "hunt feature" activated, where the notification continues by voice and electronic means until the system receives a response from an individual.

MC

People tend to leave devices in their car or in the kitchen. We received a huge influx of phone calls and messages at about 8:30 the next morning from staff recognizing that they had missed everything. This has led to tremendous guilt feelings—a lot of our team members had difficulty coping with the fact that they were not available when they were called.

JH

It sounds like there were two waves of victims; the first between 2:00 and 3:00 a.m. Tell me about the types of resources in the ED and how you managed them.

CS

We received about 38 patients in about 45 minutes. The trauma team and ED residents and attendings were there, Dr. Cheatham and Dr. Ibrahim came, and they were joined by the critical care medicine staff—everyone was triaging patients. I did the trauma triage and had my partners take

patients to the operating room. They constantly reevaluated patients as more arrived. Nine of the patients in the first wave had mortal injuries. After they were pronounced dead, the triage was less chaotic. Patients in the ED are arranged from east to west by level of acuity. The westernmost portion is the trauma bay. I spent time circling the area, trying to get everybody that needed to go to the operating room (OR) in the trauma bay and continually reassessing patients. If someone was stable in the trauma bay, they were quickly relocated.

JH

How many ORs were you able to open right away?

CS

Ordinarily, on a Sunday night, we are able to run two ORs at once. We had four ORs up and running within about 45 minutes and 30 minutes later, we had six going.

GP

One of the major issues was the proximity of the club to the hospital. The large majority of patients presented in the first 45 minutes or so and those were the sickest ones. Dr. Smith did an outstanding job reevaluating and re-triaging patients to the operating rooms.

JH

Did you get a lot of walk-ins?

GP

This was not a typical mass casualty incident—we did not receive many walk-in patients. Patients arrived by way of police pick-up truck, walk-ins, and EMS. The patients that came in to the ED were incredibly sick. There were a few that came to our ED and a few that presented to other EDs in the city.

JH

After the initial triage process, at what point during the initial rush did word come there might be a shooter in the hospital, and what did you do?

CS

The rumor that another shooter had been brought in as a victim began circulating at about 3:00 a.m. (an hour after the first patients began to arrive). At that time, we had about eight patients in the trauma bay, and Dr. Cheatham had the forethought to barricade the doors with portable x-ray machines.

MC

In any event like this, there is confusion. The Code Silver was implemented and canceled three times. This was primarily because OPD and the sheriffs' department rapidly cleared the ED using multiple teams with weapons drawn, going from room to room. The ED team did a phenomenal

Check out the ASPR publication Incorporating Active Shooter Incident Planning Into Health Care Facility Emergency Operations Plans for planning, response, and recovery strategies.

> *"Since the incident, we legitimized a need within our organization for a mass notification system. This system would be capable of notifying and alerting individual team members, groups of team members, or all of our team members. The system needs to have a hunt feature that will continue to send notices through numerous means until the receiver acknowledges receipt of the message."*
>
> *- Eric Alberts*

job sheltering in place, but some team members ignored the Code Silver and continued going from room to room to clear victims. To further add to the confusion, one person cancelled the Code Silver not knowing that other areas of the hospital were still being cleared. This happened three times, for a total of about 45 minutes. Once OPD located the suspected second shooter (a patient who had been moved out of the ED to a room), they lifted the code.

GP

We have to remember, it's in the deep night and we've had a very violent act a couple of blocks from the hospital and there is tremendous death and destruction rolling through the door. We've practiced this scenario in previous drills, so everyone's aware that a shooter presenting to the ED as a perpetrator or patient is a distinct possibility. Early on, we weren't even sure how many shooters there were at the nightclub, and everyone saw this as a definite possibility, and for a few minutes, there was some serious concern from team members that another shooter—or more than one—could be in the ED.

JH

Are the trauma bays at ORMC badge accessible or otherwise secured?

CS

The ED is, but the trauma bay, located within the ED, is not.

> *"There were never any shots actually fired in the department—that's important to point out—but the fact that it had been a possibility has played into the psychological impact that our team members have had to deal with—it hit home."*

JH

One of the things we struggle with as a Level 1 trauma center is how many major procedure and vascular surgical trays do we maintain? They take two and a half hours to turn around. While you can turn the OR around rather quickly, the trays take more time. Did you encounter similar challenges responding to this incident?

MC

After the first wave of 38 patients, we had a lull before the second wave of 11 victims arrived. During that period of time, because of the large number of gunshot wounds to the chest, we had exhausted our supply of chest tubes and pleurevacs. But because I was part of hospital incident command, when Chad called me on the radio, I was able to pull more supplies out of [the hospital's] disaster carts to restock the ED. We also brought in additional chest tube trays from the pediatric hospital located across the street.

JH

Are disaster carts automatically assigned to the ED? How are they put into service?

MC

We have three different levels of carts—green, yellow, and red—based on where they're supposed to go. Some carts go to the ED, some go to alternate triage areas, and some are reserved for a large-scale event and would be sent to an area set up to treat the walking wounded.

JH

Any time there is this much penetrating injury, the blood supply can get taxed pretty quickly. Were there any issues with transfusion protocols or supply?

MC

Early on, the blood bank called hospital incident command and sent over 100 additional units of blood. They ended up transfusing 441 units of blood in the first 24 hours after the incident.

JH

Just getting everyone registered in a mass casualty incident is challenging—how did you handle that?

CS

We assign a "Doe name" for every unidentified trauma patient—this is linked to a city, month, and name (e.g., Albany June Doe). We move alphabetically as patients arrive, and we use pre-printed labels.

GP

While this system—which is part of our mass-casualty process—is useful when there are two or three patients and allows them to immediately receive blood and other treatments, in this case, with so many patients, electronic order entry and patient tracking became a challenge. Normally, we use our electronic board to track patients, but during this rapid patient influx, following patient movement within or out of the department was difficult.

JH

How long did it take you to identify patients and use their actual names?

CS

On average, between 24 and 48 hours, we change the patient's Doe name. In this instance, we had all patients except one identified within 24 hours.

MC

We put an administrator in charge of identifying patients. She gave out her email address, and loved ones emailed her almost 300 messages containing pictures and other identifying information. We took those pictures from bedside to bedside, identifying victims. We have since created a website that we can activate in a mass-casualty event that will allow family members to share identifying information.

Initially, the hospital was locked down, so loved ones were not allowed to enter. At about 10:30 a.m., they were allowed access and were taken to a very large conference room where we provided them with food, water, cell phone chargers, and the like as they awaited news.

Our hospital psychologist started meeting with team members early in the morning; many were involved in counseling sessions on their way

The ASPR TRACIE document Tips for Retaining and Caring for Staff After a Disaster shares general promising practices—categorized by immediate and short-term needs—for facility executives to consider when trying to retain and care for staff after a disaster.

> *"These were not the usual gunshot wounds—these patients were pale and diaphoretic and looked like they were on death's doorstop when they came in because of the high-energy injuries they had."*

To learn more about HIPAA and sharing information during an emergency, access ASPR TRACIE's HIPAA and Disasters: What Emergency Professionals Need to Know.

> *"On June 12, between the hours of 2:00 and 6:00 a.m., there were 6,000 calls received by the hospital switchboard. On June 13, over 5,000 calls were received. We employed additional resources to help with these calls."*

out. In the first 10 days after the event, we had 1,200 different team members involved in counseling sessions—some staff continue to receive counseling.

JH

Did anything specific come out of your hotwash with the team?

GP

We did an immediate hotwash in the ED, and Dr. Smith had a separate one with residents and fellows. We need to continue to work on communications. This is often the case when you have drills—we are in the ED wondering what's coming in next and we depend on our EMS partners to communicate that to us. There were also some issues with intra-hospital communications. Law enforcement radios, for example, would not work in some areas of the hospital.

JH

How many surgical procedures were performed over the first 24 hours?

MC

Twenty-eight procedures. One of our most critically ill patients went back four times in the first 24 hours. We set aside two ORs the next day that were dedicated to damage control laparotomies and orthopedic takebacks. By the end of the first week, we had done 54 cases, and there was a total of 78 cases just for the Pulse victims.

JH

How did that affect clinic and OR schedules?

CS

We were open for elective cases that Sunday—we had about 13 scheduled (some were postponed to accommodate Pulse victims). We normally have one room set aside for emergent and urgent cases and we arranged the cases to allow for another one and brought in another team to staff the extra OR.

JH

As patients became reunited with loved ones, were there staff on site who were able to provide behavioral health support?

MC

We had chaplains, psychologists, and licensed clinical social workers available working with patients and family members alike.

JH

Can you tell us more about the family reunification process?

MC

At 2:00 p.m., once we had identified all but one victim, we met with about

400 people in the conference room and explained that we had a list of victims the hospital had received. We asked permission from the loved ones there to read the list. We also explained what HIPAA was, and that because this was a mass casualty situation, a provision in HIPAA allowed us to divulge information we would not normally be able to share. We asked if anyone in the room had a problem with that—some of them literally shouted that they wanted to hear the list. Dr. Ibrahim read the list of all patients they had in the hospital along with their status. We then took those families to their loved ones' bedside. There was a similar group offsite being managed by the FBI; the hospital president and corporate chief operating officer met with them and read off a similar list. It was there that they were actually able to identify the final victim. His family had been told that he was dead, but he had survived.

JH

What was the process for escorting people to their loved ones' bedside and how long did it take?

MC

We paired chaplains, social workers, and hospital administrators up with a couple of loved ones at a time to take them upstairs. I was working with the families in the waiting room who were being notified that their loved ones had died. This process went from 9:00 a.m. to about 4:30 p.m. Sunday. If families did not hear their loved one's name listed as a patient within ORMC, they were directed to the family assistance center for additional information about their loved one. We maintained two centers—one inside the hospital, and once that was at capacity, we were given a large conference room at the Hampton Inn a block away from afternoon to evening. The City and FBI did not open any family assistance centers until Monday morning at a nearby senior center, but by then many loved ones had gone home.

This was one of the things they had not planned for. While our hospital disaster plan accommodates all of our patients and their families, we did not anticipate being the source of all information for everybody. Anytime the media, the FBI, or the OPD encountered a family member—particularly in the first few hours—they told them to come to ORMC.

> *"In essence, we had our patients' families, the medical examiner patients' families, and the families of patients from a separate hospital reporting to ORMC to try to locate their loved ones."*

Eric Alberts, Emergency Preparedness Manager, Orlando Health, Inc., and Pulse HICS-Liaison Officer

We take preparing for, responding to, and recovering from emergencies seriously here at ORMC. We feel like this is not only what we want to do, and what the community we service expects, but it is also what our accrediting and regulatory bodies require from us. As with any incident, there will always be components that need to be corrected or fixed, no matter how well you think you may have responded to it. Our After Action Report on the Pulse shooting response is 51 pages long and lists several areas of improvement. Through it all there are several reoccurring themes, such as:

- Emergency Preparedness/ Management training, education, and exercises do matter and should be treated seriously— they do save lives.
- Collaboration and coordination with both internal and external stakeholders is extremely important, especially for someone in my role. If you only know one person in a critical area, take the time now to get to know two or three people to ensure you can reach someone in an emergency. Coordinate and plan with these stakeholders;

Relevant ASPR TRACIE Resources and Topic Collections:

Explosives and Mass Shootings

Family Reunification and Support

Fatality Management

Healthcare Facility Evacuation/ Sheltering

Hospital Surge Capacity and Immediate Bed Availability

Incident Management

Post-Mass Shooting Programs and Resources Overview

Pre-Hospital

Workplace Violence

get to know them now. If they don't know you and trust you now, they may not answer your phone call, email, or text message during a disaster. No one likes to feel like they are stranded on an island, and this is how it would feel; you cannot respond to a major emergency like this alone.

- Communication will always be an issue, no matter what. History shows us that no matter whether you conduct an exercise or respond to a real incident, and no matter how much effort you put into a crisis communications plan, there will always be communications gaps and issues. With that in mind, plan ahead now: Communications from people, systems, and equipment all fail at one point or another, and redundancy matters.

On a more personal note, we typically hear that all disasters are local, meaning they occur and are responded to locally (at least initially and then are supported by others later on). The one thing that you rarely hear about in a class, seminar, or webinar is how close these disasters truly are to you, your employees, and the organization. This incident occurred no more than half a mile from ORMC and involved people our team members knew. In some cases, families we knew lost loved ones. In other words, the tragedy hurts twice as much, because the victims were people we knew either directly or through others close to us. That really does make it harder for everyone to deal with. The hospital recently established a memorial site on our property at Lake Beauty Park. We now have a permanent memorial for victim's families and our team members to visit and remember those who lost their lives that morning.

John Hick comments: Mass violence events can result in a large number of very severely injured casualties presenting in a very short period of time. When possible, distribution of casualties with lesser injuries to other facilities is optimal, but with this scene so close to ORMC (and it being the only Level 1 trauma center) it is fortunate that they were able to meet all the victims' needs. Common themes emerge from this experience that hospitals will want to examine, including notification processes (particularly off-hours), security issues during these events, high levels of blood product use for mass violence events and other supply shortages, difficulty keeping up with health records during the initial wave of victims, and, as always, family reunification challenges that can persist for hours to days and can be exacerbated when there is a delay in establishing a community family assistance center. We also need to ensure that our clinical staff are trained in triage practices and scarce resource situations. For example, while more chest tube trays were easily available to ORMC, in the absence of those supplies, finger thoracostomies on intubated patients or improvised one-way valves on the chest tube ends can also be life-saving. We greatly appreciate the staff from ORMC sharing their ED, emergency management, and surgical response perspectives to this tragedy.