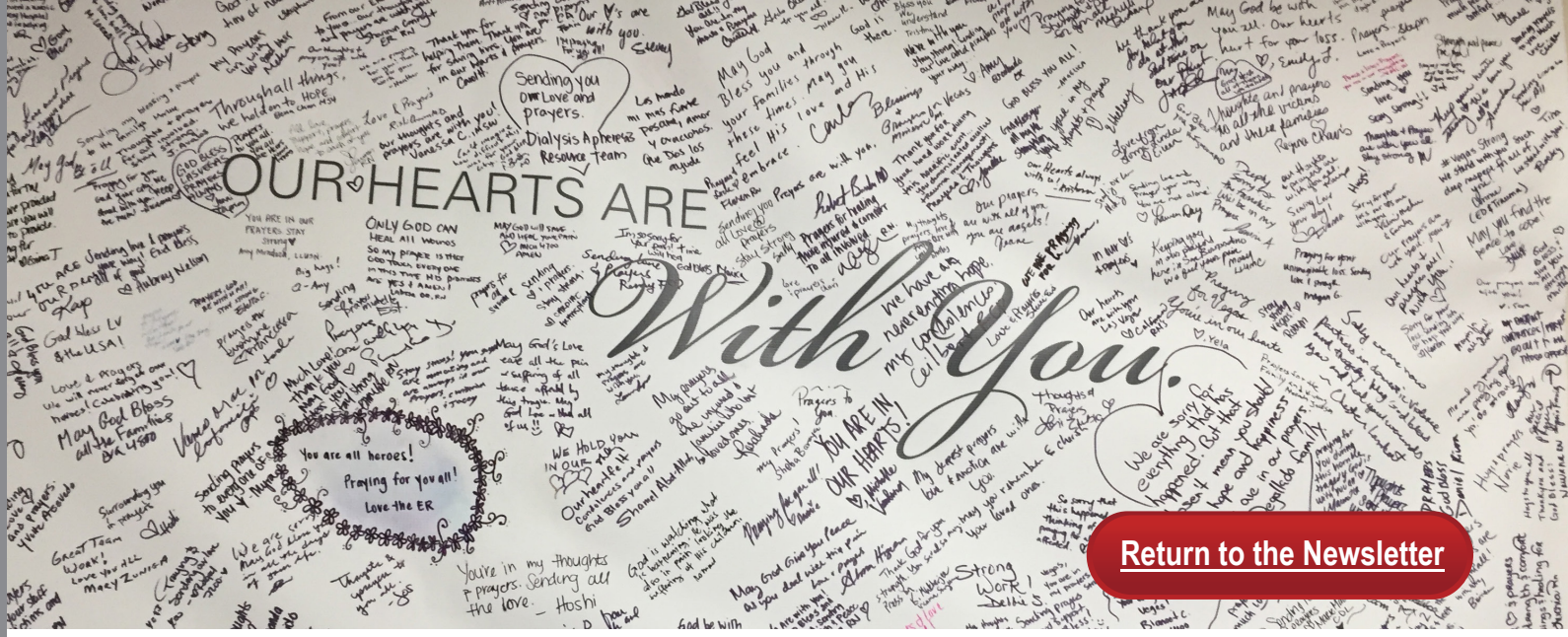

Fatality Management and Mass Gatherings: Looking Back at the Route 91 Harvest Festival Shooting

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On October 1, 2017, a gunman opened fire on more than 22,000 attendees of the Route 91 Harvest Country Music Festival in Las Vegas from a hotel room overlooking the festival. Twenty minutes later, the first of more than 200 patients began arriving at Sunrise Hospital and Medical Center, a Level II trauma center with 692 adult and pediatric beds. Sixteen patients treated at Sunrise died, including 14 who were considered dead on arrival. The incident is the deadliest mass shooting in U.S. history with 61 fatalities, more than 400 individuals injured by gunfire, and hundreds more who suffered injuries while fleeing the scene. In this article, the authors highlight five primary fatality management lessons learned during this tragic incident.

1. Pre-Identify Surge Mortuary Space

Few U.S. hospitals have mortuary capacity for more than a handful of fatalities, and some hospitals have no dedicated morgue space at all. Sunrise had a two-bay mortuary space that could accommodate up to four decedents if necessary. This space was not used during the response to the Harvest Festival incident, however, as it quickly became apparent that the need exceeded the available space. Patients who succumbed to their injuries were initially placed in the hallway outside of the emergency department. They were then moved to a storage space near the garage. As it became clear that the remains would be under the hospital's care for an extended time, Sunrise's incident command team quickly identified and prepared the endoscopy suite – located between the emergency department and operating rooms – to temporarily serve as the surge mortuary space. They selected this location because it offered the following characteristics:

- The location could be secured. Only a small number of staff (e.g., those assigned to manage the process, the hospital chaplain, and a physician who examined all of the bodies) was allowed to enter the suite.

All hospitals should review their existing mass fatality plans, know the point of contact for their jurisdiction's mass fatality planning, and ensure the hospital's plan is aligned with the jurisdiction's plan. ASPR TRACIE's Fatality Management Topic Collection and Mass Violence Resources Page include links to lessons learned, plans, tools, and templates.

- The endoscopy suite was large enough to accommodate multiple victims. Because most of the decedents were dead on arrival, Sunrise knew their total need for space was in the double digits.
- The temporary space needed to be out of public view, clean, and temperature controlled.
- The suite offered private space where loved ones could make identifications.
- There was room to house the honor guard who accompanied a fallen officer.

Most patients were not triaged in the field. Staff triaging patients as they arrived at the hospital did not black tag any of the expectant patients. Resuscitation efforts continued on all patients until they were moved beyond public view.

Sunrise arranged each decedent in rooms according to their hospital arrival time. Once identifying characteristics for each patient were recorded, staff cleaned the stretcher, placed a clean sheet over the body, and ensured all documentation remained with the decedent.

2. Prepare for Delays in Identification and Notification of Fatalities

The first few hours following a mass casualty incident are chaotic. Deceased and mortally wounded patients may arrive alone and without identification. The coroner, medical examiner, or other local jurisdictional official responsible for death notification or certification may be overwhelmed or delayed due to crime scene obligations. All of these factors were present following the Harvest Festival incident.

Harvest Festival organizers issued wristbands to attendees that stored their festival ticket and credit card payment information, allowing attendees to repeatedly enter and exit the venue and purchase food, drinks, and other products during the multi-day festival without having to carry traditional identification. Many of those who were carrying identifying documents were separated from their belongings as they fled or were evacuated from the incident scene.

None of the fatalities at Sunrise arrived with identification. Further, nearly 90% of the casualties transported to Sunrise arrived via private vehicles (including many ridesharing services driven by strangers) rather than emergency medical services.

Sunrise staff expected representatives from the Clark County Office of the Coroner/Medical Examiner (CCOCME) to arrive soon after the incident to begin the medicolegal death investigations. However, the scale of the incident and the distribution of casualties to multiple hospitals made that impossible; CCOCME needed to complete activities at the festival venue and two other hospitals before traveling to Sunrise. With families and friends waiting in the auditorium and others calling the hospital to determine if their missing loved ones were at Sunrise, the staff decided they could not wait potentially 12 or more hours for CCOCME's arrival and began the identification process prior to and with the consent of the CCOCME. Two Las Vegas Metropolitan Police Department (LVMPD) officers were assigned to assist with the process.

Sunrise staff took photos of each patient and printed them in color. They used blank sheets of paper to record the sex; approximate age, height, and weight; hair color; eye color; and other identifying characteristics of each decedent. Employees assisting families and friends waiting in the auditorium collected photos and descriptions of missing loved ones. Sunrise staff found the most valuable identifiers to be piercings and body art as well as "selfie" photos taken during the festival showing what the victims were wearing that day. An emergency physician examined each body. If staff felt confident, they identified the victim.

CCOCME needed charts for each patient. Emergency department nurses assisted with the charting, which was a combination of paper and electronic records.

Sunrise was able to identify and notify the loved ones of all but one of the decedents prior to CCOCME's arrival. The hospital chaplain and social workers spoke with the waiting families, accompanied by the attending physician who provided each family information on their loved one's injuries. Sunrise began notifications with the fallen police officer and proceeded through the remaining decedents according to their hospital arrival time. Once the coroner arrived, they confirmed the identifications and worked with Sunrise staff to complete the paperwork required before removing the decedents from the hospital. The CCOCME process at Sunrise took more than six hours to complete.

3. Consider Staff Training and Support Needed After an Incident

Dealing with multiple fatalities from a single incident is traumatizing to the staff involved. Hospitals should carefully select employees to lead mass fatality management efforts. They should also be mindful that colleagues may encounter mortally wounded patients in other areas of the hospital before they reach the mortuary space. Many Sunrise staff were exposed to deceased patients before they were transported to the endoscopy suite. During the initial "all hands on deck" response, non-clinicians were among the staff helping unload deceased patients from vehicles and assisting with resuscitation efforts. These staff members were not accustomed to providing patient or fatality care and these activities exposed them to unprecedented suffering. Sunrise made a special effort to identify who was involved and ensure they had access to appropriate emotional support and stress management. Appropriate short and long-term emotional support is critical for all staff caring for victims of mass shootings. Following the Harvest Festival incident, Sunrise engaged a team of professional counselors from the U.S. Department of Veterans Affairs to provide on-site emotional support to staff for about a month. This team was well-versed in managing war time and crisis situations and was well-suited to meet the needs of Sunrise's staff.

At the time of the incident, I served as the chief operating officer of Sunrise's adjacent children's hospital and was selected to lead the mass fatality response. I was an experienced manager with the authority to make sensitive decisions and I was able to focus my attention on the fatality management process while others managed the care of injured patients. We limited staffing to those necessary to complete the required activities, including the hospital chaplain, the physician who examined each body, nurses who assisted with charting, and social workers. Our team was very protective of the decedents under our care and cautiously approached our work to properly track each fatality, provide dignity and respect, and carefully identify as many victims as possible.

"The mechanics of standing up incident command and assigning roles/responsibilities is a learned process. Most of us feel like something like this could never happen where we work or live but it does happen and will continue to happen." Kathy Donovan

All of the fatalities from the Harvest Festival incident were adults. Hospital mass fatality planning should consider any adjustments that may be needed for incidents involving children, particularly the effects such an incident may have on staff. This should include planning for injured or uninjured children who may arrive at the hospital with caregivers who are already deceased or not expected to survive.

4. Plan to Accommodate Line of Duty Death Processes

First responders may also be victims during an incident of this magnitude. Most hospitals are familiar with the rituals and processes that accompany first responder line of duty deaths (LODD), but they may not have considered these customs in the context of a mass fatality incident. Hospitals should incorporate these considerations into their mass casualty incident plans.

An off-duty LVMPD officer attending the Harvest Festival was fatally wounded while helping other attendees seek shelter from the shooting. Colleagues identified the officer and accompanied him to the hospital. Sunrise provided a private area for his family to spend time with him, and an LVMPD honor guard was posted in the hallway outside the endoscopy suite and led his ceremonial departure from the hospital after the CCOCME completed its work.

In addition to being prepared to accommodate first responder LODD customs, hospitals should also be aware of the effect these formal processes may have on their staff. Several Sunrise staff identified seeing the posted honor guard or ceremonial departure as the moment that affected them the most during their response to the Harvest Festival incident.

5. Understand Law Enforcement Needs

Mass fatality incidents will have a law enforcement investigation component. Hospitals should be prepared to maintain chain of custody for all items recovered. Bullets recovered from gunshot wounds, shrapnel from explosives, and similar items are important evidence for the investigation and potential criminal charges. Clothing and other items accompanying casualties are also important to the investigation. Law enforcement will be interested in the cause and time of deaths to establish what occurred at the incident scene and timelines.

Following the Harvest Festival incident, Sunrise cooperated with both local law enforcement and the Federal Bureau of Investigation to ensure evidentiary materials were collected and properly turned over to law enforcement authorities. Sunrise bagged belongings, labeled them, and tied them to each decedent's stretcher. CCOCME managed the belongings as each decedent was removed from the hospital. Loved ones may want the belongings of the deceased; it is important for hospital staff to be prepared to communicate sensitively about why that is not possible. Sunrise also has a robust internal security presence and designated an area for law enforcement personnel to conduct interviews with witnesses from the incident.

While Sunrise had no international fatalities, the hospital did receive calls from consulates seeking information about their citizens. In addition to inquiries from patient loved ones and law enforcement, hospitals should be prepared to manage information requests from the media and government officials, including from foreign governments, following a high-profile mass casualty incident. The Orlando Health Foreign National White Paper—written after the Pulse Nightclub shooting—provides related guidance.

Conclusion

Managing fatalities is one of the most challenging aspects of a mass casualty incident. Hospitals should collaborate with their local emergency management and public health agencies, first responder organizations, healthcare coalition members, and other response partners to understand mass fatality plans and establish clear roles and responsibilities. While this article only briefly mentions notification of loved ones, hospitals should have robust family assistance plans. Following a large mass casualty incident, family and friends arrive at and call hospitals seeking information on missing loved ones. The identification of casualties – both injured and dead – may take significant effort while also providing compassionate services to desperately waiting loved ones. The lessons learned in this article are based on one hospital's experience after a mass shooting; hospital mass fatality planning should also consider how needs may be different during a longer duration incident such as a pandemic that results in large numbers of deaths.

"Take training seriously. The more you prepare and practice for an event, the smoother it will go in real life." Kathy Donovan

Family reunification is a complex topic, and a lot of planning effort is required to manage connecting patients with their loved ones (i.e., patient "matching") during a mass casualty incident. An additional component of this is considering family reunification for the deceased. Family members will be anxious to not only identify, but also recover, their loved ones who could not be saved. Some facilities may be able to offer a family viewing area, but what happens if there are multiple decedents? Is there enough room to accommodate them? Do you have a process for coordinating multiple family visitations? What happens if the person died as a result of a crime and their loved one is now technically considered a crime scene?

Additional complexities are created in mass fatality planning when it comes to recovering a loved one's property. Is it also part of a criminal investigation? How long will it be retained by law enforcement? Was it contaminated as a result of the incident? Can it be properly cleaned and returned so it's not a hazard to the person receiving it? What is the process if it can't? What happens if the item is of significant value and can't be returned? Thought needs to be given to the fact that simple, everyday items such as a key chain may take on particular significance to families. How can we manage their expectations while still being sensitive to their grief? Have we reviewed this from a legal perspective? Have we raised this with other stakeholders who may already have industry best practice standards in these areas, such as funeral homes? We also need to manage the potential for negative media and develop press statements clearly explaining the complexities of the situation, while remaining considerate of the family's sense of loss.

Together with Central Florida Regional Medical Coalition, we recently created this template hospital emergency planners can use to develop/update their own plans to create/activate a family reunification and assistance center.

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