Mass Violence/Active Shooter Incidents:
Trauma System Considerations

Updated May 2022

ASPR TRACIE Tip Sheets: Mass Violence/Active Shooter Incidents

ASPR TRACIE has developed a series of tip sheets for hospitals and other healthcare facilities planning for no-notice incident response. Our traditional concepts and approaches have not kept pace with real-world incidents in the U.S. and other countries or the challenges the healthcare system faces in managing the resulting extraordinarily large number of casualties. The tip sheets are based on discussions ASPR NHPP and ASPR TRACIE had with healthcare personnel who were involved in the October 2017 mass shooting response in Las Vegas and supplemented with information from other recent no-notice incidents. While there is great variance in the scope and healthcare needs resulting from no-notice incidents, these tip sheets focus on some of the identified challenges.

Community-Wide Patient Distribution Considerations

- Anticipate that your community's daily goal of getting the right patient to the right place at the right time may be challenged in the immediate aftermath of a no-notice incident.
- The majority of survivors of a no-notice incident are likely to have minor injuries that do not require trauma care. Research predicts that only 10-20% of the injured will require surgical services and/or critical care.
- Self-referring patients will not be triaged according to established patient distribution protocols. Proximity to the incident and other factors may lead to large numbers of people with minor to moderate injuries arriving at trauma centers while those with moderate to severe injuries may arrive at non-trauma centers.
- Emergency medical services (EMS) practices to triage all patients with gunshot wounds (GSW) to trauma centers may saturate trauma centers with minor injuries. Consider diverting extremity GSWs to other facilities in disaster situations.
- Pre-plan and exercise with other partners in your community for the redistribution of patients to more appropriately-matched treatment locations. EMS may assist in this process but needs to have a plan to do so effectively.

Resource Considerations

- Expect to begin responding and making resource decisions before the scope of the situation is known.
- Consider how you will rapidly contact and notify additional personnel to come into work during their off hours. Technology solutions exist that may be helpful in managing this process. Be aware that no-notice incidents often overwhelm landline and cellular networks.
- Don't assume that patient triage will be conducted at the incident scene. Be prepared to do initial triage on patients arriving via private vehicles and taxis.
- Traditional trauma patient arrival patterns may not be followed. Trauma centers expecting multiple waves of patients or transfers from other facilities may not receive these additional patients as planned due to traffic restrictions, miscommunication, and rumors.

21 patients were transferred to University Medical Center (UMC) from other area hospitals. Within the first 24 hours of the incident, UMC:

- Performed more than 20 surgeries
- Treated and released 44 of its 104 incident-related patients

- A chaotic scene and conflicting communications in the "fog of war" may impede the sharing of timely, accurate information. Survivors fleeing in all directions create multiple scenes from which they will request assistance once they reach safe locations. Misinformation, such as reports of multiple active shooters, may affect transport decisions.
- Hospitals must be prepared to prioritize patients and make treatment decisions without knowing how many additional patients might arrive.
- Get senior physicians to the emergency department and surgery as quickly as possible to "conduct the orchestra" rather than provide patient care. Designate at least one respected senior employee who can coach staff and maintain calm.
- Re-triage and re-prioritize patients frequently throughout the early hours of the response.
- Transfer patients to higher levels of care as required.
- Trauma centers may need to prioritize transfers due to lack of EMS or trauma center resources.
- Trauma centers may need to decompress to other area hospitals (e.g., put patients with minor wounds on a bus to another facility).

On the night of October 1, UMC and Sunrise Hospital and Medical Center both dealt with major traumas not related to the no-notice incident, including:

- Burn patient
- Survivors of a car/pedestrian crash
- Ruptured abdominal aortic aneurysm

Surgical Services

- Expect an increased demand for surgical services.
- Plan to expand into other areas of the hospital.
- Cohort the surgical patients by specialty.
- Have a mechanism to share resources (e.g., surgical trays) as needed as well as information on capacity/needs.
- Maximize throughput. Use abbreviated surgery and damage control when possible. Triage and delay surgery for non-threatening injuries. Postpone elective surgeries.
- Monitor blood product utilization. Have regional agreements with blood suppliers about priority and any "push" allocation of additional product to hospitals during disasters.
- Expect a rapid influx of patients and prepare to turn over stock and resupply in real time. Peak patient presentations from mass violence incidents are usually within the first two hours.
- Prepare for the next shift: schedule staff in 12-hour shifts to ensure they are as fresh and rested as possible.
- Remember: patients not affected by the incident will continue to present with surgical needs.

Related ASPR TRACIE Resources

Tip Sheets in This Series:

Community Response and Media Management
Emergency Medical Systems Considerations
Expanding Traditional Roles to Address Patient Surge
Family Assistance
Fatality Management
Hospital Triage, Intake, and Throughput
Non-Trauma Hospital Considerations
Trauma Surgery Adaptations and Lessons

Other Resources:

Healthcare Response to a No-Notice Incident: Las Vegas (Webinar)
Active Shooter and Explosives Topic Collection
Pre-Hospital Topic Collection
The Exchange Issue 3: Preparing for and Responding to No-Notice Events
The Exchange Issue 7: Providing Care During Mass Violence Responses

ASPR TRACIE gratefully acknowledges ASPR NHPP staff who provided feedback on these documents and the healthcare personnel from University Medical Center and Sunrise Hospital and Medical Center who responded to the October 1, 2017 no-notice incident in Las Vegas, shared their experiences and insights with staff from ASPR NHPP and TRACIE, and reviewed these tip sheets.