No-Notice Incidents: Trauma Surgery Adaptations and Lessons

April 2018

ASPR TRACIE Tip Sheets: No-Notice 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.

When a no-notice incident occurs in your community, expect a large number of non-triaged patients to arrive in a short period of time via law enforcement, private vehicles, ride share services, or taxi. Healthcare facilities should be prepared to conduct initial triage of patients at their door and continue to assess and reprioritize patients as the incident evolves.

Plan for Clear Decision Making on Patient Prioritization

Initial Triage at Sunrise Hospital in Las Vegas:

- Minor injuries to pediatric ED area
- Moderate injuries in emergency department (stable patient)
- Major injuries to trauma area

- Prepare for receipt and initial triage of patients by emergency department (ED) staff including space, staff, and supplies.
  - Assign clinical leaders to: prioritize patients for radiology and assure appropriate selection of radiologic studies; oversee prioritization of the operating suites; and ensure appropriate use of consultants in operating suites and peri-operative space.
  - Ensure dedicated trauma resources are available in the ED area.
  - Ensure a system and process of initial triage (priority) and re-triage after initial interventions to determine destination (may wish to have separate portions of triage tag, writing on bed or patient, or other system). Assure ED, surgery, and other partners understand the process.
- Plan to keep patients in the ED for as little time as possible.
  - Focus on controlling bleeding, intubating, inserting chest tubes, and dispersing to inpatient/OR/CT.
  - Consider ordering a trauma panel for all patients, but beware of saturating lab with unnecessary studies and blood bank with many type/screens that may not be needed.
  - Maintain unidirectional flow – patients do not return to the ED once they have been taken to CT, OR, or other area.

- Minimize radiology studies. Use clinical assessment with low threshold for operative intervention. CT may be particularly useful for assessing thoracic, neuro, and vascular injury. CT is a common "choke point" during disasters. Ultrasound can be a helpful rapid triage tool when available at the bedside and time allows.

- Provide focused care delivery in the trauma bay prior to movement to the operating room or intensive care unit. Pre-packaged "bedside boxes" with airway, IV access, and bleeding control supplies can save time and lives.
  - X: Stop critical bleeding. Tourniquets can convert "red" to "yellow" patients.
  - Airway: Plan to intubate patients who are unable to speak.
  - Breathing: Insert chest tubes, if needed. Monitor patients for changes in status. Consider finger thoracostomy as appropriate.
  - Circulation: Consider the use of IOs to save time.
  - Disability: Follow mental status and motor exam changes! Document in marker on tag or forehead.
  - Exposure and Environmental Control: Keep patients warm. Continue to reassess patient status.
- Frequently re-evaluate patients in cycles during the immediate influx. Assure personnel dedicated to inpatient units to re-assess patients taken to the floor.
- Try to keep one person assigned to each patient that follows them through to inpatient care.
- First priority for the OR should be unstable patients with isolated abdominal injuries. Chest injuries not responding to chest tubes/decompression are likely to need more resources. Neuro cases are case-by-case. Vascular injury with threatened limb should be high priority as well, though most extremity injuries can be deferred for at least a few hours.
- Consider transfer of stable cases that require operative care if the hospital is overwhelmed (e.g., transfer out isolated ortho cases or cases requiring specialty care not available at the facility).

Consider Zoning Patients by Injury Type

- Designate an area for isolated orthopedic injuries.
- Make disease-specific assignments (e.g., cardiovascular, neurological, trauma) in the intensive care unit if the injuries are isolated (e.g., single critical injury per patient).

Plan for Services to Support Trauma Surgery, Including:

- Blood bank
- Respiratory
- Pharmacy
- Nursing
- Radiology
- Environmental
- Supply Service

Know How Other Spaces Will be Used

- In one hospital, the intensive care unit (ICU) was used to complete evaluations and expand triage capabilities. There was a trauma surgeon, anesthesiologist, intensivist, and support team in each ICU. Patients were moved from the ICU as soon as they were hemodynamically stable.
- The pre- and post-operative care unit assigned a team to ensure management of immediate post-operative recovery while assigning an ICU bed. PACU and pre-op spaces were critical surge areas during the response.

Plan for the Next Shift

- Perform damage control surgery to stabilize patients until additional resources are available for follow-up interventions.
- Cancel elective surgeries scheduled for the next day to increase surgical capacity and allow recovery time for staff.
- Do not call in all personnel. Ask some to come in at a later time to relieve staff who cared for the initial influx of patients.

Patient Zones at Sunrise:

- Isolated gunshot wounds to the head to the trauma ICU
- Stable gunshot wounds to the chest went to the cardiovascular thoracic unit (after chest tubes as needed)
- Gunshot wounds to the belly went to the operating room

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 System Considerations

Other Resources:

Healthcare Response to a No-Notice Incident: Las Vegas (Webinar)
Explosives and Mass Shooting 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

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