

The Nurse's Role in Active Shooter and Mass Casualty Incidents

1 Contact Hour

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Purpose

The purpose of this course is to educate nurses on the preparation and responses required for terrorism events, including active shooters, and mass casualty incidents.

Learning Objectives

After successful completion of this course, you will be able to:

1. Discuss the incidences of terrorist activities in the United States
2. Describe indicators of potential workplace violence
3. Identify the actions required for participants in an active shooter incident
4. Discuss the competencies and role of the nurse in response to mass casualties
5. Identify educational and support needs of individuals exposed to terrorism

Introduction

Between 1995 and 2014, there were a recorded 510 terrorist attacks in the United States. There were a resulting 3264 deaths from these attacks (National Consortium for the Study of Terrorism and Responses to Terrorism [START], 2015). Another study was done between 2000 and 2013, looking at active shooter incidents. This study identified 160 active shooter occurrences within those 13 years (Federal Bureau of Investigation [FBI], 2013). There were an average of 6.4 incidents per year between 2000 and 2007, and an average of 16.7 incidents per year between 2008 and 2013 (FBI, 2013).

Although there have been differing statistics of active shooter incidents in the media due to a variation in definitions, the FBI study demonstrates valid data. There are no current, accurate statistics for 2014 and 2015. However, active shooter incidents in the media involving mass shooting included Fort Hood, Texas (2014), Isla Vista, California (2014), Charleston, South Carolina (2015), Chattanooga, Tennessee (2015), Roseburg, Oregon (2015), Colorado Springs, Colorado (2015), and San Bernardino, California (2015) (Los Angeles Times, 2015).

Terrorism and Active Shooter Incidents

Terrorism involves acts of violence and intimidation related to political aims. The U.S. Code defines domestic terrorism as dangerous acts occurring primarily in the U.S., and “appear intended (i) to intimidate or coerce a civilian population; (ii) to influence the

policy of a government by intimidation or coercion; or (iii) to affect the conduct of a government by mass destruction, assassination, or kidnapping” (FBI, n.d., para. 3).

Terrorism comes in many forms, both non-violent and violent. Non-violent acts may use technology or other strategies to violate privacy or manipulate data (Clapper, 2016). Violent acts may result in mass injuries or casualties, and terrorists may use explosives, biological or chemical weapons, or other deadly weapons including firearms (Clapper, 2016).

Terrorism and Active Shooter Incidents, con't

An active shooter is a person actively engaged in killing or attempting to kill individuals in a populated and/or confined area (U.S. Department of Homeland Security, 2015). These incidents usually involve firearms, with no method of selection of victims of the active shooter. Active shooter incidents may or may not be an act of terrorism.

Multiple assault terrorism action is when there are multiple deadly force incidents occurring simultaneously or consecutively. It is a terrorist attack involving explosives, high powered weapons, or a hostage siege where the armed persons have used deadly physical force or are preparing to use deadly force on other persons in multiple locations (Arevalo, 2015).

A hostile takeover occurs when suspects take over a location by force and intimidation. A takeover is considered “hostile” when the assailants kill any subjects trying to resist or escape. The goal is not to negotiate or surrender. The plan is to cause mass casualties (Arevalo, 2015).

Hospital Based Shootings

In a study investigating shootings which occurred in hospital settings from 2000 through 2011, it was discovered that there were 154 shootings. These events had a total of 235 victims, either injured or killed. Of these 154 events, 59% occurred within the hospital itself, which included 29% in the emergency department, and 19% in patient rooms. 41% of the events were on the hospital grounds, including 23% in the parking lot. 23% of the shootings in the emergency department involved the perpetrator using a security officer’s gun. Shootings were also more common in larger hospitals (greater than 400 beds) (Kelen, Catlett, Kubit, & Hsieh, 2012).

Recent Events

There have been a number of active shooter situations in hospitals. Some examples of these events between 2014 and 2015 include:

- Iowa, 2014: A patient who was an inmate shot a police officer then killed himself
- Texas, 2014: A female pharmacy employee was shot and killed by a male who then killed himself

- Washington, 2014: A male opened fire in an emergency department, then was disarmed by security
- California, 2015: A male shot a nurse in a mental health care facility
- Texas, 2015: A male killed a doctor and then himself in a VA hospital
- Georgia, 2015: A male became angry that an emergency department was taking too long to see his girlfriend, and pulled a gun on the security officers

(Lehman-Huskamp, 2015).

Terrorism, Active Shooter Incidents, and Healthcare

Most people do not want to think of the possibility of a terrorist attack or active shooter incident. However, the reality is that these incidents can happen, and healthcare organizations are directly and indirectly affected when they occur. Nurses and other healthcare professionals must be aware and prepared for the consequences of terrorist actions in the community. In addition, preparedness includes the potential for terrorism or active shooter incidents within a facility in which you work.

Test Yourself

Which of the following statements is true?

- A. Terrorism and active shooter incidents are one in the same
- B. Active shooter incidents may or may not be an act of terrorism**
- C. Terrorist acts are always violent in nature

Active Shooter Awareness

Over the past few years, the amount of active shooter incidents involving mass casualties have been shown in the media. The effects of these incidents is devastating for those involved, as well as indirectly through individuals watching the occurrences via the media coverage. Increased awareness has led to more in-depth educational programs and training in preparation for active shooter events.

Active Shooter Characteristics

An active shooter in the workplace may be a current or former employee, and someone who reacts spontaneously. During an active shooting event, victims are selected at random. Active shooters generally carry out events alone, and hand guns are the weapon most frequently used. Although there is usually pre-planning, the event itself is unpredictable and evolves quickly (Arevalo, 2015; U.S. Department of Homeland Security, 2015). Hospital shooters are usually male, can be any age, frequently know their victim(s), and are less likely to commit suicide (Lehman-Huskamp, 2015).

Warning Signs

Although there are no clearly defined characteristics of a potential active shooter, there are some warning signs that may be noted prior to an attack. According to the FBI, behaviors may be observed of potential perpetrators, including:

- Development of a personal grievance
- Contextually inappropriate and recent acquisitions of multiple weapons, escalation in target practice and weapons training, interest in explosives, and/or interest or fascination with previous shootings or mass attacks
- Experience of a significant real or perceived personal loss such as a death, divorce, breakup, job loss
- Few offenders had previous arrests for violent crimes

(FBI, 2013; Healthcare and Public Health Sector Coordinating Council, 2015).

Hospitals as Targets

Hospitals are often considered “soft” targets, as the majority of staff do not anticipate violent situations. Access can be easier, because hospitals are open every day, 24 hours a day. Searches and the use of metal detectors are not commonly used in hospitals. Security personnel are often unarmed, and many facilities have a lot of windows (for easier escape). Hospitals can also be rendered inoperable quickly, due to dependence on electricity, technology, and medical gases. The potential for mass casualties is higher, as many patients have limited mobility and lower ability to hide or flee (Lehman-Huskamp, 2015; Peltó, 2010).

Emotional reactions to hospital-related events can trigger the potential for an active shooter. This can include death or poor outcomes of loved ones, loss of parental custody, psychiatric patients, or drug-seeking behaviors. Domestic and gang violence may also be reasons for an attack in a hospital (Lehman-Huskamp, 2015).

Active Shooter Hospital Events

In the study previously described by Kelen, et al., (2012), the 154 events were also evaluated for characteristics of the shooters and victims. The following was discovered:

- Most events involved a determined shooter with a strong motive defined by a grudge (27%), suicide (21%), “euthanizing” an ill relative (14%), and prisoner escape (11%).
- Ambient society violence (9%) and mentally unstable patients (4%) were comparatively infrequent.
- The most common victim was the perpetrator (45%).
- Hospital employees comprised 20% of victims. Physicians (3%) and nurses (5%) victims were relatively infrequent

Active Shooter Preparation

It is unknown what causes the shooter(s) to initiate their direct action onto their intended target of mass casualties. It is important to prepare yourself mentally and rehearse your immediate action plan. You will need to develop situational awareness, and do not deny yourself that this type of event can never happen (Arevalo, 2015).

Active Shooter: How to Respond

In an active shooter situation, all involved persons should quickly determine the most reasonable way to protect their own lives. Recommended actions, in order, are:

- **Run:** If there is an accessible escape path, attempt to evacuate the premises.
- **Hide:** If evacuation is not possible, find a place to hide where the active shooter is less likely to find you.
- **Fight:** As a last resort, and if your life is in imminent danger, attempt to disrupt and/or incapacitate the active shooter.

Training is important to enable you to react appropriately if confronted with an active shooter situation. As these situations evolve quickly, quick decisions could mean the difference between life and death. If you are in harm's way, you will need to decide rapidly what the safest course of action is based on the scenario that is unfolding (Federal Emergency Management Agency [FEMA], 2015).

Interactive Activity: Run, Hide, Fight

Watch this brief video on the actions of run, hide, and fight during an active shooter situation:

<https://www.youtube.com/watch?v=5VcSwejU2D0>

Active Shooter: Run

The first recommended action is to run. If there is an accessible escape path, attempt to evacuate the premises. When running:

- Have an escape route and plan in mind.
- Leave your belongings behind.
- Help others escape, if possible.
- Evacuate regardless of whether others agree to follow.
- Warn individuals not to enter an area where the active shooter may be.
- Prevent individuals from entering an area where the active shooter may be.
- Do not attempt to move wounded people.
- Keep your hands visible.
- Follow the instructions of any police officers.
- Call 911 when it is safe to do so

(FEMA, 2015)

Active Shooter: Hide

The next recommended action is to hide. If safe evacuation is not possible, find a place to hide from the active shooter. The hiding place should:

- Be out of the active shooter's view.
- Provide protection if shots are fired (for example, an office with a closed and locked door).
- Not restrict options for movement.

To prevent an active shooter from entering a hiding place:

- Lock the door.
- Blockade the door with heavy furniture. This also provides additional protection.
- Close, cover, and move away from any windows

(FEMA, 2015)

Active Shooter: Hide, con't

If the active shooter is nearby, take the following actions:

- Lock the door.
- Hide behind a large item (for example, a cabinet or desk).
- Silence your cell phone and/or pager. (Even the vibrate setting can give away a hiding position).
- Remain quiet.

Consider the difference between cover and concealment. Cover might protect a person from gunfire, while concealment will merely hide a person from the view of the shooter.

Persons in an active shooter situation should quickly choose the best space that is available. Finding cover is preferable, but if cover is not available you should find a position of concealment (FEMA, 2015).

Active Shooter: Fight

Finally, as an absolute last resort, and only if in imminent danger, attempt to disrupt and/or incapacitate the active shooter.

- Act as aggressively as possible.
- Throw items and use improvised weapons.
- Work together to incapacitate the shooter.
- Commit to your actions.
- It is never recommended to try and take the shooter's weapon by yourself, or use the shooter's weapon.

(FEMA, 2015)

Test Yourself

Responses to active shooter situation include, in the correct order:

- A. Run, Hide, Fight
- B. Run, Fight, Hide
- C. Hide, Run, Fight

Immediate Response

It is not uncommon for people confronted with a threat to do nothing rather than respond. Studies showed that individuals involved in events such as the World Trade Center and the Virginia Tech shootings delayed evacuations or did not respond urgently (Healthcare and Public Health Sector Coordinating Council, 2015). This demonstrated that there are a variety of responses in an emergency situation, including delayed response and denial. By increasing awareness of actions to take when faced with an active shooter situation, it is hoped that individuals will be able to overcome denial, respond immediately, recognize the sounds of danger, act, and forcefully communicate the danger and necessary action. In addition, those closest to the public-address or other communications system, or otherwise able to alert others, should communicate the danger and necessary action (Healthcare and Public Health Sector Coordinating Council, 2015).

Law Response

In 98% of all the active shooter incidents in the United States, The shooter's action was stopped immediately upon the first contact with some type of force used against them by responding police officers and/or potential victims. In most cases these active shooters will either kill themselves or surrender when control is taken away (Arevalo, 2015).

Officers at the scene of an active shooter event will make a rapid assessment and move to the location of the active shooter with speed and aggression. There is an ethical requirement that the first responding officers take aggressive steps to intercede. The fact that victims are being killed in a circumstance where law enforcement officers are physically present requires that officers at the scene confront the suspect and use deadly force to stop the suspect (Arevalo, 2015).

Law Response, con't

When law enforcement officers arrive at an active shooter scene:

- Their immediate purpose is to stop the active shooter as soon as possible.
- Officers will proceed directly to the area in which the last shots were heard.
- The first officers to arrive at the scene will not stop to help injured persons because their first priority is to eliminate the threat. They will need to secure the scene first.

When there is an emergency such as an active shooter incident, it is important to remember that officers arriving on scene may be coming from many different duty assignments and will likely be in various types of uniforms and even in street clothes. Do not be surprised by the variations in appearance, as law enforcement personnel are trained to react quickly and work together (FEMA, 2015).

Additional Responders

Additional officers may arrive in teams, such as a SWAT (special weapons and tactics) team.

These teams may:

- Wear regular patrol uniforms or external bulletproof vests, Kevlar helmets, and other tactical equipment. Some officers may be in plain clothes.
- Be armed with rifles, shotguns, or handguns.
- Use pepper spray or tear gas to control the situation.
- Shout commands, and push individuals to the ground for their safety.

Emergency medical personnel will also arrive at the scene. Rescue teams will treat and remove any injured persons. These teams may request able-bodied individuals to assist in removing the wounded from the premises (FEMA, 2015).

Information for the Police

When possible, provide the following information to law enforcement officers or 911 operators:

- Location of the active shooter.
- Number of shooters, if more than one.
- Physical description of the shooter(s).
- Number and type of weapons held by the shooter(s).
- Number of potential victims at the location.

(FEMA, 2015)

How to React to the Police

Emotions run high in active shooter situations. It is important to keep the following information in mind when the police arrive:

- Try and remain calm and follow officers' directions
- Put down any items in your hands
- Immediately raise hands with open fingers
- Keep hands visible
- Avoid quick movements towards officers (no holding or grabbing on to officers)
- Avoid pointing, yelling, or screaming

- Do not stop to ask officers for help or directions when evacuating, just proceed in the direction from where officer(s) entered the premises

(Arevalo, 2015; FEMA, 2015)

Safe Location

After reaching a safe location or assembly point, all persons involved in the situation likely will be held in that area by law enforcement until the situation is under control, and all witnesses have been identified and questioned.

No one should leave the safe location or assembly point until law enforcement authorities indicate it is safe and their questioning has been completed (FEMA, 2015).

Ethical Considerations

Healthcare professionals have a duty to care for the patients for which they are responsible. Since incidents such as an active shooter scenario are highly dynamic, some ethical decisions may need to be made to ensure the least loss of life possible. Every reasonable attempt to continue caring for patients must be made, but in the event this becomes impossible without putting others at risk for loss of life, certain decisions must be made (Healthcare and Public Health Sector Coordinating Council, 2015).

Ethical Considerations, con't

The following guidelines are meant to provide issues to consider when making difficult decisions, prompt meaningful discussions, and prepare those who might be involved in such an incident before it ever happens.

- Allocate resources fairly with special consideration given to those most vulnerable
- Limit harm to the extent possible. With limited resources, healthcare professionals may not be able to meet the needs of all involved
- Treat all patients with respect and dignity, regardless of the level of care that can continue to be provided them
- Prepare to decide to discontinue care to those who may not be able to be brought to safety in consideration of those who can
- Realize some individuals who are able to avoid the incident will choose to remain in dangerous areas. Consider how to react to those situations
- To the extent possible, think about the needs of others as well as yourself. Consider the greater good as well as your own interests

(Healthcare and Public Health Sector Coordinating Council, 2015).

Other Considerations in Healthcare

An active shooter incident affects the individuals as healthcare professionals, but also the lives of patients and families. Some additional considerations in response at a healthcare facility for Run, Hide, Fight include:

Run:

- Visualize possible escape routes, including physically accessible routes for patients, visitors, or staff with access and functional needs
- Avoid escalators and elevators
- Take others with you, but do not stay behind because others will not go

Hide:

- Hide in a location where the walls might be thicker, have fewer windows, and contain the least amount of piping for medical gases and vacuums
- Lock the doors if door locks are available
- Barricade the doors with heavy furniture
- If you are in a specialty care unit, secure the unit entrance(s) by locking the doors and/or securing the doors by any means available (furniture, cabinets, beds, equipment, etc.)
- Close and lock windows, and close blinds or cover windows
- Turn off lights
- Look for other possibilities of escape
- Use strategies to silently communicate with first responders if possible, (e.g., in rooms with exterior windows make signs to silently signal law enforcement and emergency responders to indicate the status of the room's occupants.) Be careful not to expose yourself to the active shooter if they are located outside of the healthcare facility

(Healthcare and Public Health Sector Coordinating Council, 2015).

Other Considerations, con't

Hide:

- Barricade areas where patients are located
- Transport patients in wheelchairs, on stretchers, or by carrying to a safe location
- Identify a safe location in your unit before an event where staff or patients may safely barricade themselves during an event
- If the shooter is not located in your unit, know how to lock down and barricade your unit in case of an attempt to enter the unit at a later time
- Provide emergency numbers at all available phone locations.

Fight:

- Confronting an active shooter should never be a requirement of any healthcare professional employee's job; how each individual chooses to respond if directly confronted by an active shooter is up to him or her
- The possibility of an active shooter situation is not justification for the presence of firearms on healthcare facilities or campus in the hands of any staff other than law enforcement

(Healthcare and Public Health Sector Coordinating Council, 2015).

Test Yourself

Which of the following statements is true?

- A. The potential of an active shooter incident justifies an employee keeping a gun in his or her locker
- B. The well-being of patients must always be a higher priority than the safety of healthcare professionals
- C. Limit harm to the extent possible. With limited resources, healthcare professionals may not be able to meet the needs of all involved**

Active Shooter Preparedness

Hospitals and healthcare facilities have emergency preparedness plans, which include events involving weapons and/or explosives. Some hospitals use a "Code Black" or "Code Silver" for these events. Make sure that you are aware of your code system and emergency preparedness plans at your facility.

Although many facilities have emergency drills for evacuation, such as fire drills, activities for active shooter situations are not as common. This may be for many reasons, including the fear it may cause patients and visitors (Healthcare and Public Health Sector Coordinating Council, 2015).

Preparedness, con't

Healthcare facilities should ensure that an active shooter plan exists. This plan should be created with input from stakeholders including executive leadership, legal, nursing, security, facility engineering, human resources, emergency management, risk managers, and local law enforcement. An effective plan should include:

- A preferred method for reporting active shooter incidents
 - An evacuation policy and procedure
 - Emergency escape procedures and route assignments (i.e., floor plans, safe areas)
 - Lockdown procedures for individual units and locations and other campus buildings
 - Integration with the facility Emergency Operations Plan and Incident Command System

- Information concerning local area emergency response agencies and hospitals (i.e., name, telephone number, and distance from your location)
- How to evacuate or lock down patients, visitors, and staff. (Personnel involved in such planning should pay attention to access and functional needs when advising on shelter sites and evacuation routes.)
- How to evacuate when the primary evacuation routes are unusable.
- How to select effective shelter-in-place locations (optimal locations have thick walls, solid doors with locks, minimal interior windows, first-aid emergency kits, communication devices, and telephones or duress alarms).

(Healthcare and Public Health Sector Coordinating Council, 2015).

Preparedness: Emergency Notification

A key part of effective preparedness is an emergency notification system. Factors to consider include:

- How the healthcare facility and/or campus will be notified when there is an active shooter on campus. This could be done through the use of familiar terms, sounds, lights, and electronic communications, such as text messages or e-mails. Include in the courses of action how to communicate with those who have language barriers or need other accommodations, such as visual signals or alarms to advise deaf patients, staff, and visitors about what is occurring.
- The emergency notification system can alert various parties of an emergency including:
 - Individuals at remote locations within premises and other campus buildings
 - Multi-lingual capability for staff or visitors with cultural or linguistic needs
 - Local emergency responders
 - Other local area hospitals
 - How patients, visitors, and staff will know when buildings and campus grounds are safe.

(Healthcare and Public Health Sector Coordinating Council, 2015).

Interactive Activity: Preparation

The following video demonstrates active shooter preparedness at one hospital.

Available at https://www.youtube.com/watch?v=Cp6_fPPTlpE

Security Plan

Every facility must have a security plan, and staff should be trained on their responsibilities in the plan. A good facility security plan includes strategies such as:

- All staff should properly display an acceptable identification badge
- Create a culture of safety by empowering staff to report unusual or suspicious activity
- Ensure locked doors remain closed and locked
- Doors with keypad access should have their codes changed at specified intervals and codes are only given to employees with a need for access
- Foster a respectful workplace
- Be aware of indications of workplace violence and take remedial actions accordingly
- Empower employees who come in contact with individuals who seem lost or are obviously not familiar to their surroundings to be helpful and ask if they can be of assistance
- The plan should include information security processes, including compliance with the Health Insurance Portability and Accountability Act.

(Healthcare and Public Health Sector Coordinating Council, 2015)

Additional Security Considerations

Security plans should also consider departments that may be more vulnerable. These include:

- **Emergency department (ED):** As a highly visible and heavily utilized area, many EDs have security and possibly law enforcement presence. If the ED is not directly affected by the active shooter incident, wounded victims, including suspects, may be evacuated to the ED for treatment. A significant law enforcement security element may be required to adequately secure the ED, allowing staff to feel secure and perform their duties. In preparing for an active shooter incident specialized training for law enforcement and security personnel, such as properly securing firearms, should be discussed before an active shooter incident occurs. Law enforcement and security personnel should also address additional ways weapons could get into the hospitals.
- **Intensive care:** Critical care areas, such as an intensive care unit (ICU), neonatal intensive care unit (NICU), or pediatric intensive care unit (PICU) have vulnerable patients. Plans should include lock-down procedures for these areas in the event of an active shooter incident.
- **Pediatrics and newborn areas:** Most facilities that care for pediatric and newborn patients have secure areas for this vulnerable population. Like the critical care areas, these areas should be locked down during an active shooter event.

(Healthcare and Public Health Sector Coordinating Council, 2015)

Additional Security, con't

- Operating room: Staff and patients may be unable to avoid the threat because of ongoing or in-progress procedures. Law enforcement and security should develop a pre-plan for securing the staff and patients within surgical suites. Security and law enforcement personnel may need to establish security procedures so medical personnel can continue to care for surgical patients.
- Nuclear medicine and other radiation areas: Many healthcare facilities have dangerous materials within the facility. Some of these materials, including radioactive sources, may be targeted for theft by suspects and the active shooter. Securing these areas should be a priority for law enforcement
- Forensic patients: An active shooter event could be an escape attempt or diversion needed to effect an escape. Prisoner patients within a facility will be guarded by law enforcement or correctional staff, but there should be a pre-plan on how to quickly communicate with the guard and provide additional resources to secure these patients in an active shooter event.

(Healthcare and Public Health Sector Coordinating Council, 2015)

Additional Security, con't

- High profile patients: Healthcare facilities may have high profile personalities who may have personal protection officers providing security. During an active shooter event, the incident commander working with the incident command team should plan to make attempts to identify and communicate with uniformed officers with any private or governmental protection detail providing security for a patient
- Behavioral health: Behavioral health patients within a healthcare facility will have staff present, but there should be a pre-plan on securing the area and the patients during an active shooter incident. For those patients that do not evacuate, a plan should be in place for the protection of the patients and staff while in lockdown
- Isolation/quarantine areas: A plan should be developed for the security and protection of the patients and staff in isolation or quarantine areas, since evacuation may not be possible. Coordination with the staff should include prior training of the proper protective equipment (PPE) for the area, where PPE is located, and proper donning and doffing techniques, as well as basic information about the disease. Patients and/or staff who may exit the quarantine area should be handled per the policy of the healthcare facility, in coordination with its infection control team.

(Healthcare and Public Health Sector Coordinating Council, 2015)

Additional Security, con't

- Pharmacy: An active shooter may want to go to a pharmacy area for self-treatment of a wound, to self-medicate, to obtain a higher sense of invisibility, or

to assist them with committing suicide. Law enforcement should provide a force protection team when all other areas of heightened concern have been addressed or when it appears the active shooter is moving towards this area. Non-affected areas of the healthcare facility will continue to need supplies from the pharmacy during and after the incident to support patient care. Pharmacy areas should be in lock-down during an event

- Magnetic resonance imaging: The powerful magnetic field within this area has the potential of taking a firearm out of the hands of an officer, accidentally discharging a firearm, or pulling any metallic object into the magnet to include the officer himself. The MRI magnetic field is never turned off unless the unit is being installed, dismantled or repaired. To turn the MRI magnetic field off takes several minutes and is only done by specially trained technicians. Due to the powerful magnetic field used by the MRI Scanner, MRI facilities and hospitals restrict access to the MRI suite by establishing four conceptual zones around the MRI scanner. MRI should be in lock-down in an active shooter incident when possible
- Kitchen areas: The main consideration during an evacuation of a kitchen area is to ensure that appliances such as stoves, grills, and ovens are turned off. The potential for fire is great when these devices are left on

(Healthcare and Public Health Sector Coordinating Council, 2015).

After the Threat

Health care facilities provide unique challenges as well as distinctive opportunities as related to the treatment of wounded victims from an active shooter incident. Unlike other locations, many facilities have the staff, equipment, and expertise to rapidly treat victims. Facility staff may be well suited to assist Fire and EMS personnel while law enforcement provides the security for this location (Healthcare and Public Health Sector Coordinating Council, 2015).

After the Event

Once a known threat has been stopped or located, or if the suspect cannot be immediately located, law enforcement will transition towards victim rescue and providing life-saving medical aid to wounded persons. In cases where the threat cannot be immediately located or identified and there is no specific and articulable information or intelligence about the location of the suspect, law enforcement will begin a systematic search of the healthcare facility while also providing medical aid to the wounded. This medical aid and evacuation of wounded process may be conducted by only law enforcement or law enforcement working together with Fire and EMS services.

Depending upon the location of the active shooter within the facility, wounded victims may be best treated within the emergency department of the affected facility. If this is not feasible, or the local emergency department was directly affected by the attack, Fire and EMS providers will coordinate to evacuate and transport patients to other facilities. It may become necessary to move and transport wounded victims to nearby hospitals or

trauma centers due to the ongoing crisis and situation at the effected healthcare facility (Healthcare and Public Health Sector Coordinating Council, 2015).

After the Event, con't

Depending upon the scope of the active shooter incident within the facility it may become necessary for law enforcement to search and clear the entire facility of any potential threats. This will likely be a very long and tedious process involving many different law enforcement agencies working in coordination with the incident command team. Even if it is determined that only the affected portion or area of the facility will be searched and cleared by law enforcement, this task can be daunting and time consuming. All stakeholders should be aware of these procedures well in advance. Law enforcement and the facilities incident command team should work together in advance to strike a balance between post-incident security and the continuity of operations for the facility (Healthcare and Public Health Sector Coordinating Council, 2015).

Case Study One: Concerning Behavior

You are working on a med/surg unit, and you are sitting in the nurse's station. You see a co-worker come out of the manager's office, and he is noticeably angry. You have heard rumors that he was going to be disciplined for his continued tardiness and poor attendance. You watch him go into the staff lounge where the lockers are, and he is slamming doors and throwing items around. Security comes to the floor and escorts him off the unit. While he is leaving, you hear him saying that "they" will regret treating him like this.

What concerns do you have with his behavior?

Putting rumors aside, his behavior is angry and aggressive. The statement about "they" will regret treating him like this is another red flag.

What actions, is any, would you take?

Although this may just be an angry response to a termination that will not result in anything further, the concerns are enough to speak with your manager. Security is present for the escort, but you may have been the only one to witness him acting out in the staff lounge, or hear him make the concerning statement. Remember the warning signs- aside from his current behavior, he has a grievance with the situation, has experienced a loss of his job, and has shown poor accountability (e.g. tardiness and attendance).

When you witness behavior that is aggressive, follow your instincts. It is better to report concerning behavior than ignore it.

Case Study Two: Active Shooter in the ED

You are working in the emergency department, and hear popping sounds from the waiting room. You look through the window to the triage area, and see a male waving a

gun around. He shoots the security guard and then points the gun at the nurse in triage.

What actions should you take?

First, get down! You are looking through a window, which gives the shooter a clear view of you. Quickly assess your area, and try to determine an evacuation plan. Can you run? Is there an exit?

Let others around you know that there is a shooter in the waiting room who is shooting. Be direct with your communications: “There is a gun!” “Run!” “Hide!”

Do you have the ability to get help immediately? If you have a voice communication device on you, use it! You may see a desk phone, but with your close proximity to the shooting, it is not worth your time to try and reach it. If you have a cell phone, try to call 911, but do so while you are acting.

You look around, and the nearest exit is the one to the waiting room, so this is not an option. You consider running to the exit at the back of the emergency department, but at that moment you hear the triage nurse scream, two more shots fired, and the doors to the waiting room open. You hear the man yelling “How can you treat people like that? You are all going to pay!”

What actions will you take now?

Running is not an option right now, as the shooter is coming in to the department from the waiting room. You look around for an area to hide.

There is a treatment room to your right which has a door on it, rather than the patient bays which have curtains only. There is a bathroom to your left, but you would have to cross the line of sight of the shooter. There are patients in all four rooms in your area, with the curtains pulled.

What options would you consider?

It is difficult, because you will want to protect your patients and their families. Your best option is to run to the treatment room, and see if you can take others with you along the way. The shooter is close behind, so you may not have time for many to come with you.

Once you are in the treatment room, lock and barricade the door, if you can. Push the stretcher over, and any carts or equipment in the room. If there is a phone, and you didn’t have time to call for help before, now is the time.

You are able to reach the treatment room with a patient and another nurse. The door doesn’t lock, but you push the stretcher and bedside cart to barricade the door. You turn off the lights, and you all crouch low behind the stretcher. You grab your cell phone, put in on silent, and call 911.

What information will you tell the 911 operator? What are you telling the others in the room?

You need to be quiet when speaking on the phone. You should tell the operator the situation and what you saw. There is one shooter that you know of. You can describe the shooter, and know you saw a hand gun. You are not sure if he has any other weapons. You last saw him going into the main area of the emergency department. You have heard six shots fired thus far. There are three of you in the treatment room, all uninjured. You do not know how many are injured, or if there are hostages.

Communication between you and the others in the room should be either whispered or by using hand signals (if you are able to see each other). Try and keep each other calm.

The 911 operator tells you to keep the line open, but to keep silent. You hear three more shots outside the door, shouts, and someone screaming. Someone tries to open the door, but the stretcher is preventing the door from opening.

What actions will you do?

Keep quiet, in your current position securing the stretcher against the door. Although it is dark, try to think of items that you could possibly use if you need to fight. This could include chairs, equipment, or anything sharp.

The door remains closed, and it sounds like the person has moved on. Time goes by, but you do not know how long it's been. You haven't heard anything outside the door for a while. Suddenly, you hear more shouting, but it sounds like it is further away from you. You hear more popping sounds, muffled.

A short time later, you hear loud knocking at the door. Several men are calling out, identifying themselves as the police. You pick up the phone, and the 911 operator confirms that police are on site, and the situation has been resolved.

What are your actions?

Unblock the room, and open the door. You and the others should put your hands up, without anything in your hands. Follow the instructions of the police officers to evacuate. You may be asked to assist with others in a different area.

Mass Casualty Response

A "mass casualty" is described as a large number and/or high acuity of casualties which exceeds available resources, and is usually within a short period of time (DeJong, et al., 2010). Whether an incident happens within a healthcare facility or in the community, nurses and healthcare professionals may be involved in a mass casualty response. One study of 291 healthcare staff showed that although 53% of respondents were willing to assist in a mass casualty incident, only 23% had the knowledge or confidence

to respond (Whitty & Burnett, 2012). Staff outside of emergency areas receive little to no training on how to respond to a mass casualty (Whitty & Burnett, 2012).

Other studies have shown some reasons why healthcare professionals may not respond in a mass casualty or disaster situation. In addition to lack of knowledge, other reasons include transportation issues, personal health concerns, child or elder care, pet care, fear and concern for self and family, and personal health problems (International Council of Nurses, 2009).

Types of Mass Casualties

The focus of this course is on terrorism and active shooter incidents, which can create mass casualties. However, when discussing responses to mass casualties, the concepts, roles, and competencies can also be applied to other incidents, such as natural disasters.

The Nurse's Role in Mass Casualty Incidents

Much training is available for first responders of mass casualty incidents, including emergency medical responders and nurses in the emergency department. But what about nurses who are not in those roles? As discussed earlier, most healthcare professionals are willing to assist, but may not have the knowledge or skills, or do not believe they have the abilities to help.

In 2003, the International Nursing Coalition for Mass Casualty Education (INCMCE) developed competencies for nurses responding to mass casualty incidents (INCMCE, 2003). In 2009, the International Council of Nurses (ICN), supported by the World Health Organization (WHO), developed a framework of disaster nursing competencies. Although these resources are older, these educational competencies continued to be used and validated (Fountain et al., 2015; Whitty & Burnett, 2012).

Disaster Framework

Disasters are described as a series of separate phases, all of which require action in order to decrease the impact of a disaster. Nurses have important roles in all phases. The disaster phases are pre-incident, incident and post incident:

- The pre-incident phase: Includes activities intended to prevent or mitigate the potential impact of a disaster as well as prepare the community and population for a disaster or emergency
- Incident phase: All the activities involved in the response to the disaster or emergency
- Post-incident phase: Recovery and rehabilitation form the post-incident phase

(ICN, 2009)

Test Yourself

Which of the following statements is true?

- A. Terrorism and mass casualties are the same
- B. Most people are willing to help, but do not have the competence**
- C. Nurses only have roles in the incident phase

Pre-Incident Phase: Prevention/Mitigation

Prevention/mitigation is the process created to prevent or reduce the risks related to disaster. Identifying risk and taking appropriate action may prevent a disaster altogether or reduce the effects of the disaster. It encompasses a variety of activities to reduce the loss of life and property. Lessons learned from actual incidents, training, and exercises contribute to the development of action plans. These plans illustrate what actions should be taken to reduce or eliminate long-term risks to human life, safeguard the community or decrease the potential effects of a disaster.

The nurse's role in prevention and mitigation begins with recognizing risks both at the individual and community level. The nurse works with other health professionals to perform community needs assessments to ascertain the pre-existing prevalence of disease, the susceptibility of health facilities, and identification of vulnerable populations, such as those with chronic disease, mental health problems, or disability. This information provides valuable data for the disaster plan (Alfred, et al., 2015; ICN, 2009).

Prevention/Mitigation, con't

The nurse collaborates in developing plans for alternative housing and other interventions designed to diminish the vulnerability of these populations. Participation in risk reduction activities in health care facilities to create safe and sustainable environments for care or identifying alternative sites for care following a disaster is another activity that necessitates the expertise of the nurse. The nurse helps to plan for the evacuation of health facilities and relocation of patients as required by working in collaboration with other health care providers and leaders in the community.

Another important role is helping to shape public policy that will decrease the consequences or potential effects of a disaster. The nurse's knowledge of the community and areas of vulnerability contribute to policy development. Working with policy-makers to identify hazards, the risk such threats pose to the population, and health organizational structure to develop solutions that decrease the risk are all part of nursing's role. Nurses also bring expertise to ongoing community education related to identification and elimination of health and safety risks in the home or community (Alfred, et al., 2015; ICN, 2009).

Pre-Incident Phase: Preparedness

Preparedness includes a variety of measures to ensure that a community is prepared to react to any emergency. Elements of preparedness include: recruiting volunteers, planning, training, equipping, public education, and evaluating. Preparedness is a continuous process that requires intermittent review and revision based on variations in the environment, staff changes, new information and technology. Building activities that sustain and improve the capacity to respond is the essential element of preparedness. This includes developing a nursing workforce ready to respond in time of need. Creating databases of prepared nurses, planning recruitment and retention activities, and training are all activities required to prepare a nursing workforce (Alfred, et al., 2015; ICN, 2009).

Preparedness, con't

Nurses play a crucial role in preparedness activities. The creation of policy related to response and recovery requires nursing input. Policies related to use of unlicensed personnel, including health care providers from outside the disaster jurisdiction, or modification of standards of care cannot be produced without extensive involvement of nursing. Nurses provide assessments of community needs and resources related to health and medical care which contribute to the planning activities. Planning activities such as communication, coordination and collaboration, supply and equipment needs, training, sheltering, first aid stations, and emergency transport all require nursing expertise. Nurses develop and provide training to other nurses and health care professionals, as well as the community. Building capacity through recruitment and maintenance of a ready disaster nursing workforce is also part of nursing's role. In addition, nurses are involved in leadership roles, planning, participating in, and evaluation of readiness exercises to ensure that the community, and the nursing workforce itself, is prepared in the time of an emergency or disaster. Partnership with planners, disaster relief organizations, government agencies, health care professionals, and community groups to develop the preparedness plan is vital (Alfred, et al., 2015; ICN, 2009).

Incident Phase: Response

The response phase includes the immediate actions taken in the face of a disaster. It includes the mobilization of responders to the disaster area. In the response phase, the objective is to save as many lives as possible, provide for meeting the urgent needs of the survivors, and decrease the long-term health impact of the disaster. This phase may last a few days to several weeks, depending on the scale of the disaster.

The role of nurses in the response phase is providing both physical and mental health care. Care is delivered in a variety of settings under challenging conditions that require a knowledgeable, skilled, and creative workforce. Managing scarce resources, coordinating care, deciding if standards of care must be altered, making appropriate referrals, triage, assessment, infection control, and evaluation are just a few of the skills a nurse uses in the response phase. Identifying individuals with chronic disease or

disability is a critical responsibility. With limited health care access and mobility, these persons are at great risk because of heat, humidity and cold issues, and trouble with maintaining appropriate diets. Stress reactions, including development of depression and anxiety, are frequently seen in the aftermath of a disaster. The nurse must continually monitor survivors for signs of mental health issues, provide care, and make referrals, as necessary (Alfred, et al., 2015; ICN, 2009).

Response, con't

Roles include advocacy for patients and survivors, teaching, leadership and management. Nurses must observe responders to ensure that mental health or physical care is not needed. Additionally, nurses provide onsite training to other nurses, health care workers, and volunteers. In this phase, nurses often work as part of a health care team and collaborate with other responders to provide aid and support to as many survivors as possible. During the response, nurses use their skills to identify patterns of illness and detect any threat of communicable disease or other health hazards. Nurses also collect data on injuries and illnesses seen during the disaster, which are later used for analysis (Alfred, et al., 2015; ICN, 2009).

Post-Incident Phase: Recovery/Rehabilitation

Once immediate needs are met, the recovery phase can begin. In this phase, work is concentrated on assisting the community and the affected population recover from the impact of the disaster. Recovery includes restoring vital services, rebuilding infrastructure and housing, and addressing the needs of the population while assisting them to reestablish their lives. Recovery is a long-term process that requires both short-term and long-term goals for rehabilitation, reconstruction, and sustainable development.

Nurses continue in the role of providing care and support to those with physical and mental health needs. Those injured or ill, with chronic disease, mental health illness, or disability must be monitored to decrease the risk of complications. Referrals must be made to appropriate health care providers, government or relief agencies for housing, food, medications, medical equipment, specialized care, long-term medical or mental health needs, or financial assistance for meeting the cost of care. Nurses also follow up with survivors to ensure all needs have been met (Alfred, et al., 2015; ICN, 2009).

Recovery/Rehabilitation, con't

Nurses have a role in the recovery of the health care infrastructure. Without the health care organizational structure, the community will struggle to survive. Temporary medical services must be transitioned back to permanent facilities. The nurse must provide leadership in planning and reconstruction activities to ensure that patient needs can be met. There may also be a need for additional services as a result of the disaster. The nurse is the one who can identify and advocate for patient needs. The advocacy

role is especially important during the recovery phase to ensure that all of the needs are being met.

During the recovery and rehabilitation phase the nurse evaluates the disaster plan and supports required changes to improve the management of the disaster and the disaster's impact on the population. Evaluation is a critical component in alleviating the effects of future disasters. Nurses have a responsibility for providing documentation, evaluating the process, and actively participating in follow-up activities that include community planning and development (Alfred, et al., 2015; ICN, 2009).

Test Yourself

The immediate action that occurs with a disaster occurs in which phase?

- A. Pre-incident
- B. Incident**
- C. Post-incident

Competencies

The ICN has described competence as performance at a level which demonstrates the effective application of skill, knowledge, and judgment (2009). Competencies are observable, descriptive statements used to measure competence, including applied skills and knowledge. Competencies are valuable to describe the expected activities of the profession when carrying out a specific job. Nursing competencies are used to describe general nursing practice, specialized roles (such as disaster nursing) and specialty practice (Fountain et al., 2015; ICN, 2009).

Competencies serve as the foundation for research, evidenced-based practice and standards development. They are also important tools in creating job descriptions and orientation programs. In addition, an individual can use the competencies for self-assessment of knowledge, skills and abilities. Understanding limitations allows an individual to make appropriate decisions about work assignments and additional education needs (ICN, 2009).

Mass Casualty Competencies

Not all nurses can or should be prepared as first responders for emergency. However, nurses must have sufficient knowledge and skill to recognize the potential for a mass casualty incident, identify when such an event has occurred, know how to protect themselves, know how to provide immediate care for those individuals involved, recognize their own role and limitations, and know where to seek additional information and resources. Nurses also must have sufficient knowledge to know when their own health and welfare may be in jeopardy, and have a duty to protect both themselves and others. The potential roles of professional nurses in a mass casualty incident may vary extensively due to diverse educational preparation, experiences, and practice settings

within the community and health care system (Alfred et al., 2015; International Nursing Coalition for Mass Casualty Education [INCMCE], 2003).

Competencies will be presented per the INCMCE recommendations (2003) and the ICN recommendations (2009). The INCMCE focuses on educational competencies that are common to the nursing role, and which can be applied in a mass casualty incident. The ICN developed competencies specific to their disaster framework previously discussed.

INCMCE Competencies

The INCMCE (2003) recommends educational competencies for nurses in three categories, with related areas of focus (Fountain et al., 2015). These include:

- Core Competencies:
 - Critical thinking
 - Assessment
 - Technical skills
 - Communication
- Core Knowledge:
 - Health promotion, risk reduction, and disease prevention
 - Health care systems and policy
 - Illness and disease management
 - Information and health care technologies
 - Ethics
 - Human diversity
- Professional Role Development

INCMCE Core Competencies: Critical Thinking

The components required for critical thinking include:

- Use a framework which is both ethical and nationally approved to support decision-making and prioritizing, which is needed in disaster situations
- Use clinical judgment and decision-making skills in assessing the potential for appropriate, timely, individual care during a mass casualty incident, as well as ongoing care after a mass casualty incident
- Describe the essential nursing care for individuals, families, vulnerable populations (e.g. children, elderly, pregnant women), and communities at the pre-disaster, emergency and post-disaster phases
- Describe accepted principles of triage specific to mass casualty incidents

(INCMCE, 2003)

INCMCE Core Competencies: Assessment

The components required for assessment include:

- Assess the safety concerns for self, the response team, and victims in any given response situation in partnership with the incident response team
- Identify possible indicators of a mass exposure
- Describe general signs and symptoms of exposure to selected chemical, biological, radiological, nuclear, and explosive agents (CBRNE)
- Demonstrate the ability to access current information regarding selected nuclear, biological, chemical, explosive, and incendiary agents
- Describe the essential components included in a mass casualty incident scene assessment
- Identify special groups of patients that are uniquely vulnerable during a mass casualty incident
- Conduct a focused health history to assess potential exposure to CBRNE agents
- Perform an age-appropriate health assessment, including airway and respiratory assessment, cardiovascular assessment, vital signs and monitoring for signs of shock, integumentary assessment (particularly a wound, burn, and rash assessment), pain assessment, injury assessment from head to toe, gastrointestinal assessment, basic neurological assessment, musculoskeletal assessment, and mental status, spiritual, and emotional assessment
- Assess the immediate and long-term psychological responses of the individual, family, or community following a mass casualty incident
- Describe the psychological impact on responders and health care providers
- Identify resources available to address the psychological effects

(INCMCE, 2003)

INCMCE Core Competencies: Technical Skills

The components required for technical skills include:

- Demonstrate safe administration of medications, particularly vasoactive and analgesic agents, via oral (po), subcutaneous (sub-q), intramuscular (IM), and intravenous (IV) administration routes
- Show the safe administration of immunizations, including smallpox vaccination
- Exhibit knowledge of appropriate nursing interventions for adverse effects from medications administered
- Demonstrate basic therapeutic interventions, including basic first aid skills, oxygen administration and ventilation techniques, urinary catheter insertion, naso-gastric tube insertion, lavage technique, and initial wound care
- Assess the need for and initiate the appropriate CBRNE isolation and decontamination procedures accessible, ensuring that all parties understand the need
- Demonstrate knowledge and skill related to personal protection and safety, including the use of Personal Protective Equipment (PPE)

- Implement fluid/nutrition therapy, taking into account the nature of injuries and/or agents exposed to, and monitoring fluid balance and hydration accordingly
- Assess and prepare the injured for transport, if required, including provisions for care and monitoring during transport
- Demonstrate the ability to maintain patient safety during transport through splinting, immobilization, monitoring, and providing therapeutic interventions
- Demonstrate use of emergency communication equipment and information management techniques required in a mass casualty incident response

(INCMCE, 2003)

INCMCE Core Competencies: Communication

The components required for communication include:

- Describe the local chain of command and management system for emergency response during a mass casualty incident
- Identify one's own role, if possible, within the emergency management system
- Locate and explain the emergency response plan for one's place of employment and its role in community, state, and regional plans
- Identify one's own role in the emergency response plan for the place of employment
- Discuss security and confidentiality required during a mass casualty incident
- Demonstrate appropriate emergency documentation of assessments, interventions, nursing actions, and outcomes during and after a mass casualty incident
- Identify appropriate resources for referring requests from patients, media, or others for information regarding mass casualty incident
- Describe principles of risk communication to groups and individuals affected by exposure during a mass casualty incident
- Recognize reactions to fear, panic and stress that victims, families, and responders may exhibit during a disaster situation
- Describe appropriate coping strategies to manage self and others

(INCMCE, 2003)

INCMCE Core Knowledge: Health Promotion and Policy

The components required for health promotion, risk reduction, and disease prevention include:

- Identify possible threats and their potential impact on the general public, emergency medical system, and the health care community
- Describe community health issues related to mass casualty incident events, specifically limiting exposure to particular agents, contamination of water, air, and food supplies, and shelter and protection of displaced persons

The components required for health care systems and policy include:

- Define and distinguish the terms disaster and mass casualty incident in relation to other major events or emergency situations
- Define relevant terminology, including triage, CBRNE, chain of command and management system for emergency response, personal protective equipment (PPE), scene assessment, and comprehensive emergency management
- Describe the four phases of emergency management: preparedness, response, recovery and mitigation
- Identify the local emergency response system for disasters
- Describe the interaction between local, state and federal emergency response systems
- Acknowledge the legal authority of public health agencies to take action to protect the community from threats, including isolation, quarantine, and required reporting and documentation
- Discuss principles related to a mass casualty incident site as a crime scene (e.g. maintaining integrity of evidence, chain of custody)
- Recognize the impact mass casualty incidents may have on access to resources and identify how to access additional resources (e.g. pharmaceuticals, medical supplies)

(INCMCE, 2003)

INCMCE Core Knowledge: Disease Management and Technologies

The components required for illness and disease management include:

- Discuss the differences/similarities between an intentional biological attack and that of a natural disease outbreak
- Describe, using an interdisciplinary approach, the short-term and long-term effects of physical and psychological symptoms related to disease and treatment secondary to mass casualty incidents

The components required for information and health care technologies include:

- Describe use of emergency communication equipment that you will be required to use in a mass casualty incident response
- Discuss the principles of containment and decontamination
- Explain procedures for decontamination of self, others, and equipment for selected CBRNE agents
- Describe how nursing skills may have to be adapted while wearing PPE

(INCMCE, 2003)

INCMCE Core Knowledge: Ethics and Diversity

The components required for ethics include:

- Identify and discuss ethical issues related to mass casualty incident events, including rights and responsibilities of health care providers (e.g. refusing to go to work or report for duty, refusal of vaccines), need to protect the public versus an individual's right for autonomy (e.g. right to leave the scene after contamination), right of the individual to refuse care, informed consent, allocation of limited resources, confidentiality of information related to individuals and national security, use of public health authority to restrict individual activities, required reporting from health professionals, and collaboration with law enforcement
- Describe the ethical, legal, psychological, and cultural considerations when dealing with the dying, and or the handling and storage of human remains in a mass casualty incident
- Discuss legal and regulatory issues related to abandonment of patients, response to a mass casualty incident and one's position of employment, and various roles and responsibilities assumed by volunteer efforts

The components required for human diversity include:

- Discuss the cultural, spiritual, and social issues that may affect an individual's response to a mass casualty incident
- Examine the diversity of emotional, psychosocial, and sociocultural responses to terrorism or the threat of terrorism on one's self and others

(INCMCE, 2003)

INCMCE Professional Development

The components required for professional development include:

- Describe various nursing roles in mass casualty incidents, including that of researcher, investigator/epidemiologist, EMT or first responder, direct care provider, generalist nurse, advanced practice nurse, director/coordinator of care in hospital/nurse administrator or emergency department nurse manager, on-site coordinator of care/incident commander, mental health counselor, member of planning response or community assessment team, manager or coordinator of shelter, member of decontamination team, triage officer
- Identify the most appropriate or most likely health care role for oneself during a mass casualty incident
- Recognize the limits to one's own knowledge, skills, abilities, and authority related to mass casualty incidents
- Describe essential equipment for responding to a mass casualty incident (e.g. stethoscope, registered nurse license [to deter imposters], packaged snack, change of clothing, bottles of water)
- Discuss the importance of maintaining one's expertise and knowledge in this area of practice and of participating in regular emergency response drills

- Participate in regular emergency response drills in the community or place of employment

Test Yourself

According to the INCMCE (2003), nurses should:

- A. Describe how nursing skills may have to be adapted while wearing PPE**
- B. Identify the presentation, signs, and symptoms of all CBRNE agents
- C. Describe the steps in detail of chain of custody and crime scene maintenance

ICN Competencies

The ICN (2009) developed competencies for nurses in relation to the disaster framework (Fountain et al., 2015). The categories and components include:

- Prevention/mitigation competencies
 - Risk reduction, disease prevention
 - Health promotion
 - Policy development and planning
- Preparedness competencies
 - Ethical practice, legal practice, and accountability
 - Communication and information sharing
 - Education and preparedness
- Response competencies
 - Care of the community
 - Care of individuals and families
 - Psychological care
 - Care of vulnerable populations
- Recovery/rehabilitation competencies
 - Long-term individual, family, and community recovery

(ICN, 2009)

ICN Prevention/Mitigation: Risk Reduction and Disease Prevention

The components required for risk reduction and disease prevention include:

- Evaluate, using epidemiological data, the risks and effects of specific disasters on the community and the population, and determines the implications for nursing
- Collaborate with other health care professionals, community organizations, government, and community leaders to develop risk reduction measures to reduce the vulnerability of the populations
- Participate in planning to meet health care needs in a disaster
- Identify challenges to the health care system and work with the multidisciplinary team to mitigate the challenges

- Identify vulnerable populations and coordinate activities to reduce risk
- Understand the principles and process of isolation, quarantine, containment, and decontamination, and assist in developing a plan for implementation in the community
- Collaborate with organizations and governments to build the capacity of the community to prepare for and respond to a disaster

(ICN, 2009)

ICN Prevention/Mitigation: Health Promotion

The components required for health promotion include:

- Participate in community education activities related to disaster preparedness
- Assess the community to determine pre-existing health issues, prevalence of disease, chronic illness and disability, and the health care resources in the community
- Partner with others to implement measures that will reduce risks related to person-to-person transmission of disease, sanitation and foodborne illness
- Participate in planning to meet the health care needs of the community such as mass immunization and medication administration programs
- Work with the community to strengthen the health care system's ability to respond to and recover from a disaster

(ICN, 2009)

ICN Prevention/Mitigation: Policy Development and Planning

The components required for policy development and planning include:

- Demonstrate an understanding of relevant disaster terminology
- Describe the phases of disaster management continuum, including prevention/mitigation, preparedness, response and recovery/rehabilitation
- Describe the role of government and organizations in disaster planning and response
- Understand the community disaster plan and how it relates to the national and international response plans
- Recognize the disaster plan in the workplace and one's role in the workplace at the time of a disaster
- Participate in disaster planning and policy development
- Contribute to the development, evaluation and modification of the community disaster plan
- Ensure that the needs of vulnerable populations are included in the community disaster plan (including children, women, pregnant women, individuals with mental or physical disabilities, older people, and other vulnerable persons and households)

- Interpret role(s) of nurses in relation to other members of the team
- Participate politically and legislatively in the development of policies related to disaster preparedness and response
- Describe the role of public health in disaster and how it relates to the nurse's role

(ICN, 2009)

ICN Preparedness: Ethical Practice

The components required for ethical practice include:

- Collaborate with others to identify and address ethical challenges
- Apply the national approved ethical framework to support decision-making and prioritization
- Protect the rights, values, and dignity of individuals and communities
- Practices in accordance with the cultural, social and spiritual beliefs of individuals and communities
- Maintain confidentiality in communication and documentation
- Understand one's own personal beliefs and how those beliefs impact on disaster response
- Describe how security issues and ethics may conflict

(ICN, 2009)

ICN Preparedness: Legal Practice

The components required for legal practice include:

- Practice in accordance with local, state, national and international applicable laws
- Understand how laws and regulations specific to disaster impact on nursing practices and disaster survivors
- Recognize the legal role of public health to protect the community in a disaster
- Understand the legal implications of disasters and emergency events (e.g. security, maintaining evidence, confidentiality)
- Describe the legal and regulatory issues related to issues, such as working as a volunteer, roles and responsibilities of volunteers, abandonment of patients, adaptation of standards of care, role and responsibility to an employer, and delegation

(ICN, 2009)

ICN Preparedness: Accountability

The components required for accountability include:

- Accept accountability and responsibility for one's own actions

- Delegate to others in accordance with standards of professional practice, applicable laws and regulations, and the disaster situation
- Identify the limits of one's own knowledge, skills, and abilities in disaster, and practices accordingly
- Practice in alignment with the laws and regulations governing nurses and standards of nursing practice
- Advocate for the provision of safe and appropriate care

(ICN, 2009)

ICN Preparedness: Communication and Information Sharing

The components required for communication and information sharing include:

- Describe the chain of command and the nurse's role within the system
- Communicate in a manner that reflects sensitivity to the diversity of the population
- Describe the principles of emergency communication in crisis intervention and risk management
- Identify and communicate important information immediately to appropriate authorities
- Utilize a variety of communication tools to reduce language barriers
- Coordinate information with other members of the disaster response team
- Provide current information to the disaster response team regarding the health care issues and resource needs
- Work with the disaster response team to determine the nurse's role in working with the media and others interested in the disaster
- Understand the process of health information management in a disaster
- Demonstrate an ability to use specialized communication equipment
- Maintain records and documentation and provides reports as required
- Communicate identified or suspected health and/or environment risks to appropriate authorities

(ICN, 2009)

ICN Preparedness: Education and Preparedness

The components required for education and preparedness include:

- Maintain knowledge in areas relevant to critical incident and disaster nursing
- Participate in drills in the workplace and community
- Seek to acquire new knowledge, and maintain expertise in disaster nursing
- Facilitate research in disaster
- Evaluate the need for additional training and obtain required training
- Develop and maintain a personal and family preparedness plan

- Describe the nurse's role in various disaster assignments (e.g. shelters, emergency care sites, temporary health care settings, disaster coordination and management units)
- Maintain a personal disaster/emergency kit (e.g. identification card, appropriate clothing, insect repellent, water bottle) in the event of deployment to a disaster
- Implement preparedness activities as part of a multidisciplinary team
- Assist in developing systems to address nursing and health care personnel capacity-building for disaster response
- Take on a leadership role in the development and implementation of training programs for nurses and other health care providers
- Evaluate community readiness and take actions to increase readiness where needed

(ICN, 2009)

ICN Response: Care of Communities

The components required for care of communities include:

- Describe the phases of community response to disaster, and the implications for nursing interventions
- Collect data regarding injuries and illnesses as required
- Evaluate health needs and available resources in the disaster-affected area to meet basic needs of the population
- Collaborate with the disaster response team to reduce hazards and risks in the disaster-affected area
- Understand how to prioritize care and manage multiple situations
- Participate in preventive strategies, such as mass immunization activities
- Collaborate with relief organizations to address basic needs of the community (e.g. shelter, food, water, health care)
- Provide community-based education regarding health implications of the disaster
- Evaluate the impact of nursing interventions on different populations and cultures, and use evaluation results to make evidence-based decisions
- Manage resources and supplies required to provide care in the community
- Effectively participate as part of a multidisciplinary team

(ICN, 2009)

ICN Response: Care of Individuals and Families

The components required for care of individuals and families include:

- Perform a rapid assessment of the disaster situation and nursing care needs
- Conduct a health history and age appropriate assessment that includes physical and psychological responses to the disaster

- Recognize symptoms of communicable disease and take measures to reduce exposure to survivors
- Describe the signs and symptoms of exposure to chemical, biological, radiological, nuclear and explosive agents
- Identify unusual patterns or clustering of illnesses and injuries that may indicate exposure to biological or other substances related to the disaster
- Determine need for decontamination, isolation, or quarantine and take appropriate action
- Recognize health and mental health needs of responders and make appropriate referrals.

(ICN, 2009)

ICN Response: Care of Individuals and Families, con't

- Implement appropriate nursing interventions, including emergency and trauma care, in accordance with accepted scientific principles
- Apply critical, flexible and creative thinking to create solutions in providing nursing care to meet the actual and potential patient care needs resulting from the disaster
- Apply accepted triage principles when establishing care based on the disaster situation and available resources
- Adapt standards of nursing practice, as required, based on resources available and patient care needs
- Create a safe patient care environment
- Prepare patients for transport and provides for patient safety during transport
- Demonstrate safe administration of medication, vaccines, and immunizations
- Implement principles of infection control to prevent the spread of disease
- Evaluate outcomes of nursing actions and revise care as required
- Provide care in a non-judgmental manner
- Maintain personal safety and the safety of others at the scene of a disaster
- Document care in accordance with disaster procedures
- Provide care in a manner that reflects cultural, social, spiritual, and diverse background of the individual
- Manage the care of the deceased in a manner that respects the cultural, social, and spiritual beliefs of the population as situation permits
- Manage health care activities provided by others
- Work with appropriate individuals and agencies to assist survivors in reconnecting with family members and loved ones
- Advocate for survivors and responders to assure access to care
- Refer survivors to other groups or agencies as needed

(ICN, 2009)

ICN Response: Psychological Care

The components required for psychological care include:

- Describe the phases of psychological responses to disaster and expected behavioral responses
- Understand the psychological impact of disasters on adults, children, families, vulnerable populations, and communities
- Provide appropriate psychological support for survivors and responders
- Use therapeutic relationships effectively in a disaster situation
- Identify an individual's behavioral responses to the disaster and provide appropriate interventions as required (e.g. psychological first aid)
- Differentiate between adaptive responses to the disaster and maladaptive responses
- Apply appropriate mental health interventions and initiate referrals as required
- Recognize appropriate coping strategies for survivors, families and responders
- Identify survivors and responders requiring additional mental health nursing support and refers to appropriate resources

(ICN, 2009)

ICN Response: Care of Vulnerable Populations

The components required for care of vulnerable populations include:

- Describe vulnerable populations at risk as a result of a disaster (e.g. older persons, pregnant women, children, and individuals with a disability or chronic conditions requiring continued care)
- Identify implications for nursing, including physical and psychological responses to the disaster of vulnerable populations, and unique needs and high risks of vulnerable populations associated with the disaster
- Create living environments that allow vulnerable populations to function as independently as possible
- Advocate for the needs of the vulnerable populations
- Identify available resources, make appropriate referrals, and collaborate with organizations serving vulnerable populations in meeting resource needs
- Implement nursing care that reflects the needs of vulnerable populations impacted by a disaster
- Consult with members of the health care team to assure continued care in meeting special care needs

(ICN, 2009)

ICN Recovery/Rehabilitation: Individual and Family Recovery

The components required for individual and family recovery include:

- Develop plans to meet short- and long-term physical and psychological nursing needs of survivors
- Identify the changing needs of survivors and revise plan of care as required
- Refer survivors with additional needs to appropriate organizations or specialists
- Teach survivors strategies for prevention of disease and injury
- Assist local health care facilities in recovery
- Collaborate with the existing health care community for health maintenance and health care
- Serve as an advocate for survivors in meeting long-term needs

(ICN, 2009)

ICN Recovery/Rehabilitation: Community Recovery

The components required for community recovery include:

- Collect data related to the disaster response for evaluation
- Evaluate nursing response and practices during the disaster and collaborate with nursing organizations to resolve issues and improve response
- Participate in analysis of data focusing on improvement of response
- Identify areas of needed improvement and communicate those areas to appropriate personnel
- Assist the community in transitioning from the response phase of the disaster/emergency through recovery and rehabilitation to normal functions
- Share information about referral sources and resources used in the disaster
- Assist in developing recovery strategies that improve the quality of life for the community
- Collaborate with appropriate groups and agencies to re-establish health care services within the community

(ICN, 2009)

Test Yourself

Which of the following is not an ICN (2009) nursing competency?

- A. Care of Vulnerable Populations
- B. Psychological Care
- C. Responsibility**

Mass Casualty Incident Triage

Effective mass casualty response is founded on the principle of triage, the system of sorting and prioritizing casualties based on the tactical situation, mission, and available resources. It is the best means to establish order in a chaotic environment and the best

hope to provide the greatest good to the greatest number within the limitations of time, distance, and capability. Triage is a constant and dynamic process as casualties move within and through the system of care.

The decision to withhold care from a casualty who in another less overwhelming situation might be salvaged is difficult for any physician, nurse, or medic. Decisions of this nature are unusual, even in mass casualty situations. Nonetheless, the overarching goal of providing the greatest good to the greatest number must guide these difficult decisions. Commitment of resources should be decided first based on the mission and immediate tactical situation and then by medical necessity, irrespective of a casualty's national or combatant status (Institute of Medicine [IOM], 2012; U.S. Army, n.d.).

Triage Categories

It is anticipated that triage will be performed at all levels.

Traditional categories of triage are immediate, delayed, minimal, and expectant.

- Immediate: This group of injured requires attention within minutes to two hours on arrival to avoid death or major disability. The procedures in this category should focus on patients with a good chance of survival with immediate intervention. Examples of injuries include:
 - Airway obstruction or potential compromise
 - Tension pneumothorax
 - Uncontrolled hemorrhage
 - Torso, neck, or pelvis injuries with shock
 - Head injury requiring emergent decompression
 - Threatened loss of limb
 - Multiple extremity amputations
- Delayed: This group includes those wounded who are in need of surgery, but whose general condition permits delay in treatment without unduly endangering life, limb, or eyesight. Sustaining treatment will be required (e.g., fluid resuscitation, stabilization of fractures, administration of antibiotics, bladder catheterization, gastric decompression, and relief of pain). Examples of injuries include:
 - Blunt or penetrating torso injuries without signs of shock
 - Fractures
 - Soft-tissue injuries without significant bleeding
 - Facial fractures without airway compromise
 - Survivable burns without immediate threat to life (airway, respiratory) or limb

(IOM, 2012; U.S. Army, n.d.)

Triage Categories, con't

- Minimal: This group has relatively minor injuries (e.g., minor lacerations, abrasions, fractures of small bones, and minor burns) and can effectively care for themselves or be with minimal medical care. These casualties may also provide a resource for manpower to assist with movement or potentially even care of the injured. When a mass casualty incident occurs in close proximity to a medical treatment facility, it is likely that these will be the first casualties to arrive, bypassing or avoiding the casualty evacuation chain. Such casualties may overwhelm the facility, leading to early obligation and ineffective utilization of resources. To prevent such a circumstance, it is essential to secure and strictly control access to the medical treatment facility immediately upon notification of a mass casualty event
- Deceased

(IOM, 2012; U.S. Army, n.d.)

Interactive Activity: Triage

The following brief video demonstrates how the principles of triage were used during an active shooter incident simulated scenario. Available at:

<https://www.youtube.com/watch?v=-7vaXMI-OJo>

Surge Capacity

Within a healthcare facility impacted by a mass casualty incident, surge capacity will occur, which requires management of staff, equipment, supplies, space, and special variables (such as infection control procedures). For most nurses, the effects of surge capacity within a facility will be more likely than actually triaging during the incident itself. The goal of surge capacity guidelines are to accommodate incident demands within the time frame presented, progressing from conventional to contingency, then crisis strategies, and returning to conventional as soon as possible (IOM, 2012).

Inpatient Surge Capacity: Conventional Care

Strategies for providing conventional care at surge capacity include:

- First two hours:
 - Fill available staffed beds
 - Cancel/hold elective surgeries if operative\ capacity needed or if expected to require admission
 - Begin “surge discharge”- involve all physicians, including medical and surgical. Unit supervisors are involved to determine patients for discharge
 - Identify patients for “early” discharge, and begin to organize for move.
- Two to four hours:
 - Provide staff for unstaffed but available beds through unit call-in
 - Add in-storage beds to usual patient rooms, and contact leasing agencies if additional beds required; consider intensive care unit (ICU) bed needs

- Move “surge discharge” patients to halls initially to open beds, and then to pre-identified discharge holding area; ensure that physicians and nurses attend to the pharmacy, transport, and home care needs of these patients.
- Four to twelve hours:
 - Obtain additional beds through leasing or from storage, and add to existing patient rooms; move patients from temporary areas (e.g., post anesthesia care unit [PACU]) to these beds as soon as available
- Twelve to twenty-four hours:
 - Cancellation of elective cases begins to have an impact (but does not open new beds)

(IOM, 2012)

Inpatient Surge Capacity: Contingency Care

Strategies for providing contingency care at surge capacity include:

- First two hours:
 - Clear patients out of pre-induction/phase 1 recovery areas, and fill available beds
 - Consider area for overflow of minor trauma cases from emergency department vs. overflow from clinics
- Two to four hours:
 - Pre-induction and procedural areas fully available. Consider adding GI lab, pulmonary/ bronchitis lab, phase 2 recovery areas/ pre-induction areas, and same-day admission/recovery areas. Reserve beds in recovery as needed for cases coming out of surgery
 - Transfer patients from higher acuity care areas to lower acuity care areas (e.g., from ICU to monitored floor) to free ICU space (can shift from private to double ICU rooms, but limited in storage/lease bed availability. Transfer overflow ICU patients to stepdown units
 - Consider inpatient care on rehab/observation units subject to availability/discharges
- Four to twelve hours:
 - Assess the situation—consider mechanisms for returning to conventional care, and contact regional health care coalition for necessary resources if unable to return to conventional status within following 8-12 hours.
- Twelve to twenty-four hours:
 - If transfer possible and unable to return to conventional care status within 8-12 hours, initiate local or regional patient transfers.

(IOM, 2012)

Inpatient Surge Capacity: Crisis Care

Strategies for providing crisis care at surge capacity include:

- First two hours:
 - Place patients in hallways or lobby areas (unit name(s)) on cots if floor beds are immediately lacking
 - Evaluate options for patient transfer to reduce demand
- Two to four hours:
 - Set up preplanned facility areas for austere inpatient care
 - Contact regional hospital coalition on call to advise of situation, and arrange resources/staff or local/interregional patient transfers sufficient to return to contingency care operations and/or activate alternate care sites
 - Request that units identify patients for possible transfer, and prioritize patients for evacuation based on the situation. Create transfer patient lists for regional/federal use. Request units identify patients for possible transfer and prioritize patients for evacuation based on situation. Create transfer patient lists for regional/federal use
- Four to twelve hours:
 - Mobilize resources for alternate care sites if needed; coordinate with regional hospital coalition.
 - Prepare patient belongings and charting, and begin local/regional patient transfers.
- Twelve to twenty-four hours:
 - Begin patient transfers to alternate care sites if activated. Federally facilitated (National Disaster Medical System) patient movement (if activated) begins at about 36 hours post-incident

(IOM, 2012)

Psychological Effects

Terrorism, active shooter events, and mass casualty incidents can have a significant psychological impact on those directly and indirectly affected. An example is a study done with nurses working in Israel, who have frequent exposure to terrorism events. The studies show high levels of burnout and secondary traumatic stress, as well as the potential for developing post-traumatic stress disorder (PTSD) (Ron & Shamai, 2014).

PTSD is triggered by exposure to a traumatic event. These may be a single occurrence or repeated exposure to trauma. Traumatic events are those considered to have a psychological effect, and often have a direct, violent physical impact. Examples of traumatic events include combat, sexual assault, and surviving a natural disaster or a terrorist attack (National Alliance on Mental Illness [NAMI], 2011). Severe traumatic events, proximity to an event, and duration of exposure to trauma increase post-traumatic responses and PTSD risk.

Psychological Effects, con't

Short-term responses of people exposed to life-threatening or overwhelming distressing events are common. Responses can last for days or even weeks. Types of responses include:

- Nightmares
- Increased fear
- Dissociation
- Flashbacks
- Inability to concentrate
- Anxiety
- Insomnia

When these responses do not lessen, it can develop into PTSD (NAMI, 2011).

For more information about PTSD, see the RN.com course PTSD: Caring for Patients and Their Families

Signs of Critical Incident Stress

The signs and symptoms of critical incident stress can be physical, emotional, cognitive, or behavioral. Individuals express stress in different ways and therefore manifest different reactions. The list below is not exhaustive but will help supervisors to identify workers who are exhibiting stress reactions.

- Physical:
 - Fatigue
 - Chills
 - Unusual thirst
 - Chest pain
 - Headaches
 - Dizziness
- Cognitive:
 - Uncertainty
 - Confusion
 - Nightmares
 - Poor attention
 - decision making ability
 - Poor concentration, memory
 - Poor problem solving ability
- Emotional:
 - Grief
 - Fear
 - Guilt
 - Intense anger
 - Apprehension and depression

- Irritability
- Chronic anxiety
- Behavioral:
 - Inability to rest
 - Withdrawal
 - Antisocial behavior
 - Increased alcohol consumption
 - Change in communications
 - Loss or increase in appetite

(Occupational Safety & Health Administration [OSHA], n.d.)

Immediate Care: Emergency Phase

Although it may be difficult during a critical event such as a mass casualty, identifying these signs of critical stress in others or even yourself requires emergent interventions. Critical incident stress that is prolonged can create increased poor outcomes, and the individual will not be able to function. The following are immediate strategies that need to occur:

- Limit exposure to noise and odors
- Dictate an immediate 15 minute rest break
- Provide non-caffeinated fluids to drink
- Provide low sugar and low fat food
- Get the person to talk about his or her feelings
- Do not rush the person back to work

(OSHA, n.d.)

Interactive Activity

Please review this brief presentation on critical incident stress. This is an audio file, with visuals via video. Available at: https://www.youtube.com/watch?v=YVIKZs_GbxU

Immediate Care: Debriefing

An important intervention for those individuals exposed to a critical incident, such as an active shooter or mass casualty event, is debriefing. There are many methods of debriefing, including both formal and informal. Debriefing focuses on the immediate reflection of events, including facts, thoughts, and reactions, as well as education on how individuals can care for him or herself in the following few days.

Individual debriefing is not recommended, but group debriefing has demonstrated positive effects for those involved. One study showed that groups who participated in group debriefing following critical incidents showed lower alcohol use and improved quality of life (Tuckey & Scott, 2014).

Counseling and Support

Critical incidents such as active shooter and mass casualty events can have widespread effects. The impact can be on the individual involved, the family, and even the community with both direct and indirect exposure (such as media coverage).

Debriefing is an immediate strategy, but many people need some form of support and counseling, even for a brief period of time, to assist in coping with these events.

Creating peer support groups is another strategy that has assisted in addressing the social and psychological needs of those involved (Shallcross, 2015).

Conclusion

As nurses, you do not expect to be in the middle of an active shooter or mass casualty incident. However, the potential does exist that this may happen someday. It is important to know how to prepare for and react in these situations. Think of a potential action plan. Review your own competencies and skills. And remember that everyone who exposed to these events will need some form of support, which includes you.

Resources

Homeland Security, Active Shooter Preparedness: <http://www.dhs.gov/active-shooter-preparedness>

FEMA Emergency Management Institute, Active Shooter: <http://training.fema.gov/is/courseoverview.aspx?code=IS-907>

For individuals in crisis:

- Suicide Prevention Lifeline 1-800-273-8255

For patients and families:

- National Alliance on Mental Illness (NAMI) 1-800-950-NAMI (6264)

NAMI provides a family to family support, including an educational program to assist families going through a mental illness diagnosis. More information is found at <http://www.nami.org/Find-Support/NAMI-Programs/NAMI-Family-to-Family>

- National Institute of Mental Health (NIMH) <http://www.nimh.nih.gov>

This website has information on numerous topics of mental illness, including PTSD

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