

Healthcare Facilities & Active Shooters - How to Implement 'Secure, Preserve, Fight'

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Effectively Responding to ACTIVE SHOOTERS IN HEALTHCARE FACILITIES

‘Secure, Preserve, Fight’ has been proposed as an alternative way to respond to active shooters in healthcare settings when ‘Run, Hide, Fight’ is not possible. Here are the specific details of this approach. **By Dr. Charles Denham II, Dr. Gregory Botz, Charles Denham III and William Adcox**

ACTIVE SHOOTER INCIDENTS have been on the rise throughout the United States. The most recent FBI data has identified 250 active shooter incidents between 2000 and 2017, in which 799 people were killed and an additional 1,418 were wounded. In the first half of that period, there was an average of 6.7 incidents per year. That number has tripled to over 20 incidents per year in the second half of that period. Four percent (10) were in healthcare organizations.

Additionally, the *Annals of Emergency Medicine* published a 2012 study that examined all U.S. hospital shootings between 2000 and 2011 in which there was at least one injured victim. It identified 154 incidents in 40 states

causing death or injury to a staggering 235 people.

Active shooter events at healthcare facilities are different from schools, shopping malls and commercial businesses for several important reasons:

1. The active shooter’s motives usually are much more personal, targeted and focused.
2. Necessary security measures are often harder to undertake.
3. Healthcare providers feel compelled to stay with their patients.
4. Certain patients will die without continued life support in ICUs and operating rooms.
5. Certain areas of hospitals are not easy to harden or evacuate.
6. Most hospitals are organized vertically and rely heavily on elevators.

7. Emergency departments may lock down or shut down during an event.
8. The violence could end in less than 10 minutes, but the healthcare delivery disruption could be prolonged.
9. Many healthcare shootings occur at entrances or just outside buildings.
10. Healthcare facilities cannot easily shut down for training.

In last summer’s excellent article by K. Inaba et.al in the *New England Journal of Medicine (NEJM)* titled “Active-Shooter Response at a Health Care Facility,” the authors framed a number of key issues that are summarized and updated below. They say the “run, hide, fight” response to an active shooter may work in many venues and for certain areas of hospitals, but healthcare facilities should consider a different approach for areas where “run, hide, fight” is not possible. Certain caregivers who are caring for vulnerable patient populations such as children, the elderly and those relying on life support systems need an alternative approach. K. Inaba et. al’s proposed alternative is for

healthcare workers to “secure” the location, “preserve” the life of the patient and oneself and “fight” only if necessary.

HEALTHCARE MUST FOCUS ON PREVENTION AND PREPAREDNESS

The term “left of boom” comes from our military leaders who were dealing with the terrible damage and carnage caused by improvised explosive devices (IEDs) in recent battle campaigns. They realized that they had to move upstream from the events because investing in protective body armor was not enough to save our troops. They began focusing on prevention and preparedness in addition to protection. They also learned from each event using performance improvement strategies. Healthcare organizations must take a “left of boom” approach, no matter what strategic framework they use for active shooter events.

Unfortunately, many hospitals and certain outpatient procedural centers are challenged to disrupt their day-to-day operations for this needed education and training; vital services often cannot be fully interrupted. Some of our healthcare leaders describe that trying to work a “left of boom” strategy into operations while they are providing continuous care is like trying to change a tire while driving down the highway. The “secure, preserve, fight” approach does offer a good strategic framework to reduce potential harm if the work is planned carefully, designed thoughtfully and recurrent training is prioritized. Some planning steps include:

- ◆ Getting entire leadership teams involved in planning.
- ◆ Generate accurate facility floor plans for response planning, training and execution. Develop checklists for necessary actions.
- ◆ Identify major ingress/egress points; identify likely pathways for active shooter travel and provide options for visitor/staff/patient evacuation.
- ◆ Identify areas that cannot be evacuated and must be defended, such as operating rooms, intensive care units, labor and delivery, and

procedural rooms where patients are most vulnerable.

- ◆ Undertake target hardening and resilience-building in non-evacuation areas to reduce harm to patients and caregivers.
- ◆ Integrate local police/fire/EMS with internal emergency personnel in planning/training.
- ◆ Identify internal and external rally points or locations where staff can meet for accounting and possible redeployment after the scene is safe.
- ◆ Develop advance communication procedures with local law enforcement and EMS assets; practice them periodically.

The “run, hide, fight” response to an active shooter may work in many venues and for certain areas of hospitals, but healthcare facilities should consider a different approach for areas where “run, hide, fight” is not possible.

- ◆ Clarify public address announcement statements for when an event is occurring and when there is an “all clear” — use plain language; practice them periodically.
- ◆ Establish recurrent severe bleeding control training across the organization.
- ◆ Create and utilize active shooter multimedia materials for on-boarding and recurrent staff training to maintain readiness.
- ◆ Develop early warning mechanisms to act on behaviors of concern.
- ◆ Consider de-escalation training for staff who interact with patients and the public.

SECURE

The “secure” step would entail immediately securing essential life-sustaining treatment areas by barricading or securing all access points from the inside, turning off nonessential lights and equipment; and silencing phones and pagers. Other important steps include:

- ◆ Train staff in situational awareness and decision-making during a crisis.
- ◆ Acquire and train with interior se-

curing or locking devices for access points.

- ◆ Deploy electronic or mechanical locking devices.
- ◆ Silence device alarms and equipment that may draw attention.
- ◆ Place adequate emergency care supplies such as AEDs within non-evacuation areas; practice with them regularly.
- ◆ Educate and train on evacuation and barricading skills; practice them regularly.
- ◆ Stage necessary emergency equipment — such as ballistic shields, evacuation equipment and Go Bags with essential supplies — in fixed

locations, in portable packs and on mobile units.

The layout of floors, open spaces and storage areas make every hospital, outpatient surgery center and clinic a unique planning challenge that requires security teams and caregivers to work together on the best solutions to secure specific areas.

PRESERVE

The “preserve” step includes strategies that reduce the risk for injury, such as staying away from windows and doors, moving patients to shelter if possible, and providing only the essential medical care required to preserve life. The reality of a hospital active shooter event is chaos. Responding law enforcement face a real dilemma: attacking the threat despite the presence of those who cannot evacuate and the challenge of defending those areas if the threat is only contained. Real events never fit the plan. That is why planning and training are so important.

- ◆ Educate and train on appropriate triage to optimize survival and care, especially when the ED is not available.
- ◆ Practice bystander medical care — recurrent training is essential be-

cause certain skills decay rapidly.

- ◆ Establish protocols for any operative or imaging procedures using damage-control principles and an

WHAT IS BYSTANDER CARE?

One important issue that must be addressed when a healthcare facility is training to respond to active shooters is medical care that can be provided by bystanders, be they clinicians or non-medical staff or others. Very often lives can be saved when bystanders quickly provide emergency medical treatment to injured individuals in the critical minutes before first responders arrive on scene. If treatment, such as Stop the Bleed care of a gunshot or stab wound, can be provided within 3 minutes, there is a much greater chance the victim will survive than if treatment is delayed.

Surprisingly, however, most healthcare providers only have rudimentary skills involving this type of care. Healthcare facilities are only now starting to realize the needed investments in recurrent training and the appropriate staging of life-saving supplies and defensive equipment. These items should be placed in strategic locations such as near or in locations that cannot be evacuated or where patients and caregivers might be trapped.

The best bystander emergency medical practices should be combined with the best current tactical practices for healthcare facilities. Education and training in effective bystander emergency care and recurring deliberate practice using immersive simulation with plausible scenarios should be planned and undertaken by every healthcare venue to address the unique challenges of dealing with an active shooter in their hospital, outpatient surgery or procedural facility, or clinic.

For more information on Med Tac or bystander medical care, read *How Bystanders Can Provide Med Tac Training to Save Lives* on CampusSafetyMagazine.com.

approach to wean anesthetics.

- ◆ Truncate any nonessential procedures underway; halt non-emergent care.
- ◆ Move patients and caregivers to the most hardened, sheltered areas.
- ◆ Educate and train staff on appropriate communication and behavior when law enforcement assets arrive in their area.

Launched in 2015 by the White House, the *American College of Surgeons (ACS) Stop the Bleed* training program is excellent. All caregivers including clinical, administrative and support staff should receive this training.

Non-clinical adults, youth and children are very effectively taught through the Stop the Bleed program to use pressure, tourniquets and wound packing for severe bleeding, which is the leading cause of preventable death from active shooter events.

Most active shooter and stabbing events are over in less than 10 minutes; however, it could take much longer for first responders to get to victims. Victims can bleed out in 3-5 minutes; the majority of victims with severe extremity bleeding can be saved. Staff should be trained in severe bleeding control of injuries they themselves sustain, and how they can care for the severe bleeding of someone else, even if they themselves are injured as well.

Bleeding control kits should be located so that they may be obtained and used within 3 minutes of a major bleeding event. Ideally located next to AEDs and/or stored with pre-positioned emergency equipment, these kits are critical to life saving care.

The hospital's Code Team will likely not be able to respond to a call during a violent intruder or active shooter event. Learning and practicing bystander medical care is essential.

FIGHT

As most authors agree, fighting an active shooter is a last resort. Only when one's life or the lives of others is in immediate danger should one attempt to fight off an attacker. If one must fight, some of the im-

portant issues are:

- ◆ Consider education and training in de-escalation communication principles that can prevent the escalation of physical violence, especially when the active shooter is a spouse or has a personal relationship with the target. Once violence starts, de-escalation techniques are rarely effective.
- ◆ Provide education and training in mental and physical preparation for the choices they will have to make if direct contact with an active shooter occurs.
- ◆ Consider training staff regarding use of available medical devices and equipment as barriers and defensive weapons.
- ◆ Train on evasion skills, and caregivers should be taught how to work with security and law enforcement officers when injured patients, caregivers or police must be moved before the threat is neutralized. If elevators are shut down, narrow stairwells become dangerous choke-points, and staff need to be aware that active shooters may exploit this issue.

TRAINING SHOULD BE A COMMUNITY AND FAMILY AFFAIR

The best way to be prepared is to have a robust training program for the care of patients in non-evacuation areas and care of injuries inflicted in an active shooter event. These efforts should extend into the community through the relationship networks that make up its fabric.

- ◆ The best way to maintain competency is to have your security and medical personnel become bystander care trainers of children, youth and adults in their communities.
- ◆ Active instructors who regularly train others have the lowest competency decay. Offering free training for the public affords ongoing readiness in your staff.
- ◆ Regular deliberate practice using immersive simulation is critical to

maintaining competencies that will be required for the most common scenarios.

- ◆ Make sure the local community knows that if there is an active shooter or terrorism event at your clinic or hospital, they should go to the next nearest appropriate hospital for their emergency care.

Inaba, et.al remind us to make sure to have transition-of-care plans to help relieve those staff who have provided care during an active shooter event, to plan for care diversion for those who might need hospital care, and plans for properly moving patients to another facility when needed. They also make the very important case for the psychological first aid of the patients, families and caregivers who were present during the event.

The “secure, preserve, fight” approach does offer a good strategic framework to reduce potential harm if the work is planned carefully, designed thoughtfully and recurrent training is prioritized.

Today, we in healthcare intensely focus on preparedness for and protection during an active shooter event. However, new exciting areas in threat safety science is in primary and secondary prevention.

Primary prevention is preventing an event from ever happening by identifying behaviors of concern, early warning signals and the likely high impact scenarios. Secondary prevention is reducing harm far beyond the immediate injuries of victims, such as the potential harm to patients who have had care disrupted by an event.

By leveraging the tools of performance improvement, studying prior events, employing immersive simulation and deliberate training, we can all move “left of boom.”

There are many innovations on the

horizon that can save more caregivers and patients who are caught in the uniquely challenging environments of hospitals, outpatient care sites and clinics. **CS**

WILLIAM ADCOX is the chief security officer for the UT MD Anderson Cancer

Center and UT-Health Chief of Police; **DR. GREGORY BOTZ** is a professor of anesthesiology and critical care and UT MD Anderson Cancer Center; **CHARLES DENHAM III** is a Junior Med Tac instructor; **DR. CHARLES DENHAM II** is the chairman of the Texas Medical Institute of Technology.

About the Authors



William Adcox

Chief William H. Adcox is a national leader in threat solutions development and threat safety science. It was his advisory input to the team that allowed them to expand their focus to the top eight causes of death of otherwise healthy people. With 37 years in municipal and campus policing, he serves as the Chief of Police at The University of Texas MD Anderson Cancer Center and The University of Texas Health Science Center. Chief Adcox holds an MBA degree from UTEP and is a graduate of the PERF's Senior Management Institute for Police and the Wharton School ASIS Program for Security Executives. The Med Tac Law Enforcement and Security Officer course has been developed and is undergoing R&D at MD Anderson under his leadership. Along with Dr. Denham and Dr. Botz, Chief Adcox will be a co-author of the International Med Tac Handbook in 2018 and will be featured in a Med Tac Documentary.



Gregory H. Botz, MD

Dr. Botz is the medical content leader for Med Tac. He is a Professor of Anesthesiology and Critical Care at The University of Texas MD Anderson Cancer Center. He inspired the initial focus of the team on active shooter events which led to the development of Med Tac. He completed an anesthesiology residency and critical care medicine fellowship at Stanford University in California. He has served on the faculty at Duke University School of Medicine, and is an Adjunct Clinical Associate Professor of Anesthesia at Stanford University School of Medicine. Dr. Botz serves as regional faculty for the American Heart Association Emergency Cardiovascular Care training programs, and he is a national consultant for the Society of Critical Care Medicine training programs. He was a senior editor for the American Board of Anesthesiology Joint Council on Anesthesiology Examinations, program director for the UTHSC-Houston Anesthesiology Critical Care Medicine Fellowship, and a member of The University of Texas System Health Care Components ICU Quality Improvement Collaborative. He and Dr. Denham have been the lead Med Tac instructors for the program for Stanford students. The Care Huddle Checklist was envisioned by Dr. Botz who is the clinical content leader for the team. He leads the Med Tac Aviation pilot program R&D.



C.R. Denham II, MD

Dr. Denham has funded Med Tac and leads its development. He has served hundreds of innovation teams during his 35 year career. While in practice as a radiation oncologist, he taught biomedical engineering and product development. He has taught innovation adoption, technology transfer, and commercialization in both academia and industry. He has been an adjunct Professor of Health Services Engineering at the Mayo Clinic College of Medicine, and had teaching appointments as an Instructor at the Harvard School of Public Health and as a Lecturer with the faculty of Harvard Medical School. He was a Harvard Advanced Leadership Initiative Fellow in 2009 and a senior Fellow in 2010 and 2011. His work there led to the production of a series of global documentaries on the Discovery Channel. He has served as Editor-in-Chief of the global Journal of Patient Safety, and has more than 100 works including peer-reviewed papers and multimedia productions. He has been ranked in the top 50 Most Influential Physician Executives by Modern Healthcare in multiple years, and he has served as a regular columnist for The Wall Street Journal program The Experts: Journal Reports. Dr. Denham is an advisor to and collaborator with a number of Stanford University programs. He founded HCC Corporation, a for-profit innovation incubator, and TMIT, a non-profit medical research organization, in the early '80s. The companies work collaboratively on common innovation programs. He developed CareUniversity which is the content engine and learning delivery system for consumers and caregivers which serves Med Tac. It provides training in association with accredited institutions of higher education. He is a scout leader and a certified PADI Rescue Diver.



C.R. Denham III

Dr. Denham's 13-year old son Charlie co-founded Med Tac while pursuing his Cub Scout first aid requirements. His school in Southern California has piloted and fully adopted the Med Tac innovations. The first life was saved in the first school program which Charlie helped lead. He participates in all Med Tac programs and leads the scout education initiatives with his troop. An avid waterman, Charlie is an Advanced Open Water Scuba diver who is certified as one of the youngest Rescue Divers in the nation. He is a Junior Med Tac Instructor and helping develop the Med Tac Divers and Lifeguard-Surf Programs. He is the founder of the KidLeaders mentorship and leadership program for children and youth seeking behavioral solutions to deal with bullying being piloted in 2019.