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PITTSBURGH'S DARKEST DAY
AND THE MASS CASUALTY RESPONSE
BY GAVIN JENKINS





Pittsburgh's responders were prepared for a national tragedy.
(Photo: Alexandra Wimley/Pittsburgh Post-Gazette via AP)

At 9:58 A.M., Oct. 27, 2018, Keith Murray is getting his 3-year-old son ready for another preschooler's birthday party when his phone vibrates. Murray, clinical assistant professor of emergency medicine at the University of Pittsburgh and medical director for the Pittsburgh police department's SWAT, reads the following message from the SWAT team:

ACTIVE SHOOTER, MULTIPLE SHOTS FIRED, SERIOUS HEMORRHAGE, TREE OF LIFE SYNAGOGUE, 5898 WILKINS AVENUE, 15217.

As one of a select group of physicians around the country who serves as a member of a special operations unit, Murray keeps his SWAT gear staged in his house for such an emergency. This hybrid practice is so new there is not an agreed upon title for it, yet. But, Murray has gone through basic and advanced SWAT training, including special weapons and tactics exercises. For the past seven years, he has drilled with Pittsburgh's SWAT for 16 hours every month.

After kissing his wife and children, the doctor puts on his camouflage uniform and a bulletproof vest with an attaching radio. He grabs a helmet, headset, and two backpacks filled with medical gear and rushes from his house. He hops in his Ford F-150 and heads toward Tree of Life Synagogue, which is usually a 15 or 20 minute drive from his suburban home.

SEVERAL MINUTES BEFORE Murray receives the alert, Leonard Weiss wakes up to a clanking noise. A Pitt assistant professor and emergency medicine physician, he didn't get home until 4 a.m. from UPMC Mercy. He assumes the noise is construction work—not unusual for a Saturday morning in Squirrel Hill—and rolls back over. But moments later, the clanking wakes him up again. This time it's more rhythmic, and it's followed by screaming.

"Just a terrible screaming," he says. "So loud and angry that I never would have expected to hear it in this neighborhood."

Weiss, who serves as EMS medical director and assistant medical director for STAT MedEvac, lives adjacent to Tree of Life Synagogue. A man armed with an AR-15-style semi-automatic rifle and three Glock

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.357 handguns had just entered the synagogue and begun firing on worshippers. Tree of Life is home to three congregations: Tree of Life, New Light, and Dor Hadash. New Light and Tree of Life had started separate Shabbat morning services; Dor Hadash was set to begin a Torah study session.

Guessing that the rhythmic sound is some kind of automatic rifle, Weiss scrambles out of bed, turns on his EMS radio, and looks out the window. The dispatcher names the streets around his house and confirms what Weiss feared when he heard the screams: There is an active shooter at the synagogue.

Worried about stray bullets, Weiss gathers the radio, his phone, and his clothes and heads to the basement. While he dresses, he listens as the police organize a response over the radio. His heart is racing; the shooting is right outside his front door. But, with years of EMS experience, he's also used to snapping into action.

Weiss (Res '15, Fel '16) feels robotic tying the laces on his boots and throwing on a shirt.

The only thing he is thinking: *I need to go outside.*

Dressed, he calls in to the dispatch, identifies himself, and is told the location of Tactical Command's staging area, which is where the police response is being overseen. He climbs the basement stairs to the first floor of his house and calls his mentor, Ronald Roth, professor of emergency medicine, chief of EMS Division in the Department of Emergency Medicine, and the medical director for Pittsburgh's Department of Public Safety. Roth lives in Point Breeze (which borders Squirrel Hill), but he's in Carnegie. He received the same alert as Murray and is in his car, heading to the staging area.

"I'm hearing the gunshots," Weiss tells Roth. "And I see teams forming outside. I'm gonna head out; I'll update you."

On his way to Squirrel Hill, Murray listens to the police scanner and goes through a medical threat assessment in his head. He envisions the geography surrounding the synagogue and considers where it is located in comparison to the level-one adult and children's trauma centers in Pittsburgh. He thinks to himself: *UPMC Presbyterian and UPMC Children's Hospital are both over two miles away; UPMC Mercy is about four; and, if there are a lot of victims, there's Allegheny General Hospital, which is almost six.*

With one hand on the steering wheel, he texts two of SWAT's four Tactical EMS team leaders. (The city has a cadre of 16 Tactical EMS personnel divided into four teams.) Murray checks to see if they know everything he knows—the synagogue's surroundings, the assessment of closest hospitals—and then he asks if they have heard any new details, specifically regarding the number of possible victims or shooters. He wants to know exactly what he's driving into, but there's no new information.

He's about to call his close friend, Matthew Neal, when Neal calls him. (Murray's son was getting ready to go to Neal's daughter's party.) Neal, trauma surgeon and Roberta G. Simmons assistant professor of surgery at Pitt, specializes in hemorrhagic shock. He also receives SWAT alerts in case of situations

like this. He tells Murray that he's skipping the birthday party and heading to UPMC Presbyterian's emergency department to help with the response. As the two talk, Neal (MD '06, Res' 14, Fel '15) follows several police cars on the Parkway North, speeding toward the Veterans Bridge as other motorists pull over.

While Murray and Neal drive, two Pittsburgh police officers exchange gunfire with the shooter. An officer is shot in the hand and the other's ear is grazed by either shrapnel from broken glass or a bullet. The man retreats into the building.

Driving up Shady Avenue in Squirrel Hill, Murray sees that the police have blocked the intersection with Wilkins Avenue. He wants to get as close to the synagogue as possible, but the road is already lined with ambulances and patrol cars. Police dispatchers have called

every available officer to the area. Murray drives up to the blockade, turns left into a driveway, and parks in someone's front yard.

Murray jumps out of his truck, checks his radio, puts on his helmet, and runs toward Tree of Life. On the way, he meets a SWAT officer who also just parked, and they do a quick "buddy check" to make sure each has the right equipment.

When they reach the corner of the synagogue, they join about eight other SWAT officers. They form what is called an Emergency Entry Team (EET) and wait for permission from Tactical Command to storm into the synagogue. Another EET has formed at the other end of the building, and police are setting up a perimeter.

SOMETIME AROUND 10:30 A.M., a SWAT officer announces on the police radio, "We're about to make entry." The other team punches into the synagogue from another location shortly after.

SWAT team members find a couple hiding. "We've got to evacuate some of these hostages," an officer reports on the radio. Officers rush them outside and up the street beyond the barricade.

SWAT confirms by radio, "Be advised ... trauma surgeon is with the team."

As they search the building, they find several dead.

SWAT finds an injured worshipper. The person has been shot, and Murray works with a Tactical EMS medic. They announce over

STOP THE BLEED

In 2017 Matthew Neal and his 9-year-old son, Cameron, stood in front of a crowded room at Rodef Shalom Congregation. Neal, a Pitt trauma surgeon who specializes in hemorrhagic shock, demonstrated to the community members how to perform emergency medicine tactics, such as how to pack a wound and apply a tourniquet. The session was part of a training initiative called Stop the Bleed.

A person can bleed to death in less than five minutes. Neal and his son coached the attendees (a number of Pittsburgh synagogues were represented at the session) on skills that can save a life after a car crash, a kitchen accident, or a mass shooting.

The SWAT team members and Tree of Life survivors who suffered gunshot wounds during the massacre would not have lived without the techniques police officers and EMS used from their Stop the Bleed training, says Neal.

The idea for Stop the Bleed came about after the Sandy Hook Elementary School shooting in December 2012. A few months after the shooting, Lenworth Jacobs Jr., a surgeon at Connecticut Children's Medical Center, and the American College of Surgeons assembled experts from government and the medical and security communities to draw up the Hartford Consensus, a set of national guidelines to help people survive mass shooting events.

In the spring of 2016, Neal joined a steering committee to implement a Stop the Bleed program in Western Pennsylvania. The committee included nurse David Bertoty, clinical director of emergency and trauma services at UPMC Presbyterian; surgical PA Benjamin Reynolds, clinical assistant professor of surgery; surgeon Raquel Forsythe, assistant professor of surgery and critical care medicine, who is director of education for trauma surgery at Pitt; and surgeon Andrew Peitzman (MD '76, Res '83), a Distinguished Professor of Surgery who holds the Mark M. Ravitch Chair in surgery here.

The committee's goal was to combat the threat of mass shootings by creating a training program that would be accessible to everyone in the region. "We went to UPMC and said, 'This is the public health



TOM ALTANY / UNIVERSITY OF PITTSBURGH

Med students participate in a Stop the Bleed training.

crisis of our time," notes Neal. "We don't know when the next event will be, but we know there will be one."

UPMC provided \$1.3 million to fund Stop the Bleed; and with its first step, the committee designed a "train the trainers" program. The committee began by teaching first responders, who could then spread the program into communities. Stop the Bleed trainers have taught faculty of entire school districts, Boy and Girl Scouts groups, and 4-H clubs. When Neal taught members of Pittsburgh's synagogues in 2017, the Jewish Healthcare Foundation bought tourniquet kits for each congregation in the city.

Neal would like to see Stop the Bleed skills become as commonly understood as CPR. However, he knows that the idea of packing a wound and applying a tourniquet can seem overwhelming for some.

"That's why I bring Cameron along," he says. "I say, 'If a 9-year-old can do it, so can you.'" —GJ



On Oct. 27, 2018, a gunman entered Pittsburgh's Tree of Life Synagogue and killed 11 people: Joyce Fienberg, 75, Richard Gottfried, 65, Rose Mallinger, 97, Jerry Rabinowitz, 66, Cecil Rosenthal, 59, David Rosenthal, 54, Bernice Simon, 84, Sylvan Simon, 86, Daniel Stein, 71, Melvin Wax, 87, and Irving Younger, 69. A memorial was erected outside the synagogue.



the radio, “Applying tourniquet at this time.”

Tactical EMS rush the congregant from the building and to the hospital.

A team locates another wounded victim, whom they rush to the hospital.

At one point, a police officer enters a room and is met by gunfire. He sustains gunshot wounds, and soon after, SWAT team members manage to pull him from the room. They remove the officer’s body armor and helmet and cut off most of his clothes. Tactical EMS, with Murray, perform a full-body search for life-threatening hemorrhage, airway issues, and head wounds. They pack his wounds, apply five tourniquets, and roll him onto his back. They place him on a MegaMover and then a stretcher. Moments later, an ambulance carries the officer to UPMC Presbyterian; Murray and two Tactical EMS medics remain alongside him.

AROUND 11:15 A.M., Murray returns to Tree of Life. By now, another wounded officer and the alleged shooter, who has surrendered and is wounded, are receiving treatment from Tactical EMS.

A total of 11 people were found dead inside the synagogue. And now, the terror is over.

The Tree of Life attack has been called the deadliest ever on a Jewish community in the United States. At a press conference later that Saturday, Pittsburgh Mayor Bill Peduto described it as the “darkest day of Pittsburgh’s history.”

Tactical EMS transported seven people, including four police officers and the alleged shooter, from Tree of Life to three level-one trauma centers—UPMC Presbyterian, UPMC Mercy, and Allegheny General.

All seven live, thanks to what Murray calls “the chain of survival.”

The chain of survival begins with the SWAT team members who are trained to pack wounds and apply tourniquets. Murray says that the officers who were shot inside the synagogue likely would have bled to death if they hadn’t received immediate medical attention from fellow officers and Tactical EMS. Neal adds that one of the worshippers probably would have died, as well, if not for immediate medical attention at Tree of Life.

When Neal gets out of his car at UPMC Presbyterian, he sees colleagues parking. Dozens of off-duty

physicians, surgeons, nurses, and residents had rushed to help.

Driving into the city, Neal was anxious. He wondered how many people had been injured, and he was worried about Murray and other friends who had gone to Tree of Life. The moment he steps inside the hospital, his anxiety diminishes.

He hurries to the back of the emergency department and joins one of six surgical teams, each staffed with eight to 10 medical professionals. Neal adds: “The teams had assembled; and I looked around at all these incredible professionals, and I said, ‘We got this.’”

Don Yealy, emergency medicine physician who serves as chair of Pitt’s emergency medicine department, senior medical director for UPMC Health Services Division, and vice president of emergency and urgent care for UPMC Physician Services, says that planning and practicing for such a tragedy took countless hours. The emergency department drills for how to handle mass shootings, infectious pathogens, and radiologic threats. Sometimes they do tabletop walk-throughs, and other times they hold exercises with mock patients.

“[On October 27], it was actually fairly

easy to know what needed to be done and know that it was going to happen fairly seamlessly,” Yealy says.

A mass casualty response has multiple components, including gathering information to verify the tragedy, calling additional personnel to help, clearing hospital space, and preparing for several hours of care as an unknown number of patients arrive.

When Roth (MD '82, Res '85) reaches the command post around the corner from Tree of Life, he acts as the point person for the medical response. He updates Yealy (Res '88), who remains in contact with the emergency departments.

SHORTLY AFTER 10 A.M., UPMC Presbyterian confirms a mass shooting is in progress. Stephanie Gonzalez, assistant professor of emergency medicine, reads the attending trauma physician responsibility card.

Each UPMC emergency department has a binder filled with folders of instructions for multiple types of possible tragedies. The folders consist of laminated cards that outline the responsibilities of each staff position.

Following her card's instructions, Gonzalez makes sure that each of the emergency department's three trauma bays is properly staffed with an attending trauma physician, an attending surgeon, nurses, a patient care technician, at least two residents, and an anesthesiologist. Gonzalez's card also warns her not to get too involved with patient care. She has to continue to oversee the emergency department as patients arrive.

As the staff read their respective cards and started preparing, Gonzalez describes the mood as calm and organized.

“It was very quiet,” she says. “There were no people shouting. There was no sense of panic. There was just this nice, regimented approach. I don't think it's anything that you would expect if you were thinking of a department preparing for a potential onslaught of patients.”

When the first victim arrives from Tree of Life (the officer who was shot in the hand), the emergency department staff manage the trauma patient as they always would: They assess his breathing and circulation. They address his

bleeding.

“You kick into doctor mode,” Gonzalez says. “This is what you do.”

Gonzalez recalls a sense of unity and a feeling of teamwork among the staff. She credits

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the laminated cards with helping to promote organization. “It was very helpful for each person to look at their card and know: *Okay, now I know what I need to do next.*”

Adam Tobias, assistant professor of emergency medicine, assistant residency program director, and a member of UPMC Presbyterian's disaster committee, wrote most of the disaster response plan, and he oversees the scheduled drills for Pitt and UPMC.

Tobias (MD '06, Res '09, MPH '11) realized the importance of implementing a simple approach in 2010, following a trip to Israel to learn how hospitals there prepare for mass casualty situations. The trip was sponsored by the Jewish Healthcare Foundation.

Roth, who grew up in Squirrel Hill and was bar mitzvahed at Tree of Life, says that when Pitt's emergency medicine department, UPMC, and Pittsburgh's first responders began an active shooting training program several years ago, Jewish community groups were some of the first to participate in drills. Nine months before the Tree of Life shooting, the Jewish Community Center (JCC) in Squirrel Hill hosted an exercise for police and EMS.

“It was eerie,” Roth says of being at the command post. “We had just done this [in a drill]. Two or three people came up to me afterwards and said, ‘Wow, I got inside and

the training from the JCC kicked in.’ To the credit of the Bureau of Public Safety, they had trained for this.”

“I preface every commentary with saying that any kind of congratulatory speak is appropriately attenuated and blunted by the severity of what happened,” Neal says. “But I am so immensely proud of this team and this community.”

Yealy speaks with pride of the response, as well. He notes the Tree of Life shooting also showed ways they can improve, particularly in terms of communication. Tobias agrees: “You have 1,000 things running through your head, and my phone was ringing off the hook.”

Murray says he learned that SWAT officers need more tourniquets and updates to individual first-aid kits.

After a while on **SATURDAY NIGHT**, Gonzalez and a few colleagues are finally able to sit down to rest. That's when it starts to sink in that the episode had been driven by hate. “There was this sense of us pulling together to stand against the trauma, if that makes any sense,” Gonzalez says.

That evening, Tobias, Roth, and Weiss gather at Weiss's house to debrief and process what happened while Neal heads home to his family.

Tobias, who grew up in Squirrel Hill and lives there with his wife, says the shooting was difficult to absorb.

His parents had attended Tree of Life the night before the massacre.

The bullet holes in the synagogue door, being part of the mass casualty response, it all felt surreal to the physicians whose lives are intertwined with the community attacked.

“It's very personal,” Tobias says. “I drive by the synagogue every day. It's still hard to believe it happened.”

EARLIER THAT DAY, AROUND 4 P.M., Murray returned to his truck; he was met by a couple. It was on their front yard that his Ford was parked.

Murray, whose SWAT uniform was covered in blood, began to apologize for driving onto their lawn, but the couple stopped him.

“They thanked me for what I do,” Murray says. “It was really nice of them.” ■