



A Case Study on School and Workplace Safety and Emergency Management Systems

This case study focuses on the events surrounding the mass shooting at Marjory Stoneman Douglas High School in Parkland, Florida on February 14, 2018. The main objective is to outline key events and showcase updates in mobile technology that can improve management of these types of events. This case study focuses on how new technology offerings can improve access to care and decrease response times. By improving the management of emergencies, the direct impact is to save valuable lives and improve school safety and workplace safety across the United States.

FLORIDA SCHOOL SHOOTING DETAILS – FEBRUARY 14, 2018

On February 14, 2018, a former student opened fired inside a Parkland Florida high school. The gunman tried to fire at fleeing students from the building's third-floor windows, but the high-impact windows didn't shatter. The gunman set off fire alarms during the incident, luring hundreds of students out of their classrooms so he could open fire. After he fired several rounds the gunman dropped his weapon and hid among the crowd as students and faculty evacuated the facility. Police captured the shooter over an hour later in Coral Springs, located about a mile away from the school. Seventeen people were killed, 3 staff/ adults and 14 children attending school on that day. Fourteen others were wounded in the shooting, including several with severe and life-threatening injuries sustained during the event.

Below is a timeline of events gathered from the Broward County Sheriff's Office and other sources. The goal is to map out key responders, key communication and key timelines of the emergency event. What is clear is that cell phones and mobile devices were key in re-building the timeline and these devices plus social media were used during and after the event by those inside and outside the building or on campus.



FEBRUARY 14, 2018

2:19 P.M.

Shooter enters the school.
Gunman was dropped off by Uber driver at the high school at 2:19 p.m., a Thursday timeline from the Broward County Sheriff's Office showed, just before the school day ends, when gates are open and it's easy to enter the campus.

2:21 P.M.

Gunman went into Building 12 east stairwell with a rifle in a case. He emerged from the stairwell with the rifle no longer in the case. He started firing into classrooms and proceeded to use the west stairwell to the second floor (Room 1214, 1215, 1216) and shot someone in another room (Room 1234).



2:55 P.M.

WSVN, a local news station, reported that there were at least five people injured at the school.

2:22 P.M.

School Resource Officer thinks shooting is occurring outside the building.

2:45 P.M.

Police reviewed video camera footage they thought was real time but was 20 minutes delayed and shooter was instead on way to Walmart and had left the building.

Broward Schools
@browardschools



#BSO is working a developing incident regarding a report of active shooter located at 5901 Pine Island Rd, Parkland. Here's what we know so far: deputies are responding to reports of a shooting at Stoneman Douglas High. There are reports of victims. PIO will be on scene 3:15pm.



2:53 PM - 14 Feb 2018

2:27 P.M.

Gunman allegedly went into the 3rd-floor stairwell, dropped his backpack and weapon and took off.

2:50 P.M.

Gunman went into a Walmart and purchased a drink at a Subway and left the store, per the sheriff's office timeline.

2:53 P.M.

Deputies responded to reports of a shooting at Stoneman Douglas High School, the Broward County Sheriff's Office confirmed in a tweet.

2:24 P.M.

Gunman used the east stairwell leading to the third floor, per the timeline. More shots were fired.

2:35 P.M.

After the shooting/firing of weapon ceased: Students reportedly were texting about a shooter at the school. Police start to enter building (after talking to school resource officer who drew picture of campus and had cleared the outside area).



Grumpyhaus
@Grumpyhaus



all hell is breaking loose at Douglas high school @Coralspringsfla kids texting about a shooter ????



Aj22000 @TheCaptainAidan · 1h

I am in a school shooting right now...

60 633 870

2:28 P.M.

9 minutes after arriving and 7 minutes after opening fire.

Gunman got out and ran in the direction of tennis courts before he went south, according to the sheriff's office timeline. At 2:29 p.m., it said he crossed a field and ran west with other people exiting the building.

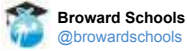
3:11 P.M.

The sheriff's office tweeted the shooter was still at large.



4:27 P.M.

The suspected shooter was taken to a local hospital.



Broward Sheriff @browardsheriff Avoid the area of Stoneman Douglas HS. #BSO is currently working a developing incident regarding a report of active shooter.

2:56 PM - 14 Feb 2018



2:56 P.M.

The sheriff's office warned the public to "avoid the area of Stoneman Douglas HS" as authorities investigated reports of an active shooter.

3:10 P.M.

A student shared a photo to Twitter to show where he and other students were hiding.

3:40 P.M.

Broward Schools began dismissing students from the school. "We are receiving reports of possible multiple injuries," the school district tweeted. "Law enforcement and the District's Special Investigative Unit are currently on site."

3:41 P.M.

A Coconut Creek police officer detained Gunman in Coral Springs.

4:11 P.M.

The shooter was taken into custody, the sheriff's office confirmed in a tweet, warning that the scene was still active.

3:01 P.M.

The Broward County Sheriff's Office timeline said gunman went to a McDonald's, sat down briefly, then left.

3:36 P.M.

Broward Schools said the school was on lockdown after students and faculty heard what sounded like gunfire.

4:22 P.M.

The sheriff's office tweeted there were at least 14 "victims," who "have been and continue to be transported to Broward Health Medical Center and Broward Health North hospital."



Today, close to Marjory Stoneman Douglas High School's dismissal, students and staff heard what sounded like gunfire. The school immediately went on lockdown but is now dismissing students. We are receiving reports of possible multiple injuries. Law enforcement is on site.



3:36 PM - 14 Feb 2018

My school is being shot up and I am locked inside. I'm scared right now.



2:01 PM - 14 Feb 2018

5,294 Retweets 4,904 LI

Still locked in. I checked the local news and there is 20 victims. Long live Marjory Stoneman Douglas High.





6:29 P.M.

The sheriff's office identified the shooting suspect as 19-year-old Nikolas Gunman.

6:27 P.M.

Sheriff Israel said 17 people were killed in the shooting.

4:50 P.M.

Florida Sen. Bill Nelson said there were "a number of fatalities."

5:39 P.M.

Students started to reunite with their parents.

4:59 P.M.

Sheriff's office confirmed the shooter was not a current student at Stoneman Douglas High School. In a separate tweet, the sheriff's office said SWAT teams were still clearing the school.



A RECAP OF EVENTS

From the School Resource Officer

The School Resource Officer (SRO) held his post outside the building and a police/SWAT recap:

- Mr. Peterson initially "received a call of firecrackers — and not gunfire — in the area of the 1200 Building."
- In response to the firecracker call Mr. Peterson along "with Security Specialist Kelvin Greenleaf exited the 100 Building and ran north the couple of hundred yards to the 1200 Building."
- Upon arriving at 1200 Building Mr. Peterson "heard gunshots but believed that those gunshots were originating from outside of any of the buildings on the school campus."
- BSO trains its officers that in the event of outdoor gunfire one is to seek cover and assess the situation in order to communicate what one observes to other law enforcement.
- Consistent with his training, Mr. Peterson "took up a tactical position between the 700-800 buildings corridor/corner."
- Mr. Peterson was the first BSO officer to advise BSO dispatch that he heard shots fired.
- Mr. Peterson "initiated a 'Code Red' lockdown of the entire school campus."
- "The first police officer that arrived on-scene was from the Coral Springs Police Department." Mr. Peterson informed this Coral Springs Police Officer that he "thought that the shots were coming from outside." This Coral Springs Police Officer took up a tactical position (approximately twenty yards away from Mr. Peterson) behind a tree with his rifle.
- "Radio transmissions indicated that there was a gunshot victim in the area of the football field," which served to confirm Mr. Peterson's belief "that the shooter, or shooters, were outside."
- Mr. Peterson had the presence of mind to have the school administrators go to the school's video room to review the closed-circuit cameras to locate the shooter and the obtain a description for law enforcement.
- Mr. Peterson provided his keys to the Coral Springs SWAT team so that they could enter the 1200 Building.
- Mr. Peterson "provided BSO SWAT Command with handwritten diagrams of the entire Stoneman Douglas campus for student evacuation."
- The police radio recordings showed that the Coral Springs police officers were the first to enter the school building after confirming that Broward County Sheriff's Office deputies had not gone in.
- As they cleared each of the building's three floors, the officers described seeing shell casings on the floor and bullet holes in the windows. They warned that the suspect may have changed clothes after they reported finding a camouflaged jacket, ski mask and backpack on the first floor. On the third floor, officers said they found an AR-15 with a magazine still attached.
- The officers found wounded victims and bodies, and they prioritized evacuating the wounded before allowing other students and teachers to leave. On the third floor, they said they shattered windows in some locked classroom doors because terrified students would not open doors. Cruz was arrested a few blocks away from the school. Evacuations continued well into the afternoon and evening.

SUMMARY WITHOUT EMMA

Of note is that the provided timeline and events recap shows the fragmented emergency management functions that occur during these types of chaotic events. As shown on the picture below, the large campus had the 1200 building (outlined in yellow) with shots fired reports called in to 911 dispatch call centers, starting at 2:21 to 2:22 p.m. The 911 phone call recordings clearly reiterate the chaos and make solid attempts to gather information, but the students can not talk due to the lock down and need to stay quiet. The 911 dispatch centers attempt to gather information from parents of children who are on the phone with their child (who is on lock down and told to be quiet) while other adults make 911 phone calls standing next to the parents who are trying to communicate with their child. Videos taken by students show the cell phones actively taking video and using twitter and other means of communicating with the outside world. The media quickly becomes involved due to social media reports and the school district and administrators also must immediately deal with the press and media coverage. Staff members, who have locked down the classrooms and are sheltering in place, do not have easy access to PCs or land line phones while hiding and staying quiet and mobile device emergency management is not engaged. In addition, the School Resource Officer (SRO) has a recap provided that clearly illustrates how he had to hand draw maps of the campus for arriving initial law enforcement. SWAT team members first objective was to shut down any shooter. Without active communication on the status of in-house staff that are sheltered in place, the shooter sweep takes a long period of time. Not until after SWAT has cleared the scene sweep is active emergency medical treatment commenced, prioritizing the wounded being cleared first. Once the wounded are cleared, full scale evacuation of students and staff not wounded occurs. Deceased are cleared last. No clear 2 way communication method was able to be used by all parties involved.



Coral Springs Police Officer recap:

"The building was riddled with bullet holes, with spent shell casings scattered all over. Instead of smoke alarms and screaming, there was silence. Victims with gunshot wounds lay in the hallways. Students and teachers were still holed up in classrooms and storage rooms, too terrified to leave, he said."

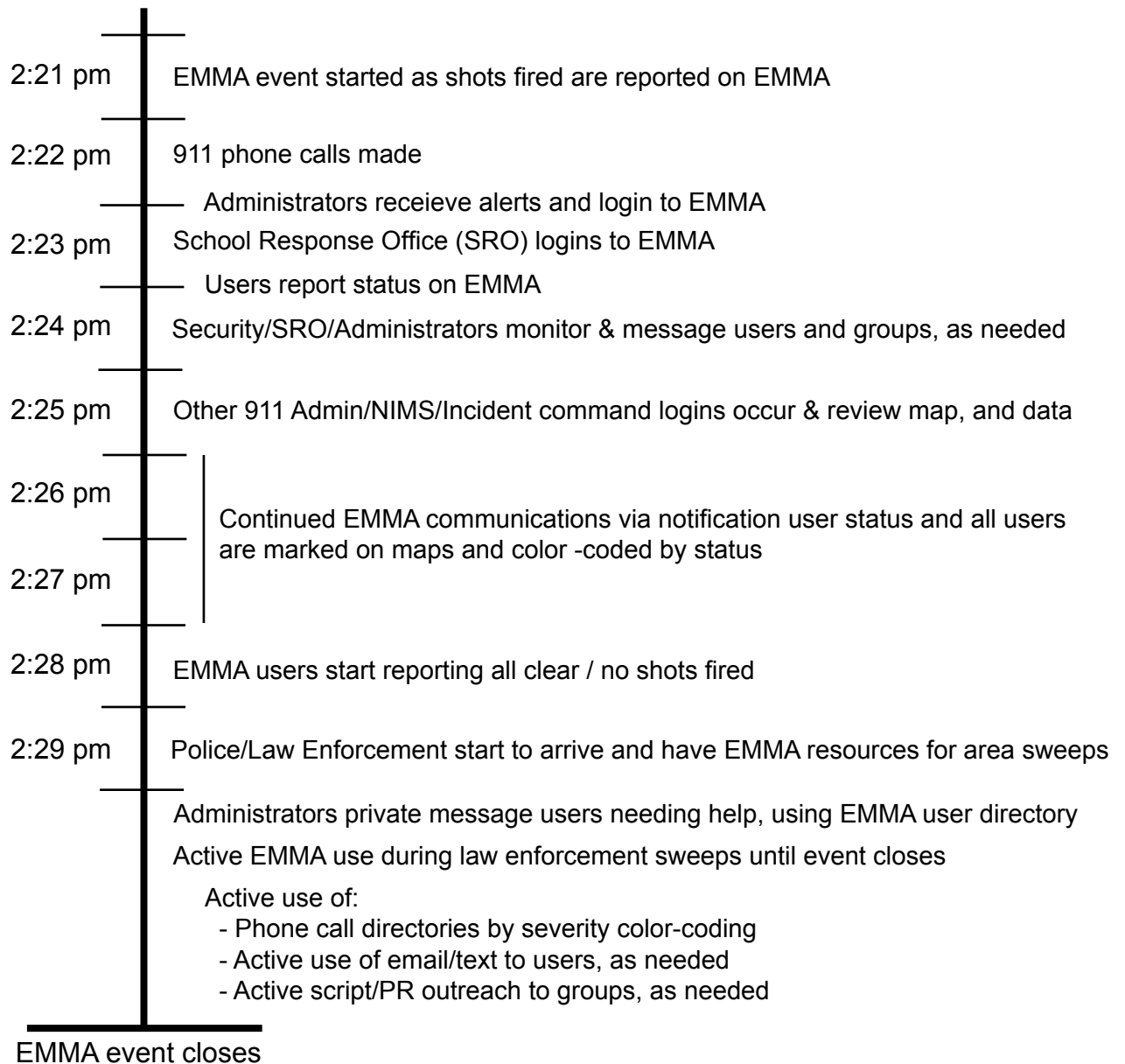
Police/911 Dispatcher recap:

Police dispatchers also were shaken from the ordeal. They had fielded scores of calls from frantic parents asking if their children were alive, and they didn't know the answer. "In some of the classes, students and teachers had called 911. But they were too afraid to speak for fear of drawing the shooter's attention. Dispatchers on the other end listened to their breathing and other signs of life. You just have to be quiet, that's OK. As long as I can hear you breathing," Kathy Liriano of the Coral Springs Police and Fire Communications 911 dispatch said she told the callers. They heard the whispers of the students calling for help, even the gunshots in the background. Julie Vidaud decided not to instruct one student to perform CPR on two her classmates who had been shot and were beside her. Vidaud said she feared any noise or movement would endanger everyone hiding in the classroom.



SUMMARY WITH EMMA

EMMA projected Parkland timeline "continuum of care":



How EMMA would have helped decrease response timelines and survival rates of victims:

- 1) Clear continual communication inside to outside and roles/privileges controlling information flow to right administrators and decreasing panic.
- 2) "Hot spot" location-aware EMMA real-time map views by administrators/SWAT/911 first responders.
- 3) Easy resource access by arriving 911/law enforcement on assets and maps, floor plans access to arriving help.
- 4) Asset location map (Stop The Bleed kits or supplies for severe bleeding) and easy mobile map directions.
- 5) Script access for administrators to use to control public relations and keep those sheltered in-place and outside calm.
- 6) Clear parent and student communication, decreasing social media use and press coverage.
- 7) Improved timelines for response and care to all affected, due to continual EMMA push notifications and tools inside EMMA Admin portal for administrator use and via nonlimited streaming user communications from EMMA.

WHY DO YOU NEED TO BE PREPARED?

MAJOR FINDINGS FROM THE FBI'S ACTIVE SHOOTER INCIDENTS STUDY

The "A Study of Active Shooter Incidents in the United States Between 2000 and 2013" contains a full list of the 160 incidents used in study, including those that occurred at Virginia Tech, Sandy Hook Elementary School, the U.S. Holocaust Memorial Museum, Fort Hood, the Aurora (Colorado) Cinemark Century 16 movie theater, the Sikh Temple of Wisconsin, and the Washington Navy Yard, as well as numerous other tragic shootings. Here are some of the study's findings:

- Active shooter incidents are becoming more frequent—the first seven years of the study show an average of 6.4 incidents annually, while the last seven years show 16.4 incidents annually.
- These incidents resulted in a total of 1,043 casualties (486 killed, 557 wounded—excluding the shooters).
- All but six of the 160 incidents involved male shooters (and only two involved more than one shooter).
- More than half of the incidents—90 shootings—ended on the shooter's initiative (i.e., suicide, fleeing), while 21 incidents ended after unarmed citizens successfully restrained the shooter.
- In 21 of the 45 incidents where law enforcement had to engage the shooter to end the threat, nine officers were killed and 28 were wounded.
- The largest percentage of incidents—45.6 percent—took place in a commercial environment (73 incidents), followed by 24.3 percent that took place in an educational environment (39 incidents). The remaining incidents occurred at the other location types specified in the study—open spaces, military and other government properties, residential properties, houses of worship, and health care facilities.

Prior to Parkland, FL – the stats on Number of victims of school shootings in the United States between 1982 and February 2018

