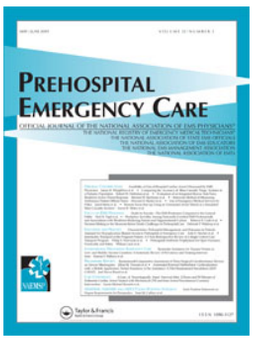

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Evaluation of an Integrated Rescue Task Force Model for Active Threat Response

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Abstract

Objective: An integrated response to active threat events is essential to saving lives. Coordination of law enforcement officer (LEO) and emergency medical services (EMS) roles requires joint training, as maximizing survival is a shared responsibility. We sought to evaluate the performance of an integrated LEO-EMS Rescue Task Force (RTF) response to a simulated active shooter incident utilizing objective performance measures. **Methods:** Following prior didactic training, we conducted a series of evaluation scenarios for EMS providers and patrol officers in our urban/suburban advanced life support EMS system (pop. 1,000,000). The scenario-tested command staff, LEOs tasked with neutralizing an active shooter threat, and two RTFs of LEOs and EMS providers each tasked with triage and treatment of 11 simulated casualties scattered over 2 office building floors totaling 13,000 square feet. Trained evaluators recorded performance on 30 objective data elements related to LEO-EMS operations/communication, time intervals, and trauma care. Data were analyzed using descriptive statistics and t-tests for between group comparisons. **Results:** Over 18 days, 69 scenario events evaluated 388 EMS providers and 468 LEOs. Overall median (90th percentile) times in minutes from dispatch were: unified command established 4.1 (5.5), RTF assembled 9.4 (13.5), first victim contact 11.9 (16.5), first victim to internal casualty collection point (CCP) 16.6 (20.8), all victims ready for evacuation 21.6 (26.0). Life-saving interventions included tourniquet placed: 96% (95% CI 92–99) and LEO placed tourniquet: 88% (79–94). Clinical delays included inappropriate chest decompression: 4% (2–9) and unnecessary initial treatment: 17% (12–25). Correct operational actions included communication with LEO to ensure EMS was safe to treat: 70% (61-77) and appropriate CCP selection: 84% (74–91). Incorrect operational actions included failure to maintain protective LEO-EMS formation: 49% (45–62) and inappropriate single patient evacuation: 20% (14–28). Limitations included the lack of a pre-training control group for this novel program. **Conclusions:** We described the performance of an integrated LEO-EMS Rescue Task Force response to a simulated active shooter event in a large city. In general, clinical care was appropriate while operational targets can be improved. Objective measurement of response goals may be used for benchmarking and performance improvement for active threat events. **Key words:** emergency medical services; law enforcement; trauma; tourniquets; simulation training

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Introduction

Active threat incidents occur in municipalities of all sizes on both a national and international basis. Recent high profile active threat events have forced Emergency Medical Services (EMS), fire, and law enforcement leaders nationwide to prioritize planning for these events (1,2). The FBI notes that there were 160 active shooter events spanning 2000–2013 with over 1,043 casualties (3). These events have increased in frequency such that the Hartford Consensus first convened in 2013 in order to recognize the importance of a coordinated approach to these events and to support local, state, and national policies to enhance survival (4). Regardless of size and capacity, every public safety agency must prepare to respond to these dynamic events. To improve the chances of survivability associated with active threat events, there must be a rapid, integrated continuum of care from the initial response to definitive treatment (5,6).

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Due to the rapid nature of these events, line personnel from police, EMS and fire will be the first responders to render aid to victims rather than Special Weapons and Tactics (SWAT) or tactical medical support (7,8). Therefore, integrated active threat training for all field officers and all medical providers is necessary to build proficiency and speed. This conclusion is supported by after-action reports citing the need for improvement with integrated response operations (2,9).

The rescue task force (RTF) model is an integrated response configuration that combines early arriving law enforcement and medical personnel from EMS or Fire (10,11). The combination of personnel across disciplines in a joint operating environment allows for a rapid medical response in warm zone areas, rather than a traditional medical response in a cleared and secured environment. Many organizations have adopted the rescue task force model as the optimal operational strategy for response (12,13).

In the RTF response model, first-arriving law enforcement forms a "contact" team whose job is to locate, isolate, and stop the shooter. Simultaneously, other arriving law enforcement personnel and first-arriving medical personnel meet at an identified location and become an RTF with the intention to deploy into the scene to render aid to known victims that are non-ambulatory.

We sought to objectively evaluate the performance of an integrated rescue task force model in response to a simulated active threat event. The medical literature surrounding disaster training is growing, however, much of the literature on disaster training and response reports "lessons learned" and other subjective or qualitative analysis. Many studies lack empirical data or evaluation metrics upon which to build objective benchmarks to prepare and improve response to active threat events (14). The Emergency Medicine and public safety communities have recognized this, and efforts continue towards engaging in data-driven processes and training that is measurable and comparable within and across systems. In this project, we described discrete time intervals and clinical actions to establish a framework for benchmarking response to active threat events.

METHODS

Study Setting and Design

Wake County is an urban/suburban county located in central North Carolina, with an area of 854 square miles and a population of 1,000,000 residents. The Wake County EMS system is comprised of the Wake County Department of EMS and three contracted provider agencies: Apex EMS, Cary EMS, and Eastern Wake EMS. The system operates at an advanced life support (ALS) level, with at least one paramedic on each ambulance. The system received ~101,000 calls for service in 2016. EMS conducted this exercise in conjunction with Raleigh Police Department (RPD). RPD is the largest law enforcement agency in Wake County, serving a population of 432,000 citizens.

The study was a cross-sectional, observational evaluation of a novel training program. A small group of content experts in EMS training and Law Enforcement, including multiple study authors (MWB, MBD, DGG and JEP), developed the training program curriculum. Training was divided into two distinct phases: didactic and operational. Data were collected during observation of the operational training phase. The study population was EMS System Personnel, Raleigh Police Patrol Officers, and supervisory staff from both agencies.

We submitted the study to the WakeMed Institutional Review Board where it was reviewed and exempted.

Study Protocol

Didactic Training Phase. During the month prior to the simulation training, Wake EMS (MWB) provided lecture-based training on active threat response and the RTF model to all Wake EMS system personnel in a face-to-face continuing education session. In addition, in preparation for active threat training, the Wake EMS system developed an active threat equipment bag. We outfitted this active threat/trauma response bag with the minimum supplies necessary to respond to a penetrating trauma event. This bag was the only equipment EMS personnel were required to take to the patient's side during any shooting or stabbing call. Participants were very familiar with their equipment before active threat training began.

During this same month, Raleigh Police (JEP) conducted separate didactic sessions for their personnel to introduce the rescue task force model. In addition, during these sessions, a study author (MWB) provided North Carolina law-enforcement-mandated tourniquet training to all Raleigh Police field operations personnel.

Operational Training Phase. The Wake EMS system conducted multiple simulated active threat scenarios one month after baseline education was delivered We aimed to train every front-line EMS field provider and Raleigh Police patrol officer in

the concept and operations of the RTF model by having each person conduct operations and care as part of a RTF during a simulated active threat event. The Wake EMS system has an active tactical medic program that supports pre-planned special law enforcement operations, but for active threat response every field provider was trained to respond as part of a RTF.

We established a 2-hour time frame for each active threat training exercise to allow for an initial safety brief, the active threat scenario and a detailed debriefing. A multi-level office building spanning 2 floors and totaling 13,000 square feet was utilized for the simulated scene. Each active threat scenario consisted of 5 identical simulated patients per floor, which were a combination of moulaged manikins and human actors, and a sixth patient, the deceased active shooter, on the second floor. Patient 1 had an exsanguinating hemorrhage to the left leg and the appropriate initial treatment was for a tourniquet to be placed Patient 2 had a gunshot wound (GSW) to the chest but had no respiratory distress, was conscious, and had a strong radial pulse. The appropriate initial treatment was for a chest seal or no immediate treatment (i.e., decompression not indicated). Patient 3 had a GSW to the abdomen, with "no treatment" the appropriate initial action. Patient 4 had an exsanguinating hemorrhage to the right arm; the appropriate initial treatment was for a tourniquet to be placed. Patient 5 had a GSW to the lower leg with only minor bleeding; the appropriate action was "no initial treatment" (i.e., no indication for tourniquet). Patient 6, on the second floor only, was the deceased active shooter with no treatment indicated.

The RTF model for the Wake EMS system included 3 to 4 law enforcement officers and 2 EMS personnel per RTF, who worked together as an integrated unit to enter the scene. In addition, the RTF model included unified command and close communication between EMS and law enforcement supervisors. Each scenario required 8 Raleigh Police patrol officers, 1 Raleigh Police sergeant, 4 EMS personnel, and 1 EMS supervisor.

Six event controllers acted as communicators for the contact team and RTFs, incident command, and provided dispatch and arrival information to simulate an actual response. Event controllers staged EMS and LEO personnel at separate locations and personnel released to the scene at common response intervals. The simulated active threat scenario proceeded as follows:

1. Started with a 9-1-1 center dispatch of multiple law enforcement, EMS, and supervisory units to a scene in which "shots have been fired" with multiple casualties.
2. First arriving officers formed a contact team and notified command (when established). This team then entered the building to locate, isolate, and stop the shooter. There was a single adult male shooter, armed with a semi-automatic rifle, who progressed from the first floor to the second floor, where he was encountered by the contact team and killed by LEO gunfire.
3. The EMS supervisor and Raleigh Police sergeant established unified command in the same physical location outside the simulated scene.
4. Two RTFs formed with next-arriving law enforcement and EMS personnel and, subsequently, command directed the RTFs to enter the building once the contact team communicated that the threat was contained.
5. The RTFs proceeded through both floors simultaneously (one RTF per floor) in order to access, assess, stabilize, and evacuate the simulated patients, with injuries as previously described. In this model, at a minimum, one RTF deployed to each floor or sector of a structure to optimize speed in reaching casualties. In addition, on the second floor, the LEO contact team had the opportunity to place a tourniquet on patient 1 once the active shooter was neutralized.
6. The scenario ended once the RTF accessed, assessed, and stabilized all casualties, consolidated them at a casualty collection point, and requested a secure corridor for evacuation.

Each time the RTF encountered a patient, EMS personnel requested "permission to treat," which was verbal communication to ensure that the LEO members of the RTF had established adequate security. Once the EMS personnel completed assessment and stabilization of the patient, they informed the LEO members of the RTF that they were "ready to move." As the RTFs proceeded through the scenario, EMS personnel left a green chemical light at each initially assessed patient and moved to the next patient. In addition, they left a blue chemical light at the dead patient encountered. They always deployed the chemical light in the hallway, even if the patient was in a room. This process continued quickly until the RTF reached the end of their assigned area of responsibility (AOR). Incident command designated the area of responsibility as an area that known casualties were located. For this particular training evaluation, personnel identified a casualty collection point (CCP) and used it to consolidate patients while the RTF called additional resources for evacuation

In our scenario, once personnel in the assigned AOR assessed and treated any life threatening patient findings, the RTF contacted unified

TABLE 1. Scenario time intervals for rescue task forces, all participants

Interval Measured	Mean Time, min (SD)	Median Time, min (IQR)	90th %tile Time, min
RTF* Formation to First patient contact, for all floors ($n = 138$)	2.05 (1.41)	1.68 (1.12–2.55)	3.88
RTF Formation to First patient contact, first floor only ($n = 69$)	1.58 (1.09)	1.26 (0.98–1.95)	3.75
RTF Formation to First patient contact, second floor only ($n = 69$)	2.51 (1.55)	1.91 (1.60–3.00)	4.75
First Patient Contact to CCP† Established, for all floors ($n = 138$)	4.80 (2.57)	4.50 (3.00–6.38)	8.56
First Patient Contact to CCP Established, first floor only ($n = 69$)	5.89 (2.74)	5.75 (3.91–8.40)	9.63
First Patient Contact to CCP Established, second floor only ($n = 69$)	3.72 (1.86)	3.28 (2.33–5.20)	6.33

*Rescue Task Force.
†Casualty Collection Point.

command to inform them of the: 1) total number of patients; 2) total that meet CDC field triage trauma criteria (15); 3) number of ambulatory patients; 4) an identifier of the casualty collection point; and 5) request for evacuation resources. During this time, the RTF physically moved casualties from the point of wounding to the casualty collection point for the purposes of consolidation while awaiting evacuation. Our scenario ended upon consolidation of all casualties and evacuation was not performed or evaluated. In the case of an actual event, our protocol would utilize fire department personnel to augment the RTF(s) as needed and assist with the evacuation of patients.

Outcome Measurements, Data Collection, and Analysis

In this exercise, we measured the RTF's ability to rapidly access, assess, stabilize, and call for the evacuation of patients. Primary outcome measures were key time intervals (Appendices A and B) and secondary outcomes were whether key elements of trauma care were performed. There was no discrete primary outcome; we intended for the study to describe and benchmark performance in this scenario, for the purposes of future focused training and improvement. After assessment, the RTF determined whether immediate lifesaving treatment interventions (Life Saving Interventions = LSI) were indicated, consistent with the threat-based phases detailed in TECC guidelines (16). We pre-defined (Appendix A) a set of opportunities for "appropriate treatment actions" and "inappropriate treatment actions" for each simulated patient. Data collectors marked "Yes" or "No" with regard to whether a treatment action was performed for each simulated patient. For each casualty that was encountered, the medical personnel in the RTF assessed for exsanguinating extremity hemorrhage, tension pneumothorax, and airway compromise. The only stabilizing treatment that should have been provided at initial assessment included the application of a tourniquet, chest decompression if indicated, and/or basic airway maneuvers (these were the 3 appropriate "LSIs").

The six event controllers were also the data collectors for this event. Study personnel assigned individual controllers to each contact team and RTF. Controllers utilized a stopwatch that started when the event was dispatched, along with a paper evaluation form in order to capture the pre-defined metrics associated with an active threat event for each RTF. Controllers were either tactical paramedics with the Wake EMS tactical medic program, or police officers from the reality-based training unit of the Raleigh Police Department. The controllers received a 1–2 hour training course from study authors (MWB, JEP) that reviewed the data collection form and data dictionary (Appendices A and B). Controllers recorded performance on 30 objective data elements related to LEO-EMS operations on the data collection form for each RTF. A study author (MWB) collected these forms at the end of each scenario and entered them into a centralized database (Microsoft Access 2010, Redmond, WA). Outcome measures included the duration of key time intervals, and whether key elements of trauma care consistent with threat-based guidelines were performed. Three study authors (MWB, BCA, JGW) analyzed the data using descriptive statistics, t-tests, and confidence intervals (Microsoft Excel 2010, Redmond, WA and Graphpad Software, Inc 2017, La Jolla, CA).

RESULTS

Over 18 days, 69 scenario events evaluated 138 RTFs and supervisors, for a total of 388 EMS providers and 468 LEOs. We stratified the descriptive analysis and comparison of means by rescue task force ($n = 138$). Overall median (90th percentile) times in minutes from dispatch were: unified command established 4.1 (5.5), RTF assembled 9.4 (13.5), first victim contacted 11.9 (16.5), first victim moved to internal casualty collection point (CCP) 16.6 (20.8), all victims ready for evacuation 21.6 (26.0). Table 1 describes individual intervals within the

Table 2. Time intervals for rescue task forces, first-time participants

Interval Measured	Mean Time, min (SD)	Median Time, min (IQR)	90th %tile Time, min
RTF* Formation to First patient contact, for all floors ($n = 94$)	2.23 (1.58)	1.79 (1.23–2.81)	4.14
RTF Formation to First patient contact, first floor only ($n = 46$)	1.62 (1.12)	1.32 (1.00–1.97)	3.81
RTF Formation to First patient contact, second floor only ($n = 48$)	2.82 (1.74)	2.18 (1.73–3.36)	4.95
First Patient Contact to CCP† Established, for all floors ($n = 94$)	5.13 (2.57)	5.13 (3.14–6.76)	8.54
First Patient Contact to CCP Established, first floor only ($n = 46$)	6.21 (2.71)	6.16 (4.18–8.42)	9.51
First Patient Contact to CCP Established, second floor only ($n = 48$)	4.09 (1.95)	4.23 (2.73–5.45)	6.41

*Rescue Task Force.
†Casualty Collection Point.

Table 3. Time intervals for rescue task forces, repeat participants

Interval Measured	Mean Time, min (SD)	Median Time, min (IQR)	90th %tile Time, min
RTF* Formation to First patient contact, for all floors ($n = 44$)	1.65 (0.88)	1.55 (1.06–1.95)	3.01
RTF Formation to First patient contact, first floor only ($n = 23$)	1.5 (1.05)	1.1 (0.87–1.94)	2.94
RTF Formation to First patient contact, second floor only ($n = 21$)	1.81 (0.62)	1.68 (1.40–2.06)	2.76
First Patient Contact to CCP† Established, for all floors ($n = 44$)	4.12 (2.46)	3.49 (2.37–5.55)	8.58
First Patient Contact to CCP Established, first floor only ($n = 23$)	5.25 (2.74)	5.25 (3.43–6.54)	9.09
First Patient Contact to CCP Established, second floor only ($n = 21$)	2.89 (1.32)	3.00 (1.90–3.46)	4.33

*Rescue Task Force.
†Casualty Collection Point.

Table 4. Comparison between RTFs with "only first-time" and "repeat" participants

Interval Measured	First-Time ($n = 94$)	Repeat ($n = 44$)	Mean Difference (95% CI)	p-value
RTF* Formation to First patient contact (all floors), mean min (95% CI)	2.23 (1.91–2.56)	1.65 (1.38–1.92)	0.58 (0.07–1.08)	0.02
First Patient Contact to CCP† Established (all floors), mean min (95% CI)	5.13 (4.60–5.65)	4.12 (3.37–4.87)	1.00 (0.08–1.92)	0.03

*Rescue task force.
†Casualty collection point.

scenario: time from RTF formation to first patient contact and time from first patient contact to establishment of the CCP. See Appendix B for definitions of these elements.

Due to the staffing intricacies of ensuring every EMS provider in the system participated, some EMS personnel participated in the scenario evaluation twice (but no more than twice). Time intervals for RTFs with only First-Time Participants are described in Table 2, and time intervals for RTFs that included a repeat participant are described in Table 3. We compared the most important time intervals (the summative "all floors" times) between groups. As described in Table 4, RTFs with repeat participants had significantly shorter times to these key events than did RTFs with only first-time participants.

In addition, we evaluated the trauma care performed both by law enforcement (whether contact team or RTF) and by EMS members of the RTF. Outcomes of opportunities for appropriate and inappropriate treatment actions are shown in Figure 1. In the great majority of RTFs, personnel placed tourniquets appropriately. In a small percentage of RTFs, personnel performed interventions not clinically indicated (e.g., inappropriate chest decompression occurred in 4%, 95% CI 2–9%) or performed interventions other than LSIs at the initial patient encounter. These were deemed inappropriate (15% of opportunities, 95% CI 11–20%).

Furthermore, we measured pre-defined key operational metrics, such as certain communications, between EMS and law enforcement. For example, correct communication from EMS to LEO to ensure EMS is "safe to treat" occurred 70% of the time (95% CI 61–77%). Incorrect operational actions included failure to maintain protective LEO-EMS formation (occurred in 49%, 95% CI 45–62% of opportunities) and inappropriate single patient evacuation occurred in 20% (95% CI 14–28%) of scenarios.

Discussion

We described the implementation and measurement of a large scale training event for the rescue

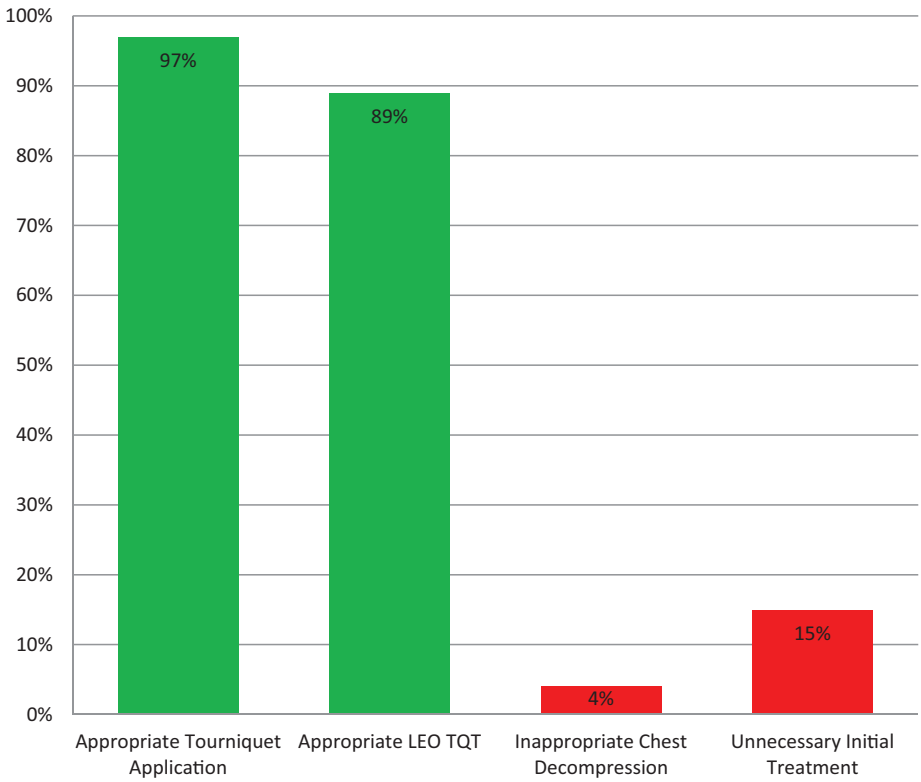

FIGURE 1. Scenario Trauma care in the Rescue Task Force Model. Green Represents Appropriate interventions and red indicates inappropriate interventions, represented by the percentage of opportunities in which they occurred.

task force model. This event was successful in that we were able to include all EMS field personnel and supervisors working together with all Raleigh Police Department patrol officers. We benchmarked system performance with regard to times to key events, as well as for trauma care priorities. This training evaluation measured our ability to rapidly access, assess, stabilize, and request evacuation in a coordinated, integrated fashion, for active threat events.

Deployment of integrated resources is a key component of a successful response. Integrated response is not a new concept (13), but it can be difficult to engage large numbers of active-duty public safety personnel in ongoing joint training. Therefore, it is important to take any opportunity to measure training performance in a reproducible way, such that future training can build on initial benchmarks. Indeed, training for these events, and the measurement of metrics for readiness, is important for professional responders as well as for members of the communities they serve (17,18).

In addition to measurement, it is important to ensure that training prepares responders for what they are likely to encounter in a "real" event. Our training occurred in a vacant office building spanning two floors with 13,000 feet of space and included LEO contact teams engaging a simulated threat with non-lethal Simunition™ marking cartridges. Also, we planned for the simulated event to unfold rapidly, with RTFs entering a "warm zone" immediately after contact teams have neutralized the threat. We intended these elements to be comparable to what is known about how prior real-life active threat events have unfolded (3,7). We acknowledge, consistent with threat-based care principles, that other options for patient movement existed (e.g., immediate victim evacuation instead of utilization of a CCP), depending on the circumstances of the event. In any case, immediate safe evacuation and transport of patients should be the priority, and care should be taken not to cause a delay in transport to an appropriate trauma center. Indeed, perhaps the most important part of "training for reality" is emphasizing the speed necessary to optimally respond to active threat events, both operationally and clinically. Our training measured several different time intervals in order to build a baseline for which future events can be compared. The ultimate goal of RTF response is to intervene quickly and treat preventable causes of death to increase survivability during these events, which means medical providers must be involved earlier in the event (4,5). The medical component of the RTF should utilize threat based treatment guidelines, and patients should be treated and rapidly transported to definitive trauma care (5).

The initial care priorities in this training focused primarily on tourniquets for severe extremity hemorrhage (4). However, in actual events the incidence of head and torso trauma is also significant (19,20). Some of these injuries described, if treated, could possibly have been survivable.

In addition, LEOs can and should participate in initial care priorities, especially tourniquet placement, when appropriate. Our training, with the opportunity for LEO-placed tourniquets on patient 1, corroborates the literature on this topic (21). These scenarios, as well as future training, should include injuries consistent with what history tells us that civilian EMS and law enforcement are most likely to encounter in order to best prepare responders.

There are several limitations to this novel simulation of an active threat event. Although we feel that this simulation represented a potential real-world event, no one can accurately predict the actions of an active shooter from a tactical perspective and the complexities of dealing with such a dynamic event. The chaos that ensues during an event was not able to be replicated, therefore not invoking a natural level of stress on the responders. In addition, our simulation study was only able to measure whether an appropriate treatment occurred (i.e., yes/no) and not whether an appropriate treatment was effective (e.g. did the tourniquet stop the bleeding). As we know, effective tourniquet application is not guaranteed (22). Future research should include the use of high-fidelity simulation in order to attempt to assess trauma intervention effectiveness as well as completion. In spite of these limitations, this training description provides a framework for organizations to build and measure their training to enhance their preparation for response.

Conclusion

We describe the performance of an integrated LEO-EMS Rescue Task Force response to a simulated active shooter event in a large city. In general, clinical care was appropriate while operational targets could be improved. Objective measurement of response goals may be used for benchmarking and performance improvement for active threat events.

We feel that this training conducted by the Wake EMS system is consistent with the stated goals in the literature for improving disaster training and mass-casualty response. By describing the concept of the rescue task force, these evolutions and the data elements used to measure them, we will continue to improve our abilities to respond to these disasters, and to be able to share that knowledge with other systems via measurable and objective comparisons in addition to qualitative data. Organizations should continue to participate regularly in reality- based training and measure their performance to improve their readiness for response to these types of events. Unfortunately for many communities, the mantra is not "if" an active threat event will occur, but "when" will an active threat event occur.

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Appendix A

Outcome measures and data collection form for the simulated scenario.

Active Shooter Evaluation Sheet

Date:____/____/____ Time:_____ AM/PM Evaluator Name:_____

Session Number:_____

1. Has either provider participated in the training already this month	☐ Yes ☐ No
2. Floor you are evaluating: **1** **2** (please circle the correct one)	
3. Incident command (IC) established with LEO and EMS physically together	☐ Yes ☐ No
4. Elapsed Stop Watch Time when incident command established :	
5. Elapsed Time LEO declares scene "Clear":	
6. EMS Units switch to a "Direct" channel	☐ Yes ☐ No
7. Does someone from IC call for formation of a Rescue Task Force (RTF)?	☐ Yes ☐ No
8. If #7 is Yes, what is the elapsed time that the RTF is called for?	
9. Elapsed Time the RTF you are evaluating actually assembles (LEO and EMS):	
10. At least 1 RTF is sent to each floor of known casualties	☐ Yes ☐ No
11. All Medics maintain appropriate contact with entire RTF	☐ Yes ☐ No
12. At least one Medic communicates need to treat to entire RTF when casualty is encountered	☐ Yes ☐ No
13. Elapsed Time when RTF makes contact with first victim:	
14. Casualty One: Tourniquet placed by medic or LEO?	☐ Yes ☐ No
15. Casualty Two: Was the chest decompressed?	☐ Yes ☐ No
16. Casualty Two: Was the chest wound covered?	☐ Yes ☐ No
17. Casualty Three: Was any treatment provided?	☐ Yes ☐ No
18. Casualty Four: Tourniquet placed by medic or LEO?	☐ Yes ☐ No
19. Casualty Five: Was any treatment provided ?	☐ Yes ☐ No
20. Did any LEO place a tourniquet on any casualty? (circle all that apply)	**Yes-#1 Yes-#4 No**
21. Do RTF Medics determine appropriate CCP location	☐ Yes ☐ No
22. Elapsed Time CCP is established:	
23. Are all appropriate casualties moved to CCP	☐ Yes ☐ No
24. Elapsed Time last patient in CCP:	
25. Do medics attempt to evacuate any single casualties prior to consolidation at CCP	☐ Yes ☐ No
26. Medics notify IC of number of casualties	☐ Yes ☐ No
27. Medics notify IC of location of CCP	☐ Yes ☐ No
28. Medics request assistance and direction with evacuation when appropriate	☐ Yes ☐ No
29. Elapsed Time: When request for evacuation is made to IC	
30. Elapsed Time: When IC states development of Evacuation Strike Team **(Scenario Ends)**	

APPENDIX B

Data dictionary for active shooter evaluation sheet.

Start time: Once the LEO controller dispatches the first LEO unit the stop watch time begins

#1 - Already participated: Either provider has already gone through the scenario this month

#2 - Floor: the scenario takes place on the first and second floor. Each evaluator will be responsible for a single floor. Please circle the floor you are evaluating

#3&4 - Incident command established: The highest ranking LEO and EMS provider (in this case DC or APP) will establish a unified command. Once those personnel are together document the time

#5 - Clear: This means the known shooter is contained and it is time for the rescue team to respond

#6 - Direct channel: This is the channel either marked Direct 1 or Direct 2 that we will utilize for internal communications on active shooter events

#7 - Rescue Task Force (RTF) Requested: The request by EMS or LEO to form a team of LEO and EMS for the purposes of casualty rescue

#8 - Time Rescue Team Requested: If #7 is true what was the elapsed time of the request

#9 - Elapsed time of assembly: The time that EMS and LEO physically assemble to form RTF

#11 - Appropriate contact: Medics are staying within protective area of the LEO and ensure that 360 coverage is provided to them. 1 occurrence of team separation LEO or EMS = NO

#12 - Ask permission to treat: EMS asks RTF for permission to move to treat. 1 negative occurrence = NO

#13 - Contact with first victim: Elapsed time when RTF is close enough to first casualty to make adequate physical or visual assessment of need to treat or not.

#14,15,16,17,18,19 - Treatment provided: Were the treatments listed provided or not by either LEO or EMS

#20- LEO Place tourniquet: LEO may have opportunity to place tourniquet, did they yes or no. Does not matter if contact team member or RTF

#21&22 - Appropriate CCP established: The CCP is established when the location is defined by the RTF and when the first casualty crosses the threshold of the location. An appropriate CCP is any place other than hallway or stairwell. Elapsed time this occurred

#23&24 - All casualties to CCP: This is when the last casualty crosses the threshold of CCP. Time = What time did the last patient cross the threshold of the CCP. Appropriate means all moveable casualties have been moved

#26&27- Notify IC of CCP and time: Did medics notify the IC of location of CCP and number of casualties.

#28&29 - Request evacuation: Once CCP is established a request for an evacuation strike team should be made to the IC. They should not attempt to evacuate prior to direction from IC. The elapsed time the medics made the request for evacuation

Time Stops when IC informs that Evacuation Strike Team is being developed