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# The expansion of the training of the hospital emergency response team at Sentara Rockingham Memorial with the Harrisonburg rescue squad

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**The Expansion of the Training of the Hospital Emergency Response Team at Sentara  
Rockingham Memorial with the Harrisonburg Rescue Squad**

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An Honors Program Project Presented to  
the Faculty of the Undergraduate  
College of Integrated Science and Technology  
James Madison University

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Submitted by: Allison Elizabeth Mayzel

May 2016

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Accepted by the faculty of the Department of Integrated Science and Technology, James Madison University, in partial fulfillment of the requirements for the Honors Program.

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PUBLIC PRESENTATION

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## **Abstract**

Major emergency incidents occur without any notice and can cause extreme disorder and confusion. The hospital in Harrisonburg, Virginia, Sentara Rockingham Memorial, has created a Hospital Emergency Response Team (HERT) that will be prepared to respond to major incidents in order to create an Emergency Treatment Area that will triage, decontaminate, and transport patients. An agency that operates closely with the HERT is Harrisonburg Rescue Squad. The Rescue Squad is the first response to the scene of disasters, therefore it is important for them to be prepared for any emergency situation. In order to create uniformity between the Rescue Squad and the Hospital Emergency Response Team, training programs developed by the Federal Emergency Management Agency (FEMA) were offered to members of the Rescue Squad as a means to increase their education and preparedness for disasters. An Awareness-160 and a Hospital Emergency Response Team class were offered to the members. These classes were found to be effective for medical professionals and JMU students. This community-related project was successful at increasing the education of the Rescue Squad as well as the general public to be prepared for major incidents that may occur in the community.

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## **Introduction & Literature Review**

Sentara Rockingham Memorial Hospital (SRMH) is a healthcare facility in Harrisonburg, Virginia that serves more than 77,000 patients. This Sentara-owned facility was opened in 1912 but relocated in 2010 (Sentara, 2016). The new location provides opportunities for new advancements and technology for better patient care.

Over the past two years, SRMH has partnered with James Madison University (JMU) to develop a Hospital Emergency Response Team (HERT). An Emergency Response Team is critical for effective responses to major incidents and disasters. Since 1919, the U.S. federal government has attempted to provide assistance in the face of disasters. In particular, the Federal Emergency Management Agency (FEMA) has established the Center of Domestic Preparedness to operate with the U.S. Department of Homeland Security to be ready for emergency events (Center for Domestic Preparedness, 2011). FEMA's Center of Domestic Preparedness in Anniston, Alabama was created in 1998 as a training center for first responders.. It plans specific training programs to help emergency responders stay supplied and otherwise prepared for patient care in the event of an emergency (Center for Domestic Preparedness, 2015).

The terrorist attacks of September 11, 2001 changed the way that the United States responds to emergencies. Throughout these events, FEMA played a major role in determining disaster-response infrastructure.. Through the 9/11 attacks, the government observed extreme chaos due to lack of organization. Unprepared agencies responded to dangerous scenes and supplies were not allocated appropriately. These errors led to safety hazards and in some cases, death for emergency personnel (U.S. GPO, 2003). In order to avoid response teams going into dangerous situations blindly, FEMA developed a new system that involved setting up an Incident Command Center at the center of the response. The Incident Command Center would oversee an

Emergency Treatment Area for emergency responders where they could begin triaging, decontaminating and treating patients as they arrived (FEMA, 2003). Since the creation of the Incident Command Center protocol, FEMA's Center of Domestic Preparedness has been operating to ensure the use of these plans in major disasters across the nation by training Emergency Response Teams on the proper response in a disaster situation.

Prior to the development of the HERT at SRMH, medical personnel did not understand the roles and responsibilities of the hospital in a major disaster. Through the work and cooperation of approximately forty hospital employees from the emergency and other departments at SRMH, the hospital was able to develop a plan to establish and begin training the HERT team. These efforts were led by Emergency Manager, Mr. Robbie Symons, and two JMU students, Chelsey Frelke and Jonathan T. Simmons (Simmons, 2015). Dr. Ronald Raab, a regional Hazardous Materials (HAZMAT) responder and educator for Rockingham County, also helped facilitate the training sessions. The HERT has been designed to come in formation during any mass casualty incident (MCI) or major environmental, chemical, or situational incidents including chemical explosions, major natural disasters or terrorist attacks that may occur within the county. A MCI would create an influx of patients into the Emergency Department and the HERT is responsible for keeping the hospital operating by monitoring the contaminated patients so that they can be treated appropriately by the Emergency Department (Macintyre, et al. 2000).

As of 2014, the HERT team has been equipped by SRMH and continues to actively train to prepare for major incidents. An organization that interacts with the HERT during a major disaster is the Harrisonburg Rescue Squad. The Harrisonburg Rescue Squad is an agency that helps transport patients directly to the Emergency Department at SRMH. Established in 1949, the Harrisonburg Rescue Squad is a 100% volunteer agency that works with the assistance from

Volunteer Hose Company 4 and the Harrisonburg Fire Department (Harrisonburg Rescue Squad, 2016). In the case of a chemical explosion or another major incident, the Rescue Squad would be one of the first responders on scene. They would have to triage and decontaminate the patients on scene so that they could be transported to the Emergency Department. Since the Rescue Squad and SRMH have a direct relationship through their patients, it is important that members of the Rescue Squad are trained to respond to MCIs at the same ability as the HERT. Training that is offered to the members has to be approved by the Rescue Squad's Board of Directors, which consists of seven members that represent the leaders of the Rescue Squad. In the past, there has not been adequate training for the Rescue Squad to respond in such emergencies. Therefore training needs to be provided for the Rescue Squad to operate with the HERT.

Two of the classes that are taught to the HERT include the Awareness-160 class and the Hospital Emergency Response Team class. These classes are designed by FEMA's Center of Domestic Preparedness to help organizations establish structure and organization in the case of a major incident. In order to monitor the effectiveness of these courses, FEMA developed standardized pre- and post-tests containing multiple-choice questions that cover the material. FEMA requires that participants receive above a 70% on the post-test to pass the course (Center for Domestic Preparedness, 2011).

The Awareness-160 is a class that is designed to train participants in the appropriate procedures for the successful response to weapons of mass destruction (WMD) and terrorism awareness. It provides practical information on the recognition, avoidance, isolation, and notification techniques in a WMD environment. This six-hour course covers prevention and deterrence of chemical, biological, radiological, nuclear, and explosive (CBRNE) hazards by providing hands on examples and important lectures on terrorist topics. Awareness level training

provides emergency responders and the general public with a basic understanding of how to respond safely and become aware of an accidental or terrorism incident.

The second class is the HERT training course, which provides students an understanding and ability to respond to a MCI involving contamination as a result of a natural, accidental, or intentional incidents including natural disasters, chemical explosions or terrorist attacks. Additional focus is placed on a hospital's Incident Command System, providing members with an insight to the hospital response, and assists anyone who may currently or in the future work in a hospital setting. Instruction includes the health effects of CBRNE, proper usage of Personal Protective Equipment (PPEs), proper hospital decontamination procedures, initiating triage, and the transportation of patients to an Emergency Treatment Area.

Throughout this project, Dr. Raab, Mr. Robbie Symons and I focused on the continuation of the training of the HERT as well as integrating the Rescue Squad with the HERT. To integrate the Rescue Squad, we taught the Awareness-160 and the HERT class. Both of these classes have standardized pre- and post- multiple-choice tests that I administered before and after the class in order to monitor the students' progress. The medical professionals at the Rescue Squad have an initial background in the material because of their training to become an Emergency Medical Technician (EMT). Training to become an EMT gives a general background on HAZMAT incidents, triaging patients in MCIs, and using PPE. Therefore we decided to compare medical professionals to JMU students, all of whom are not active participants in the medical field, to see if the medical professionals' general background of knowledge helped them retain the material better than the non-medical professionals (Berger, et.al. 2011).

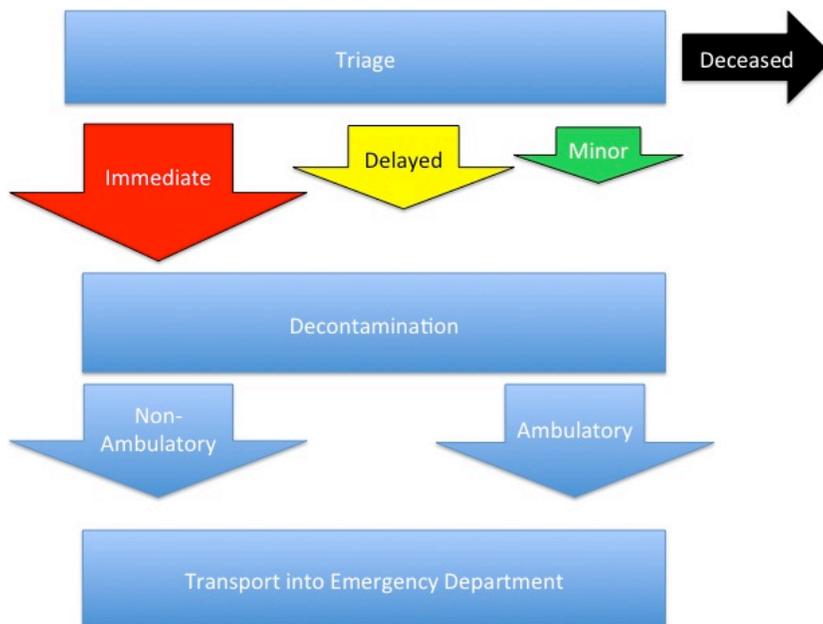
## **Objectives**

The objectives of this project were to continue the training of the Hospital Emergency Response Team at SRMH by designing and implementing a full-scale airport exercise. During the exercise we evaluated the team's ability to triage, decontaminate, transport, and care for patients with various injuries. We hoped that the HERT would be able to set up the Emergency Treatment Area effectively and utilize it during the allotment of time. Another goal was to increase the training and knowledge of the Harrisonburg Rescue Squad by providing the opportunity to take the Awareness-160 and the HERT classes so that they are up to date on the information needed for a major emergency to occur. We compared pre- and post-test scores from the standardized FEMA courses to monitor the effectiveness of the Awareness-160 and Hospital Emergency Response Team class for the Rescue Squad volunteers. We hypothesized there would be a significant increase from their pre- to post-test scores. These classes were taught at Harrisonburg Rescue Squad as well as JMU in order to compare the results from non-medical undergraduate students to medical professionals. Due to their previous education and experience in general HAZMAT awareness and triaging, we hypothesized there would be a significant difference in the scores of the pre- and post-tests of the medical professionals when compared with the non-medical professionals.

## **Methodology**

### **Shenandoah Regional Airport Exercise and Evaluation**

The HERT was evaluated during their first Full-Scale Shenandoah Regional Airport Exercise Drill located in Weyers Cave, VA on October 1, 2015. Mr. Robbie Symons and I, along with other representatives across the region, helped design the drill specifically for Emergency Response Teams at Shenandoah Regional Airport, SRMH and Augusta Medical Center. Through five different meetings that were held in the spring and summer of 2015, we planned the drill so that the HERT was completely unaware of the type of accident and the number of patients they were going to receive. The drill simulated a major disaster that involved an airplane crash with a multitude of patients that had to be transported to two different hospitals, one being SRMH. These patients had various injuries and were contaminated with chemicals that spilled from the airplane during the accident. The first responders alerted the Emergency Department and the HERT was responsible for coming together as a team. 15 members of the HERT joined together and were responsible for triaging, decontaminating, and caring for 25 contaminated patients based on their various injuries (Figure 1). Patients arrived to the hospital via emergency transport vehicles as well as private vehicles and the HERT was evaluated on their ability to minimize chaos while maintaining the operation of the rest of the Emergency Department. The Emergency Response Director, Robbie Symons, and I evaluated the HERT team by observing their ability to triage, decontaminate, and transport 25 patients into the hospital effectively.



**Figure 1.** The Emergency Treatment Area that was utilized by the HERT during the Shenandoah Airport Drill. The patients are received from the emergency responders at the top point “Triage.” The arrows represent the priority of each patient. Then the patients went through “Decontamination” which involved ambulatory and non-ambulatory patients. Finally, the patients were transported into the Emergency Department (Center for Domestic Preparedness, 2011).

### **Harrisonburg Rescue Squad Involvement**

In order to get the Harrisonburg Rescue Squad involved with the HERT team, it was imperative that the leadership of Harrisonburg Rescue Squad, the Board of Directors (BOD), approved the trainings. After receiving the approval from the BOD, the Awareness-160 class was taught by HAZMAT officer Dr. Ronald Raab to 12 members of the Harrisonburg Rescue Squad. The standardized pre- and post-test scores allowed us to monitor the effectiveness of the class. The

effectiveness was measured using a paired t-test in order to determine if there was a statistical significance between the mean pre- and post-test scores of the participants.

### **Comparison to Non-Medical Professionals**

We compared the results from the Harrisonburg Rescue Squad class with the same class taught to JMU students to see if our hypothesis that medical professionals have a larger background surrounding the material and should learn the material better was supported. The JMU students consisted of a class of 56 students who were not involved in any type of health related field. The same standardized pre- and post-tests were administered to the students and the scores were compared using an unpaired, two-tailed t-test to see if there were any significant differences between the pre- and post-test scores between the two groups.

## Results

### Shenandoah Airport Drill

Throughout the drill, Mr. Robbie Symons and I observed the HERT to evaluate their training progress.

Areas of Success:

- The entire HERT worked well together to set up all the equipment. From beginning to the end all equipment was set up and ready to receive patients within 21 minutes.
- Personal Protective Equipment Usage:
  - The HERT appropriately chose the proper PPE in order to conduct patient decontamination.
  - The HERT members worked extremely well together while monitoring their PPE usage.
- Triage:
  - The HERT appropriately triaged all patients upon entering decontamination area using proper triage procedures.
- Decontamination:
  - The HERT members assigned to decontaminating the ambulatory patients appropriately verbalized to the victims on how to remove their clothing and wash the contaminants off their bodies.
  - The HERT appropriately decontaminated the non-ambulatory patients by properly removing the contaminated clothing, and washing the patients.

- The area where the decontamination process was set up worked well. It will keep a good flow of day to day emergency patients going into the Emergency Department.
- Transport:
  - The HERT members in the medical area (patients already decontaminated) appropriately re-triaged the patients, registered them in the patient tracking system and took them into the Emergency Department for medical treatment.

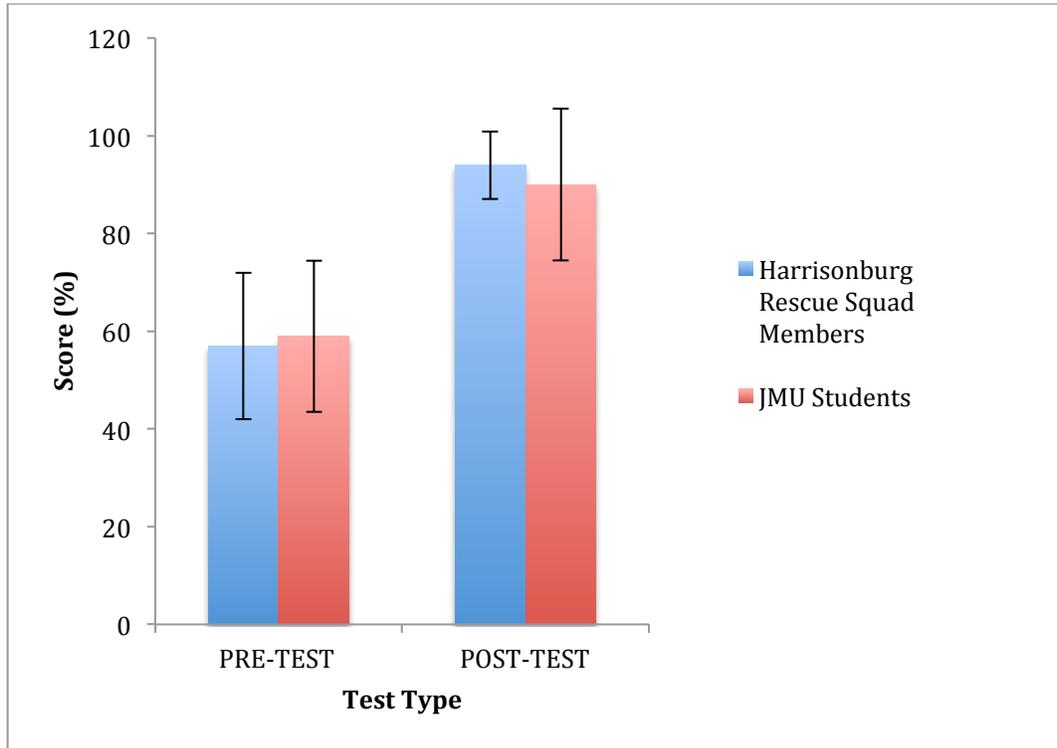
Areas of Improvement:

- The HERT members that were in the key Incident Command System positions needed to be identified with vest. Not being appropriately identified caused confusion on who was managing the specific decontamination stations.
- Several patients that were placed on the triage tarps were not monitored very well. Several Red/Yellow (Immediate and Delayed) patients laid on the tarps for an extended period of time before anyone checked on them or took them to be decontaminated.
- There were not enough hospital gurneys so several of the non-ambulatory patients had to lay on backboards in the decontamination area for an extended amount of time. Therefore, this caused a back-up of the patients that needed to be decontaminated.
- The exercise did show that SRMH needs additional HERT members. If this was an actual incident and it lasted an extended period there were not enough trained team members.



**Figure 2.** A photo from the scene of the Airport Exercise at Shenandoah Regional Airport. Participants are seen triaging patients as they prepare to take them to the 2 different hospitals (Marcus, 2015).

### Awareness-160 Class at Harrisonburg Rescue Squad



**Figure 3.** The Pre- and Post-Test Scores for the Harrisonburg Rescue Squad Members and the JMU Students for the Awareness-160 Class. The error bars represent standard error. The sample size for the Harrisonburg Rescue Squad was 12 members. The sample size for the JMU Students was 56 students.

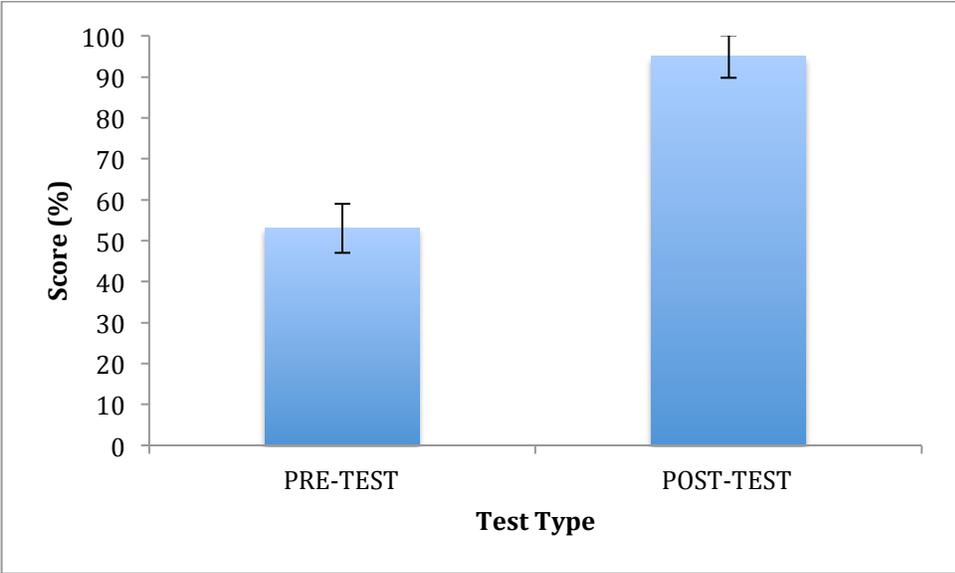
The pre- and post-test scores were recorded from the Awareness-160 class to determine the effectiveness of the class for the Harrisonburg Rescue Squad Members and the JMU Students. The average score for the Rescue Squad Members for the pre-test was 57% with a standard deviation of 15%. The average scores for the Rescue Squad Members for the post-test was 94% with a standard deviation of 6.9%. 100% of the Rescue Squad Members scored over a 70% and therefore passed the class. The average score for the JMU students for the pre-test was 59% with a standard deviation of 16.1%. The average score for the JMU students for the post-test was 90% with a standard deviation of 10.7%. 96% of the JMU students scored over a 70%

and therefore passed the class. A paired t-test was performed to determine the difference between the pre- and post-test scores of the Harrisonburg Rescue Squad. A p-value of  $6.18 \times 10^{-8}$  was found. Since  $p < 0.05$ , the null hypothesis can be rejected which indicates that there was a significant improvement between the pre- and post-test scores.

An unpaired t-test was used to determine if there was a significant difference between the test scores of the Harrisonburg Rescue Squad Members and the JMU students. For the pre-test, the p-value was 0.725. Since  $p > 0.05$ , we cannot reject the null hypothesis which indicates that there is no significant difference between the pre-test scores of the Harrisonburg Rescue Squad Members and the JMU Students. For the post-test, the p-value was 0.177. Since  $p > 0.05$ , we cannot reject the null hypothesis which indicates that there is no significant difference between the post-test scores of the Harrisonburg Rescue Squad Members and the JMU Students.

### **Hospital Emergency Response Team Class at JMU**

The HERT class was given to the JMU students to determine its effectiveness for non-medical professionals. The average pre-test score was 53% with a standard deviation of 6%. The average post-test score was 95% with a standard deviation of 5.22%. A paired t-test was performed to determine the effectiveness of the class. The p-value was determined to be  $3.03 \times 10^{-9}$ . Since the  $p\text{-value} < 0.05$ , the null hypothesis can be rejected which indicates there is a significant difference between the pre- and post-test scores.



**Figure 4.** The Pre- and Post-test scores for JMU Students for the HERT class. The error bars represent standard deviation. There were 56 students in the class.

## **Discussion**

The Hospital Emergency Response Team at Sentara RMH and the Harrisonburg Rescue Squad must work together in the case of a major emergency. Working together will allow for an organized, successful response to any major disaster that could benefit the hospital and the community of Rockingham County. The Airport exercise that occurred at Sentara Rockingham Memorial Hospital was beneficial for the HERT because it enabled them to practice in a full-scale exercise for the first time in the allotted time period. Approximately 15 members from the HERT participated from 6 am to 12 pm in the Shenandoah Airport Exercise. After being evaluated by Mr. Robbie Symons and I, we were able to determine their strengths and weaknesses. Their strengths included the HERT was able to set up their equipment and be ready to receive patients within 21 minutes of being notified of the disaster. The HERT appropriately chose the proper PPE to conduct patient decontamination and monitored it accordingly. They appropriately triaged and decontaminated all ambulatory and non-ambulatory patients. The members in the transport area appropriately re-triaged patients and brought them in for treatment in the Emergency Department. Areas of improvement include that the HERT members who were in the Incident Command System needed to be identified with a vest to account for confusion on who was managing the specific decontamination stations. Several patients who were triaged as Immediate and Delayed patients were left on the tarps for an extended amount of time which could be detrimental to their health in an actual contamination event. The exercise revealed a need for additional HERT members and supplies. In the event of an actual incident, there were not enough trained team members or supplies to sustain the Emergency Treatment Area. Although there were some weaknesses throughout the simulation, many of these errors can be

corrected with future practice. The exercise was deemed an overall success because the HERT was able to complete the skills in the allotment of time during their first full-scale exercise.

Prior to this project, the Harrisonburg Rescue Squad has not been involved in any of the HERT training. By receiving approval from the Board of Directors, there was a confirmed need for the Rescue Squad to become involved with the HERT in order to provide a smooth transition from the transporting agency to the HERT in the case of a major incident. The Awareness-160 class is part of the HERT training and therefore it is an integral part in increasing the knowledge of the Rescue Squad. It was determined that there was a significant increase between the pre- and post-test scores for the Rescue Squad members and therefore we can conclude that it was effective in creating a foundation for HERT training at the Rescue Squad, supporting our hypothesis.

In order to monitor the effectiveness of the Awareness-160 and the HERT classes in medical professionals versus non-medical professionals, the pre- and post-test scores for the Rescue Squad members and the JMU students were compared. The medical professionals in the Rescue Squad have received prior training as EMTs, which include basic training for triaging patients, HAZMAT, and proper PPE (Berger, et.al. 2011). Therefore, we compared the scores to see if the additional education helped the medical professionals score higher on the pre- or post-tests than the JMU students. There was no significant difference in the pre-test scores or in the post-test scores when comparing Harrisonburg Rescue Squad and JMU students, therefore we conclude that individuals in the medical professional are not necessarily better suited to learn the material, which does not support our hypothesis. The HERT class effectiveness was monitored by the JMU students' participation. There was a significant difference between the pre- and post-test scores and therefore we can conclude that the HERT class was effective in teaching the

material to non-medical professionals. Therefore this indicates that this material does not require a medical background to understand and it implies the importance for all members of the general public to become aware of the potential weapons of mass destruction, biological, and terrorist attacks that are prevalent in today's society.

## **Future Work**

In order to make organizations prepared for a major emergency, training must occur on a regular basis. This includes continually providing equipment, training, participating in exercises like the Shenandoah Airport Exercise, evaluating and implementing changes. This project served as a learning experience by setting the foundation for HERT training at the Harrisonburg Rescue Squad. As a follow-up for the initial class taught, it would be interesting to test the individuals in three months and six months out to see what information they retained. With any kind of learning in the emergency medical field, if the Rescue Squad does not practice their skills on a regular basis, then they will lose them.

Although we made progress towards bridging the gap between the Harrisonburg Rescue Squad and the Hospital Emergency Response Team at Sentara RMH, there is still an extensive amount of work to be done in the future. There are more trainings, including additional classes, exercises, and scenarios, that must be completed in order to educate the Rescue Squad to the same magnitude of the HERT. We hope to continue training in the future to ultimately create a uniformity between the HERT and the Harrisonburg Rescue Squad.

## Work Cited

- Berger, David, Dickinson, Ed, Grant, Harvey, Limmer, Daniel., Murray, Bob,. Okeefe, Michael. (2001). *Emergency Care* 12<sup>th</sup> Edition. Print.
- Center for Domestic Preparedness. (2011). *Hospital Emergency Response Training: Basic Indirect Delivery*. Anniston, Alabama: Author.
- Center for Domestic Preparedness (2005). *History of Center for Domestic Preparedness*. Retrieved from <https://cdp.dhs.gov/about/>
- Federal Emergency Management Agency (FEMA) (2003) *An Orientation to Hazardous Materials for Medical Personnel*. Retrieved from <http://training.fema.gov/EMIWeb/downloads/is346.pdf>
- Federal Emergency Management Agency (FEMA) (2016). *About FEMA*. Retrieved from: <https://www.fema.gov/about-agency>
- Gunderson, S., Helikson, C., & Heffner, M. (2014). *HazMat Emergencies. (cover story)*. Print.
- Harrisonburg Rescue Squad (2016). *About the Harrisonburg Rescue Squad*. Retrieved from: <http://www.rescue40.org>
- Kaszeta, D. (2012). *Cbrn and hazmat incidents at major public events: Planning and response*. Hoboken, New Jersey: John Wiley & Sons. Retrieved from <http://proquestcombo.safaribooksonline.com/book/operations/9781118288191>

- Macintyre, A.G., Christopher, G.W., Eitzen, e., Gum, R., Weir, S., DeAtley, C., Tonat, K., & Barbera J. (2000). *Weapons of Mass Desturction Events with Contaminated Casualties: Effective Planning for Health Care Facilities*. Print.
- Marcus, Holly. (2015). *Disaster drill at Shenandoah Valley Regional Airport*. Retrieved from: <http://www.newsleader.com/picture-gallery/news/2015/10/01/disaster-drill-at-shenandoah-valley-regional-airport/73176384/>
- Sentara RMH Medical Center. (2016). *About*. Retrieved from: <http://www.sentara.com/harrisonburg-virginia/hospitalslocations/locations/sentara-rmh-medical-center.aspx>
- Simmons, Jonathan. *Continued Design and Implementation of a Hospital Emergency Response Team at Sentara RMH Medical Center*. Harrisonburg, James Madison University Integrated Science and Technology Department, 2015. Print
- U.S. Government Printing Office. (2001). *FEMA'S Response to the September 11<sup>th</sup> Attacks*. Washington D.C: Retrieved from: <https://www.gpo.gov/fdsys/pkg/CHRG-107shrg80653/html/CHRG-107shrg80653.htm>
- U.S. Government Printing Office. (2003). *Review of the General Accounting Office Report on FEMA's Activities After Terrorist Attacks on September 11<sup>th</sup>*. Retrieved from: <https://www.gpo.gov/fdsys/pkg/CHRG-108shrg92386/pdf/CHRG-108shrg92386.pdf>
- U.S. Government Printing Office. (2007). *Hurricane Katrina: the Homeland Security Department's preparation and response*. Retrieved from: <https://www.gpo.gov/fdsys/pkg/CHRG-109shrg27032/html/CHRG-109shrg27032.htm>