

Matthew Bautista^{1,2}, Thomas Vander Woude^{1,2}, Nikita Sathiaprakash^{1,2}, Katherine Palmer Loveluck^{1,2}, Kristiana Kaufmann MD^{1,2}

¹Wayne State University School of Medicine

²First Aid First Student Organization, Wayne State University School of Medicine

INTRODUCTION

- Providing effective first aid is a fundamental and potentially life-saving skill that all physicians-in-training should possess.
- Past research has demonstrated the importance of both didactic and practical components of first aid training to improve retention of knowledge (1,2).
- The COVID-19 Pandemic has shifted many learning opportunities to a virtual environment, posing a challenge to the First Aid First (FAF) student organization in effectively teaching first aid practical skills to the student body.
- In this project, FAF utilized pre-training and post-training survey questions to assess the effectiveness of virtual first aid training for students enrolled in three medical schools within the Southeast Michigan area.

METHODS

- A total of six elective, hour-long training sessions were hosted by FAF over Zoom as part of the High Yield Practical Emergency Skills (HYPES) training initiative throughout the 2020-2021 academic year.
- Students from Wayne State University School of Medicine, Michigan State University College of Osteopathic Medicine, and Oakland University William Beaumont School of Medicine were invited to participate in all six training sessions.
- FAF research coordinators developed an assessment survey for each session that was taken by participating students immediately before and immediately after each training session.
- Each survey was composed of situation-based questions assessing first-aid knowledge, concepts covered in the session, and students' overall satisfaction with the training.
- The REDCap database was used to input and organize all data collected throughout the six training sessions.
- Microsoft Excel was used to create relevant figures visualizing student responses and to perform basic statistical calculations to assess the effectiveness of virtual training.

RESULTS

- Across all six training sessions, there was a general decline in student attendance, which was reflected in the amount of pre- and post-survey responses completed for each session.
- Pre-training survey responses for session three (pretest and posttest 3) were not included in any statistical analysis due to administration of the wrong survey before and after the training session.
- Within each session, fewer post-survey responses were received compared to pre-survey responses.
- Results from the survey responses show a statistically significant, marked improvement in student performance. The pre-training survey score average was 59.02 with a standard deviation of 20.2. The post-training survey score average was 72.60 with a standard deviation of 22.1.
- Overall, 67% of students reported the first aid training to be very useful information on a Likert-based scale from 1 to 5, with 5 being very useful.

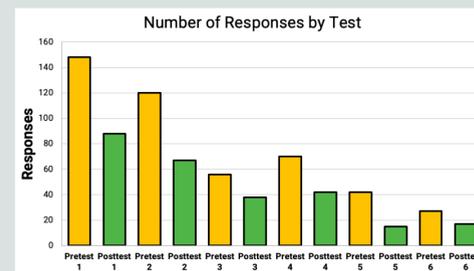


Figure 1. Number of survey responses received in each training session. A decline in participation was seen throughout the six sessions. Additionally, there were less survey responses after the training compared to before the training for each individual session.

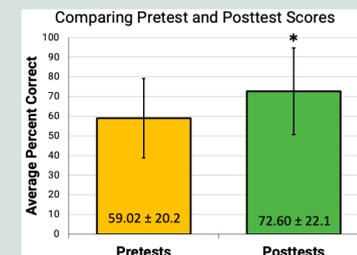


Figure 2. Comparison of pre-training and post-training survey scores. The results from the pretests (M = 59.02; SD = 20.2) and posttests (M = 72.60; SD = 22.1) show a marked improvement in student performance, a finding which was confirmed to be statistically significant using a paired t-test ($t(203)=10.42, p<0.0001$). Survey results for survey three were omitted due to errors.

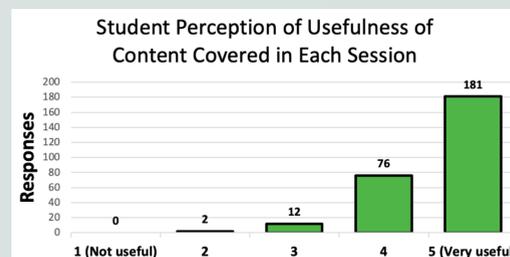


Figure 3. Student perception of the usefulness of virtual first aid training. After each session, students were asked to assess the usefulness of the training on a Likert-scale from 1 to 5 with 1 being not useful and 5 being very useful. Most participants indicated that the training sessions were very useful.

CONCLUSIONS

- The COVID-19 pandemic has changed methods of teaching drastically, and FAF's ability to teach first-aid basics was no exception to these changes.
- Despite the expected difficulties of teaching first-aid through a virtual platform, its effectiveness is apparent through the data collected.
- Following these six training sessions, students should be equipped with the necessary knowledge and skills to effectively respond to emergencies.
- Medical students achieve a large amount of learning through their interactions with patients in various clinical settings throughout the community.
- With their role as future doctors, it is reasonable to assume that medical students are expected by patients and the community to be able to respond effectively to emergencies.
- Despite this, many students report feeling unprepared to respond to emergencies as they do not have proper training to administer CPR, correctly use an AED, or other essential skills.
- Using a virtual learning platform to administer first aid education allowed FAF to reach a larger student population across three medical schools and to teach valuable first aid knowledge.
- Virtual teaching sessions can be employed when teaching a large volume of students that are not in the same region is a priority.
- The decline in student attendance suggests that if sessions are not mandatory, students will not attend training sessions.
- Ultimately, this project demonstrates that virtual learning is still an effective means of teaching first aid to medical students when in-person, hands-on training is unavailable.

REFERENCES

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