Cardiac Health and Stroke Awareness Month (CHASAM)

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Abstract

Project HeartSafe is a subgroup of MIT EMS dedicated to enhancing emergency response to cardiac arrest. Since 2014, Project HeartSafe has trained 2000+ individuals in lifesaving skills. Currently, the initiative is led by 19 EMTs who are certified as CPR instructors, and several dozen additional members of MIT EMS. Because teaching opportunities for EMTs without instructor certifications are limited, they are an underutilized source of training potential. To involve these members and to increase our breadth of training, we designed a non-certification learning opportunity for students who have not previously sought out CPR training. MIT EMS's creation of an annual Cardiac Health and Stroke Awareness Month (CHASAM), piloted at MIT in 2016 and repeated in 2017, substantially increased the number of trained bystanders from a diverse selection of residential communities. In 2016, walk-in hands-only CPR and stroke symptom recognition trainings with a 1:1 student to instructor ratio were conducted in all 11 undergraduate dorms, with 190 participants over five weeks. In 2017, 45-minute group sessions with an average 4:1 student to instructor ratio, including individual practice and feedback, were held at three graduate residences, with 39 participants over three weeks. Of Project Heartsafe's 762 trainees in the 2016-2017 academic year, 24.9% participated in CHASAM. Analogous data for 2017-2018 is pending, and will indicate how effectively we reach students who may not otherwise receive training. Additional evaluation will involve surveys to assess participants' perceived barriers to learning CPR through traditional means. CHASAM was designed to minimize course cost, inconvenience of traveling to receive training, and lack of awareness of the skills' lifesaving potential. We are interested in assessing whether these are the true reasons students are not frequently trained, and whether CHASAM effectively addressed these challenges. Hosting CHASAM events in student residences is a short-term, high-impact method of reaching a diverse population, and will likely transfer well to other colleges.

Introduction

General motivations for bystander training:

- CVD and stroke are two of the leading causes of death in the U.S.
- Almost 90% of out-of-hospital cardiac arrests are fatal, but chance of survival can double or triple after immediate bystander CPR[1].
- Cardiac arrest survival rates are highest when an AED is placed within 3-5 minutes of a sudden collapse[2].
- For each minute stroke treatment is delayed, patients lose up to 1.9 million neurons[3].

MIT EMS's motivations for CHASAM:

- MIT EMS's outreach is CPR/ AED focused. Stroke symptom recognition is less frequently taught despite how easy it is to learn.
- Previously, there existed few on-campus opportunities for members of MIT EMS to teach non-certification training courses.

Development/Implementation

CHASAM was designed through collaboration between MIT EMS's Director of Professional Development, Financial Officer, Community Relations Officer, and HeartSafe Officer. Volunteer instructors were recruited from MIT EMS.

The MIT EMS Financial Officer obtained funding to allow training to be free to participants. Grant proposals emphasized the unique potential of in-residence training events to attract students to learn lifesaving skills. Funding was used to provide trainees with stickers *(see left)*, handouts, magnets, and food to incentivize their participation.

Spring/ Summer: Identify funding sources and apply for grants related to student life, public service, and emergency preparedness.

August to September: Confirm funding sources and decide the scope of training (number of sessions, incentives to participate, etc.).

October: Contact residence leadership to identify appropriate dates and locations; publicize widely to residents. Design promotional materials and hand-outs for participants. Coordinate instructor assignments.

November: Continue publicity. Confirm session details and organize catering. Run CHASAM events!

Hands-only CPR training included checking for consciousness and breathing, activating the emergency response system, and chest compressions. AED use was also taught. Stroke training included education on the B.E. F.A.S.T. acronym for stroke recognition.

Evaluation

☑ **Goal: Reach students who may not otherwise receive CPR, AED, and stroke awareness training.**
Of Project HeartSafe's 762 trainees in 2016-2017, 24.9% participated in CHASAM, indicating success in reaching students who have not actively sought out training in the past. Data for 2017-2018 is pending.

☐ **Goal: Determine the true barriers that prevent college students from seeking out emergency preparedness training. Assess whether CHASAM effectively addressed these challenges.**
Assess via survey. Anticipated barriers include course cost, inconvenience of traveling to receive training, and lack of awareness of the skills' lifesaving potential– all factors considered in designing CHASAM.

Discussion/Conclusion

Two different styles of CHASAM have been run, each with distinct advantages and challenges:

1:1 student to instructor ratio (walk-in sessions)

- Conducted in all 11 undergraduate dorms
- 190 participants over five weeks
- Individual practice and feedback
- **Pros**: less funding required (snacks provided) and more individuals trained
- **Cons**: shorter time spent training each participant (approx. 5 mins each)

4:1 student to instructor ratio (formal sessions)

- Conducted in 3 graduate dorms
- 39 participants over three weeks
- Individual and group practice; individual feedback
- **Pros**: more time spent training participants (45 min sessions); group interaction during training and opportunity for team practice
- **Cons**: more funding required (catered dinner provided) and fewer individuals trained

While the formal sessions seemed to offer a more positive participant experience, the appropriate model to implement depends heavily on the availability of the greater funding and instructor time required.

Limitations:

- Less time for practice than in a traditional 3 hr. certification course.
- Time constraints → exclude rescue breathing from training.
- High concentration of events may strain a small instructor pool.

References

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3. Saver JL. Time is brain– quantified. *Stroke.* January 2006:263-266. Accessed February 21, 2018.

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