

“Where’s the closest AED?”: An Interprofessional Simulation to Improve the “drop to shock” Interval on Duke University’s Campus

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Background

- Around 10,000 sudden cardiac arrests occur annually in the workplace. (OSHA, 2003).
- Automated External Defibrillators (AED) devices have a proven track record of saving lives in public places.
- Delaying defibrillation until EMS arrival results in only 5-7% survival, yet immediate defibrillation increases survival to 60%
- Duke lacks a repository identifying AED locations and their accessibility.
- Duke community’s knowledge is variable regarding AED location, accessibility, and use.

Objectives

1. Engage health profession students in a meaningful Interprofessional Education (IPE) activity that will ultimately impact the entire Duke community.
2. Educate about the importance of timely activation of emergency response system as well as the vital function of an AED.
3. Create a public service announcement (PSA) about where to access AEDs and how to respond to a cardiac arrest.
4. Add the location and instructions on use of AEDs on the Duke University Campus map at maps.duke.edu and create a link in Duke Resources in the Duke *LiveSafe* App.

Formation of IPE Teams

- Students were recruited from nursing, medicine, physical therapy and physician assistant programs to participate in this project.

Application included:

Name: _____
Program of Study- select one- SON, SOM, PT, PA
Year in Program: 1st, 2nd, 3rd, 4th

Please answer these 2 questions (250-word limit):

- What about this project interests you?**
- Why do you think it would be important to represent your discipline in this project?**

- IPE Teams were formed to include one student from each discipline as well as two IPE project leads

| IPE Team 1 | IPE Team 2 | IPE Team 3 |
|--|--|--|
| | | |
| Project Team Leads: Melinda Blazar (PA) Midge Bowers (SON) | Project Team Leads: Margie Molloy (SON) Amy Pastva (PT) | Project Team Leads: Margie Molloy (SON) Wayne Thomann (SOM) |
| Students: Patricia Alvarez (RN) MaryEllen Targonski (PT) Benjamin Thompson (PA) Colleen Wixted (MD) | Students: Zachary Smothers (MD) Robert Stern (RN) Carolyn Stoddard (PT) Maria Trescony (PA) | Students: Grant Cabell (MD) Bryce Olsen (PT) Sally Pohlman (PA) Judy Zhu (RN) |

Acknowledgments

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Methodology

Focused Question:

Can groups of interprofessional students work together to engage in a Plan-Do-Study-Act (PDSA) cycle to determine location of Automated External Defibrillators (AED) on the entire Duke campus, produce a short video, and supplement existing informatics tools to educate the public on prompt activation of the emergency response system?

Design:

Pre/Posttest design using 3 surveys:

ICCAS-Interprofessional Collaborative Competencies Attainment Survey
RIPLS- Readiness for Interprofessional Learning Scale Questionnaire
TeamSTEPPS Teamwork Attitudes Questionnaire

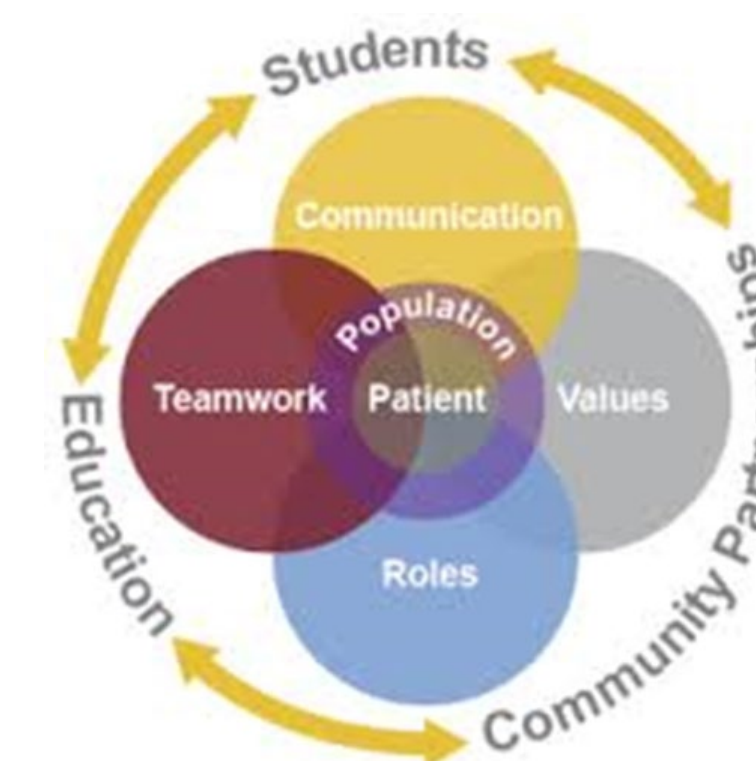
Pre-event:

Prior to the start of the project, students were asked to watch an IHI.org video that reviewed the PDSA cycle and complete three on-line surveys related to views on IPE.

Event Orientation (“Project Launch Party”):

- Icebreaker
- Discussion of implementation frameworks, including Interprofessional Education and Collaborative Practice Collaborative (IPEC) core competencies and PDSA Cycle
- Review pre-event assignments
- Review overall objectives and project timeline
- Assign campus locations
- Time for team formation and brainstorming

| Timeline | 2018 | | 2019 | | | | | |
|---|------|-----|------|-----|-----|-----|-----|-----|
| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| Open Recruitment | | | | | | | | |
| Review Applications and Select Students | | | | | | | | |
| Project Launch | | | | | | | | |
| IPE Group Work | | | | | | | | |
| Project Finale – “AED PSA” Movie Night | | | | | | | | |
| Project Outcome Analyses | | | | | | | | |
| Dissemination Plans | | | | | | | | |



IPEC Core Competencies:

- Competency 1: Values/Ethics for Interprofessional Practice
- Competency 2: Roles/Responsibilities
- Competency 3: Interprofessional Communication
- Competency 4: Teams and Teamwork

Dissemination – AED PSA Night

- Reviewed project framework and objectives
- Team presentations of project evolution and PSA Videos
- Audience members voted on a “People’s Choice” award for their favorite PSA
- The IPE team with the most votes was announced and awarded trophies



- Team 1 PSA
- Team 2 PSA
- Team 3 PSA



Lights, Camera, Action!!!
Access this QR Code with your mobile devices to view highlights from the three IPE teams combined videos

Please join us for this important INTERPROFESSIONAL event!

WHAT: “Where’s the closest AED?”: An Interprofessional initiative to improve the “drop to shock” interval on Duke University’s Campus

WHEN: Wednesday, April 17th from 5:30pm-7pm

WHERE: Duke School of Nursing, Pearson Building, Room 1026

Audience will vote for their favorite Public Service Announcement!

Teams are made up of Students from Nursing, PT, PA, and Medicine

? Do you know where the closest AED is located?

Dinner served at 5:30pm
RSVP to raymond.brisson@duke.edu

EVENT SUPPORTED BY DUKE AHEAD GRANT

Results

| | Female | 6 | Male | 3 |
|-----------------|-----------------|---|-----------------|---|
| Gender | | | | |
| Year in Program | 1 st | 4 | 2 nd | 5 |

| Survey Name | Pre | Post |
|--|------|------|
| ICCAS (Scale 1-7) | | |
| Communication | 6.53 | 6.74 |
| Collaboration | 6.5 | 6.78 |
| Roles/Responsibilities | 6.2 | 6.8 |
| Patient/Family Collaboration | 6.19 | 6.78 |
| Conflict Management/Resolution | 6.67 | 6.78 |
| Team Functioning | 6.25 | 6.72 |
| RIPLS Scale (1-5) | 3.79 | 3.63 |
| TeamSTEPPS/Teamwork Attitudes (Scale 1-5) | | |
| Team Structure | 4.44 | 4.70 |
| Leadership | 4.52 | 4.68 |
| Situation Monitoring | 4.37 | 4.66 |
| Mutual Support | 4.08 | 4.14 |
| Communication | 4.26 | 4.23 |

*Scale – Lowest numbers = strongly disagree, Highest numbers = strongly agree

Discussion

- Using the PDSA cycle students successfully mapped AEDs in their assigned locations and presented PSAs to the Duke community.
- Health professions students collaborated to both learn and teach about how to respond to a cardiac arrest with an AED.
- IPEC core competencies provided a framework for teambuilding and project success.
- Health professions students identified how they overcame challenge often encountered in IPE activities.

Future Recommendations

- We got the conversation started... Email correspondence 4/17/19
“I will ask my contact at LiveSafe about the best way to go about this functionality, but my initial understanding from past discussions is that AED locations would need to be added in some way to [Duke Maps](https://maps.duke.edu), which is available as a resource through the [LiveSafe app](https://livesafe.duke.edu).
- This model can be used for other IPE projects, i.e. mapping of wheelchair accessibility
- Identify the framework and objectives and the students will do the rest

References

Core Competencies for Interprofessional Collaborative Practice (IPEC, 2011) retrieved from https://members.aamc.org/eweb/upload/Core%20Competencies%20for%20Interprofessional%20Collaborative%20Practice_Revised.pdf

United States Department of Labor, Occupational Safety and Health Administration (OSHA, 2003). *Saving Sudden Cardiac Arrest Victims in the Workplace* retrieved from <https://www.osha.gov/Publications/3185.html>

World Health Organization (WHO). (2010). Framework for action on interprofessional education and collaborative practice. Geneva: World Health Organization. Retrieved from http://scholar.harvard.edu/files/hoffman/files/18_-_jah_-_overview_of_who_framework_for_action_on_ipe_and_cp_2010_gilbert-yan-hoffman.pdf