



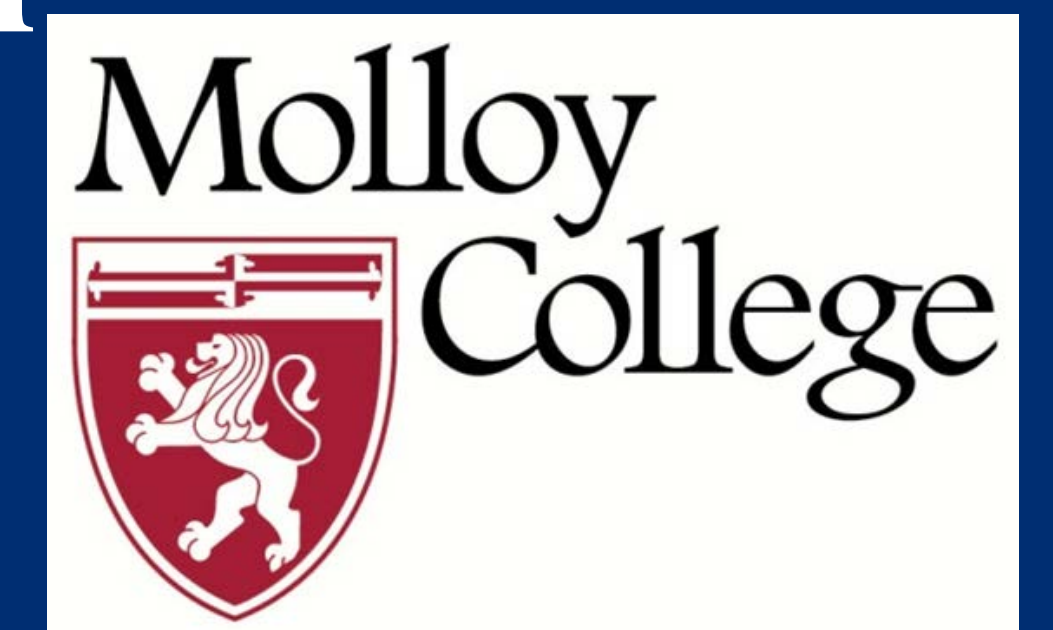
# DNP Scholarly Project: Implementation of a Campus-Wide Sudden

## Cardiac Arrest Safety Net

Mary McCormack DNP, FNP-C

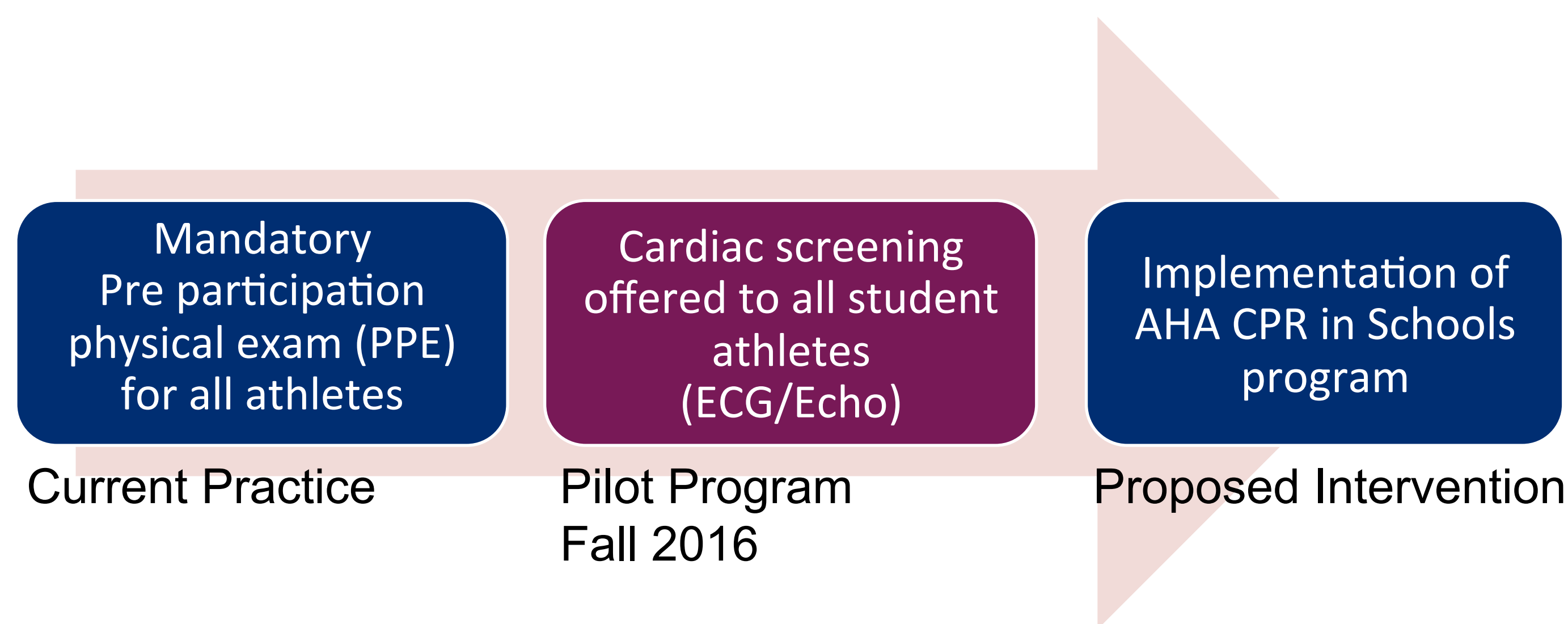
Adjunct Nursing Instructor

Molloy College, Barbara H. Hagan School of Nursing



### BACKGROUND/SIGNIFICANCE

- Estimated 326, 000 episodes of sudden cardiac arrest (SCA) occurring in communities nationwide annually
- < 6% of victims of outside hospital SCA survive to hospital discharge
- < 3% of U.S. citizens are trained in CPR/AED
- Sudden cardiac death (SCD) is the leading cause of death in athletes
- The risk of SCD is 3 times greater in athletic youths



### PROBLEM STATEMENT

- SCA costs the U.S. healthcare system \$33 billion dollars annually
- College male athletes are 6 times more likely to suffer an incident of SCA than female athletes
- African-American athletes are 5 times more likely to experience SCA than white athletes
- African American, male, basketball players are at the greatest risk for SCD

#### Question:

What is the knowledge level of college student athletes in CPR/AED use?

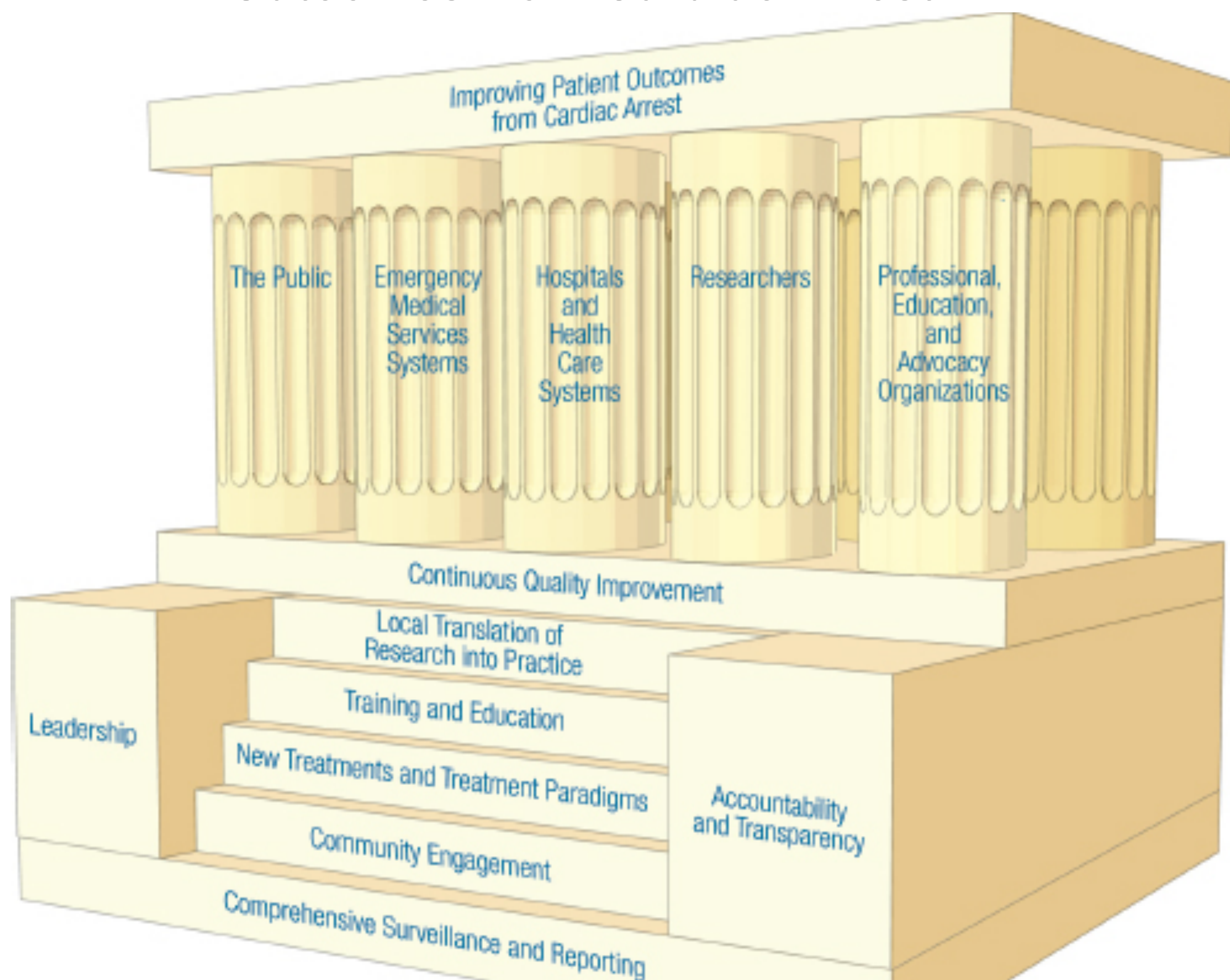
Will there be a change in the knowledge level of student athletes in CPR/AED use after completion of the AHA CPR in schools program?

### ROL/EVIDENCE

- Provision of bystander CPR for SCA in the community has been noted to increase survival rates two to three fold
- 75% of the population in Kings Co., WA has received CPR training and reports the highest nation-wide survival rate from SCA due to ventricular fibrillation at 62%
- Most important factor affecting survival is early defibrillation
- Survival and future neurologic status post SCA are directly dependent upon how quickly the victim receives emergency medical treatment
- 1866 incidences of SCD in young competitive athletes evaluated and found the majority of deaths occurred as a result of an underlying cardiac condition

### FRAMEWORK

#### Unifying Framework for Improving Patient Outcomes from Cardiac Arrest



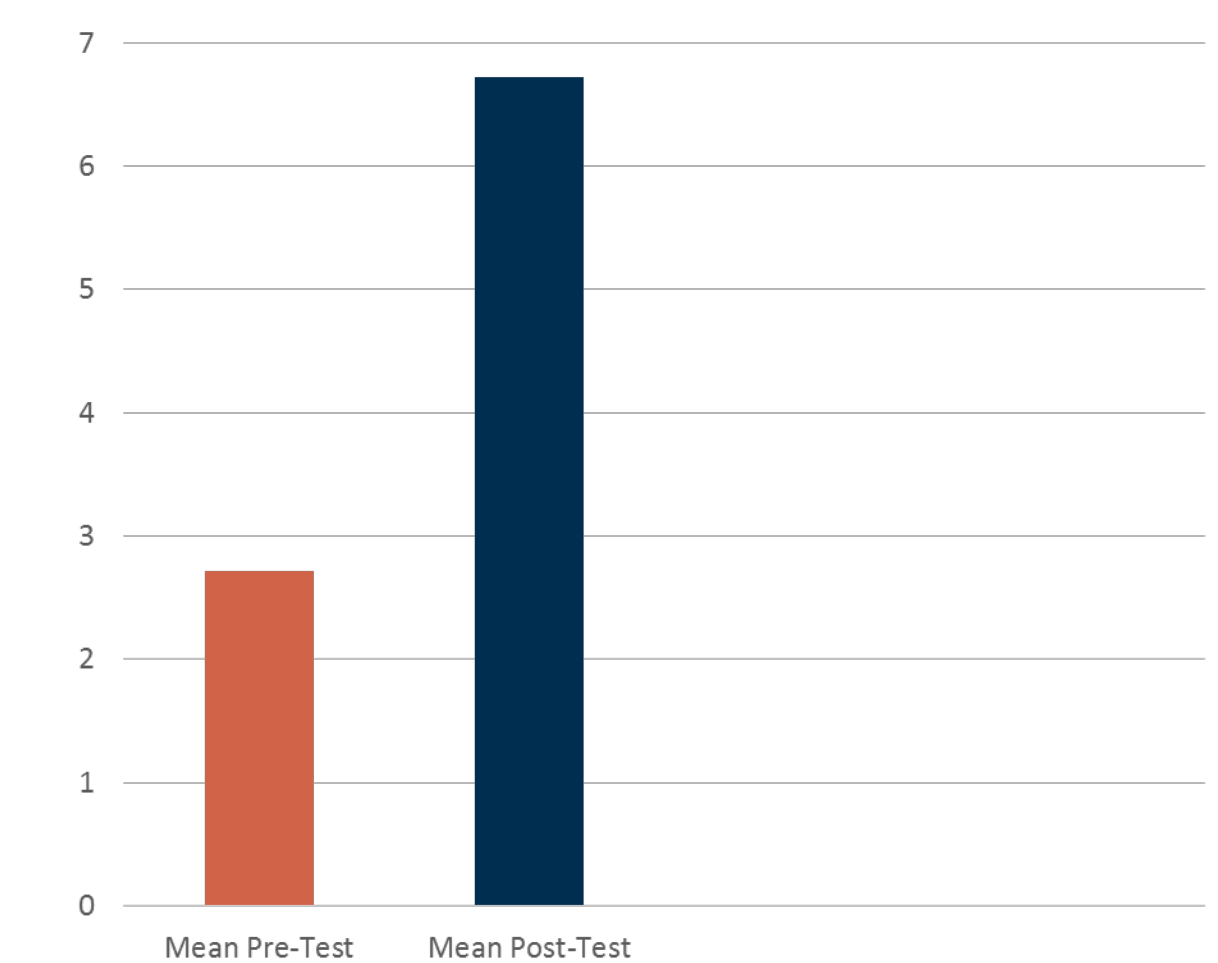
### METHODS

- Convenience sample (n = 25)
- Interventional Pre/Post test design
- Implementation of American Heart Association CPR in Schools Program
- Multiple Sessions



### RESULTS

- There was a significant difference in the mean scores for the pre test ( $M = 2.72, SD = 2.03$ ) and post test ( $M = 6.72, SD 0.54$ )
- These results support that implementation of the AHA CPR in Schools Program improves knowledge level of CPR and AED use in this group of student athletes and fitness center staff



Anderson, M. L., Cox, M., Al-Khatib, S. M., Nichol, G., Thomas, K. L., Chan, P. S., ... Peterson, E. D. (2014). Cardiopulmonary Resuscitation Training Rates in the United States. *JAMA Internal Medicine*, 174(2), 194-201. <http://doi.org/10.1001/jamainternmed.2013.11320>

Institute of Medicine. (2015). *Strategies to improve cardiac arrest survival: A time to act*. Washington, DC: The National Academic Press.

Maron, B., Haas, T., Murphy, C., Ahluwalia, A. & Rutten-Ramos, S. (2014). Incidence and causes of sudden death in U.S. college athletes. *Journal of the American College of Cardiology*, 63(16), 1636-1643. doi:10.1016/j.jacc.2014.01.041

Resuscitation Academy. (2014). *Strategies to improve survival from cardiac arrest: An evidence-based analysis*. Seattle, WA: Resuscitation Academy.