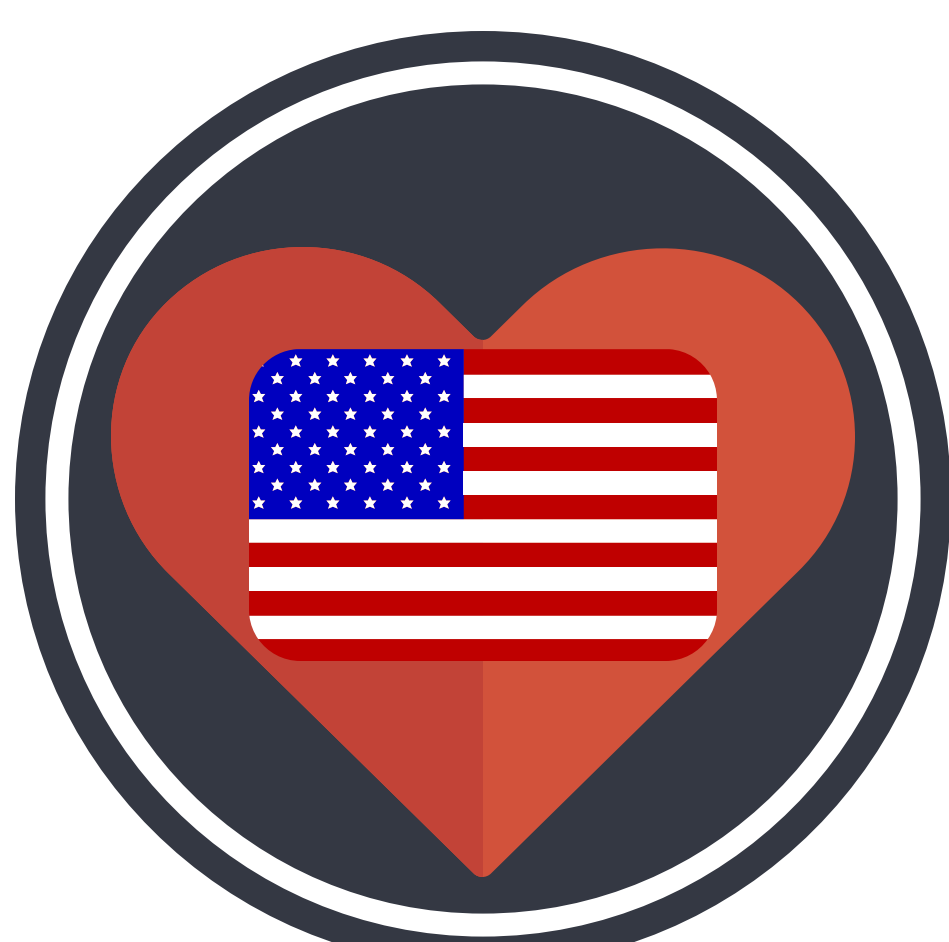


# Adherence To Pediatric Arrest Guidelines

Auerbach et al. 2018



Increased adherence to American Heart Association guidelines decreases mortality



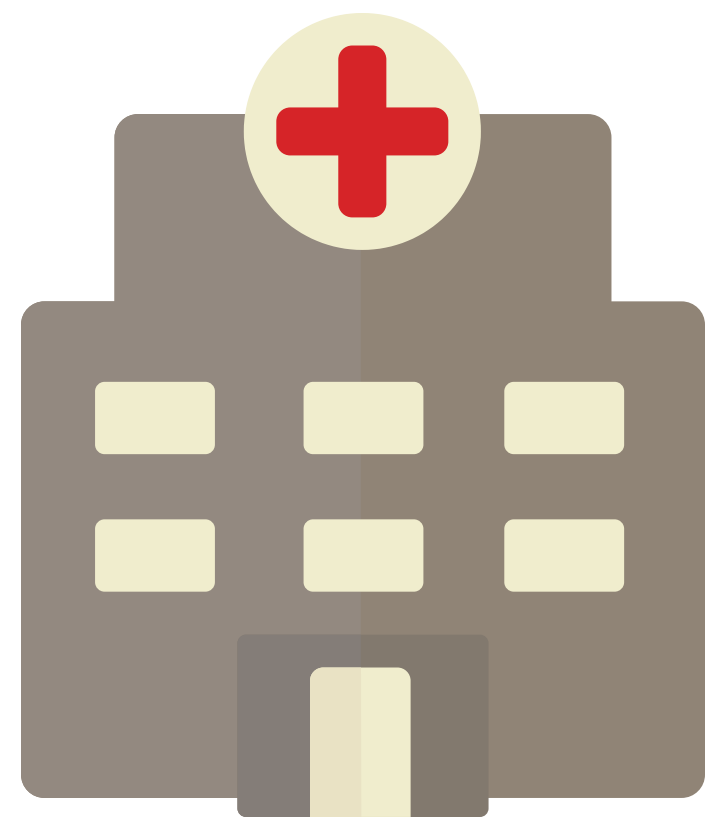
For adult patients, EDs with higher patient volume have improved survival rates



Limited data on association of pediatric ED volume with adherence to AHA guidelines

## IS THERE A VOLUME-ADHERENCE RELATIONSHIP IN PEDIATRIC PATIENTS PRESENTING IN CARDIAC ARREST TO EMERGENCY DEPARTMENTS?

### The Study



101 Teams



Low Volume <1800 Patients



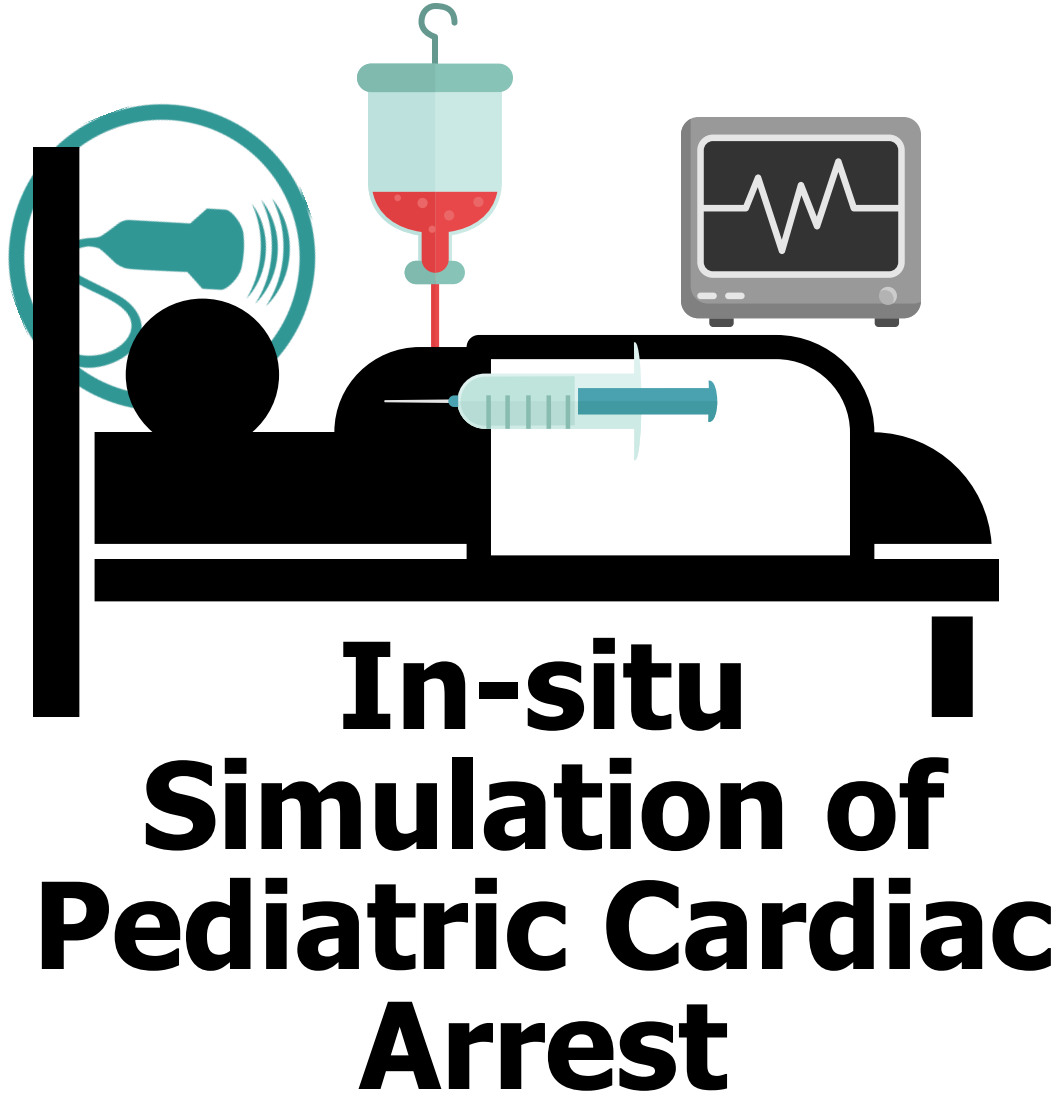
Medium Volume 1800-4999 Patients



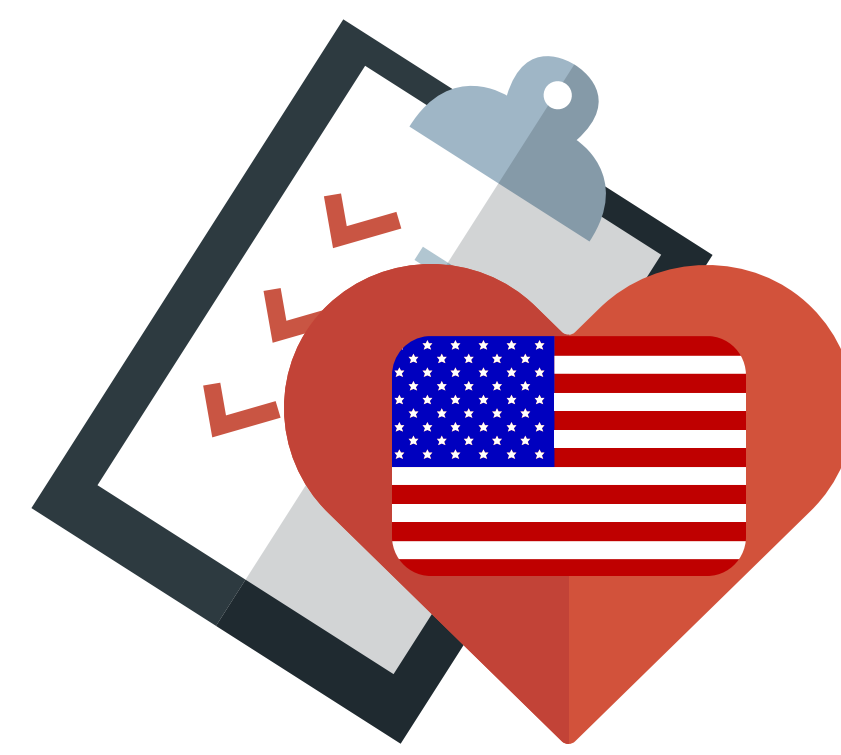
Medium-High Volume 5000-9999 Patients



High Volume ≥10000 Patients



In-situ Simulation of Pediatric Cardiac Arrest



Scored on adherence to AHA guidelines

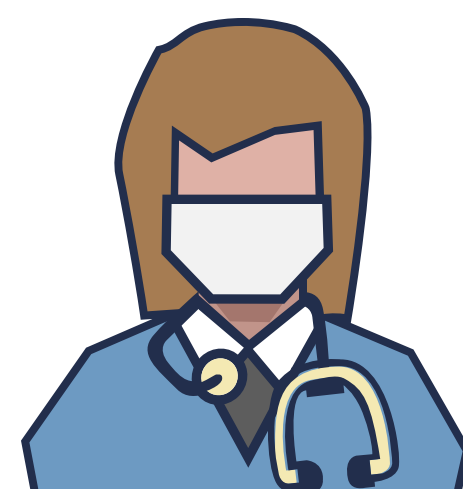
### Primary Objectives

### Secondary Objectives



#### Basic Life Support (BLS)

Compression rate 100-120/min + Ventilation rate 8-10/min + Backboard used + Compressor change every 120s + Interruptions other than pre-shock pause >10s + CPR fraction >80%



#### Provider Variables

Provider team experience + Number of providers with PALS training



#### Pulseless Electrical Activity (PEA)

Pulse check <120s after start + Verbalize PEA rhythm + Epinephrine 1st correct dose + Epinephrine 2nd correct dose



#### Team Variables

Team performance (measured with Stimulation Team Assessment Tool)



#### Ventricular Fibrillation (VF)

Pre-shock pause >10s + Verbalize ventricular fibrillation rhythm + Defibrillation 1-4J/kg + Resume compression <10s and continue for 120s



#### Hospital/System Variables

Pediatric Readiness Scores

### The Results



Medium-High Volume EDs had the highest BLS score. Low Volume EDs the lowest BLS score.

Provider experience or number trained in pediatric advanced life support did not impact adherence score.



Medium-High Volume EDs had the highest PEA score.

Improved teamwork did not impact adherence score.



Pediatric ED volume did not have a significant impact on VF score.

Hospitals with higher pediatric readiness scores did not impact adherence score. Teaching, trauma, and pediatric hospitals showed better total adherence than their counterparts.

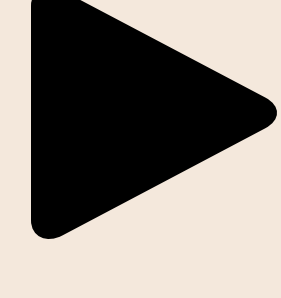


Total adherence scores demonstrated no significant difference associated with pediatric ED volume

### Conclusions



Overall adherence to cardiac arrest guidelines was not associated with pediatric volume, but a trend was observed as low volume EDs typically had lower scores



Provider experience, PALS training, teamwork, and pediatric readiness score are not directly associated with adherence to guidelines



Current approaches to optimizing pediatric arrest care are insufficient. Consider brief, focused, and frequent retraining sessions to improve skills retention and improve adherence to guidelines

#### REFERENCES:

Auerbach, Marc, et al. "Adherence to Pediatric Cardiac Arrest Guidelines Across a Spectrum of Fifty Emergency Departments: A Prospective, In Situ, Simulation-Based Study." *Academic Emergency Medicine* (2018).

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This infographic was created by Anson Dinh and edited by Brent Thoma.