

Session/Poster#

Presenter

B33

Ramya Sivasubramanian

Pediatrics Resident

Advisor(s): Dr. Sule Doymaz, Pediatric Critical Care Medicine

Step-up to Pediatric Codes: A Prospective Observational Study to Assess Impact of Periodic PALS Arrhythmia Algorithm Teaching Amongst Pediatric Residents

Background: A major challenge that pediatric residents face with algorithms in American Heart Association's Pediatric Advanced Life Support (PALS) is knowledge retention due to limited exposure to actual pediatric codes. Reiterating PALS algorithms frequently is crucial for pediatric residents to perform effectively in codes. While impact of frequent mock codes on resident performance is studied widely, there remains a scarcity in literature that studies the impact of periodic PALS lectures on pediatric residents during their residency training.

Objective: To study effectiveness of periodic lectures focused on PALS arrhythmia algorithms on resident knowledge and confidence.

Methods: We introduced our intervention: forty-five-minute lectures given to eighty-eight residents every four to six weeks for a duration of eight months. We tested residents' knowledge at baseline and through eight months with tests conducted pre- and post- every lecture. Each test had sets of 10 MCQs based on the lecture content. Residents were scored on four categories: Code Team Basics, Arrhythmia Medication & Shock Dosing, Arrhythmia Recognition, Application of knowledge. Overall knowledge trend and residents' confidence levels were assessed. Our null hypothesis tested the impact of the intervention assessed by comparing knowledge in the eighth month to baseline.

Results: Residents showed significant improvement from baseline to eighth month in knowledge in Arrhythmia Medication & Shock Dosing, from 44% to 95% (p value < 0.001) and in Overall knowledge from 47% to 88% (p-value < 0.001) in post-lecture tests. Residents' confidence level on their PALS knowledge also improved from pre- to post-lecture in 3 out of 3 surveys we conducted; Scale of 1-10: Month-3: 5.7 to 7.6, Month-6: 6.2 to 6.8, Month-8: 5.3 to 6.7.

Conclusion: Periodic PALS arrhythmia algorithms teaching is highly effective in improving knowledge and confidence level amongst pediatric residents during residency training.