At Dartmouth Hitchcock Medical Center the Emergency Department nurses and paramedics manage the code cart during the infrequent pediatric emergencies. In an attempt to educate on this low frequency, high risk skill, a rolling refresher training program was developed.

This training program demonstrated improvement on a majority of these low frequency, high risk skills after an initial and repeat training after 6 months and can serve as a model for educating emergency department staff in ongoing competency with repeated training for rare but life saving skills.

This study is limited by several factors including; small single center sample and a high rate of loss to follow-up.

A collaboration of MD and RN experts developed a training program consisting of four scenarios with 17 individual code cart skills based on Pediatric Advanced Life Support (PALS) algorithms.

Scenarios included shock, ventricular fibrillation, asystole, and supraventricular tachycardia. Individual skills are listed in the following tables.

46 Emergency Department Nurses and Paramedics completed an initial monitored training (Training 1). 30 of the initial cohort completed a second training (Training 2) 6 months later.

Participants were given a skill to perform within a designated time. If a skill was not performed to standard accepted practice and within the allotted time, the participant received immediate feedback and instruction and this was considered a First Attempt Failure. This was repeated an unlimited amount of times until the skill was performed correctly.

Upon completion of each training session, all skills were performed to mastery.

This training program identified several life saving skills that were initially deficient in many emergency room personnel including; preparing a pediatric weight specific code dose of epinephrine, drawing up and delivering a dose of adenosine, preparing an epinephrine infusion, and placing and describing placement of an intravenous needle.

Overall, there was a statistically significant improvement in participant performance between the first and second trainings suggesting our training program is an effective method for training for low frequency, high risk skills.

Specifically, we demonstrated a statistically significant improvement in first attempt successes in four different skills including obtaining supplies to place and IV and send labs, drawing up 5ml/kg of D10W, drawing up a weight based code dose of epinephrine, and drawing up and administering a weight based dose of adenosine.

Attending more pediatric codes was associated with a lower scored first attempt failure, thus given the low frequency of pediatric codes our training program is vital to ensure the ED staff are prepared to manage these emergencies.

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