

Title: “Effects of a Multimodal Educational Program for Pediatric Interns Participating in Rapid Responses”

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Background: At St. Christopher’s Hospital for Children (SCHC), the process of succinctly presenting a rapid response (RR) that consists of pertinent medical history, relevant hospital course, and concerns for clinical deterioration is conducted by the resident physician caring for the patient. Currently, there is no standard process for this presentation at SCHC, and residents rely largely on experiential learning to augment their presentations and delivery. Studies have shown that implementation of educational curricula can improve resident knowledge and preparedness to activate, respond, or lead a rapid response (Burke 2015, Eperjesiova 2018); however, research is limited within pediatrics.

Objective: To evaluate the role of a multimodal educational program in guiding pediatrics interns on how to recognize the need for and activate a RR and deliver a presentation to the RR team.

Setting and Participants: This is a single site study at SCHC. Eligible participants include the intern class of 2025 (n=26).

Design/Methods: A multimodal educational program was delivered to the incoming interns during their orientation in June of 2022. This session focused on indications and how to call a RR and outlined the role of the intern as the primary presenter. To supplement the didactic component, participants took part in simulated cases presenting a RR for a mock clinical scenario. Pre and post course surveys to assess knowledge retention, comfort, and confidence in skills acquired were obtained. Following the session, participants received a pocket-sized RR guide with high yield information on RRs. Longitudinal data collection on the use of the RR guide is ongoing to determine its effectiveness on resident confidence and comfort in presenting rapid responses in real time.

Results: 25 interns participated in the educational session and completed surveys. They were asked four case-based questions to assess their knowledge before and after the session. There was a statistically significant increase in correct responses between pre and post survey responses based on unpaired t-type testing (Table 1). Participants also reported increased comfort and confidence in the indications and steps for calling a RR following the educational session based on Chi-Square testing ($p < 0.05$) (Figures 1)

Conclusion: Our data suggests utilizing case-based didactics and low-fidelity simulation can improve interns’ knowledge, comfort, and confidence in participating in RRs. Analysis of the RR guide and its impact on residents in real time RRs is ongoing.

Citations:

Burke, Peter A et al. “Improving Resident Performance Through a Simulated Rapid Response Team: A Pilot Study.” *The Journal of the American Osteopathic Association* vol. 115,7 (2015): 444-50.
doi:10.7556/jaoa.2015.090

Eperjesiova, Bianka, Katarzyna Mikrut, and Daniel Katzman. “Improving Internal Medicine Residents’ Preparedness and Confidence Levels in Responding to Rapid Response Calls Through Targeted Education Tool.” *Chest* 154.4 (2018): 542A.

Table 1: Responses to pre- and post-education questions assessing resident knowledge to the indications of a rapid response.

Questions	Pre-Educational session	Post-Educational session
1. Which is NOT an indication for calling a rapid response?	12%	76%
2. Which of the following scenarios would be an indication to call a Code 99 rather than a rapid response?	32%	96%
3. Which of the following lists the members of the rapid response team?	32%	96%
4. How can you reach the emergency operator line to call a rapid response?	72%	100%

Figure 1. Responses to pre- and post-education questions assessing resident comfort and preparedness in calling rapid response.

