

ASSESSMENT OF A NOVEL PEDIATRIC RESIDENT SIMULATION CURRICULUM

Kyle Schoppel MD¹, Christopher Lops MD², Nicholas Cormier³, Alanna Hickey³, Suzanne Sprague MD¹, Peter Sell DO⁴, Kathryn Wynne MD⁵, Anne Weaver, BSN RN CCRN⁶, Stacey Valentine MD, MPH⁴

¹Department of Pediatrics (Chief-Resident), ²Departments of Medicine and Pediatrics (Chief-Resident), ³University of Massachusetts Medical School, ⁴Division of Pediatric Critical Care, ⁵Division of Pediatric Hospital Medicine, ⁶Department of Nursing, University of Massachusetts Medical School and UMass Memorial Medical Center

Aim: To assess the efficacy of a newly implemented resident simulation curriculum at a medium sized pediatric residency program.

Background: Many pediatric residency programs incorporate high-fidelity simulation into their curriculum, but there is limited data discussing the utility/educational impacts of a longitudinal/standardized/multimodal simulation curriculum. Several studies of simulation-based training have employed “self-efficacy” as a barometer for trainee education and performance ^{1,2}. The level of a person’s self-efficacy can influence their behavior and may be a pivotal factor in performance. We have implemented a newly devised standardized, multimodal resident simulation curriculum and used resident self-efficacy to assess its effectiveness.

Methods: Participants were UMass Pediatric and Med/Peds residents. Implementation of our curriculum occurred at the start of the 2016-2017 academic year. Surveys were administered to all residents prior to curriculum implementation and at 6 months post-implementation. They assessed resident self-efficacy with regards to specific technical/procedural skills (i.e. running a code, performing intubation, etc.) and resident confidence in their ability to identify/manage specific pediatric disease presentations (i.e. respiratory failure, tachyarrhythmia, etc.). Data was pooled and averaged for each resident class separately. We predetermined a 10% change in self-efficacy to be a clinically significant difference.

Results: 36 of 40 residents completed the initial survey and 31 completed the 6-month follow-up. PGY1 residents reported improved self-efficacy for 4 PALS-related skills and 8 pediatric case presentations. Similarly, PGY2 residents reported improved self-efficacy for 3 PALS-related skills and 6 pediatric case presentations. Conversely, PGY3/4 residents reported no significant change in self-efficacy for any survey question.

Conclusions: These results suggest that our newly implemented longitudinal, standardized, multidisciplinary, multi-modal simulation curriculum has significantly improved resident self-efficacy related to core Pediatric Advanced Life-Support (PALS) skills/topics, with the greatest impact affecting our PGY1 class. Further study and curriculum development will attempt to address this issue.

Contact:

Kyle Schoppel

UMass Memorial Medical Center

Kyle.Schoppel@umassmemorial.org