Effect of Systematic Fellowship Simulation Training on Early Post-Graduate Clinical Practice

Elizabeth Eastburn DO, Carlos Munoz-San Julian MD, Julianne Bacsik MD, Richard Blum MD MSE, Linda Bulich MD, Andres Navedo-Rivera MD, Sharon Redd MD, Bistra Vlassakova MD

Department of Anesthesiology, Perioperative and Pain Medicine, Boston Children’s Hospital, Boston, Massachusetts

Introduction

A pediatric anesthesia fellow simulation program has been part of the curriculum for 5 years. Objectives include acquisition of knowledge, technical skills, and behavioral skills. The course consists of 3-full day in-situ modules with 4-5 anesthesia fellows facilitated by 3 anesthesia simulation certified faculty. Scenario design was based on a needs assessment using our faculty. The scenarios were standardized. Two modules consist of 4-5 scenarios followed by a debriefing session. These modules include: 1) high risk clinical situations 2) common perioperative pediatric emergencies 3) rare cases that are unique to pediatric anesthesiology where fellows may not gain adequate expertise due to inadequate exposure. The third is an airway workshop with difficult airway scenarios. Debriefing sessions include case specific didactics followed by discussion about the topics with participants and facilitators sharing their experiences. Principles of crisis resource management and the importance of communication are emphasized through the course. The course is not evaluative.

Methods

After IRB approval, a survey was sent to graduates of our fellowship program from 2014 and 2015. The aim of the survey was to determine if former fellows found that the simulation experience was a useful part of their training. Survey questions were designed to examine if the scenarios were representative of cases seen in their actual clinical practice and the impact of the course on clinical management. Respondents were asked to recall actual clinical experiences, as a new attending, where they utilized ideas or skills acquired in the program.

Results

- 76% of those surveyed responded (26/34)
- 100% recalled similar cases in their practice to those done in simulation
- 46% said that they felt more comfortable or confident in these cases because of simulation
- 15% said they felt they recognized significant events earlier and treated them more effectively.
- One respondent reported that their only exposure, during fellowship, to a specific scenario, was during one of the modules; however, they had the exact case on their first call as an attending.

Discussion

All respondents had cases that were at least similar to the ones they experienced in the simulation program. The cases simulated appear to adequately reflect cases that graduates will see in their own clinical practice and appear to impact their management of these cases. Finally, our simulation program appears to improve confidence and comfort managing cases in the first 2 years of independent practice. In the future, we would like to examine how this course changes fellows’ decision making and response time and whether it can improve patient care and safety.

References