Creation, implementation and evaluation of an in situ simulation based interprofessional pediatric critical care curriculum

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Pediatric critical events have become an infrequent occurrence in many pediatric centers due to improved child health practices. The ability to successfully care for a critically ill child depends on knowledge and skill but most importantly on a well-functioning team. It has been recognized that communication and collaboration between team members is an important competency for all health professions to obtain. Developing a well-functioning team may depend on the ability to learn in an interprofessional environment. This project aimed to develop, implement and evaluate an In Situ Simulation Based Interprofessional Pediatric Critical Care Curriculum. A review of the steps in the curriculum design and scenario creation is discussed. Canadian Pediatric Royal College Objectives, Crisis Resource Management Principles, the 2010 Heart & Stroke/PALS guidelines were used to create 18 Core Scenarios & 2 Trauma Scenarios. Factors taken into account in the development of the program were: Environment, Logistics, Participants, Realism, and Evaluations. Factors are discussed regarding engaging the participants. Results of the evaluations on debriefing and knowledge translation reveal that: 93% of participants reported an overall positive experience with non-resident members being significantly more likely (p=0.024) to have perceived the debriefing as a positive, 95% felt the feedback was useful for their learning, 81% felt they actively contributed to the scenario, 87% were able to integrate previous feedback in subsequent sessions. The benefit of an In-Situ program is that it is possible to highlight System failures. System Changes implemented secondary to the program were the following: Awareness raised regarding hospital airway protocol, Medication delivery issues highlighted: Providing infusion protocols in the ED, knowledge of location of infrequently used medications (prostaglandin), better understanding of scope of practice limits for IV PUSH meds, Recognition that residents require more training in intra-osseous placement and defibrillator use, Residents and ED nurses given in-service for gaps in skill. The challenges of an interdisciplinary In-situ simulation program were found to be: ensuring protected time for nurses and RTs, building a critical mass of instructors/debriefers, providing appropriate, timely orientation to all users and developing a bank of scenarios. Overall, it was found that it

is possible to develop and implement an interprofessional, in-situ simulation program that is useful for all learners and can contribute to knowledge gain and skill development.