

Good, pretty and cheap: Creating endless learning opportunities with a new *in situ* simulation based cardiology-training program

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Abstract

Background: Acute care inpatient units, such as cardiology floors, are high acuity and highly specialized areas with an increased potential for codes and other emergency events. Simulation based educational programs are a very effective and efficient way to train health care providers on emergency situations, and improving their confidence and comfort when treating high risk patients. We present the results of the first in-situ simulation room in our cardiology floor, the learning opportunities created, the cost and the impact of this new regular activity in our staff.

Methods: We installed our simulation equipment, including a camera and a mock crash cart, in one of the free procedure rooms in our cardiology floor. Five simulation instructors with experience on cardiology emergencies and/or CRM skills participate in the program. We run twice weekly, mostly, “just in time” simulation scenarios. We use the small conference/ family room on the cardiology floor for our debriefings. The scenarios are run for 10 minutes, debriefings for 20 minutes. Evaluations are filled post-simulation activities every time, by every participant.

Results: We created over 994 multidisciplinary educational opportunities, training 97% of the residents, 100% of the cardiology fellows, 67% of the NPs and 90% of the RNs, on our cardiology floor. Over 85% of the scenarios were run by the same three instructors and 80% of the scenarios were conducted during daytime hours. The total cost was \$37,205. The evaluations were overall >4/5 when assessing for self-reported ability to perform as part of a team during high-stakes events, increasing the vigilance to patient safety during crisis and self-confidence in handling critical situations.

Discussion: It is feasible to create an interesting and engaging “*in situ*” educational program with minimal equipment and cost, and limited manpower that improves team and personal performance. We need further research to evaluate whether this educational method helps improving patient safety, by, for example, increasing rapid response team (RRT) calls while decreasing real codes, and improving code outcomes.

Biography

Patricia Bastero is currently involved with The Congenital Heart Surgery project in Mexico, in collaboration with TCH international services. She participated in many international ECMO courses bringing a good “hands on” experience with high fidelity simulation for ECMO. Her main research interest is based on education research at the moment. Her past research experience involves her PhD thesis, a prospective investigation of the relationship between the vitamin D receptor gene and estrogen receptor gene polymorphisms, and their relation to the growth pattern in healthy children from birth to 7 years of age.

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