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Featured Article

Pilot-Study Exploring Time for Simulation in Academic and Hospital-Based Organizations

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Abstract

Background: Organizations are embracing innovative learning activities, particularly simulation, because it is learner focused, grounded in adult learning theory, and engages various learning styles. Allotting appropriate time for work in simulation is a challenge for many organizations. The use of simulation has increased; therefore, understanding the amount of time necessary for best-practice simulation is essential to assure programs meet the increased demand and clinical and professional development objectives.

Method: A nonexperimental explorative study was designed to quantify the time needed for simulation activities.

Results: Approximately 26.9% of time was spent conducting prescenario learning activities (immediately preceding the simulation), simulation scenarios, and debriefing. Other presimulation and postsimulation activities related to simulation design, evaluation, and cleanup were more time intensive, together accounting for 73.1% of time reported.

Conclusion: This study enabled the researchers to identify simulation processes with correlations to time highlighting the patterns of activity usage and quantifying time commitments related to simulation. It lends useful information to help resolve difficulties in the allocation of staff time and other resources for simulation. Understanding the time necessary for specific simulation activities can allow organizations to budget resources and potentially improve the process for simulation development and execution.

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Aim

A simulation consortium of academic-based and hospital-based organizations in southeast Indiana desired to conduct a time study to quantify the time necessary for activities involved in simulation. The guiding question for this research study was: what length of time can be reasonably expected for simulation facilitators to prepare, implement, and evaluate simulation according to established best practices? The aim of the study was to develop an instrument to log time for simulation activities, collect data regarding time commitments for simulation activities, and analyze the data.

Key Points

- An allowance of time is a major challenge for conducting best practice simulation and budgeting resources for simulation.
- In this study, nearly three-fourths of the time used by simulation facilitators was spent in pre and post simulation activities that are important to best practice simulation.
- These results are useful because they support evidence for an allotment of time and resources for all aspects of simulation.

The study included quantifying the time required for presimulation activities, such as developing objectives, designing scenarios, using evidenced-based practice, collaboration with other departments, programming scenarios, developing props, developing prescenario learning activities, preparation and setup, and training actors. The study also evaluated the time required to implement simulation, such as administering the prescenario learning activities, implementing the scenario, and debriefing. Furthermore, quantifying the time required postsimulation, such as evaluation, cleanup, and reporting was included in this study.

Background

Organizations are embracing innovative learning activities, particularly simulation, because it is learner focused, grounded in adult learning theory, and engages various learning styles. Allotment of time for work in simulation is a challenge for many organizations. Use of simulation is increasing; therefore, quantification of time is essential to assure that programs can meet increased demands and clinical professional development objectives, while maintaining best practice. Many organizations are challenged with budget restrictions resulting in limited availability of staff or faculty time for simulation. In fact, many simulation facilitators in a simulation consortium in southeast Indiana anecdotally report that limited time and lack of staffing are their greatest challenges. These challenges need to be explored and interventions need to be implemented.

Review of the Literature

Relevant literature from peer-reviewed journals and databases, including EBSCOhost, Gale Database, and Proquest, were used to search for literature related to simulation time and simulation activities. Search terms included simulation, time study, simulation activities, simulation-based learning, simulation development, simulation evaluation, simulation and evidenced-based practice, and simulation and debriefing. There is little information in the literature related to time necessary for simulation activities. Therefore, a need for research associated with the time necessary to implement best-practice simulation was identified. Today's economic environment threatens simulation programs. Health care education and practice are expected to do more with fewer resources; however, education programs are often negatively impacted by budget cuts. In addition, the National Council of State Boards of Nursing recently conducted a National Simulation Study which identified up to 50% of clinical experiences can be substituted with best-practice simulation experiences (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). An increase in simulation in nursing education programs is expected and an appropriate time will need to be allotted for this shift. Supporting time allotments is essential to the success of simulation (Jones & Hegge, 2008).

Participants

Simulation facilitators included in the pilot and formal research study are members of a simulation consortium, a group formally organized working together to advance the use of simulation, research best practices in simulation, and ultimately improve patient outcomes. Each simulation facilitator has attended formal simulation training and has experience designing, conducting, and evaluating simulation within their organizations. All simulation facilitators have mentors from the simulation consortium. They are subject matter experts in their professions and they are experienced simulation facilitators. Facilitation of simulation is part of each participant's job requirements.

A purposeful sample of three simulation facilitators from two academic-based institutions (2-year colleges) and five simulation facilitators from two hospital-based institutions participated in the pilot study. The overall response rate was 80%. One academic organization employed one simulation facilitator and a 100% response rate was obtained from that organization. The other academic organization employed two simulation facilitators and a 100% response rate was obtained from that organization. One hospital-based organization employed one simulation facilitator and a 100% response rate was obtained from that organization. The other hospital-based organization employed six simulation facilitators at the time of the pilot study, and four simulation facilitators participated, resulting