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Review Article

A Proposed Model for Simulation Faculty Workload Determination

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Abstract
Background: Faculty workload calculations are not designed to capture nursing simulation faculty workload. The purposes of this literature review were to gather available determinants of simulation faculty workload in the existing literature and to propose a nascent simulation faculty workload model.
Method: Scholarly databases were searched and synthesized.
Results: Determinants of simulation faculty workload included substitution of clinical with simulation, simulation-to-clinical hour ratios, faculty preparation for simulation, faculty-to-student ratios, length of time in simulation, and the coordinator/director role.
Conclusions: This article provides an initial attempt to identify and contextualize factors that determine simulation faculty workload. The simulation faculty workload model provides educators a framework with which to define and analyze concepts related to simulation workload, test relationships between these concepts, and guide discussions with administrators for appropriate workload credit for simulation-based learning activities.

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The use of nursing simulation in traditional baccalaureate nursing programs is on the rise, fueled in part by the National Council of State Boards of Nursing (NCSBN) National Simulation Study (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). This landmark report found that up to 50% of clinical learning time could be substituted with well-designed simulation-based learning activities with no significant differences in comprehensive nursing knowledge, preceptor and clinical instructor ratings of clinical competency, or first-time National Council Licensure Examination—registered nurse pass rates.

As many academic nursing programs begin to expand the use of simulation as a major pedagogical approach, there is growing concern that the demand for simulation may outpace the availability of faculty with simulation expertise

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(Acton, Chipman, Lunden, & Schmitz, 2015). Furthermore, the imminent shortage of nursing faculty is forcing many nursing programs to do more with less, increasing the enrollment of prelicensure nursing students while struggling to maintain an adequate number of educators to teach them (Wyte-Lake, Tran, Bowman, Needleman, & Dobalian, 2013). As a result of the nursing shortage, 51% of survey respondents reported an increase in faculty workload (Bittner & Bechtel, 2017). In fact, the National League for Nursing estimated that up to 25% of nurse educators were considering leaving their academic position because of an increasing workload (National League for Nursing, 2014).

Key Points

- Current models for calculating faculty workload do not capture the nature of simulation pedagogy.
- The potential determinants in the Simulation Faculty Workload model are: substitution of clinical with simulation, faculty-to-student ratio, simulation-to-clinical hours ratio, faculty preparation for simulation and the coordinator/director role.
- Understanding the nature of simulation faculty work will help justify the appropriate teaching credit for simulation activities.

Simply maintaining an adequate number of nurse educators in academia is a growing struggle for many colleges of nursing. Although simulation offers numerous benefits as a learning modality, particularly with fewer options for clinical learning sites (Breymier et al., 2015), expecting nurse educators to add simulation to their current workload could result in increased faculty burnout, demoralization, and an exodus of nurse educators from the university. One way to potentially avoid these undesirable outcomes is to ensure that faculty receive appropriate credit for all the activities that encompass their workload. Therefore, the purpose of this article is to describe a preliminary framework that can be used to identify significant determinants of simulation faculty workload.

Methods

The following databases were searched from inception to present: Joanna Briggs Institute, Cochrane, PubMed, MEDLINE, Cumulative Index to Nursing and Allied Health Literature/EBSCO, and Google Scholar with the following search terms: Nurs*, Faculty, Simulation, Lab, Workload, Work*, Hour*, full time equivalent (FTE), and Calculate. In addition, the following nursing organizations were searched for standards, white papers, and discussion boards: National League for Nursing—Simulation Innovation and Resources Center, American Association of Colleges of Nursing, International Nursing Association for Clinical Simulation and Learning (INACSL), Society for Simulation in Healthcare, and NCSBN. Relevant articles were reviewed. For the most relevant articles, the primary author used a forward citation search engine (Web of Science).

Review of the Literature

Faculty time for work in simulation has been minimally described in the literature (Eisert & Geers, 2016), which reflects the paucity of research related to nursing faculty workload overall (Bittner & Bechtel, 2017). In fact, Bittner and Bechtel (2017) found that there is no universal definition of nurse faculty workload. The best available evidence to make simulation workload recommendations included descriptive studies, personal communication with content experts in nursing simulation, and information available from open forum discussion boards through INACSL and Society for Simulation in Healthcare.

In terms of current research, all sources are descriptive in nature (Acton et al., 2015; Jones & Hegge, 2008;

Table 1 Potential Key Determinants in Simulation Faculty Workload

Substitution of clinical with simulation
• Number of students in each class with simulation component
• Replacement of clinical time with simulation: 10%, 25%, and 50%
Faculty-to-student ratio
• Ratio of simulation faculty to students (1:2-1:10)
◦ Students as observers or hands on
Simulation-to-clinical hours ratio
• Ratio of simulation to clinical hours (3:1, 2:1, 1:1, 1:2, and 1:3)
Faculty preparation for simulation
• Assure efficient use of faculty
• Active engagement & contribution of faculty assigned to simulation
Length of time during simulation
• Number of students in each simulation
• Multiple simulation sessions in one day
• Complexity of simulation scenario
• Multiple visits to simulation throughout the semester
Coordinator/director roles
• Scheduling students/faculty
• Support staff, graduate assistant
• Training faculty to debrief
• Training faculty to facilitate simulation/run computer/operate equipment
• Developing new content-matched scenarios
• Revising scenarios
• Set-up scenarios
• Tear-down scenarios, restocking
• Ongoing evaluation of simulation program