Description and Outcomes of a Collaborative Interprofessional Acute Care Simulation Lab for Physical Therapy Students

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Background & Purpose: Use of simulation technology in physical therapist education is increasing. Literature supports simulation (SIM) to help develop and evaluate clinical skills, decision making, and professional behaviors. The use of high fidelity human simulators (HS) has also been proposed as a method for acute care clinical education. The purpose of this project is to describe an acute care SIM module designed to focus on interdisciplinary communication and clinical decision making, report student perceptions of the experience, and assess the outcome on students clinical experience.

Case Description: The daylong education session, utilizing HS, was designed through collaboration between academic faculty and clinical partners. The education program contracted with a partner health system for the SIM sessions. A single clinical topic (care post cardiac surgery) was the focus throughout the day. Clinicians from multiple healthcare systems and university faculty provided student mentorship. Fifteen groups of 4 students rotated through 5 component experiences: 2 HS sessions with subsequent video reviews for feedback and reflection, and one documentation session utilizing a pre-recorded case scenario. During the SIM each student pair practiced clinical skills on the HS while the other pair observed. Hand off communication about patient status occurred between student pairs. During the SIM session, nurses interacted with the students by requesting a patient status report. Student feedback on the SIM experience was collected via a 13 question Likert scale survey, and open ended feedback. For students placed in an acute care clinical experience (n=114), midterm Clinical Performance Instrument (CPI) data were compared across 5 years, 2 years not utilizing SIM and 3 including SIM.

Outcomes: All students participating in the simulation day completed the survey and provided feedback (n= 174). The 4 dominant themes identified from the open ended feedback were also supported by the 4 top rated questions in the survey. Greater than 90% of the students agreed or strongly agreed that the SIM sessions helped them: apply prior knowledge (94%),
respond to change in the patient condition (94%), practice clinical decision making (90%), manage multiple lines and tubes (96%). For the students placed in acute care clinical experiences, the group receiving simulation (n= 62) had 1-2 point higher median scores for the following CPI items: communication, screening, examination, and documentation compared to those not receiving simulation sessions (n= 52).

**Discussion:** Using active learning principles, the acute care SIM day included clinical lab practice, observation, intra and inter-professional communication, documentation and self-reflection. The coordinated day allowed a large class multiple opportunities to engage in the learning opportunity throughout the day. Results suggest the day encouraged higher levels of learning in multiple domains with potential carry over to clinical performance.