

# Incorporating an Interprofessional Education Emergency Medicine Simulation into Medical Laboratory Science Curriculum

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## ABSTRACT

Incorporating interprofessional education (IPE) events into current medical laboratory science (MLS) curriculum is crucial but challenging. MLS, physical therapy (PT), paramedic, physician assistant (PA), and nursing faculty developed an interprofessional emergency medicine simulation. The case involved transferring a patient with an adverse event during rehabilitation services via the paramedic training ambulance to the simulated emergency room for diagnosis and treatment. Faculty met monthly to develop a case that fulfilled each program's learning objectives. The event was scheduled to ensure all students had acquired the necessary skills and knowledge for successful participation. Evaluation tools were chosen to collect data regarding the participants' experience. The IPE emergency simulation event included 87 students from 5 programs. The primary goal was use of communication skills to safely transfer a patient between providers. Data was collected using the TeamSTEPPS observation tool and Teamwork Attitudes Questionnaire and self-reflections to gauge student learning, application of TeamSTEPPS tools, teamwork, and perspective of the event. Preliminary analysis of the pre- and post-surveys revealed a significant positive change in the MLS student

understanding of the importance of communication. Two questions in particular showed post-hoc, ANOVA significant differences. For the question "patients are a critical component of the care team," the initial mean score for MLS students was 4.5, with 5 indicating strongly agree. Post-hoc analysis revealed a mean difference of 0.33 (SD 0.651). MLS students had an initial mean of 4.08 on the question "leaders should create informal opportunities for team members to share information" and demonstrated a mean difference of 0.83 (SD 0.835). On the same question, PT had a mean difference of 0.18 (SD 0.476) while PA showed 0.09 (SD 0.294). Overall, more significant changes were seen in MLS than the other professions. Self-reflections contained positive comments from all professions. IPE simulations enhance student learning as they use critical thinking, practice patient safety, and demonstrate collaborative problem-based learning. Outlining steps and considerations for implementation can assist healthcare programs in creating interprofessional opportunities for students to learn with, about, and from each other, ultimately strengthening collaborative patient-centered care.

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