

Abstract #19: Poster (Teaching Tool)

Pilot Program in Clinical Microbiology Laboratory Simulation for MLS Students

Medical Laboratory Science (MLS) educational programs face the challenge of placing students for clinical practica/rotations. In a non-medical university, this has been particularly true for clinical microbiology practica as local healthcare systems centralize microbiology, serology, and molecular testing services with smaller hospitals housing “stat labs” only. Encouraged by the success of an immunohematology simulation practicum implemented over 15 years ago, in the summer 2018 faculty piloted a clinical microbiology simulation lab to satisfy entry-level practical competency requirements. The pilot program consisted of three weeks of on-campus lab simulation, followed by a two-week hospital clinical experience, as opposed to five weeks in the clinical setting in the traditional practicum. In the lab simulation, students completed clinical microbiology evaluations on all clinical specimen types. Identification techniques included bench top tests, automated identification and antibiotic susceptibility testing. Students utilized rapid kit tests and performed quality control. Upon completion of the students’ practicum final exam and microbiology section of the comprehensive program exit exam, faculty evaluated student learning using two-sample t-tests to establish if statistically significant differences existed in the scores achieved by students enrolled in the pilot versus the traditional model. We hypothesized that no such differences would exist. There were no statistically significant differences between the post-practicum exam results achieved by both groups ($p < 0.05$). We conclude that students had equally valuable learning experience in both practicum models and plan to expand the on-campus simulation to alleviate clinical site shortage.