

DETERMINING THE LEARNING EFFICACY OF INTERACTIVE PATIENT SIMULATIONS AS MEDICAL TEACHING TOOLS

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Introduction/Summary: This presentation describes the development, implementation and evaluation of online, interactive clinical simulations designed to augment the clinical pathology instruction for second year medical students. Special attention will be given to the development and refinement of the evaluation tool, and the results of survey responses provided by third year medical students who used these exercises in their second year. I believe the presentation will appeal to medical educators of all levels as well as people interested in developing their own interactive educational media.

Abstract: Previous studies have shown that third and fourth-year medical students rely more on laboratory values than patient history for making diagnoses. Technical advances have created opportunities for students to learn effective use of the clinical laboratory, as well as practice clinical skills in a safe, online environment. I report on the development, implementation and evaluation of online, interactive, diagnostic clinical simulations in the teaching of clinical pathology to second year medical students. The clinical simulations described were developed to augment classroom experience by providing evidence for the importance of the clinical history in the effective use of laboratory testing. The cases are driven by short movies of 'patient' (actor) interviews and required 20-30 minutes to complete. Students were required to gather history, laboratory and radiological information in order to make correct diagnoses. Third year medical students who had used these exercises in their second year were asked to evaluate the effectiveness and appropriateness of the simulations in light of their third-year clinical rotations. The Merrill 5-Star instructional model was used as the basis for creating an assessment tool. Using Cronbach's Alpha Statistical Test, a reliable assessment tool for evaluating the efficacy of the online problem-based clinical exercises was crafted. Participating third year students retrospectively found the clinical cases valuable in preparing them for the 'real world' setting of the clerkship experience. These findings indicate medical students learn effectively from scripted, online clinical problems and appreciate the opportunity to make clinical decisions in a safe environment.