A MULTIMEDIA WEB-BASED INTERACTIVE CASE MODULE FOR THE EDUCATION OF EMERGENCY MEDICAL PERSONNEL

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Background
At SUNY UMU a dynamic database-driven Website was introduced in 2002 as an adjunct to residency training in pathology (http://www.upstate.edu/pathology/residency). This site has served successfully as a learning tool with its annual update and addition of interactive case and quiz modules. To extend the advantage of Web-based learning to medical students and residents in other disciplines, e.g. Emergency Medicine, we developed a multimedia Web-based module with video and audio enhancements to simulate patient encounters in the emergency ward setting.

Method
Central to the Web-module development is the creation of a relational database using FileMaker Pro (FileMaker Inc, Santa Clara, CA 95054), an application that allows search, storage, retrieval, with image, video and audio incorporation functions, and a built-in interface that allows display of database contents on Web templates written in HTML and JavaScript. The initial introduction of a patient’s history is enhanced with a 30-60 second video of patient presentation, which is followed by key physical findings. The diagnostic studies and management of the patient are then available to the learner through sequential interactive quizzes. The format of the quizzes simulates medical board questions. Once the learner submits an answer to a quiz, the correct answer with a detailed explanation is given. The interpretation of patient’s X-rays, ultrasounds, and laboratory data facilitate succession of subsequent quizzes. After quiz completion, the learner is asked to make a response for the patient’s diagnosis, which is discussed in detailed as the case closes.

Results and Conclusion
Initial feedback has been favorable. The majority of Emergency Medicine personnel feel that in addition to complementing and enhancing regular lecture sessions, this module enables preservation of interesting and/or infrequently encountered cases which some learners might otherwise miss due to other commitments.

Benefit to Participants
Participants will learn from this presentation/demonstration:
1. How Emergency Medicine personnel could utilize our multimedia module as an educational tool to simulate patient encounters.
2. How video and audio maybe incorporated into a Web-based interactive database-driven case module.
3. Gain insight into an interactive Web-based module that utilizes medical board question format and detailed feedback in a simulated patient case.

Reference
http://pathed.upstate.edu:8080/p_gicases/frame.htm, Gastrointestinal Pathology: an Image based CME module. Contact Jannie Woo, Ph.D. (wooj@upstate.edu)