Use of an Innovative Educational Design in Physician Board Exam Preparation

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Purpose

One of the strategic objectives of The American Academy of Family Physicians (AAFP) is to support the clinical expertise of family physicians so that they can continue to provide high quality care for their patients. In this presentation, the authors show an example of a Continuing Medical Education (CME) activity that combines learning theory with innovative use of technology to promote improved understanding as it relates to preparation for the American Board of Family Medicine board examination.

Background

Family physician learners preparing for their board examination must balance patient care with finding time to prepare for the exam across a range of topic areas. The stakes are high, as board certification may be a requirement for hospital privileging and other essential physician functions. However, for some learners, some of these topics may relate to conditions that they see infrequently or not at all. As a result, effective and efficient education is required to make the best use of learners' time and give them the breadth and depth of knowledge to pass the examination.

Methods

To maximize the reach of our education, this variant of the AAFP board examination preparatory education (the AAFP Board Review Self Study Package [BRSSP]) used online archived/on-demand sessions, arranged by clinical topic, for asynchronous learning. Sessions from a live AAFP board review course were recorded and then post-produced and edited, as appropriate. Learners were presented with a step-wise program of pre-test baseline assessment, educational session engagement, followed by an immediate post-test. Each presentation was accompanied by reinforcement tools to further stretch learner understanding. Using our existing learning management system and blast email tool, learners were invited to participate in an online assessment to reassess their knowledge one month before the exam. These Retention Test questions were pulled from the original pre-and post-test questions and then randomized and presented grouped by clinical topic. Learners were provided feedback after answering the questions including links back to the sessions for incorrect answers. Scores were compared in a paired learner cohort for the pre-, post-, and retention-test phases.

Results

Learner scores (from a paired data cohort; N= 72) in the pre-test varied depending on the difficulty of the core material (mean= 64.5% correct). Post-test scores immediately following the education were uniformly high towards the maximum score across all subjects (mean= 97.4% correct). Retention test scores decreased slightly, but generally lay in a band between the pre- and post- test scores (mean= 86.2% correct). The retention test scores were equated to the average working knowledge of learners as they approached the examination

Discussion

Analysis of these data suggests that consistent with learning theory, knowledge and understanding erode with time. This has implications for how educators should perceive educational value as many activities utilize a post-test that immediately follows the education. For learners engaged in board examination preparation, using the AAFP BRSSP Retention Testing functionality allowed them to reconnect with the educational material just prior to the examination and promoted a second period of reflection that serves to focus study in persistent weak areas. Data from this study have also allowed AAFP staff to work with faculty to improve the quality of the educational content as well as the questions in the sessions. An essential element in this process has been the utilization of existing technology in an innovative way to enhance learning, but with low complexity and cost.