Restructuring of the Advanced Core Educational Curriculum for Anesthesiology Residents

Ihab Kamel, MD – Temple University
Abiona Berkeley – Temple University
Gordon Morewood – Temple University

Background: Medical education has not kept pace with the continually changing landscape of medical practice. The core educational curriculum serves as the backbone of all teaching programs and provides a common foundation for residents' clinical performance, their professional development, patient outcomes, and inter-professional collaboration (Frenk J, 2010). Residency curricula based on historical templates may not address the future needs of current trainees including: achievement of Specialty Board Certification, provision of safe patient care in a complex and dynamic healthcare system, and becoming a life-long learner.

Needs Assessment: The authors conducted a general needs assessment to determine current approaches to addressing this deficiency. The general needs assessment consisted of a literature survey and informally contacting regional anesthesiology programs and national experts in education. The general needs assessment was followed by a targeted needs assessment. Targeted learners were the CA-2 and CA-3 anesthesiology residents at the authors' institution. The targeted needs assessment included a resident survey, individual interviews with stake holders and a learning environment assessment. Survey results demonstrated a low satisfaction rate (7% extremely satisfied, 14% satisfied and 36% somewhat satisfied) with the established curriculum which was comprised of traditional lectures based on standard textbook chapters.

Curriculum Design: A new core curriculum was designed based on the ABA advanced examination content outline. Educational strategies were specifically incorporated to foster both active and collaborative learning, as well as higher-order problem solving (Weidman J, 2015). The ABA content outline topics were divided into 78 learning modules each lasting 2 hours. Each module was comprised of 2 one-hour sessions. Within each module at least one session involved a problem-based learning discussion. The curriculum was accompanied by a parallel faculty development program to assist educators with preparing and moderating problem-based learning discussions.

Curriculum Evaluation: The curriculum evaluation process will assess the impact of the new curriculum on the educational process and outcomes. To achieve this goal, the authors will use the following questions, designs, and data collection strategies:

1. Do the CA-2 and CA-3 residents perceive the new curriculum as an improvement over the prior curriculum?
Design: O1----X---O2
Data source: anonymous online resident survey.

2. Does the new curriculum improve the performance of the CA-2 and CA-3 residents as assessed by the ABA In-Training Examination scores as well as the pass rate for the ABA Advanced Certification Examination compared to the prior curriculum?
Design: O1----X---O2
Data source: Departmental database

3. Does the new curriculum improve the CA-2 and CA-3 residents' attendance and participation at educational activities compared to the prior curriculum?
Design: X---O
Data source: anonymous online faculty survey.

The authors will use the information from the evaluation process to modify the educational methods to continually foster a learner-centered active educational approach.

References:
Frenk J, et al. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet, 376(9756), 1923–1958.
Weidman J, Baker K. (2015). The Cognitive Science of Learning: Concepts and Strategies for the Educator and Learner. Anesthesia & Analgesia, 121(6), 1586–1599.