

COUNCIL PERSPECTIVE

A New Educational Framework to Improve Lifelong Learning for Cardiologists



Akhil Narang, MD,^a Poonam Velagapudi, MD, MS,^b Bharath Rajagopalan, MBBS,^c Bryan LeBude, MD,^d Aaron P. Kithcart, MD, PhD,^e David Snipelisky, MD,^f Shashank S. Sinha, MD, MSc^{c,g}

ABSTRACT

Lifelong learning is essential for the practicing cardiologist. Present lifelong learning mechanisms are stagnant and at risk for not meeting the needs of currently practicing cardiologists. With the increasing burden of cardiovascular disease, growing complexity of patient care, and ongoing pressures of nonclinical responsibilities, educational programming must evolve to meet the demands of the contemporary cardiovascular professional. A paradigm shift, replete with modern and practical educational tools, is needed in the lifelong learning armamentarium. Emerging evidence of novel educational strategies in graduate medical education supports the promise of broader application of these tools to different stages of professional life. In this commentary from the Fellows-in-Training Section Leadership Council, the authors propose 3 novel educational tools—personalized learning, adaptive learning, and the flipped classroom—to improve lifelong learning to meet the educational needs of fellows-in-training to practicing cardiologists alike. (J Am Coll Cardiol 2018;71:454-62) © 2018 by the American College of Cardiology Foundation.

The development and maintenance of professional competence through lifelong learning is indispensable to all physicians (1). As trainees progress from medical students to established practitioners, learning becomes increasingly self-directed and time-limited. Modalities used in the canonical paradigm to educate medical students, traditionally based on textbooks and lectures, are less well-suited to fellows-in-training (FITs) or practicing cardiologists. In addition, the learning preferences of FITs may not reflect those of more established clinicians. Finally, technological developments, expanding patient volume and complexity,

escalating financial pressures, increasing nonclinical responsibilities, and a rapidly evolving health care landscape demand that physicians adopt new methods to engage in lifelong learning and maintain competency in clinical practice (1-6).

Lifelong learning has been defined “as a continuation of medical education with an ongoing process of professional development along with self-assessment, which enables physicians to maintain the requisite knowledge, skills, and professional standards” (7). Using the framework employed by the Accreditation Council for Graduate Medical Education for its six core competencies, the American



Listen to this manuscript's audio summary by JACC Editor-in-Chief Dr. Valentin Fuster.



The views expressed in this paper by the American College of Cardiology's Fellows-in-Training Section Leadership Council do not necessarily reflect the views of the *Journal of the American College of Cardiology* or the American College of Cardiology. From the ^aSection of Cardiology, University of Chicago, Chicago, Illinois; ^bDivision of Cardiovascular Medicine, Brown University, Providence, Rhode Island; ^cDivision of Cardiovascular Medicine, University at Buffalo, Buffalo, New York; ^dDivision of Cardiovascular Diseases, Georgetown University, Washington, D.C.; ^eDivision of Cardiovascular Medicine, Brigham and Women's Hospital, Boston, Massachusetts; ^fDepartment of Cardiovascular Diseases, Mayo Clinic, Rochester, Minnesota; and the ^gDivision of Cardiovascular Medicine, Samuel and Jean Frankel Cardiovascular Center, University of Michigan, Ann Arbor, Michigan. Dr. Narang has received grant funding from the National Institutes of Health (5T32HL7381). Dr. Sinha has received grant funding from the National Institutes of Health (T32-HL007853); and is a contributing faculty member for Knowledge to Practice. All other authors have reported that they have no relationships relevant to the contents of this paper to disclose. Drs. Narang and Velagapudi contributed equally to this work.

Manuscript received October 9, 2017; revised manuscript received November 26, 2017, accepted November 26, 2017.

College of Cardiology (ACC) has recently developed lifelong learning competencies for all areas of cardiovascular medicine to address evolving learner needs (1). Thus, a methodical and critical examination of how the variety of available education platforms can best be incorporated at all stages of training and across the arc of a professional career is needed. As evidence continues to emerge on lifelong learning tools and strategies within graduate medical education (1), a notable gap as it pertains to lifelong learning for medical subspecialists currently exists.

This commentary from the Fellows-in-Training Section Leadership Council examines transformations in the approach to graduate medical education for FITs and lifelong learning for cardiologists from training to retirement. We identify challenges and explore currently available methods of learning in their respective context. Finally, we propose strategies that modern-day trainees and practicing cardiologists can adopt to improve learning skills, including several innovative learning concepts, such as personalized learning, adaptive learning, and the “flipped classroom.”

IMPORTANCE OF LIFELONG LEARNING

As cardiovascular medicine has evolved over the past several decades (8,9), diagnostic and therapeutic complexity has markedly increased. In addition to the challenges facing general cardiologists to master a rapidly accumulating body of knowledge (1,10,11), those with more specialized careers face similarly formidable challenges. As more FITs pursue advanced training in sub-subspecialties such as advanced heart failure, multimodality imaging, and catheter-based interventions, practicing cardiologists will need to keep abreast of developments in their own fields of special expertise while remaining current in the broader aspects of the field. To meet the demands for lifelong learning, cardiologists need timely access to evidence-based educational materials that address both the narrow and wider spheres of knowledge (1,12).

CURRENT GRADUATE MEDICAL EDUCATION AND LIFELONG LEARNING STRATEGIES

Traditionally, the education of physicians takes place in the classroom, lecture hall, at the bedside, in laboratories, at scientific sessions, or through continuing medical education programs (13). The challenges of the modern-day health care environment call for critical examination of learning methods by the profession (14). The curriculum and expectations for general cardiology fellowship have been standardized in the ACC 2015 Core Cardiovascular Training

Statement and the policies of the Accreditation Council for Graduate Medical Education (10,15). Requirements for training in emerging subspecialties, such as multimodality imaging, cardio-oncology, and sports cardiology, are less well-defined by specified curricula. Fellows entering the workforce are expected to maintain expertise in these fields, but opportunities for personalized education to ensure continued competency beyond the formal fellowship training years are relatively limited. Although resources for lifelong learning should be personalized with respect to individual physicians, current programs typically offer limited customization. The problem is particularly acute for those physicians seeking to gain competencies in new areas for which they were not trained during fellowship. Although there is skepticism of the often industry-sponsored “weekend course” at which new techniques are taught, alternative opportunities for those seeking genuine competency are scarce.

Emerging concepts of adult learning theory create opportunities for lifelong learning. Early-career learners depend on teachers to provide foundational knowledge. As trainees progress through residency and fellowship, individual learning paths evolve in different directions. Independent learning uses an education cycle (16) that recognizes the needs of the physician, sets clear objectives for learning, and includes assessments of how well the objectives are met. Lifelong learning programs should incorporate the following key elements (Table 1):

- Generate discrete learning objectives for educational programs.
- Incorporate evidence-based medicine to guide development of learning programs.
- Provide high-yield and practical educational programming that is readily applicable to clinical practice.
- Effectively use technology and innovative educational platforms.
- Ensure that educational programs use time efficiently.
- Critically examine lifelong learning programs by both educators and learners with the goal to continually optimize and refine programs.

In the following section, we explore several strategies for lifelong learning that can be initiated during fellowship and pursued throughout practice. These strategies address some of the challenges inherent in current models of learning by adult learning theories as they apply to continuing medical education in cardiology.

ABBREVIATIONS AND ACRONYMS

ACC = American College of Cardiology

FIT = Fellow-in-Training

Download English Version:

<https://daneshyari.com/en/article/8666671>

Download Persian Version:

<https://daneshyari.com/article/8666671>

[Daneshyari.com](https://daneshyari.com)