LIFELONG LEARNING IN THE 21ST CENTURY

A New Paradigm for the ACC

Health care providers are required to participate in Continuing Medical Education (CME) activities as a means of maintaining competence and incorporating new knowledge into their practice. These activities traditionally have comprised attendance at live educational events and the self-study of journals or textbooks. Professional societies have assumed responsibility for providing these activities to their members, using an approach that gathers faculty in convenient locations to lecture on topics they feel are critical to best practice. Programs are attended by clinicians interested in updating their medical knowledge in an environment remote from their practice settings.

It is now recognized, however, that this approach to learning does not reliably enhance knowledge or improve patient outcomes to a measurable extent. Principles of adult learning theory are not used effectively as a basis for activity planning.[1] Needs assessments are rarely utilized, and content is traditionally based on the personal opinions of the program director or faculty. The experience is one of "teaching" rather than "learning. "Metrics used to assess the success of a course include attendee registration numbers and qualitative satisfaction scores. There is no effective assessment of knowledge gained, much less documentation of improvement in patient care, as a result of attending the program.

A 2009 Institute of Medicine Report, *Redesigning Continuing Education in the Health Professions*, stated, "the absence of a comprehensive and well-integrated system of continuing education in the health professions is an important contributing factor to knowledge and performance deficiencies at the individual and system levels" and recommended a shift to Continuing Professional Development in which there is "a holistic view of health professionals' learning, with opportunities stretching from the classroom to the point of care."[2] Therein lays the impetus for professional societies to take a leadership role in designing a new paradigm for lifelong learning.

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The ACC

The ACC has been a leader in the formulation of health policy, clinical standards and practice guidelines, and is a staunch supporter of cardiovascular research. Importantly, the ACC provides professional education and operates national registries for the measurement and improvement of quality patient care. The educational offerings provided by the ACC include didactic lectures and case-based studies designed to address medical knowledge and clinical decision-making. Enduring products allow asynchronous learning by printed text or web-based applications. However, challenges to this traditional model of education include:

1. explosion of scientific information in the rapidly changing field of cardiovascular disease;
2. increasing clinical demands of cardiology practice and patient care;
3. requirements for Maintenance of Certification (MOC) and Maintenance of Licensure; and
4. restricted sources of funding to support lifelong learning.

Lifelong learning can no longer be restricted to the acquisition of new knowledge. The new paradigm must enable the translation of knowledge into practice with tools that can be customized by the learner, yet with a focus on quality that accounts for patient experience and outcomes. ACC recognizes the need for an interwoven tapestry of continuous learning that addresses knowledge application, patient and provider communication, shared decision-making, process improvement, systems-based care, patient outcomes, and assessment of provider competence. An example of such a comprehensive approach follows.

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Championing Care for Patients with Aortic Stenosis

There are a growing number of patients with aortic stenosis in the U.S., related primarily to the increasing age of the population. Symptoms are relieved and life extended when patients with aortic stenosis are referred for surgery in a timely manner. However, there remains a subgroup of aortic stenosis patients who are either referred for intervention too late in the course of their disease or not referred at all. In many cases, the patient is felt to be too old or frail to undergo intervention. The introduction of transcatheter aortic valve replacement (TAVR) has changed this landscape and appropriately selected elderly patients can now undergo intervention safely with excellent outcomes.

Championing Care FOR THE PATIENT WITH AORTIC STENOSIS

In light of this change, the ACC conducted a comprehensive needs assessment with input from multiple stakeholders. Key findings from the assessment included :

1. knowledge gaps regarding the diagnosis and natural history of aortic stenosis, as well as currently available treatments;
2. lack of understanding and utilization of surgical risk and frailty assessments in this elderly population;
3. inadequate patient and family education, with limited attention to shared decision-making; and
4. problems with transitions of care between providers and treatment centers.

Working with 10 accomplished valve centers and their referring communities, the ACC has developed an educational pilot program, **Championing Care for the Patient with Aortic Stenosis** (Championing Care) that is focused on developing tools customized at both the individual provider and systems level to address these deficiencies. The basic foundation of the program consists of the following elements:

- Live educational sessions to enhance knowledge of aortic stenosis and potential treatment options
- Tool to assess and provide a patient's level of frailty
- Tool to simplify the interpretation of the echocardiogram in patients with aortic setnosis
- Tools to improve transitions of care
- Creation of a provider community to promote "best practices"

Metrics have been designed prospectively to evaluate the effectiveness of each tool and learning intervention and the degree to which patient assessment tools are incorporated into practice.

Operational Design

The initial learning activity at each center will begin with a review of local practice patterns through our surveys and data collection. The progression of the initiative will include core knowledge modules as well as demonstration of diagnosis and risk assessment with the aid of specially designed point-of-care (POC) tools. Learners will share challenging aortic stenosis cases and test the suite of POC tools in real-time. After the course, participants will complete branching case studies using the POC tools to assess their clinical decision making.

The POC tools will include:

1. Heart sound simulations
2. Algorithmic approaches to the interpretation of echocardiographic findings
3. Frailty assessment
4. Shared decision-making
5. Semantic search tool pointed to ACC/AHA Guidelines for the Management of Patients with Valvular Heart Disease
6. Checklists for communication and transitions of care
7. Interactive patient education on *CardioSmart.org*

A "test and control" approach will be used to assess the effectiveness of the program. Quality of care across the valve centers will be evaluated. Dynamic analysis of the appropriate use of technology and POC tools will be incorporated. Interventions will allow pre/post (30 and 60 days) assessment of the utilization, effectiveness and areas for improvement of each of the tools.[1] The program can be adapted by the individual learners to teach subsequent groups of providers and patients.

Funding

Support for this new model has been provided by Edwards Life Sciences, St. Jude Medical, Boston Scientific and Medtronic. All aspects of the program, including needs assessment, educational programming, quality improvement tools, POC tools, and patient outcomes will be designed, implemented, and assessed independently by ACC.

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Future Directions

This quality improvement initiative represents an effort to combine critical local market data across medically managed TAVR and surgical aortic valve replacement patients with the evaluation of the effectiveness of our tools and interventions. If successful, it will serve as the basis for a national treatment initiative similar in scope to many of the quality improvement programs in place for the management of patients with such disorders as myocardial infarction, heart failure and atrial fibrillation.

REFERENCES

1 – Donald E Moore, Achieving Desired Results and Improved Outcomes: Integrating Planning and Assessment Throughout Learning Activities, *Journal of Continuing Education in the Health Professions*, 29(1): 1-15, 2009

2 – The Institute of Medicine Report 2009, *Redesigning Continuing Education in the Health Professions*

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