

## GUEST EDITOR'S PAGE



## Making the Case for Case-Based Education at ACC.23/WCC



Kathryn Berlacher, MD, MS, Jane Linderbaum, ARNP, CNP, Douglas E. Drachman, MD

The American College of Cardiology's 2023 Scientific Session, together with the World Congress of Cardiology (ACC.23/WCC), represented a remarkable return to live, in-person education after the COVID-19 pandemic. The program was hosted March 4 to 6, 2023, at the Ernest N. Morial Convention Center in New Orleans, and consisted of >300 education sessions, >80 of which were simultaneously live streamed via 6 virtual education channels. There was tremendous engagement by attendees, with nearly 15,000 individuals participating in person in New Orleans and an additional 2,000 virtual attendees. The program included 10 learning pathways and was developed over 12 months by an interdisciplinary planning committee consisting of physicians and cardiovascular team members with the aim to deliver cutting edge science and timely, actionable knowledge to learners in an interactive fashion. Unique classroom formats and strategies were used, including educational games and debates that engaged faculty and learners in the spirit of friendly competition. Didactic sessions included extensive periods for learner questions and discussion. Informal educational gatherings were hosted outside of classrooms in member section lounges and on the Expo floor, which allowed for community networking. Late-breaking science was presented by

leading investigators with expert panelists sharing insights and leading discussion highlighting the impact of new findings on the field of cardiovascular medicine. Overall, ACC.23/WCC was viewed as a highly-successful return to live cardiovascular education and professional networking.

While robust registration rates and successful implementation of program design are important aims, the primary objective of ACC.23/WCC, and certainly of medical education in general, is to improve patient outcomes. To achieve this important goal, educators should strive to incorporate concepts of adult learning theory into educational efforts. These concepts were popularized in the 1970s when Malcolm Knowles coined the term andragogy, referring to adult learning, and differentiating it from pedagogy or childhood learning. A key principle of andragogy is the emphasis on teaching information that is "life related," enabling adult learners to immediately apply information learned to daily tasks. Additionally, it is noted that adults learn best when information is presented in a way that is problem centered.<sup>1</sup> Building on these andragogical concepts, Benjamin Bloom and colleagues developed a hierarchical framework for educators to use while planning curriculum, now recognized as Bloom's taxonomy.<sup>2</sup> This framework acknowledges both the continuum and the complexity of adult learning, while encouraging learners to move from the basic tasks of remembering and understanding to achieve higher level skills such as applying, analyzing, and evaluating.

The leadership and planning committee for ACC.23/WCC focused on the key concepts of adult learning while developing the session content, with the goal to increase retention and application of actionable knowledge among all learners.

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From the Heart & Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA; Department of Cardiovascular Diseases, Mayo Clinic, Rochester, Minnesota, USA; and the Division of Cardiology, Massachusetts General Hospital, Boston, Massachusetts, USA.

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Recognizing that content should be relevant to real life and problem-centered, the planners deliberately emphasized the use of clinical cases throughout the curriculum. Tying real-world clinical scenarios in case-based presentations to important questions about clinical decision making encourages learners to climb the progressively more complex skillsets highlighted in Bloom's Taxonomy. Through case-based learning, attendees become equipped with both knowledge and the experience of applying that knowledge to a patient scenario, which they may then incorporate into their routine practice when they depart from the conference.

The emphasis on case-based education was recognizable throughout the ACC.23/WCC program. The newly-developed *March Matchup* sessions employed educational games focused on patient cases to highlight the spirit of friendly competition among faculty and audience participants to increase learner participation and knowledge retention. These sessions drew significant attendance and stimulated great enthusiasm from attendee learners. The *Heart 2 Heart* stage used informal, case-based discussions among interdisciplinary experts to highlight key practice points, and to engage lively audience participation. In a session entitled, *Clinical Cases from the Guidelines*, physicians, nurse practitioners, physician assistants and pharmacists collaborated as faculty to provide engaging, interactive cases with audience response questions and answers for both live and virtual learners across the globe. Additionally, a perennial favorite session type entitled *Stump the Professor*, engaged cardiology fellows-in-training who presented challenging clinical cases to a panel of expert, seasoned clinicians. These sessions inspire eager learners to engage with the same clinical questions, and to strive to reach the correct diagnosis and treatment plan in parallel with the senior clinicians. The Simulation Center embraced case-based education, providing hands-on opportunities for learners to acquire specific skills in simulated patient care. Simulations spanned a spectrum of scenarios including

management of a patient with hypertrophic cardiomyopathy, to performing a pericardiocentesis on a patient with pericardial tamponade, to a focus on critical care of patients in the cardiac intensive care unit. New this year, the Health Equity Hub allowed learners to project themselves into a patient's experience, utilizing virtual reality technology as a patient progressed through the healthcare system. Throughout the meeting program, the application of cardiovascular knowledge to case-based learning was a primary goal to enhance attendee experience, interactivity, and education.

ACC.23/WCC was created with adult learning theory in mind and launched with the hope of case-based learning occurring throughout the meeting. For many who attended ACC.23/WCC, the experience provided a sense of homecoming, reestablishing the importance of live, in-person learning after the pandemic. At the same time, the conference also provided a glimpse into strategies to enhance future meetings. Educational formats that encourage direct interaction between faculty and attendees may harness adult learning strategies and elevate the impact. Case-based education represents a key opportunity to build community and catalyze the sharing of best practices between faculty and attendees, while imparting practical knowledge and skills to enhance patient care and outcomes.

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**ADDRESS FOR CORRESPONDENCE:** Dr Douglas E. Drachman, Division of Cardiology, Massachusetts General Hospital, Gray-Bigelow 800, 55 Fruit Street, Boston, Massachusetts 02114, USA. E-mail: [ddrachman@partners.org](mailto:ddrachman@partners.org).

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