Circulation: Cardiovascular Quality and Outcomes

CARDIOVASCULAR PERSPECTIVE

Highlights From the American Heart Association Quality of Care and Outcomes Research 2019 Scientific Sessions

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The American Heart Association (AHA) Quality of Care and Outcomes Research (QCOR) 2019 Scientific Sessions was held in Arlington, Virginia from April 5 to 6. QCOR brings together clinicians, researchers, and policymakers to discuss healthcare quality and patient outcomes, with a particular focus on early career development at the annual QCOR Scientific Sessions.

This year's programming featured intertwined topics across the spectrum of quality improvement, including real-world evidence impacting clinical care to real-world evidence to health policy implications, with a notable focus on digital technology in research and patient engagement. Programming featured 4 interactive workshops, >20 oral abstracts, and nearly 200 poster presentations. Plenary sessions focused on behavioral economics and real-world data for evidence generation, featuring a variety of speakers from academia and industry. Oral abstract sessions included presentations on current quality improvement initiatives such as fast-track extubation protocols and preoperative dual antiplatelet therapy use, data science using natural language processing, and deep learning to analyze echocardiogram data, and health IT exploring how patients perceive mobile health applications and how a health system can create a disease-specific registry for both clinical care and outcomes research.

This year, Gregg Fonarow, MD, was honored with the 2019 QCOR Outstanding Achievement Award. In his keynote address, he reflected on his journey as a clinician investigator, often taking clinical questions from the bedside and asking them at the population level with the formation of the Get With The Guidelines registry and multiple pragmatic clinical trials.

BEHAVIORAL ECONOMICS, PATIENT ENGAGEMENT, AND DIGITAL TECHNOLOGY

Several presentations focused on ways to influence behavior change, engage patients in their own care, and use digital technology. Elana Safran, MPP, from the Office of Evaluation Sciences in the United States General Services Administration began the first plenary session, on Behavioral Economics, explaining how the Office of Evaluation Sciences uses behavioral design to develop and evaluate evidence-based programs on behavior change, such as targeted prescriber letters to reduce overprescribing in Medicare Part D. Mitesh Patel, MD, MBA, MS, shared use cases from the Penn Medicine Nudge Unit, the first behavioral design team embedded within a health system. A nudge is a change in the way choices are presented or information is framed that alters people's behavior in a predictable way without restricting choice.[1] For example, nudges in the electronic health record have increased the number of cardiac rehabilitation referrals from 15% to 85% for cardiac patients. Charlene Wong, MD, MSPH, of the Duke-Margolis Center

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Table 1. Shared Decision-Making

4 questions to ask when creating a decision aid
What is the decision and what are the options?
What are the pros and cons of the options?
What are the value trade-offs?
What are the next steps?
4 common misconceptions hindering quality care delivery
People are sufficiently worried about their health to do something about it
People understand risk and interpret risk similarly
People want to defer decisions to their provider
If we remove barriers like side effects, cost, inconvenience, and general dislike, patients will take their medications

for Health Policy, urged researchers to use concepts of behavioral economics during patient encounters. For example, presenting the most important information at the beginning and at the end of a clinical encounter may enhance patient learning because people tend to remember information presented first and last.

Another way to engage patients is through shared decision-making. In an interactive workshop focused on this topic, Dan Matlock, MD, MPH, walked participants through the creation of a decision aid by asking 4 questions (Table 1). Erica Spatz, MD, MHS, built on Dr Matlock's points, presenting data on how shared decision-making tools can overcome 4 common misconceptions that may hinder the delivery of high-quality care to patients (Table 1).

A workshop that combined behavioral economics with patient engagement was titled Design Thinking In Action led by Kapil Parakh, MD, PhD, MPH, from Google Fit. Design thinking is a "systematic innovation process that prioritizes deep empathy for end-user desires, needs, and challenges to fully understand a problem in hopes of developing more comprehensive and effective solutions."[2] Attendees worked together to develop a consumer archetype to promote more physical activity, consistent with the new physical activity guidelines.

In the Policy to Payment to Practice session, Bimal Shah, MD, expounded on the ability of telehealth to address many of the challenges patients with multiple chronic conditions face, such as lack of health management support, disconnected health data, and medical costs. He explained that in order for telehealth to be successful in this patient group, telehealth must include connected technology such as cellular enabled blood pressure monitors, blood glucose meters, and wearables, as well as actionable and timely signals from those devices and associated mobile applications. Bringing the patient-level implementation up to the policy level, Dr Shah pointed out that service-based price models align healthcare delivery with patient outcomes that matter, such as quality of life and patient satisfaction, while showing tangible cost savings compared with traditional care.

REAL-WORLD DATA FOR EVIDENCE GENERATION IN A TRIAL-DOMINATED CARDIOVASCULAR SPACE

In a 2-part series, QCOR joined with the Cardiovascular Clinical Trialists Forum to discuss the role of real-world data and real-world evidence in supporting healthcare and regulatory decisions. Topics pertaining to real-world evidence included the new Framework for the Food and Drug Administration Real-world Evidence Program, patient engagement in real-world data collection, use of real-world data to fill research gaps both in guideline adherence and medical devices, as well as methodologic considerations as we move into the era of real-world data and evidence.

Amy Abernathy, MD, PhD, and David Martin, MD, MPH, both from the Food and Drug Administration, introduced the Framework for Food and Drug Administration's Real-World Evidence Program which outlines best practices to use real-world evidence for new drug indications or support drug postapproval study requirements.[3,4] Dr Martin described the key features of regulatory grade real-world evidence, including data reliability and relevance, while acknowledging challenges with incorporating new types of study designs using mobile health technology. Marc Boutin, JD, a patient advocate from the National Health Council, emphasized the patient need for real-world evidence. He explained that patients should be involved in study design because, if "you don't ask the patient, you aren't going to focus on the right outcomes." Dr Gregg Fonarow highlighted the ability to use real-world data to fill the gaps between trial populations, registries, and community populations.

With respect to methodology, Rachael Fleurence, PhD, Executive Director of the National Evaluation System for Health Technology Coordinating Center, opened the second session on real-world data. National Evaluation System for Health Technology Coordinating Center brings together a large range of complementary, real-time, cross-referenced evidence, all under a common data model, which can be used in the premarket approval process and clinical trial ecosystem. Michelle McMurry-Heath, MD, PhD, Global Head of Evidence Generation at Johnson & Johnson, provided the industry perspective on access to robust and reliable real-world evidence, presenting case studies where real-world evidence impacted medical device approval processes.

Richard J. Wilke, PhD, Chief Science Officer at the International Society for Pharmacoeconomics and Outcomes Research, presented practical considerations for generating and analyzing real-world evidence, summariz-

Table 2. Advice for Effectively Navigating Research Collaborations

Planning ahead is key
Whether leading an article or writing a grant, it is important to spend time up front to ensure an adequately detailed paper or proposal with sufficient buy-in from collaborators.
Listen to your community partners.
For those conducting community-engaged research, it is important to listen to the priorities of the community partners from the beginning and incorporate those priorities into your work from the planning stage.
Decide authorship early
Having discussions about authorship order and roles for papers up front is important, especially the first author position and last author position. Young investigators should rely on their mentors to guide the discussion is important, and mentors should advocate for young investigators in the conversations.

ing recent efforts from the International Society for Pharmacoeconomics and Outcomes Research–International Society for Pharmacoepidemiology Task Force.[5] He recounted that continued challenges in the real-world evidence arena include careful data collection and curation, appropriate analyses, and procedural practices for transparency, and efforts toward replicability and reproducibility. Incoming AHA president, Robert Harrington, MD, closed the session by highlighting the ability to use real-world data in this age of expensive large clinical trials, to identify relevant research questions for randomized clinical trials without sacrificing randomization.

QCOR CAREER DEVELOPMENT PROGRAMMING

Career development was intertwined throughout the conference programming this year, including sessions dedicated to practical advice on quality improvement skills, research projects and careers, a publication workshop from the editor team at Circulation: Cardiovascular Quality and Outcomes, an early career panel, and the annual Career Development Luncheon.

This year's Career Development Luncheon, entitled Building Bulletproof Collaborations, was moderated by Michael Thompson, PhD, Madeline Sterling, MD, MPH, MS, and Adam Bress, PharmD, MS. While collaborations are the name of the game in research, little formal training exists on how to manage collaborations successfully and how to identify and avoid common pitfalls, such as stalled projects, handling feedback, and diffusing tension between collaborators. The session featured 2 panelists, Jeremy Sussman, MD, MSc, and Erica Spatz, MD, MHS, both cardiovascular disease health services researchers transitioning from early to mid-career. The panelists shared their own experiences with collaboration—both good and bad—and provided several key lessons for junior investigators (Table 2). The session continued to round table discussions led by cardiovascular outcomes researchers Nancy Albert, PhD, MSN, BSN, Karen Joynt Maddox, MD, MPH, Donald Likosky, PhD, John Spertus, MD, MPH, and Tracy Wang, MD, MPH, MSc. Participants were asked to brainstorm solutions to common collaboration struggles at their tables and report back to the room.

The Young Investigator Award Finalist session included 5 presentations from promising early career researchers on topics ranging from policy effects of Medicaid expansion and the Hospital Readmission Reduction Program,[6] to the association between air pollution and patient-reported health status following myocardial infarction.[7] Presentations also focused on disparities, including a study on differences in direct oral anticoagulant treatment of venous thromboembolism by race and income,[8] as well as different cardiovascular risk factor burden and events in transgender patients.[9] This year's winner, Sameed Ahmed M. Khatana, MD, presented a quasi-experimental analysis examining cardiovascular mortality in Medicaid expansion states—finding lower cardiovascular mortality in counties of expansion states compared with counties in nonexpansion states. He argued that Medicaid expansion might have a beneficial role in reducing cardiovascular mortality and could inform future decision-making in states considering expansion. Several of the young investigator Award finalists also had their work published in *Circulation: Cardiovascular Quality and Outcomes*.[7–9]

CONCLUSIONS

The 2019 AHA QCOR Scientific Sessions brought together an innovative and multidisciplinary group of patients, clinicians, researchers, and policy makers from across the world to discuss key topics in healthcare quality, from patient experience and participation in registries, to health informatics and IT collaboration, to the future of real-world evidence generation. We thank the 2019 Program Committee for planning a fantastic conference. The QCOR Specialty Conference Program Committee has begun planning for next year's QCOR Scientific Sessions, which will be held May 15 to May 16, 2020 in Reston, Virginia. The committee is thankful for attendee feedback and areas of need identified by attendees this past year included creating more networking opportunities and building a sense of community. The committee will proactively address recommendations for popular program offerings, including the Early Career sessions, different oral abstract presentations, and the GWTG sessions. We look forward to seeing you at the 2020 QCOR Scientific Sessions.

ARTICLE INFORMATION

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