ABMS' Organizational QI Forum Links QI, Research and Policy

Highlights of Keynote Speakers’ Presentations

When quality improvement (QI) is done well, it can improve patient outcomes and inform public policy. However, QI efforts can be difficult to implement, replicate, and publish, fueling skepticism. Keynote speakers at the recent Organizational QI Forum discussed how to get past that skepticism to influence and drive improved patient care.

Hosted by the American Board of Medical Specialties (ABMS), in conjunction with the ABMS Multi-Specialty Portfolio Program™ (Portfolio Program), the third annual QI Forum held this past May in Rosemont, Ill., bridged public policy, organizational and professional imperatives driving QI, and the ABMS Program for Maintenance of Certification (ABMS MOC®). Health care leaders, QI experts, policy makers, leading researchers, and journal editors described quality initiatives and best practices, including examples from Portfolio Program sponsors, as well as explored research, evaluation, and dissemination opportunities. The following are highlights of the keynote speakers’ presentations.

Improving Outcomes, Informing Policy

National QI efforts are resulting in improved patient safety, according to Jeff Brady, MD, MPH, a Rear Admiral in the U.S. Public Health Service assigned to the Agency for Healthcare Research and Quality (AHRQ) and Director of its Center for Quality Improvement and Patient Safety. Between 2010 and 2014, the rate of hospital-acquired conditions declined by 17 percent, more than 2.1 million adverse events and infections in hospitals were averted, and 87,000 lives were saved due to reduced adverse hospital events. These unprecedented reductions in harm were associated with partnerships among federal public agencies, most notably AHRQ, the Centers for Medicare & Medicaid Services (CMS), and the Centers for Disease Control and Prevention.

During that timeframe, nearly 20 billion dollars in health care cost savings were realized. “Efforts to improve patient safety are not only the right thing to do for patients,” he said, “but the business case seems to be more and more compelling.”

Unfortunately, the significant national gains driven by QI efforts have leveled off in recent years, Dr. Brady stated. An estimated 121 harms still occur for every 1,000 hospital discharges. “One important take away point from the data is that we can improve,” he said.

Making health care safer is a difficult task for myriad reasons. Health care delivery occurs in one of the most complex environments from a technical, organizational, and administrative standpoint, Dr. Brady noted. Many health care systems, at all levels, are not designed to optimize patient safety or address systems-based problems. Poor communications is another common contributor to patient harm. The key to progress is using QI efforts to find those flaws and figure out the most efficient and effective ways to address them, Dr. Brady said.
Translating Research into Practice
To that end, AHRQ invests in research and evidence to understand how safety can be improved. Basic research focuses on identifying risks and hazards, and ultimately drives the development of safe practices, he explained. The research is then translated into pragmatic, practical things that can be done at the front line to mitigate these risks and hazards, noted Dr. Brady, who as a member of AHRQ’s Senior Leadership Team, leads the agency’s programs focusing on patient safety research, healthcare associated infections, the National Healthcare Quality and Disparities Report, the Patient Safety Organizations Program, and the Consumer Assessment of Healthcare Providers and Systems Program. Additional work is often required to refine the safe practices and then to integrate them seamlessly into the real world clinical environment, he added.

The agency develops practical materials and evidence-based tools to teach and train health care professionals on the front lines to catalyze improvements in care. Some of the tools address foundational issues such as organizational culture and teamwork, while others target specific safety threats such as hospital-acquired infections and antibiotic resistance. Tools include patient safety culture surveys, comprehensive unit-based safety program toolkits to reduce hospital-acquired infections, re-engineered tools to reduce avoidable hospital readmissions, and TeamSTEPPS team training materials. Advancing the field of patient safety also requires support for collecting, organizing, and cataloguing the growing body of information. That is why the agency created the AHRQ Patient Safety Network. This website, which is customizable for different audiences, features the latest news and essential resources about patient safety, including literature updates, news, tools, meetings, and links to research.

Finally, AHRQ generates measures and data used to track and improve performance and evaluate progress of the U.S. health system. Measuring safety improvements across the country requires a rigorous approach, Dr. Brady said. “We work really hard to try to fine tune the measurement approaches we use and make sure that they’re well matched to their intended purposes,” he noted.

While CMS has leveraged Medicare payment to improve quality in health plans and hospitals, it is now looking to do the same in physician offices through the Medicare Access & CHIP Reauthorization Act of 2015 (MACRA). The agency is streamlining its existing quality programs—the Physician Quality Reporting System (PQRS), Value-Based Payment Modifier, and Electronic Health Record Incentive Programs—into a single system that will reward clinicians for delivering coordinated care with better outcomes supported by health information technology, explained Kate Goodrich, MD, MHS, Director of CMS’ Center for Clinical Standards and Quality. “These changes are reflective of, and in response to, the concerns that too many quality programs, technology requirements, and measures get between the clinician and the patient,” she said. The Merit-based Incentive Payment System (MIPS) will provide clinicians with the flexibility to choose the quality measures and clinical practice improvement activities (CPIAs) that are most meaningful to their practices to demonstrate performance, Dr. Goodrich said. Providers will select six measures, which are three fewer than in PQRS, plus either one outcome measure and one cross-cutting measure or other high priority measure, and a specialty-specific measure set. They must choose one CPIA from 90-plus proposed activities with the option to participate in more CPIAs.
Facing Skepticism

Quality improvement, however, faces skepticism among some clinicians and academics. Many associate QI with old fashioned, punitive quality assurance, noted Don Goldmann, MD, Chief Medical and Scientific Officer at the Institute for Healthcare Improvement (IHI). Maintaining the right motivation to focus on real improvement when faced with judgment in the form of pay-for-performance is difficult for clinicians, said Dr. Goldmann, who also serves as Senior Lead for the IHI Fellowship Program and trains and mentors emerging investigators at Harvard Medical School, Boston Children’s Hospital, and the Harvard School of Public Health. Teams trying to do QI “by the book” get bogged down in tedious processes and settle for small incremental improvements. “But most importantly, we don’t give clinicians the data in real time they need to improve,” he said. Finally, QI experts are not good at emphasizing the academic potential of rigorous QI research.

Another reason for the criticism is that it’s difficult to apply the standards of traditional biomedical evidence to QI, according to Graham Martin, PhD, Professor of Health Organization and Policy at the Social Science Applied to Healthcare Improvement Research (SAPPHIRE) Group, and Head of the Department of Health Sciences at the University of Leicester in the United Kingdom. One reason is that individuals typically tinker with QI initiatives while they are in progress because the primary concern is improving quality, not necessarily conducting a traditional, controlled-trial type evaluation, Dr. Martin explained. Conversely, no number of gold standard trials will create definitive evidence of what works universally because nothing works universally. “Everything has to be adapted and implemented with care,” he noted. “When people don’t know what makes an intervention work, they don’t know what should be replicated and what should be adjusted so successful QI interventions can succeed in others settings,” added Dr. Martin, whose research focuses on social, organizational, and professional issues in the health care system including quality and patient safety improvement initiatives.

Developing Rigorous QI

Doing QI right, however, can influence and drive improved patient care. “It doesn’t have to be complicated, just rigorous,” Dr. Goldmann stated. One way to simplify the process is to stop debating whether QI should be called the science of improvement, an implementation science, or a health care delivery science, among others. It’s scientific regardless of the name; some methods are better honed to eliminate waste from the system, such as Lean management principles, whereas some emphasize reliability, such as Six Sigma.

Dr. Goldmann reviewed key attributes of improvement science, which closely align with IHI’s Model for Improvement Methodology, as follows:

- Clear, measurable aim
It’s important to draw out the causal pathway, he said. At IHI, they typically use driver diagrams that are simple expressions of the causal pathway (see example of driver diagram, below). A simple driver diagram consists of primary drivers, which reflect the most highly leveraged changes being made, supported by secondary drivers and then several changes. If the cause-and-effect diagram has 10 primary drivers, there are too many, Dr. Goldmann said. The hypothesized causal pathway should be re-evaluated to determine the most highly leveraged drivers. He recommended planning for anti-drivers, which are unexpected challenges that may arise, and anticipating and monitoring the unintended consequences, which range from patient satisfaction to opportunity costs. The measurement framework, which focuses on the intermediate outcomes and processes being measured, helps track progress, he noted.
The implementation theory defines what activities will be implemented, how they will be tested, what are the expected outcomes, and how they will contribute to behavior change that will impact the processes and outcomes. Without a strong implementation strategy linked to the causal pathway, the QI project will likely fail, Dr. Goldmann said. “We are very sloppy about documenting and predicting what will happen, and we do a lot of activity that doesn’t lead to the changes we want,” he said, adding, “Don’t just start testing activities. Spend some time thinking the theory through.” Using rapid testing cycles, such as PDSA, allows clinicians to test their way to a good implementation plan.

Process maps and other depictions of value streams can be used to help understand the system. “If you aren’t able to articulate the system, you don’t know where to begin to start improving it or where are the critical control points that are most highly leveraged in making a change,” Dr. Goldmann said.

Using time-ordered data in the form of run charts, for example, can detect whether variations are statistically significant or just random, he explained. Just as important is the heterogeneity or variation among doctors, wards, organizations, or regions. “We go on a learning exploration about why people succeed and why people fail,” Dr. Goldmann said. “That’s what a learning health care system is really about.”

Drs. Goldman and Martin agree that the use of social scientific knowledge and methods can help enhance the science of QI evaluation and practice, and understand and account for some of the contextual conditions that are necessary for change to occur. QI interventions are complex, in that they have more than one component or active ingredient, Dr. Martin said. Additionally, they interact with context in unpredictable ways. “We need to understand more about the ingredients of the intervention, how they work, where they are likely to work, and what they need to be adapted to new contexts,” he said.

The social sciences could contribute to better evaluations because the program theory could be combined with other theories, such as those around behavior change and human cognition, both of which can impact implementation. The use of social science theory could enhance implementation and spread because it could potentially provide a better understanding of how the QI intervention is intended to work and insight into which components should be adopted faithfully and which ones should be adapted to the new context. Social science theory could offer a better contribution to generalizable knowledge because regardless of whether the QI intervention succeeds or fails, the knowledge on which a well-designed QI effort is based could inform the efforts of others. “We can make sure that the learning that comes from QI interventions—successes and failures—contributes to the wider endeavor to improve health care,” Dr. Martin concluded.

From Theory to Point of Care
To be embraced by clinicians and academics, rigorous QI must be part of routine work at the point of care, Dr. Goldmann stated. He sees the MOC program as a tool that can help practicing physicians enhance their knowledge and skill set around improving care. The Portfolio Program, in particular, integrates QI with the work that physicians do in the real world, Dr. Goldmann said. It does so by awarding Improvement in Medical Practice (MOC Part IV) credit to physicians, who are Board Certified by one of the 21 (of 24) ABMS Member Boards participating in the Portfolio Program, for their engagement in QI work at their practice or clinic.

For its part, AHRQ is attempting to spread the “science of safety” it has supported in hospitals to all health care settings. TeamSTEPPS for office-based care and a toolkit for rapid-cycle patient safety and QI to manage patient testing and follow-up are two examples of tools AHRQ has developed for providers
in office-based settings. “Ultimately, the goal is to help busy clinicians in the field understand how to implement best practices,” Dr. Brady said.

He noted that various stakeholders in the QI environment are aligning their efforts. “At AHRQ, we see regulators, payers, providers, medical societies, and organizations, such as ABMS and others, that are not only working to achieve similar goals that results in better care, but they are recognizing the efficiency that can result from effective alignment,” he said.

On a national level, MIPS recognizes MOC activities as a pathway to satisfy CPIAs, Dr. Goodrich said. Physician organizations, among others, also have an opportunity to identify and/or create high value specialty measures and CPIAs for inclusion in MIPS as well as sponsor clinical data registries. Currently, 14 ABMS Member Boards accept physician participation in third-party registries and one Board offers its own registry. Additionally, Boards are increasingly utilizing registries to drive QI. For example, one Board has piloted an innovative approach to collecting patient-reported outcomes data using convenient data capture pre- and post-treatment to track patient functional outcomes. Another Board, with AHRQ funding, obtains data from its physicians’ electronic health records without the need for manual data entry and provides feedback to participating clinicians on a variety of measures. Dr. Brady points out that one of the best QI initiatives—Door to Balloon Time—got its start in a data registry. Capitalizing on data in the registries to drive improvement is critical, he said.

Closing Thoughts
It is possible to do rigorous QI as part of physicians’ routine work that is not only credible, but publishable, Dr. Goldmann said. What does he do when he runs into skeptics? “I remind them that QI is really just the scientific method applied to what we do in clinical care,” Dr. Goldmann concluded.

Suggestions for Initiating QI Efforts
When initiating a QI project, Dr. Goldmann offered the following suggestions:

• Focus on learning what it takes to bring about QI.
• Understand that QI requires individual and social change (hence the key role of behavioral and social sciences).
• Use concepts rather than fixed protocols as a starting point to test and learn whether QI interventions can be amended to a specific setting.
• Provide a prediction that a QI intervention will achieve a particular impact in a specific setting.
• Align the measurement system to the program theory.
• Use rapid-cycle evaluation approaches to enable amendment to local settings.