

President's Desk: From concept to fruition

July 2018—CAP members know that laboratory quality improvement and accreditation drive much of what we do. Nobody can know everything about the science underlying our specialty because pathology embraces a vast body of knowledge that is always changing, so we rely on two CAP councils—Council on Accreditation (COA) and Council on Scientific Affairs (CSA)—whose volunteers have the expertise to know what is state of the art and what is on the horizon.

I plan to write two columns on laboratory improvement—this one mostly about laboratory improvement via proficiency testing and another soon on accreditation. Their roles ebb and flow; there's a lot of back and forth. Together, they capture much of what is fundamental to what we do for our patients and the clinicians who care for them.



R. Bruce Williams, MD

Thirty-two discipline-specific scientific committees that report to the CSA oversee CAP proficiency testing programs. More than 600 CAP volunteers sit on these committees, and all are experts in their fields. They debate, design, and develop new tools for quality improvement, evaluating the programs for laboratory performance and utility each year and refining as needed. I greatly enjoyed my opportunity to chair the CSA, which oversees more than 650 proficiency testing programs administered to more than 22,000 subscribing laboratories worldwide.

Each scientific committee has its mission, and many partner with members of the COA to edit laboratory accreditation checklist requirements pertinent to their disciplines. These members also educate peers on the emerging science and its applications to medicine by writing articles, hosting webinars, and giving talks.

Our proficiency testing programs evolve in conjunction with our specialty. As Raouf Nakhleh, MD, our CSA chair, has said, the challenge lies in the variety of forms that laboratory testing can take and the number of new technologies coming into the field at once. This year the CAP is offering 25 new PT and quality improvement programs for 2019, including two new next-generation sequencing programs. There are four new Q-Probes educational programs in the catalog, including one that targets opioid testing stewardship and another to measure expression rates in invasive breast cancer.

An exciting expansion of our online ordering system for PT and quality improvement programs, learning opportunities, and publications will be fully launched next year. (To access the online store, go to www.cap.org, click on "Shop," then log in to view and renew your order.) For those tasked with tracking these things, this one might be a game changer. You might also want to try the complimentary Performance Analytics Dashboard, a web-

based reporting solution for CAP proficiency testing and accreditation performance with which to benchmark your laboratory against your peers and CAP-wide performance.

I'd also suggest taking a few minutes to check out Quality Cross Check, a relatively new quality improvement program. Quality Cross Check is not proficiency testing; rather, it is a source of metrics with which to monitor and compare the performance of multiple instruments within your laboratory.

The CAP offers seven accuracy-based programs and will add another in 2019. Most PT materials are manufactured to meet specifications and are not commutable, which can affect results (matrix effects). This is one reason PT results are peer-group graded. Grading for accuracy-based (or matrix-effect free, commutable) PT materials is set against reference method targets. They are manufactured by using human donors to closely mimic clinical samples. These programs are not widely available because their manufacture is so costly and in many instances not technically feasible given the programs' high enrollment numbers.

CSA volunteers are leaders in their disciplines whose expertise enables us to help push the science forward. For example, CAP PT for next-generation sequencing began with a CSA project team charged with figuring out how to best approach quality improvement for a new and growing discipline. Karl V. Voelkerding, MD, a former president of the Association for Molecular Pathology, chaired the project team. Jason D. Merker, MD, PhD, who served on that project team and chairs the Molecular Oncology Committee, had a critical role in developing the first two somatic NGS PT programs (for solid tumors and hematologic malignancies). The complexity involved and collaboration required made the NGS Surveys a case study in how things get done within the CAP.

Over a period of six years, the project team developed PT materials and worked with the Commission on Laboratory Accreditation to draft the first accreditation checklists for NGS, published in 2012. Those were refined over time with the help of early adopters, who shared their experiences with and suggestions for the new technology as they always do. When the NGS Surveys were securely ensconced under the appropriate CSA scientific committees, we retired the project team, but not before creating a new CSA Genomic Medicine Resource Committee with Dr. Voelkerding as chair.

The science and technology required to construct the NGS programs was novel and complex. The group had three distinct mandates: develop the programs, write informatics programs to translate them, and work with the Council on Accreditation to write the checklists. I was not surprised to hear later that Dr. Voelkerding had described his (ongoing) time on the CSA and the opportunity to see so many different programs evolve from ideas to realities as one of the most professionally rewarding things he had ever done. I know exactly what he means.

Other providers may offer proficiency testing programs that will meet regulatory requirements at lower cost. And money matters, no doubt about it. But every investment has its own returns. Although we cannot directly observe all the ways that CAP quality improvement programs contribute to a culture of quality patient care in the medical laboratory, we know they drive excellence day in and day out. We can say that with confidence because we have the data to back it up and because we know what goes into them—from concept to fruition. □

Dr. Williams welcomes communication from CAP members. Write to him at president@cap.org.