



Perspective

Testing, Testing, Testing: Gratitude for our Laboratory Professionals

by Alexandra Harrington, MD

Laboratory testing is in the news these days, and the public has heard the terms “swabs,” “Abbott,” “NAAT,” “RT-PCR,” “reagents,” “RNA,” “antibodies,” and “false negatives” more in the last few weeks than ever before. As our federal and state leaders develop strategies for safely re-opening the country, the news media will bring more and more details on COVID-19 laboratory testing into our living rooms. The data needed to understand our current situation and to plan for the future will emerge from the nation’s testing labs. Let me be the first to welcome you to the laboratory, also affectionately known as the “Black Box!”

We are ramping up testing

A detailed discussion of COVID-19 testing is beyond the scope of this reflection and honestly beyond the scope of my expertise, as I am neither a microbiologist nor a molecular pathologist. Rest assured though, that there are many highly qualified laboratorians tackling the challenges head-on, and we are lucky to have them on our faculty and staff in the Medical College of Wisconsin’s Department of Pathology, at Wisconsin Diagnostic Laboratories, at Children’s Wisconsin, and as national partners. After the FDA loosened requirements in late February 2020, our laboratory teams efficiently validated and operationalized diagnostic COVID-19 testing (Nucleic-Acid Amplification Tests) for patients across our healthcare systems, offering dependable, on-site, rapid-turnaround assays, a process that normally would have taken months. As more testing platforms (instruments and vendors) become available, they will offer additional flexibility and capacity to our armamentarium.

Everyone is facing challenges

Laboratories around the country, however, face significant challenges. There are limited supplies of testing reagents and PPE (yes, we need protective equipment, too, as these are respiratory specimens). The sudden demand has strained the supply chain. Multiple companies have rushed COVID-19 test kits to market, but few have undergone FDA validation, and each has different reportable results, turnaround times, and sensitivities. The increased volume of specimens will strain our fatigued and/or ill laboratory technical and support staff. Aggressively scaling up testing capacity in the near future to manage hotspots and contact tracing will require a tightly coordinated, non-competitive, and well-resourced laboratory effort across the nation.

Thanks to our laboratory heroes!

The nation is expressing its heartfelt appreciation with social media, television, yard and window signs, and chalked pavements to the heroes of this pandemic, those on the front lines fighting this invisible enemy while they care for our loved ones, keep us safe, clean our hospitals, put food on the shelves, teach our children remotely, and deliver our packages. I'd add to that list our laboratorians who are making the enemy *visible* for all of us. We celebrate the medical laboratory scientists who perform testing on COVID-19 patients, the phlebotomists who draw blood, the specimen processors who set up swabs for testing, the microbiologists who validate and interpret the COVID-19 tests, and the laboratory executive leaders who set policy, compile data, and share results. And we can't forget the people working in other areas of the clinical laboratory – such as in chemistry, coagulation, hematology, and blood bank – as we know our sickest COVID-19 patients require much round-the-clock testing.

We celebrated Lab Week differently this year...

The laboratory team is usually invisible (that is, the “black box”), and goes unrecognized for its contributions to health care despite its indispensable role in medical decision-making. We are grateful for these healthcare workers, especially at this critical time when our population’s health and national policy depend on vital testing.

April 19 – 25, 2020 was Medical Laboratory Professionals Week. Usually, we would have celebrated with catered meals and fun activities to thank everyone for the part they play in our patient care team. Not this year. This week was subdued, and the laboratory was busy testing, adapting, and providing crucial data to our clinical partners. Still, we can all take the opportunity to thank the lab professionals! These days, all of our lives depend on them.



Alexandra Harrington, MD, MT (ASCP) is a Professor of Pathology and Director of Hematopathology in the MCW Department of Pathology. She serves as Director of the Faculty Pillar of the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education.

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