IN THE FACE OF A PANDEMIC, QUICK LABORATORY TESTING HELPS FIGHT AGAINST COVID-19

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Executive Summary *This article highlights one major laboratory, Quest Diagnostics, and its role in responding to the COVID-19 pandemic. It describes how the entire organization worked tirelessly to modify its operations so the lab could provide diagnostic testing. The company is actively trying to identify the next opportunity to help in the fight against COVID-19. With serology testing and clinical lab results being made available to insurers through several different laboratory services, Quest remains focused on finding ways to extend those efforts into valuable health insights in the insurance underwriting process.*

Not that long ago (early March), in a galaxy not that far away (Lenexa, KS), insurance testing labs were busy analyzing thousands upon thousands of blood and urine chemistry risk-assessment profiles. Then there were the reflex tests. In recent years, much more testing has been focused on the older-age applicant (NT-proBNP, hemoglobin and cystatin C), as well as individuals who may have engaged in risky personal behavior (hepatitis C, blood alcohol and drugs of abuse with recent emphasis on the explosion of opioid abuse).

Then the world changed dramatically. On March 11, 2020, the World Health Organization (WHO) publicly characterized COVID-19 as a pandemic. COVID-19 dominated our world.

Mere days after COVID-19 was declared a worldwide pandemic, national laboratory leaders joined for a national press conference at the White House to share their commitment to a rapid response to the pandemic. Many large laboratories began to perform COVID-19 diagnostic testing for the clinical world.

Helping navigate through the crisis

The nasal swab test uses molecular technology to detect the RNA of the virus that causes COVID-19, aiding in diagnosis. Laboratories with sophisticated "molecular laboratories" used high-through-put FDA EUA molecular platforms to scale-up testing capacities for the diagnostic tests.

At the time this article was written, more than 8.3 million diagnostic tests have been performed. Quest has the capacity to complete more than 150,000 diagnostic molecular tests on a daily basis, with an average turnaround time of 1 day for priority patients and 2 to 3 days for all others.

Our Lenexa laboratory changed focus to the molecular SARS-CoV-2 RNA testing, and the molecular area was expanded significantly to handle the COVID-19 volume. When the extent of the pandemic became clearer, and as insurance applicant volume declined in light of canceled or postponed exams, some laboratory resources were shifted to focus on the clinical diagnostic molecular testing. In this specialized lab, 4,000 molecular SARS-CoV-2 RNA tests were being processed per day in a clean lab setting, isolating the virus in a contamination-free environment.

April brought COVID-19 serology testing to major laboratories. SARS-CoV-2 IgG antibody serological tests were launched to help identify who may have been previously exposed to the SARS-COV-2 virus and who may have developed an immune response to the virus. The antibody tests are called immunoassays and Quest Diagnostics has a capacity of approximately 200,000 tests per day, with an average turnaround time of 1 to 2 days. The antibody assay results are assisting health care professionals in disease surveillance and also in identifying potential donors for convalescent plasma.

During the peak of this crisis, Quest's lab services accounted for nearly half of all SARS-CoV-2 (COVID-19) testing across the US, and we have completed more than 2.7 million serological tests. At the time of this writing, it is still not known whether the SARS-CoV-2 (COVID-19) antibodies provide long-lasting immunity to future infection with the SARS-CoV-2 virus.

Keeping people safe

While states prepared for shutdowns, consumers were still applying for life insurance and we were still performing paramedical exams. Both Quest and ExamOne made significant changes to the screening questions and protocols at our exam centers to ensure and prioritize the health and safety of our examiners, life insurance applicants and communities nationwide.

Questions were updated to ask about potential exposure to the COVID-19 virus in an effort to minimize any risk to our examiners. By mid-April, examiners were supplied with personal protection equipment (PPE) which covered their eyes, nose and mouth. We required examiners to wear long sleeves and pants or scrubs, as well as closed-toe shoes. Waiting areas in our exam centers were re-configured to require 6 feet of social distancing. In many locations, visitors can request a hand-buzzer or text message, allowing them to wait their turn outdoors, in their car or wherever they feel most comfortable.

Imagining a new future for life insurance underwriting

Many states have lifted their stay-at-home orders, but without a vaccine, we can expect to see some of these changes as part of the "new normal" for the foreseeable future.

Insurance laboratories are able to add the SARS-CoV-2 Antibody IgG assay to their insurance platforms. By having two distinct testing laboratories, we can accommodate this new volume. Recent discussions with insurance thought-leaders have centered around ad hoc testing, screening older age applicants and at-risk populations, as well as the potential to screen all applicants as a benefit to the consumer.

Times like these remind us how connected we are, as an industry and as individuals. While nothing could prepare us for what COVID-19 brought us, we are proud of the way our industry responded together. We are committed to working endlessly and collectively to deliver the answers and connections that will help us work through these changing and challenging times.

About the Author

Betsy Sears, MSM, MT(ASCP), has almost 35 years of experience in the insurance laboratory environment. She is the primary liaison for client medical and laboratory relationships and works closely with ExamOne's laboratory operations, R&D, and medical and sales staff on client end-to-end strategic solutions. She also supports insurance customers through a variety of presentations on laboratory, medical and risk assessment topics. Betsy currently serves on the MUD and AHOU life insurance industry executive boards. Prior to joining ExamOne, Betsy served as the VP and Laboratory Director of Osborn Laboratories for 14 years. She also has over 11 years of experience in clinical and hospital laboratory settings in NYC and Chicago, specializing in microbiology. Betsy received her Bachelor of Science degree in Medical Technology from the University of Missouri-Kansas City and her master's degree in Business Management from Baker University.