



Unsung Heroes in the Lab

Doctors, nurses and other frontline workers spend the most time with hospital patients, but they couldn't do their jobs without the support of their colleagues in the lab. Whether it's phlebotomists who skillfully draw your blood or technicians who painstakingly perform and analyze your tests, lab workers play a critical role in diagnosis and treatment.

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Maria Parker, a laboratory technician at John Randolph Medical Center in Hopewell, Virginia, is one of the many team members working behind the scenes in an

HCA Healthcare hospital. If she has a day shift, she clocks in around 6 a.m., dons a lab coat and enters the windowless, secure lab.

“The actual lab looks very different from the blood draw room, which is the image that probably comes to mind when people think of a lab,” Parker says. “A lab is bright and clean, and bustling with activity and whirring machinery. I think the average person would be very surprised to see what goes on in the lab.”

Early mornings in John Randolph’s lab get off to a brisk start. By 6 a.m., phlebotomists are almost finished taking morning blood draws from patients in the hospital. The goal is to get these specimens turned into the lab and tested by 7 a.m. so doctors can have results in hand when they start morning rounds in the 147-bed hospital. There is no typical day, but Parker says they process between 125 and 140 specimens during a morning shift.

Once the morning lab work is finished, Parker checks the maintenance log to see which instruments need to be checked or serviced. Patients also begin to arrive to get their blood drawn. If a phlebotomist isn’t free, Parker is happy



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to step in. She enjoys the opportunity for face time with patients.

“I love getting to know a little about a patient in those few minutes it takes to draw their blood,” she says. “I take

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that moment to be cheerful and positive and give them encouragement. The best is when they come back and say, ‘I remember you.’ It’s nice to be remembered.”

Helping Deliver the Diagnosis

Lab workers are often the first ones to confirm the cause of problems with a patient. Chrisell Hubbart, lab director at Brigham City Community Hospital in Utah, estimates that 70 to 80 percent of all decisions regarding a patient’s diagnosis, treatment, hospital admission and discharge are based on lab results.

“Patients don’t realize that one of the main reasons a doctor can come to you and say, ‘Yes, you are sick,’ is because their blood work has been processed in a quality, precise way,” she says. “Without a lab, you don’t have a hospital. You can’t take care of patients or perform surgeries without lab tests.”

Sue Evert, who has served as lab director at Englewood Community Hospital in Englewood, Florida since 1998, echoes those sentiments. She explains that doctors often have to wait on the lab before they can make a decision about the delivery of care or diagnosis.

“If we give a wrong lab result, they might take a different care path with the patient. Speed and accuracy are everything,” Evert says.

Fortunately for patients, a typical hospital laboratory, which operates 24/7, contains highly sophisticated instruments and employs a team of trained technicians who process and analyze samples and specimens quickly and correctly.

“The majority of a lab department’s technical staff is required to have a four-year degree,” Evert says. They may also hold a state license (a requirement in 11 states) and typically take continuing education classes on a regular basis.

Proficiency testing, required by the Centers for Medicare and Medicaid Services (CMS), happens periodically throughout the year.

Advancements in the Lab Improve Care

Technological advancements have sped up the turnaround time for testing, says Evert, who has worked in the lab since Englewood Community Hospital opened in 1985.

“Once we have the specimen in our lab, the majority of the tests we perform here can be done within 20 minutes, if not much sooner,” she says.

Small community hospitals like Englewood routinely perform complete blood counts (CBCs), A1C tests and uri-



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nalyses. The CBC measures components in the blood to evaluate overall health and diagnose infections and conditions like anemia or leukemia. An A1C blood test measures blood sugar to diagnose diabetes or determine how well someone is managing diabetes. Urinalysis is used to test urine for signs of urinary tract infections, kidney disease, diabetes and other disorders.

Specialized testing that is not available at small hospitals is often sent to sister facilities with larger labs. For Englewood Community Hospital, that's Largo Medical Center located 93 miles away. For instance, Largo helps Englewood provide quick turnaround on labwork that identifies certain strains of bacteria. Results from Largo are typically ready within a couple of hours—once the hospital has the specimen, it only takes minutes to process, and results are sent electronically. Complicated lab tests that can't be done at either hospital, such as testing for genetic markers, are sent to a reference lab. Results for these tests may take a week or longer to be returned to the hospital.

Over the course of her 10-year career in the lab at Brigham City Community Hospital, Hubbard has seen instrumentation get “smarter and smaller.” The hematology analyzer is a good example. This workhorse of the hospital lab counts and characterizes blood cells to detect diseases, including blood cancer (leukemia), low red blood cells (anemia), infections

and clotting problems. If your doctor has ever ordered a CBC panel, your blood specimen was on a hematology analyzer.

In just a span of two years, the analyzer at Brigham City Community Hospital has decreased its footprint from a freestanding 6-foot-wide machine to one that now fits on a countertop. Hubbard says that since the new machine doesn't require as much maintenance as the old one, it can run many more tests. The smaller size also frees up space for more equipment.

Last year, the hospital added tacrolimus (tacro) testing to its laboratory services. Tacro is a powerful drug given to patients with organ transplants. Given at the right dose, the drug suppresses the immune system to keep the patient's body from rejecting the organ. Too much or too little of the drug can be fatal. The 50-bed hospital is one of a few facilities in the state that does its own tacro testing.

“Previously, two days would pass before we knew whether they were getting enough of this life-saving medication,” Hubbard says. “Now we can do a test in about 25 minutes. That's a huge difference.”

Advancements in lab technology have led to improvements in prescribing antibiotics, too.

“Doctors used to not know for sure if something was a bacterial or viral infection,” Hubbard says. “Now, when the patient is still in the ER, we can use rapid diagnostic tools to tell them if an antibiotic is needed.”

For those undergoing surgery to remove a cancerous tumor, hospital lab workers can immediately test tissue for cancer cells, allowing the surgeon to remove all of the cancer while preserving healthy tissue. This can improve outcomes and even prevent additional surgeries.

A Job That's Never Boring

Repetitive and routine could describe the job of a lab worker, but it's certainly not robotic.

“Every day, I'm learning something new,” says Parker, who was a medical lab technician in the U.S. Army for five years before joining HCA Healthcare at John Randolph Medical Center two years ago. “When I look at a specimen under the microscope, I am able to learn something new about the patient. I really enjoy this job and hope to do it for the rest of my career.”

Englewood Hospital's Evert agrees, adding that the lab may not always seem like the glamorous choice in the medical profession. “The reality is it's a very rewarding career. It's fast-paced, never boring and you can go home knowing that you did your part to take care of your patients,” she says. ■