

A Florida hospital's POC solution

By Louise Townsend

Recognized as one of the best hospitals in the country by *U.S. News & World Report*, Florida Hospital (FH), an 880-bed acute care hospital in Orlando, is part of one of the largest hospital systems in the country and cares for almost one million patients every year. The hospital's laboratory staff — equal to 38 full-time phlebotomists — draws and collects approximately 15,000 blood specimens per month, which represents about 50% of all blood collected in the hospital setting.

The specimen-collection process includes numerous steps for patient identification; specimen collection, labeling, and transport; and data entry. These steps also include actions and processes by which human involvement could lead to potential errors. FH needed a solution that would automate its specimen collections and, in the process, improve patient safety and increase workflow efficiency.

"Basically, our goal was to try to be more efficient and reduce steps where the possibility of an error could occur," says Patrick O'Sullivan, MS, MT(ASCP)SBB, FH administrative laboratory director. Because much of the time spent in the specimen-collection process involves getting phlebotomists to the patients and transporting patient specimens to the lab, FH engaged in a LEAN analysis and identified tremendous waste in getting both the phlebotomist and the specimens where they needed to go. Specimen labels were printed in the lab, which required significant travel time between the lab and patients as new specimen orders came in. In cases where generic labels were used from the floor, the lab would have to spend even more time examining the specimen before printing the right label and moving that label on to the testing areas.

Implementing its SCMS

The FH laboratory went live with its specimen-collection management solution (SCMS) in 2004. Before finally selecting its SCMS, FH looked at several products on the market that were good but primarily focused on providing a batch process for printing labels. One factor that determined FH's final product selection was the chosen SCMS' real-time notifications for new orders and the product's full integration with the laboratory information system (LIS) in use at the hospital. The implementation of the SCMS was quick and straightforward. Except for the hand-held devices and the printers, no additional system hardware or servers were required. Once the SCMS software was easily installed onto the hand-helds, it was instantly recognized by the LIS, and the solution was ready to go using the existing wireless network infrastructure in the hospital.

"The training was not complex, though it can be challenging to train a large number of staff members," says O'Sullivan. "The solution changed the existing workflow. We had to work through new processes in which the phlebotomists were deployed on the floor and no longer came back and forth to the laboratory.

"We made a mistake in trying to phase in the implementation in the lab," he admits. "We would definitely recommend going live with the new process all at once because it changes the workflow so much that you cannot keep going back and forth between manual and automated methods, which creates a ton of inefficiencies. Once all the laboratory collections were moved to the bedside-collection management system, then we were able to obtain efficiencies."

Benefits of specimen-collection automation

Before implementing its SCMS, FH's LEAN analysis showed that 50% to 60% of phlebotomists' time was spent on non-value-added use, mostly just walking from place to place, waiting for elevators, and other fairly non-productive activity. Now, phlebotomists grab their hand-held devices and supplies, and go right onto the floor to start collecting specimens from patients.

"We have definitely noticed an increased level of patient confidence when we are at the bedside, wandering them with a bar-code reader," says O'Sullivan. "Patients are concerned about safety. By our reading their bar-coded armbands and producing their labels right at the bedside, they know their samples are getting correctly labeled."

The FH lab's goal was to have STAT samples done within 120 minutes after they are ordered. Before its SCMS, fewer than 60% of the STAT samples were done within this time frame. Since the implementation, over 76% of the STAT samples are done within the time limit. Now, specimen data gathered at the patient bedside is immediately received by its LIS, not only saving lab staff from having to enter data back in the lab but also saving them time and eliminating the prospect of human error. Collector information as well as the collection time is recorded immediately.

Since implementing SCMS in 2004, the FH lab has experienced less than one patient-identification error per year. This is a distinct difference in comparison to other areas in the hospital not currently using the collection-management system. "We brought one nurse-collected unit up in June 2008 and, so far, we have reduced collection errors to zero in that unit," notes O'Sullivan. "We now use less staff, from 42 FTEs to 38 FTEs, and we are busier now than before, getting more done with less staff," he points out. "Our goal is to be at 10 minutes per collection, and we currently average between 10 and 15 minutes per collection, depending on the time of day and other factors."

User reaction to the SCMS has been positive after some initial reluctance for lab personnel to change their workflow. Some phlebotomists did not have in-depth computer skills or familiarity with hand-held devices, so the LIS team stripped out unnecessary functions and created "hot keys" on the devices to make some functions easier. Bar codes were added to phlebotomists' name badges so they would not have to wand in their user access codes at each collection.

"Our phlebotomy staff members have all learned the system, and we have improved our patient-safety standards," says O'Sullivan. After four years of point-of-care specimen-collection, he and the lab staff recommend deploying an SCMS all at once; evaluating and changing the entire workflow process along with the deployment since the new workflow will be very different; and avoiding products that cannot be integrated with the existing lab system(s).

"Overall, our experience with our specimen-collection management solution has been very good. It has met our expectations for productivity increases and significantly exceeded our expectations for improving patient safety," concludes O'Sullivan. □

Louise Townsend is a freelance writer based in Florida. The laboratory at the Florida Hospital at Orlando uses Sunquest's Laboratory Information System and its Collection Manager solutions.