Phlebotomists at Lutheran Hospital of Indiana get less exercise these days. Instead of running back and forth several times a day between the hospital and the laboratory to pick up new orders, they are staying on the hospital floor and accessing orders on their wireless, handheld devices before moving on to their next draw.

As part of the Lutheran Health Network, the 361-bed hospital in Fort Wayne, IN, served as a pilot site for McKesson’s new Horizon MobileCare Phlebotomy system, which links with the hospital’s laboratory information system, Horizon Lab.

“We saw this as a twofold opportunity: Not only could our phlebotomists become more efficient, but also it’s a way to improve patient safety,” Denise Gaff, MT(ASCP), laboratory network director at Lutheran. “Our phlebotomists would go out into the bowels of the hospital and we’d lose track of them. We wouldn’t know where they were for a while. Then they’d have to come back to the lab, and in our particular instance, the lab was not even located in the hospital. It was located in a building that was an annex to the hospital. It was very inefficient to have them walk back, come down from the floors, walk back to the laboratory to get orders, and then go back up onto the floors.”

How It Works

The phlebotomy system relies on bar code technology for real-time automation of specimen collection orders and acknowledgements. It provides positive identification of the patient and the corresponding laboratory test. The device requires the phlebotomist to scan their own bar-coded badge, then to scan the patient’s wristband. A screen displays the patient’s file, listing all the collections that have been ordered. On a wireless printer, the phlebotomist prints the tube labels at the patient’s bedside and scans in the bar-coded labels for each test request. The system matches the patient name and test to an electronic list of all patients who require specimen collection, ensuring correct patient, correct test, and correct collection time. All information is transmitted to and from the laboratory’s information system via wireless connection.

Orders for new blood draws can be entered into the system throughout the day, and the handheld devices receive updates from the system every 2 to 5 minutes. “If we have a phlebotomist on the floor, they can refresh their screen and they will get any new orders, so they can create a workflow for themselves,” Gaff said. Phlebotomists can call up new orders in a variety of ways, for example, by what floor they are on or whether the orders are stat. “Before, they spent a lot of time running around. Well, now it’s much more manageable as far as the workflow.”

One problem that arose during implementation was an increase in the amount of time it took for the phlebotomist to complete a collection from each patient. Gaff said the system’s safety checks, while useful from a patient safety perspective, were initially cumbersome and time-consuming, especially during the time-crunch of the morning blood draw. McKesson had been asked to see if they can speed up that process without losing any of the safety features.

Patient Safety Takes Time

“What we found is that what turns out as a safer process is also a little bit slower process,” she said. “Morning draw is where you do a significant portion of the house, and all the doctors want their lab results back on the chart by 7 AM. Timeliness is important. The phlebotomist has a tendency to get frustrated with the time it takes to go through those screens, to enter the information, to get the labels printed, and to acknowledge that they have made that draw.”

Lutheran’s application specialist, Rhonda Prideaux, MT(ASCP), said that part of the problem was due to slow or dead spots in the hospital’s wireless system, but those problems have been eliminated. She added, however, that while the patient safety features do add some time to the collection process, it is time well spent. “We did some time studies,” she said. “We had a phlebotomist that could collect a patient in 3 minutes without the device. It took them 4½ minutes with the device. That extra minute and a half at the front end, which seems like forever to a phlebotomist, saves (an estimated) 45 minutes on the back end if the wrong patient gets drawn.”

Other more minor issues arose during implementation that required adjustments. At the request of the hospital, McKesson changed the information displayed on the initial patient screen to include the status of orders, such as “stat,” “now,” or “routine.” The hospital also had to change the labels it used, which took some time to find the brand that would work best. Even with the inevitable challenges associated with transitioning to a new process, Gaff said that personnel shortages, resource constraints, and a national focus on reducing medical errors make such electronic systems more of a necessity than a luxury.

“Every hospital has to do more with less,” she said. “There are more expectations by the customers at the hospitals, which may be the patients or the physicians. We have fewer and fewer resources to cover all those demands. So we have to get more efficient. I do believe IT (information technology) is a key to helping us become more efficient.”

For health care providers, the primary concern is whether any change will hinder their ability to take care of their patients. “The perception when they start (using a new system) is that there will be less hands-on time with patients,” she said. “What they are finding, however, is that their time spent with the patient is better utilized, because they have real-time access to more information about each patient. So while the transition at first may be slow, said Graff, ‘once we get them to where they’re using the system, they go kicking and screaming if they lose it.’”

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