



# MEDICATION MANAGEMENT

## Hospitals Add Robotic Assistance

By Matt Ottinger

These numbers from the U.S. Food and Drug Administration generate immediate attention: Medication errors cause at least one death every day and injure nearly 1.3 million people annually in the United States.

The FDA asserts problems can occur anywhere in the distribution system, including prescription, repackaging, dispensing, administering or monitoring. With human error one of the factors in play, hospitals are turning to automation in their pharmacies.

### Around the carousel

For Hancock Regional Hospital in Greenfield, the Omnicell 10-pan vertical carousel, which holds about 2,100 drugs, was a new addition when the hospital expanded to a 4,300-square-foot pharmacy last fall.

"Some of the bigger facilities in the state use it (the carousel) – like larger hospitals in Indianapolis," explains Tim Livesay, pharmacy director. "It probably is more unique for a hospital our size (a nearly 70-bed hospital with 20 pharmacy staff)."

Previously, Hancock Regional's nursing units relied on printouts to guide restocking efforts.

"We'd grab a piece of paper, go to all the shelves, and pull and have it lined up," Livesay says. "The carousel automates all that – the cabinets integrate and talk to the carousel. It sends it to the computer and comes up on a monitor, and we fill off of this monitor now."

Livesay lists patient safety as the primary reason for investing in

the carousel. He doesn't disclose what Hancock Regional paid for its model, but reveals carousels can cost as much as \$500,000 with full amenities in place. Beyond the added safety, he is also pleased with its boost to inventory control management.

"We cut our annual inventory from eight hours to about four hours at the end of last year," he recalls. "With this, we do monthly counts on specific drugs."

Livesay adds, "We never want to do away with the human looking at it to make sure you're getting the right thing, but it's a check to make sure you're getting the right medication."

Community Hospital in Munster (part of the Community Healthcare System) has two carousels in its inpatient pharmacy, according to Elizabeth Clements, director of pharmacy.

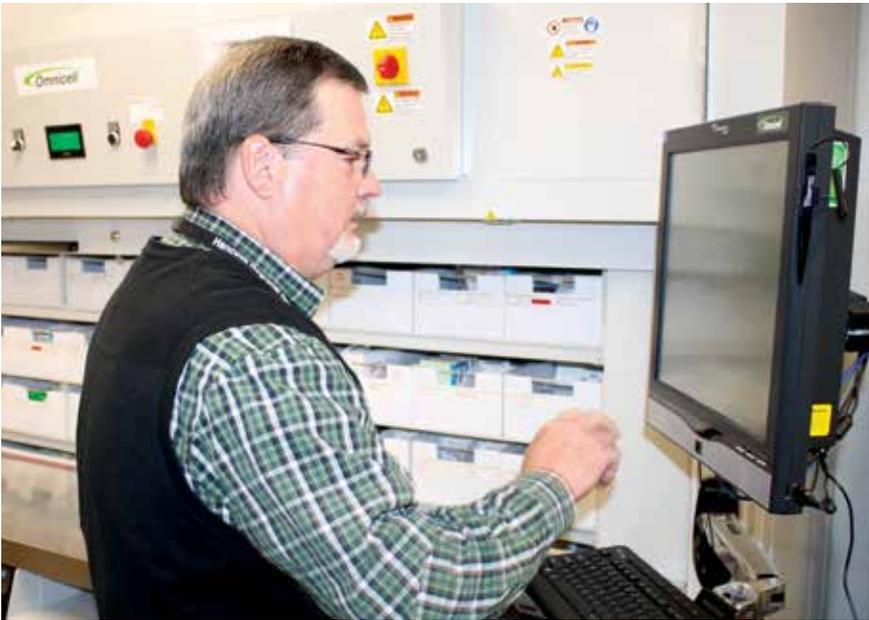
"Basically, I use them to manage all my inventory," she notes. "Everything that comes in gets assigned a spot in my carousel, whether it's in the physical or a remote location like a refrigerator. It keeps a perpetual inventory of everything I have on the shelf and then it also allows us to bar code products in and back out again for patients."

### Retail relevance

Community Hospital includes another machine for automation in its retail pharmacy, as a Script Pro robotic prescription dispensing system fills its bottles. (The pharmacy recently upgraded to a ScriptPro SP 200 from the 100 model; the numbers relate to how many cassettes of drugs they hold.)

"If it's one of the drugs that's entered into the pharmacy information system in retail, it will identify that's how it gets filled, send it to the robot, the robot will fill a bottle with the prescribed number of doses, label it and put it into a conveyor belt for us to pull," Clements outlines.

The robot condenses the inventory space that's needed and



Pharmacy team leaders Tim Livesay (left) and Frank Bieda use their respective automated systems to ensure patient safety. Livesay notes his hospital had been eyeing the carousel technology for several years before purchasing it last fall.

reduces the number of labor hours associated with picking, pulling and labelling.

“It takes out a section the labor technicians used to have to do for us,” Clements offers. “And then there’s safety, because it does do the bar code verification.”

“When the pharmacist goes to check it, there’s a picture of the product and all the information from the original bottle so they know the expiration date, the lot number and everything pharmacists need gets put right in front of them,” she adds. “They don’t have to go looking for it.”

### **Fulfilling a mission**

Clements, a 25-year industry veteran, touts the benefits of pharmacy automation as an integral part in improving patient safety.

“Improper medication fulfillment is a problem in the industry,” she says. “That’s why there’s such a push for some form of secondary verification like bar code reading and dispensing to help facilitate not making those errors.”

Its collective benefits make automation big business, especially as it continues to permeate retail pharmacies. According to BCC Research, the global pharmacy automation

market was valued at \$3.5 billion in 2015 and will increase to \$5.5 billion in 2021.

When asked about a personal wish list for future machines, Clements is content that her hospital is “pretty far along.”

“Probably the only thing left for us (to automate) is when we do kits and trays for filling crash cart trays (a cart on wheels used in hospitals for dispensing emergency medication and equipment),” she concludes. “But there are technologies out there with (radio-frequency identification) tags for those types of trays. It’s a little expensive right now, so we’re just watching to see how that goes.”

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**RESOURCES:** Elizabeth Clements, Community Hospital, at [www.comhs.org](http://www.comhs.org) | Tim Livesay, Hancock Regional Hospital, at [www.hancockregionalhospital.org](http://www.hancockregionalhospital.org)