

Hospital Gains Labor-Savers

2 mechanical workers will do menial tasks with no OT concerns

by Jon Walker

The new workers in the halls at Avera McKennan Hospital will be dependable, uncomplaining, a little on the slow side, but manageable and courteous.

They are robots.

They will arrive in Sioux Falls as a labor-saving tool to run errands and make deliveries that until now have required human feet and time.

The robots are 3-foot-8 and move close to 2 mph. They use laser vision to stop and start and will defer to others if about to collide with someone in the hallway.

"It would wait, go around you or ask you to move," said Steve Petersen, the hospital's pharmacy director.

Avera McKennan will introduce two of the robots this fall with much of their workday delivering drugs to upper floors from Petersen's department in the basement of the main hospital. The robots also will deliver mail, meals and small equipment. Avera will add more robots and expand their duties next year when it opens its new cancer institute.

The change is part of expanding electronic technology in health care. These robots will have more mundane duties than their brainy cousins, the surgical robots that assist physicians in surgery at Avera and elsewhere. Sanford Health has another tool, its two-way communication robot that lets a doctor offer a patient something akin to bedside care from a remote location.

While surgical robots let a physician reach internal organs with minimal invasion of the body, the new hallway travelers at McKennan simply are time-savers. "It frees up the human to do much higher-quality tasks," senior vice president Dick Molseed said.

The American Hospital Association doesn't track the number of health care units with robots but sees their use as a helpful trend. The implied loss of the human touch with robot technology is a minor matter, spokesman Matt Fenwick said from Chicago.

"Anything that can help alleviate administrative and time-consuming processes and create more time for patient care - if it saves a 10-minute walk, that's a very positive thing," he said.



Eric Glomb works with a tug robot at Avera McKennan Hospital. Two robots will be introduced at the hospital this fall to deliver mail and perform other menial tasks. (Lara Neel / Argus Leader)

A pitch to name robots "Wall-E" and "Eve"

That's precisely what it saves. Sandy Stricherz, a pharmacy technician at Avera McKennan, said some days she makes 20 deliveries from the basement prescription center to upstairs patient wings. "It takes 10 to 15 minutes each time," she said. "This will be very handy." She is among those lobbying to name the McKennan newcomers "Wall-E" and "Eve," in honor of the animated robot heroes in an Oscar-winning movie.

Eric Glomb, a field engineer for Aethon in Pittsburgh, said his company has placed robots in about 150 hospitals, most in the past five years in major cities such as Chicago and St. Louis. He visited McKennan to walk a scout robot through the hospital. The scout made electronic notations of its surroundings to program into computer memory the hallway dimensions and location of doors and elevators. The two robots arriving this fall will use that data to find their way around, in concert with laser readings from shoetop level.

Unfamiliar objects prompt a robot request for help

Inevitably, a robot will encounter an obstacle outside its memory. It then sends an e-mail alert to the 24-hour trouble desk in Pittsburgh, where a technician interprets the problem. If a fire door is shut, the technician might call the hospital to ask someone to open it. Usually the problems are fixed by remote command from Pennsylvania.

"Ninety-five percent are fixed without the local hospital knowing," Glomb said.

AVERA MCKENNAN'S NEW DELIVERY TEAM

- Two robots will travel in the Avera McKennan hallways starting this fall.
- They're 3-foot-8 and travel 2.5 feet a second, using laser vision and computer memory of the hospital's layout.
- They'll deliver prescription drugs from the hospital pharmacy, also mail, meals and small pieces of equipment.
- They cost \$4.50 an hour under a lease with Aethon of Pittsburgh.

About 80 percent of prescription drugs at Avera McKennan are dispensed through key-coded storage units that the basement pharmacy supplies in advance on various wings of the hospital. The pharmacy delivers the other 20 percent through pneumatic tubes similar to what a drive-up bank uses - or else manually by a staff member when it's a sensitive compound that shouldn't be fired through a tube. The robots will take over the manual deliveries, a small but significant percentage, Petersen said.

"We waste a lot of time walking," he said.

People walk 3 to 4 mph, so the robot will purr along slightly behind the crowd, offering canned comments when it meets someone but otherwise keeping to itself. "You feel stupid talking to a robot," Petersen said, though he thinks many will try. The robot will call its own elevator and there show its lone streak of self-will as it directs the elevator to its destination regardless of the wishes of anyone else on board. "It's the robot's elevator till it gets off," Petersen said.

Petersen is not concerned about robots upsetting the balance of human touch in health care. "We'll find out," he said. "I went to two hospitals in Chicago where employees loved them."