

Hospital Aides Act Robotic

In Celebration, 3 machines help to handle the chores

by Chris Cobbs

The three steadiest workers at Florida Hospital Celebration Health know their way around every inch of the building -- and work tirelessly for three shifts every day without complaint.

The three are robots called TUGs, and they scoot about the hallways of the Osceola County hospital, chattering, beeping and acting as if they own the place.

Elevators hurry to give them a lift in response to a wireless summons. Doors to locked units spring open on command. Patients and visitors smile and reach out to touch them as they pass.

The unfailingly polite robots -- officially known as "automated robotic courier systems" -- deliver medical supplies and fetch dirty linens, allowing human staff to concentrate on patient care.

"Most hospital delivery systems are still sneaker-based," said Aldo Zini, chief executive of Aethon Inc., the privately held Pittsburgh company that built the robots. Moving beyond rubber soles into the 21st century, Celebration Health purchased the three TUGs for about \$100,000 each, according to Aethon, and put them into service in April.

"It's fun to watch people's expressions as they see a TUG for the first time," said Mike Thompson, the hospital's assistant administrator.

"It's new, and people like to watch it and hear it talk," he said. "We've got a naming contest in progress and should have our selections in a few weeks."

Some hospitals have already come up with clever names for the machines, such as "A La Cart," the moniker for a food-service TUG at work in Washington.

The Celebration TUGs keep up a steady patter as they roll from the central supply area to the obstetrics and emergency departments in response to computerized commands from a nurse or other staff member.

"Backing up. Please step aside," one TUG said last week in a polite, synthesized feminine-sounding voice similar those used on airport trams and other automated systems.

"Crossing hallway," it added before heading toward an elevator to change floors.

Adding convenience

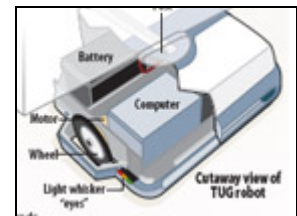
Each TUG is about the size of a vacuum cleaner but, married to a metal delivery car, stands about 40 inches tall. Each robot can carry as much as 500 pounds.

Moving at a top speed of 30 inches per second -- a brisk walking pace for a human -- the TUG relies on its "light whiskers," or lasers, to detect people or objects in its path.



Unloading supplies

Photo by Roberto Gonzalez



Graphic: Robots hired for hospital jobs

When it encounters something, it either stops or goes around the obstacle to continue its deliveries, communicating wirelessly with the hospital's network so staff can track its whereabouts on a computer screen.

"Entering elevator," a TUG said last week as it headed for obstetrics.

"TUG has arrived," it announced as it came to a stop and waited patiently for somebody to unload it.

The three robots are theoretically available 24 hours a day, seven days week and, if used to maximum capacity, can do the work of almost 2 1/2 delivery people, Zini said.

For now, the new machines at Celebration Health are idle about half the time, but a hospital in South Carolina has four robots that each complete more than 50 deliveries daily, which is about 100 percent capacity, said Kevin Hill, Aethon's regional vice president.

More than 100 TUGs are in use at about 50 hospitals in the East, Hill said. But Aethon -- named for one of the mythological horses that pulled Greek god of the sun Helios' chariot across the sky -- considers all of the country's more than 6,000 hospitals as candidates for delivery robots.

"Most hospitals find [that] the more they use TUGs, the more they can't live without it," Zini said.

Perhaps, but so far Orlando Regional Healthcare, the region's other large hospital chain, has resisted the siren call of the soft-spoken robot.

"Robotics is something we're looking at for delivering meals and linens," Orlando Regional spokesman Joe Brown said. "It can reduce labor overhead. We are looking at it with interest, but there is nothing on the books for at least the next year."

Appeal grows

Aethon, which entered the Florida market about six months ago, has other robots at work in several cities statewide, including Jacksonville and Tallahassee, Hill said.

Celebration Health is the first member of the Florida Hospital system to employ the robots.

"It is well-known in the industry as a technology leader," Hill said. "This is a great showcase for our products."

After completing a delivery or pickup, each TUG automatically guides itself back to a docking station built into a recess in the wall.

Although people like to talk to TUGs, the robots don't have anything to say in response beyond the automated warnings they utter as they roll along.

"We wouldn't want to stop and talk," Hill said.

"After all, a robot is all about efficiency."