



This hospital spent \$300,000 on giant, superbug-killing robots

The war against superbugs began not so long ago, in a hospital not so far away ...

That'd be Norton Audubon Hospital, part of Norton Healthcare Inc., which says it's the first in the area to use Xenex Germ-Zapping Robots to destroy potential germs, bacteria and other harmful organisms hiding on hard-to-clean surfaces.

Audubon bought three of the metallic, futuristic droid units — named Adele, Claude and Maddox — in a total investment of \$300,000. The robots are a product of San Antonio, Texas-based Xenex Disinfection Services.

The units were up and running last month, and now rove around the Louisville-area hospital all day, cleaning operating rooms, the intensive care unit and the rooms of discharged patients. They sort of reminded the hospital staff of the R2-D2 droid from "Star Wars." (That's pretty obvious from their parody video, "Staph Wars: The Robots Strike Back," which you can watch below.)

But since the robots can't call on "the force" to clean patient rooms, they have to rely on pulses of xenon ultraviolet light. The light is 500 times more intense than sunlight, making it more effective at killing bacteria, viruses, fungi and other unseen disturbances in the force that exist on hospital surfaces.

Norton Audubon's environmental service department will still clean rooms as usual, then bring in one of the robots for a second sweep. It's placed in the room, activated and left alone to do its thing, sort of like a giant, superbug-killing Roomba.

"It is an additional step in the process, a valuable step in helping reach our goal of reducing infection rates," chief administration officer Jon Cooper said in an email.

While the Norton droids aren't fighting the Empire, they do have to take on drug-resistant "superbug" organisms, like C.diff and MRSA. Those are often referred to as "health care-associated infections," or HAIs, that patients pick up while in a hospital being treated for another problem.

According to the U.S. Centers for Disease Control and Prevention, about one in 25 patients contracts at least one HAI on any given day— and of those that do contract HAIs, one in nine will die from it.

Using the average prices for services in urban areas, the estimated costs related to HAIs range as high as \$35.7 billion to \$45 billion per year, according to a 2009 report, "The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention."

The good news is that most of these infections are preventable, and that hospitals that take the right actions can reduce rates for some HAIs by as much as 70 percent, according to the CDC.

That could save U.S. hospitals as much as \$25 billion to \$31.5 billion every year, according to the 2009 report.

Even so, the report also notes that, "while the cost estimates illustrate the magnitude of the potential savings of preventing all infections, these savings must be weighted against the effectiveness of the interventions to prevent them and the cost of the resources needed to invest in the interventions."

Each of these robots cost \$100,000 and it costs about \$4 per room to use them, "depending on how many rooms they are able to zap," Xenex media relations director Melinda Hart said in an email. But she added that cost is recouped if each one prevents two to three infections, and most hospitals report a return on their investment in four to five months.

According to the manufacturer's website, the machines have been credited with helping other hospitals reduce their HAI rates. At Westchester Medical Center University Hospital, in Valhalla, N.Y., the robots reportedly helped reduce the C. diff infection rates by 70 percent. In other hospitals, they've helped drop the rate of MRSA by 57 percent, and surgical site infections by 100 percent.

"Over the past few years, the (Norton Audubon) hospital has seen a reduction in infection rates, but we hope to see that rate continue to drop with the addition of the robot," Cooper said. Last year, Norton Audubon had more than 145,000 patient encounters, making it one of the most active in Norton's system, which also includes the downtown Norton Hospital and Kosair Children's Hospital. And it was No. 4 on our 2015 list of largest area hospitals, ranked by number of licensed beds. That number was 432.

The hospital also is undergoing a \$107 million to upgrade and expansion project that's expected to take about 3.5 years to complete.

Source: <http://www.bizjournals.com/louisville/news/2016/05/19/this-hospital-spent-300-000-on-giant-superbug.html>

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