



Germ-zapping R2-D2 look-alike works at Renown

Renown Regional Medical Center has four new employees that — at first glance — can be mistaken for an R2-D2 look-alike from George Lucas' film "Star Wars."

But the "germ-zapping" robots do just that — zap bacteria, pathogens and viruses to oblivion, Rachael Sparks, of Xenex Disinfection Services, LLC., said Monday during a demonstration at Renown Regional Medical Center. That includes the Ebola virus, influenza, measles and methicillin-resistant *Staphylococcus aureus* (MRSA).

"Well, they're germ-zapping robots that produces a UVC light that's germicidal," Sparks said. "It's able to kill bacteria and viruses in a matter of five minutes, and they're used to disinfect hospital rooms to make the rooms safer for the next patient."

Renown has four robots, each worth about \$100,000, and the first of their kind in Northern Nevada, Sparks said. They are used in nearly 300 hospitals nationwide and 500 worldwide, she said.

"It's kind of about the cost of treating four infections," Sparks said. "Each infection can cost a hospital about \$25,000 to \$35,000. So if they can prevent four or five infections, it will pay for itself."

The L-Vira Xenex Germ-Zapping Robot uses a xenon ultraviolet light that pulsates when it receives electricity. The pulsating light is invisible to the human eye and only appears as a bright light that fills the room. The light is 25,000 times more intense than sunlight, Sparks said.

UVC light, which uses shortwave ultraviolet radiation, rarely penetrates the Ozone layer of the Earth's surface. That means microorganisms haven't adapted to it, she said.

"UVC kind of scrambles the DNA in bacteria and viruses, which prevents them from replicating, so they die," Sparks said.

"Most hospitals use it after a patient who (was) known to have an infection," she said. "We try to do a really good job at cleaning rooms, but studies show that we miss places. There's always little nooks and crannies where bacteria likes to hide."

The robots are being used to disinfect operating rooms every night and in high-risk rooms previously occupied by a patient with an infection.

"It's a really big step in terms of disinfection science, and what's more important, it's evidence-based science," Sparks said. "Anytime a hospital makes a decision about what to invest in, they want to do something that's been proven to show results at other places."

Ultraviolet radiation has been used as a sanitation practice since the mid-20th century. In 1903, Niels Finsen was awarded the Nobel Prize for Medicine for his research in treating diseases with sunlight, according to Nobelprize.org, the official web site of the Nobel Prize.

"There's incidents of health care-associated infections across the nation," Amy McCombs, director of infection prevention at Renown, said Monday. "At Renown, we participate in the National Healthcare Safety Network, and I'm happy to say that with health care-associated infections, Renown is well below the national benchmark in all categories."

At a glance:

R2-D2, Optimus Prime and Wall-E all have one thing in common: Creative names and famous personalities.

Renown officials need help in naming three of the robots. If you have any ideas on what to name the new germ-zapping bots, enter the Name the Robots contest through May 22 and vote. Details at bestmedicineweeks.org

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