Fighting Infectious Disease The Modern Way - With Robots

Germ-fighting robots that pulse UV light are used by Loyola University Health System to fight infectious disease.

Hospitals are synonymous with cleanliness and now Loyola University Health System is the first academic medical center in Illinois to take disinfection to futuristic levels. Nicknamed “Ralph” by the housekeeping staff at Gottlieb Memorial Hospital and “little Joe” at Loyola University Medical Center, 3-foot upright cylindrical robots provide the finishing touches to room sanitation. A rotating telescopic head emits cidal ultraviolet (UV) rays for 15 minutes in closed, unoccupied rooms to systematically kill germs dead.

"Loyola is a world leader in infection control and now the addition of automated room disinfection reinforces our ongoing commitment to patient safety," says Jorge Parada, MD, MPH, FACP, FIDSA, medical director, Infection Control Program, Loyola University Health System. "Loyola is doing everything humanly possible to control disease and that includes robotics."

According to studies, the disinfection robots eliminate Clostridium difficile (C. diff) in less than 4 minutes and Methicillin-resistant Staphylococcus Aureus (MRSA) in less than 2 minutes.

"The robots are used for further disinfection in the operating suites and patient rooms including isolation, burn and transplant," says Alex Tomich, DNP, RN, CIC, manager, infection prevention and control at Loyola. "Loyola takes very seriously its responsibility to protect patients, visitors and our hospital staff from infections and we are early adopters of proven technology as well as best practices."

The hospital housekeeping staff cleans the rooms and then uses the robots for additional sterilization. The pulsed UV light destroys viruses, bacteria and bacterial spores without human contact or use of chemicals.

Hospital infections are linked to approximately 100,000 deaths each year and add as much as $30 billion a year in medical costs, according to the Centers for Disease Control and Prevention.

Loyola is a crusader in the war on infectious disease. Loyola was the first university medical center to screen all hospital patients for MRSA, is in its fifth year of mandatory flu vaccination for employees, students, volunteers and vendors and uses advanced laboratory technology to accurately identify 17 viral and 3 bacterial pathogens in about 60 minutes. Loyola is no stranger to robotics and currently uses telemedicine robots for surgery and in the emergency department to diagnose stroke patients.

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