STUDIES & ARTICLES

Case Study: Electrostatic Disinfection with the Clorox® Total 360® System in Acute and Long-term Care Facilities

Facility Information

Providence Health Care, Vancouver, BC, https://www.providencehealthcare.org/
For a copy of the full report, please contact your local sales representative.

Study Overview

Two facilities in the Providence Health Care system in Vancouver, BC incorporated the Clorox® Total 360® electrostatic sprayer into their disinfection protocols in acute care and long-term care settings. They paired the electrostatic sprayer with a novel sporicidal disinfectant called Clorox Healthcare® Spore[10] Defense™ Cleaner Disinfectant. During the course of one month, facility staff used the system to disinfect patient and resident areas, common and public spaces, and shared equipment. They collected data on the time it took to apply disinfectant using the electrostatic sprayer as compared to manual disinfectant application, disinfectant used per square foot, and disinfectant surface coverage. No additional labor was required to incorporate the electrostatic sprayer into their protocols. Although exact cost savings were not calculated during the study, they noted that electrostatic spraying could save on costs via reduction in microfiber cloth usage and replacement, laundry cost reduction, labor savings due to a simplified process, and reduced waste.

Key Findings

- The Clorox® Total 360® electrostatic system enabled added disinfection services, with no additional labor required.
- Compared to manual disinfection methods, the Clorox® Total 360® system was more efficient, including:
  - Disinfected restrooms up to 120 square meters in size in 2 minutes
  - Disinfected wheelchairs in 5 seconds
  - Disinfected stretchers in 15 seconds
- Facility staff reported that the electrostatic sprayer was safe, and easy to use and transport.

Methods

Each facility received two Clorox® Total 360® electrostatic sprayers to use during the study. The system was used as an adjunct to existing disinfection protocols rather than replacing daily manual disinfection processes. However, no additional labor was required to incorporate the system into their protocols.

In the acute care facility, the electrostatic system was used to apply a sporicidal in patient care areas, physical therapy areas, public and common spaces, and on shared equipment. Similarly, the long term care facility used the system to apply sporicidal in resident rooms, common areas, and on shared equipment. Disinfection with the Clorox® Total 360®

10. *C. difficile* spores only

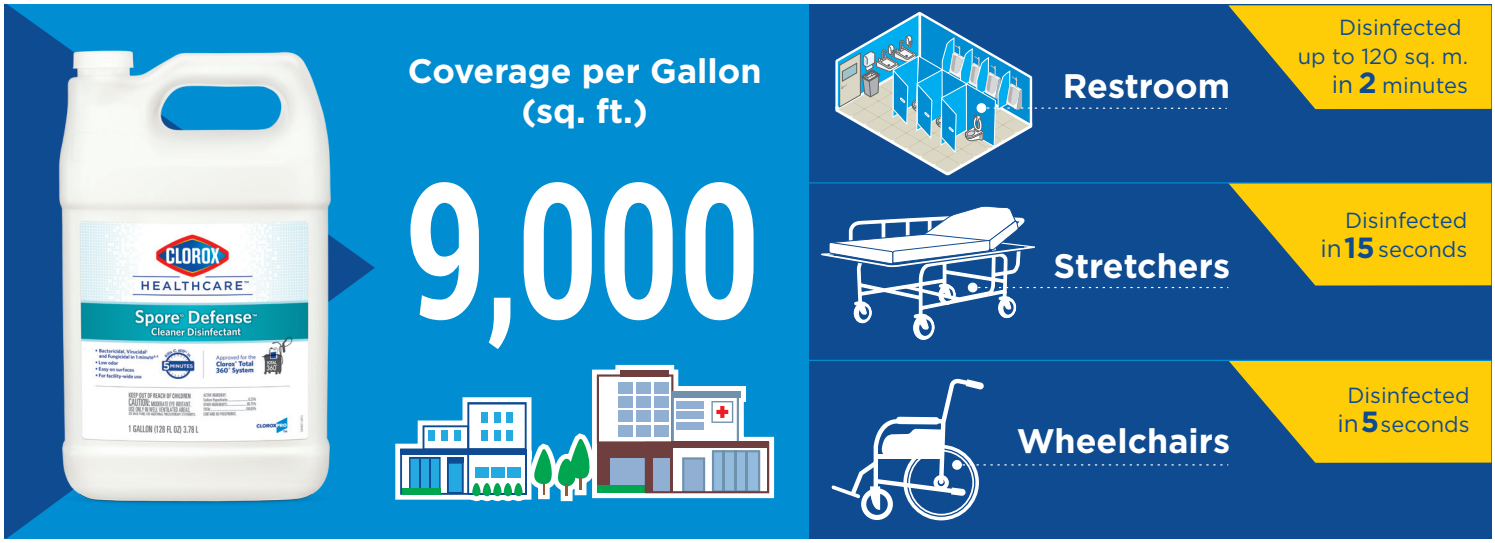
system was done after each patient use, daily, bi-weekly, or weekly depending on availability and how often items and rooms were used. Disinfection was done only when spaces were empty.

Results

The Clorox Healthcare® Spore[10] Defense™ Cleaner Disinfectant could be applied to restrooms using the Clorox® Total 360® electrostatic system in 1-2 minutes.

Restrooms were electrostatically disinfected in one to two minutes depending on the size of the room. Stretchers were electrostatically disinfected in 15 seconds, and wheelchairs took only 5 seconds to disinfect. Restrooms were out of commission for less time when the Clorox® Total 360® electrostatic system was used (about 1–2 minutes) instead of manual disinfection (about 12–30 minutes).

Each facility also estimated the number of gallons of disinfectant used per square foot, and found that 9,000 square feet of surfaces were covered with each gallon of disinfectant when applied electrostatically. Although both manual and electrostatic disinfection effectively reduced bioburden on surfaces in testing, electrostatic disinfection covered more surfaces. Specifically, they reported >90% surface coverage when using the Clorox® Total 360® electrostatic system, as compared to 35–85% coverage when disinfecting manually. They also noted that because the Clorox Healthcare® Spore[10] Defense™ Cleaner Disinfectant is ready to use, no disinfectant was wasted or discarded.



Spray surfaces until thoroughly wet. Allow surfaces to remain wet for the disinfectant contact time.

Conclusions

This study demonstrated that patient care areas, portable equipment, and shared spaces in both acute and long-term care facilities can be efficiently disinfected using electrostatic technology. The facilities expressed that as with any new technology, training and education are important for successful implementation.

Personnel increasingly requested the Clorox® Total 360® electrostatic system during the study, as staff and stakeholders became aware of the capabilities of the system. Both facilities reported a potential time and cost savings with the use of electrostatic disinfection, and noted that no additional labor was required to implement electrostatic technology.

10. *C. difficile* spores only

For more information, contact your Clorox sales representative.
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