

## The Five Pillars Of Safety In Healthcare

# Appendix

Clorox Professional  
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## Appendix

## Page

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14 Clorox Healthcare - C-Diff Infection rate

3

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15 Clorox Total 360 System

4

**There are multiple studies that have demonstrated the value of using bleach (sodium hypochlorite) disinfectants.** These products have been successful reducing *Clostridium difficile* transmission in hospital settings.

**Beth Israel Medical Center's Dr. Brian Koll spearheaded a hospital collaborative to interrupt Patient-to-Patient *Clostridium difficile* transmission and reduce infection.** Clorox Healthcare products were used in many cases; refer to "Prevention of Hospital-Onset *Clostridium difficile* Infection in the New York Metropolitan Region Using a Collaborative Intervention Model" for additional information.  
[https://www.crothall.com/files/2515/1603/4011/Summary-\\_Koll\\_at\\_Beth\\_Isreal\\_on\\_C.\\_diff\\_Intervention\\_APIC\\_2011\\_NI-18568\\_Bleach.pdf](https://www.crothall.com/files/2515/1603/4011/Summary-_Koll_at_Beth_Isreal_on_C._diff_Intervention_APIC_2011_NI-18568_Bleach.pdf)

**The Raimondi study was able to successfully reduce MRSA transmission and infection,** implementing several interventions, including the use of Clorox products; refer to "Infection-Prevention Bundle — Including Use of 1:10 Bleach (DISPATCH®) — Decreases MRSA Incidence by 57%."  
[https://www.crothall.com/files/3315/1603/4009/Clorox\\_Crothall\\_white\\_paper\\_Summary-\\_Raimondi\\_at\\_Beth\\_Isreal\\_on\\_Bleach\\_for\\_MRSA\\_Reduction\\_SHEA\\_2011\\_NI-18793.pdf](https://www.crothall.com/files/3315/1603/4009/Clorox_Crothall_white_paper_Summary-_Raimondi_at_Beth_Isreal_on_Bleach_for_MRSA_Reduction_SHEA_2011_NI-18793.pdf)

**The Mermel et al study implemented six major interventions to curtail *Clostridium difficile*,** including an emphasis with improving decontamination of the environment in patient rooms, other care areas, and patient care equipment, which resulted in decreased *Clostridium difficile* infection rate and reduced mortality; refer to "Reducing *Clostridium difficile* Incidence, Colectomies, and Mortality in the Hospital Setting: A Successful Multidisciplinary Approach." [https://www.crothall.com/files/7715/1603/4011/Summary\\_-\\_Multidisciplinary\\_C.\\_diff\\_Reduction\\_Approach\\_Mermel\\_Joint\\_Commission\\_Journal\\_2013\\_Bleach\\_1\\_1.pdf](https://www.crothall.com/files/7715/1603/4011/Summary_-_Multidisciplinary_C._diff_Reduction_Approach_Mermel_Joint_Commission_Journal_2013_Bleach_1_1.pdf)

**Saint Mary's Hospital in Rochester, Minnesota, developed a targeted strategy using Clorox bleach wipes** which was found to be an effective component in reducing *Clostridium difficile* infection and generated cost savings; refer to "A Targeted Strategy to Wipe Out *Clostridium difficile*." [https://www.crothall.com/files/8015/1603/4012/Summary-\\_Targeted\\_Strategy\\_Study\\_St.\\_Marys\\_Mayo\\_Clinic\\_Bleach\\_1.pdf](https://www.crothall.com/files/8015/1603/4012/Summary-_Targeted_Strategy_Study_St._Marys_Mayo_Clinic_Bleach_1.pdf)

**The Wiemken et al study demonstrated how the Ready-To-Use (RTU) method resulted with improved environmental cleaning and disinfection compliance rates;** refer to "The Value of Ready-to-use Disinfectant Wipes: Compliance, Employee Time, and Costs."  
[https://www.crothall.com/files/8515/1603/4011/Summary\\_-\\_Weimken\\_on\\_Benefits\\_of\\_RTU\\_Bleach\\_Wipes\\_AIIC\\_March\\_2014\\_3.pdf](https://www.crothall.com/files/8515/1603/4011/Summary_-_Weimken_on_Benefits_of_RTU_Bleach_Wipes_AIIC_March_2014_3.pdf)

**Louis Stokes Cleveland Veterans demonstrated a reduction in C. difficile spore contamination using Clorox Healthcare® Fuzion® Cleaner Disinfectant;** refer to "Routine use of Clorox Healthcare® Fuzion Cleaner Disinfectant, a spray formulation of bleach in non-C. difficile infection rooms reduces C. difficile spore contamination." [\[Insert Crothall link to study\]](#)

For a more complete of studies, go to:

<https://www.cloroxpro.com/resource-center/bleach-based-disinfectants-in-healthcare-settings-summary-of-clinical-evidence/>



## Clorox Total 360 System

With any new innovation in the marketplace, there are a multitude of questions and perspectives that must be considered. Below are all the relevant pieces of information which provide compelling evidence that the Clorox® Total 360® System is going to provide efficient and effective performance far above manual disinfection and other electrostatic sprayers.

### Published Studies

#### The Clorox® Total 360® System Improved Absenteeism Rate by 14% in a Florida School

A Florida elementary school serving an average of 1,250 students had two absenteeism rate spikes of +10% and an annual average rate of 6% during the 2017–2018 school year. In an effort to help keep the students and staff healthy, the school used the Clorox® Total 360® System paired with Clorox® Total 360® Disinfectant Cleaner<sup>1</sup> on a daily basis. The system was applied in areas including classrooms, restrooms, nurse's station and cafeteria.

A more frequent application of the Clorox® Total 360® System during the 2018–2019 school year resulted in a 14% decrease in the overall average absenteeism rate and a 53% decrease in the absenteeism rate for the peak flu season month of December, as compared to the previous school year.

Source: CloroxPro. Case Study: Clorox® Total 360® System can help reduce absenteeism rates and bioburden in elementary [Internet]. CloroxPro [cited 2019 Sept 16]. Available from: <https://www.cloroxpro.com/resource-center/clorox-total-360-system-and-absenteeism-study-in-k-12-white-paper/>

#### Louis Stokes Cleveland VAMC Total 360 Study Summary by Dr. Curtis Donskey

##### Method:

- Clorox Healthcare® Spore10 Defense™ Cleaner Disinfectant applied to wheelchairs, portable equipment, and waiting rooms using the Clorox® Total 360® System
- Surfaces swabbed before and after application to determine number of sites positive for *C. diff*, MRSA, enterococci, gram-negative bacilli, and MS2 (SARS-CoV-2 surrogate)

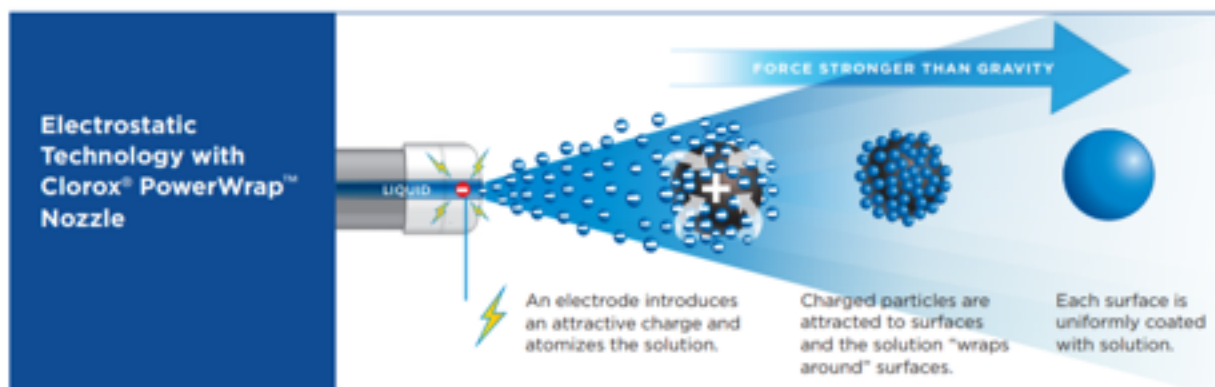
##### Key findings:

- Electrostatic application of Spore Defense™ to wheelchairs was **4 times faster** than manual wiping, but equally effective
- Statistically significant reductions achieved on all sites, with **Spore Defense™ alone** (no pre-clean or wiping)
- Download the full article from AJIC at: <https://doi.org/10.1016/j.ajic.2020.06.002>

## The Clorox Total 360 System Device and Chemistry

### The Clorox® Total 360® Electrostatic sprayer

- The Clorox® Total 360® Electrostatic Sprayer, with the patented Power-Wrap™ nozzle, is an efficient, reliable and powerful method to ensure all surfaces – front, back, and sides – can be properly disinfected and sanitized.



## Clorox Total 360 solutions



- Kills 99.9% of bacteria in 5 seconds\*
- 44 organism claims: Kills cold and flu viruses<sup>†</sup>, MRSA and norovirus in 2 minutes or less
- One-step disinfecting
- Eliminates odors
- Sanitizes soft surfaces
- Inhibits the growth of mold and mildew for up to 7 days
- No re-entry time needed after application
- PPE: gloves and safety goggles recommended, N95 required for long time use



- Sanitizes food contact surfaces in 1 minute, no rinsing required
- Kills bacteria on food contact surfaces
- Kills 99.9% of the bacteria commonly found in kitchens and bathrooms
- Eliminates odors caused by bacteria
- Gentle enough to use around children
- No re-entry time needed after application
- PPE: safety goggles recommended



- The first sporicidal solution available through the Clorox Total 360 System
- Kills *Cdiff* in 5 minutes; Kills 38 additional bacteria, viruses and fungi in 1 minute
- Meets the EPA Emerging Viral Pathogen designation for use against SARS-CoV-2 (virus that causes COVID-19)
- Great surface compatibility and residue profile
- Low odor with no added fragrances
- PPE: gloves

