

How the Pandemic Impacted Environmental Cleaning & Disinfection

By Doe Kley, RN, MPH, CIC, T-Chest



We were all very hopeful that this summer was going to bring the end of the COVID-19 pandemic, and we could get back to life as we once knew it.

We may be done with this virus, but it certainly is not done with us, with variants continuing to stoke the flames. Although we are still in the thick of this pandemic, we should also start to think about the future, beyond COVID-19. This pandemic changed everything, including the way in which we clean and disinfect our facilities. This article highlights those cleaning and disinfection practices that can be discontinued and those that should be hard-wired.



Extreme Disinfection

Early in the pandemic, before much was known about the SARS-CoV-2 virus and how it was transmitted, extreme cleaning was a common occurrence — both inside and outside of healthcare facilities.

Some have referred to this as “Hygiene Theater,” which is the act of increasing hygiene protocols that may make patients, visitors and workers feel safe but has no real correlation to lowering the risk of infection. An unprecedented awareness and focus on infection prevention, including hand hygiene and cleaning and disinfecting, catalyzed across healthcare. Healthcare workers banded together in their shared responsibility for infection control practices to protect patients and each other.

Over time, as more was learned about the virus, the CDC de-emphasized the importance of cleaning and disinfection, citing low risk of transmission from environmental surfaces. This is generally true, but the risk does increase when a COVID-19 positive patient is present and is shedding the virus into their immediate environment. Hopefully, by now we have all stopped extreme cleaning. However, continued diligence to cleaning and disinfection is still necessary, as it plays an imperative role as part of a holistic strategy to protect patients, visitors and staff from other pathogens that are easily transmitted via surfaces.

While we are still in the midst of a global pandemic, enhanced cleaning and disinfection protocols that align with Centers for Disease Control guidance and the Occupational Safety and Health Administration Emergency Temporary Standard (OSHA ETS) requirements are needed. Enhanced cleaning and disinfection falls somewhere between our routine processes and extreme cleaning and disinfection — it’s the “happy middle.” Frequent disinfection of high-touch surfaces should be included in these enhanced measures.

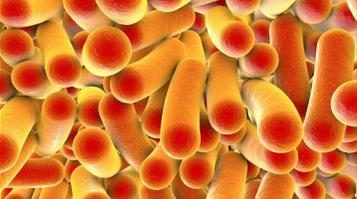
It is important to apply the lessons learned during this pandemic. This is an opportune time for Infection Preventionists (IPs) to collaborate with Environmental Services (EVS) to assess whether the cleaning procedures they’ve adopted at the onset of the pandemic still serve the facility’s needs and meet regulatory requirements.

COVID: Not the Only Pathogen of Concern

Over the past year and a half, with our focus on a single pathogen — SARS-CoV-2 — a few other pathogens seem to have gotten away from us. One that is highly concerning is drug-resistant *Candida auris*.

Several facility outbreaks have been reported in the U.S. and case counts have nearly doubled during the pandemic.^{1,2} This pathogen can survive for prolonged periods on environmental surfaces, including portable equipment. Its primary route of transmission is contact with contaminated environmental surfaces, medical equipment and fomites or from person-to-person such as from unclean hands. One recommended strategy to reduce the risk of transmission of a broader range of pathogens, including *C. auris*, is a horizontal and more standardized approach to cleaning and disinfection.³ Even a pathogen like *Clostridioides difficile* could be managed under the horizontal approach, as many of today's sporicidal disinfectants have great surface compatibility for everyday use.

Candida auris and *Clostridioides difficile* Resources

	Resource Type	Title
 <i>C. auris</i>	Free CE	" <i>Candida auris</i> : An Emerging Threat"
	Free CE	"Electrostatic Sprayers: A New Way to Combat <i>C. difficile</i> in Healthcare"
	Video	"What is <i>Candida auris</i> ?"
	Education Sheet	<i>Candida auris</i> Pathogen Info Sheet
 <i>C. difficile</i>	Education Sheet	<i>C. difficile</i> Education Sheet
	Blog Article	"The COVID-19 Pandemic's Impact on Two Urgent-threat Pathogens: <i>Candida auris</i> and <i>Clostridioides difficile</i> "

Everyone Plays a Role in Cleaning & Disinfection

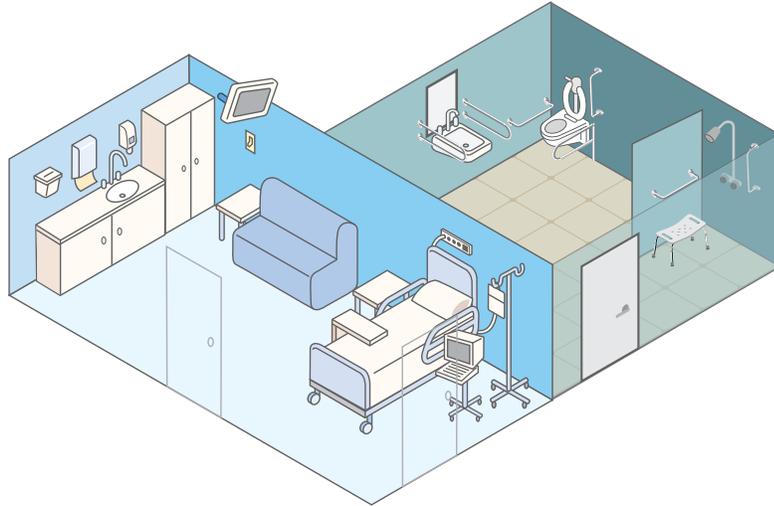
This pandemic highlighted the importance of a sanitary healthcare environment to keep patients, visitors and staff safe. While we don't want others to slow down their cleaning efforts, it is time to give some tasks back to the cleaning professionals.

For example, early in the pandemic, when supplies were limited, nurses took on occupied daily room cleaning in order to conserve personal protective equipment (PPE). Now that PPE supplies have normalized, EVS should be performing this task.

What should nurses continue to do? At least once per shift in their assigned patient rooms, nurses should clean and disinfect high-touch surfaces, including medical equipment — particularly the high-touch surfaces like control panels. We don't hesitate to clean our hands frequently, but it's important to note that our hands really only are as clean as the environment around us, so shouldn't we clean these frequently as well?

What about other healthcare workers? What should they be doing? Much like the nursing staff, they too should ensure that their work spaces are clean. After all, EVS is required to clean any given area only once per day. We must question if this is enough given the high traffic in hospitals. All staff should wipe down work spaces at least once per shift and clean and disinfect any patient care equipment after each use. With many EVS departments' short staffs, even office workers can do their part by cleaning their desk areas and high-touch items such as telephones and printer control panels.

High-Touch Surfaces in a Patient Room



Toilet



Sink



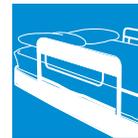
Soap dispenser



Shower fixtures



Bed frame



Bed railings



Cart



Bedside table



Commode chair



Door handles



Railing



IV poles



Light switches



Medication barcode scanner



Portable equipment



Computer, keyboard, mouse



Telephone



Nurse call button



TV remote



Transport equipment



Chairs

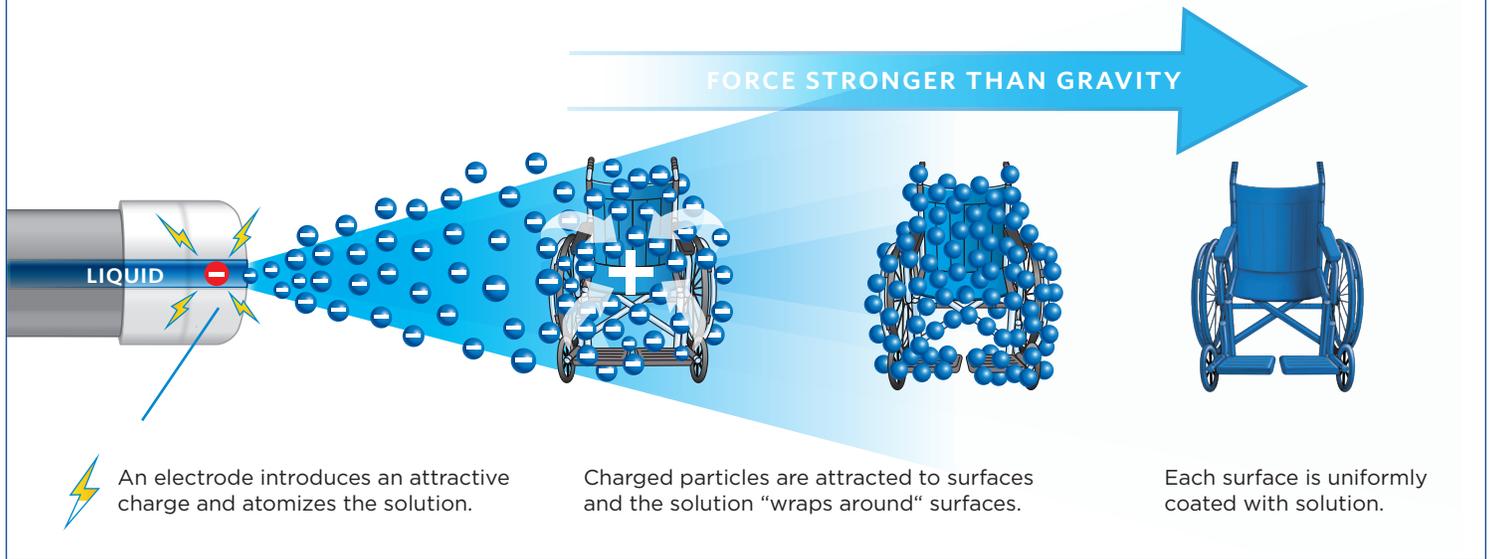
Disruption Brings Innovation

The disruption of the pandemic brought innovation. One in particular is electrostatic disinfection technology. This technology is not new. It has been used for years in industries such as agriculture, and it's used for other applications like automotive painting, spray tanning and inkjet printing.

The reason this technology works so well is that it allows for even application of a liquid to all surfaces of a complex object while minimizing liquid waste. This technology was recently introduced into the surface disinfection industry, and it has the same benefits for disinfection.

So how does it work? Droplets that leave the nozzle are charged as they exit the device. Those droplets are also broken up into smaller droplets at the same time that they are being charged. This results in evenly sized droplets that repel one another and actively seek out target surfaces like small missiles. Once the droplets reach their target, the charge dissipates, and the liquid remains on the surface. The result is an even, uniform coating of disinfectant that can wrap around even complex surfaces like a wheelchair. Imagine the time it would take to manually disinfect such a surface. Electrostatic technology allows for effective and efficient uniform coating of every surface targeted in a matter of seconds. These features are key in these resource stretched times.

How Electrostatic Technology Works



During the pandemic, many healthcare facilities across the country adopted this technology. These facilities found the technology invaluable to keeping large spaces such as waiting rooms safe. Electrostatic disinfection was also used as an adjunct to discharge cleaning of COVID-19 and other isolation rooms. Infection Preventionists saw the value, and these devices found their way into operating rooms for more efficient terminal cleaning. Last, electrostatic disinfection is an incredibly efficient means of disinfecting complex surfaces such as transport equipment (e.g., wheelchairs and gurneys).

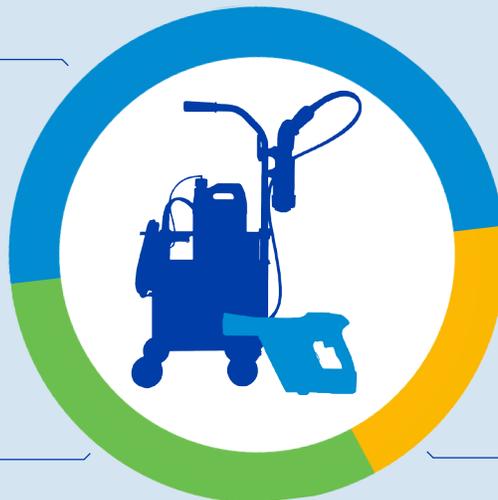
Where Are Electrostatic Sprayers Used in Healthcare?

50%

of electrostatic device spending was in Acute Care

72

new industries began using electrostatics since 2020



31%

of electrostatic device spending was in All Other Healthcare

19%

of electrostatic device spending was in Long-Term Care

Total electrostatic device sales in healthcare in 2020. Data collected in June 2021.

Looking Forward

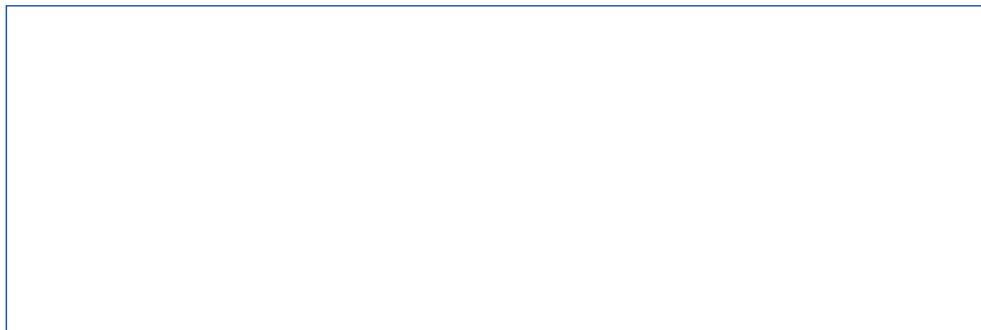
A sanitary environment is key to infection prevention and control efforts, regardless of pathogen.

Hopefully, the next normal for cleaning and disinfection in healthcare will mean the adoption of innovation to lighten the work of disinfection, more collaboration among disciplines and more appreciation for Infection Preventionists and Environmental Service professionals.



References:

1. Pan-American Health Organization. (2021). Epidemiological Alert: *Candida auris* outbreaks in health care services in the context of the COVID-19 pandemic – 6 February 2021. [Internet]. [Cited 2021 Sep 13]. Available from <https://www.paho.org/en/documents/epidemiological-alert-candida-auris-outbreaks-health-care-services-context-covid-19>.
2. CDC. (2021). Tracking *Candida auris*. [Internet]. [Cited 2021 Sep 13]. Available from <https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html>.
3. Wenzel R, Edmond M. Infection Control: The Case for Horizontal Rather than Vertical Interventional Programs. *International Journal of Infectious Diseases*. 2010; S3-5.



For product resources and implementation tools,
contact your Clorox sales representative or
Call: 1-800-234-7700
Visit: www.CloroxHealthcare.com

© 2021 Clorox Professional Products Company,
1221 Broadway, Oakland, CA 94612.