



Instant UV with NuvaWave™

Advanced UV Technology to Bridge the Critical Disinfection Gap

NUVA™
WAVE

A WellAir Brand



Despite the current disinfection protocols in place, healthcare-acquired infections (HAIs) remain a significant problem.

- ☼ **1 in 31 U.S. hospital patients** contracts at least one infection as a result of receiving health care, totaling an estimated 1.7 million infections per year.
- ☼ HAIs are associated with an estimated **99,000 deaths** per year.³
- ☼ Hospitals in the U.S. spend up to **\$45 billion** each year battling HAIs.



The Pathogen Problem We Can't Ignore

Many high-touch surfaces in the healthcare environment are not adequately disinfected with current protocols. This poses an ongoing and critical infection risk and encourages the spread of pathogens.

Multiple studies have revealed that environmental surfaces and patient care items have not been properly cleaned and disinfected; therefore, the healthcare environment can be contaminated (up to 75% depending on the status of cleaning/disinfection) and result in transmission of multidrug-resistant pathogens, putting patients and staff at risk.

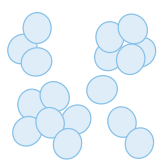
Numerous pathogens that cause HAIs can persist on surfaces for months without intervention and can affect patients and staff alike. Studies show only 40 to 50% of hospital surfaces that need to be disinfected are in fact manually wiped by environmental service (EVS) personnel.

The ongoing prevalence of HAIs is a clear indicator that current disinfection protocols

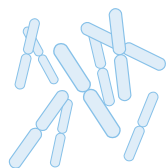
simply aren't enough to protect both patients and staff. In a pandemic era, we expect current disinfection protocols to be enough to mitigate infection risk. But it's not. Disinfection experts have acknowledged that we need to embrace new disinfection technologies to improve pathogen protection. Instant UV with NuvaWave is a new and powerful disinfection weapon to combat the disinfection gap and the ongoing burden of HAIs on the healthcare system.

“History tells us that this will not be the last pandemic, and epidemics are a fact of life. Doing nothing to prevent the next one is dangerously short-sighted, and frankly difficult to understand.”

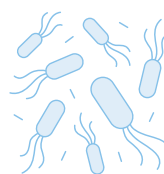
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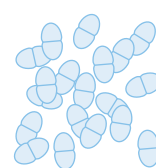
MRSA



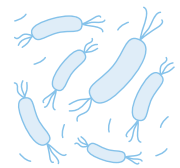
Klebsiella



Escherichia



Enterococcus



Pseudomonas

Red: Surfaces that cannot be disinfected with chemical wipes and sprays without risk of damage.

Yellow: Surfaces where improper use of or ineffective chemical wipes or sprays are common, leading to increased pathogen exposure.






The Disinfection Gap Exists Everywhere

A variety of high-touch surfaces are not disinfected often or well enough to prevent the spread of HAIs.

Sensitive, high-touch medical equipment that cannot be disinfected with chemical wipes or sprays without risk of damage provides a prime opportunity for pathogen spread. Portable medical equipment can also spread pathogens beyond a patient's room. Examples include patient monitors, IV pumps and poles, blood pressure cuffs and monitors, EKG and other machines, pulse oximeters, and control buttons. Additionally, fabrics and soft surfaces cannot be disinfected with chemical wipes or sprays.

Even high-touch surfaces that can tolerate chemical wipes and sprays may not be adequately disinfected for several reasons, including:

-  Chemical wipe/spray is not effective against certain pathogens, like *C. difficile* spores
-  Insufficient dwell time with surface (2 to 10 minutes)
-  The use of one wipe on more than one surface and/or in more than one direction

Importantly, incorrect usage of chemical wipes and sprays can transfer pathogens from a contaminated surface to an uncontaminated surface increasing infection risk and creating a

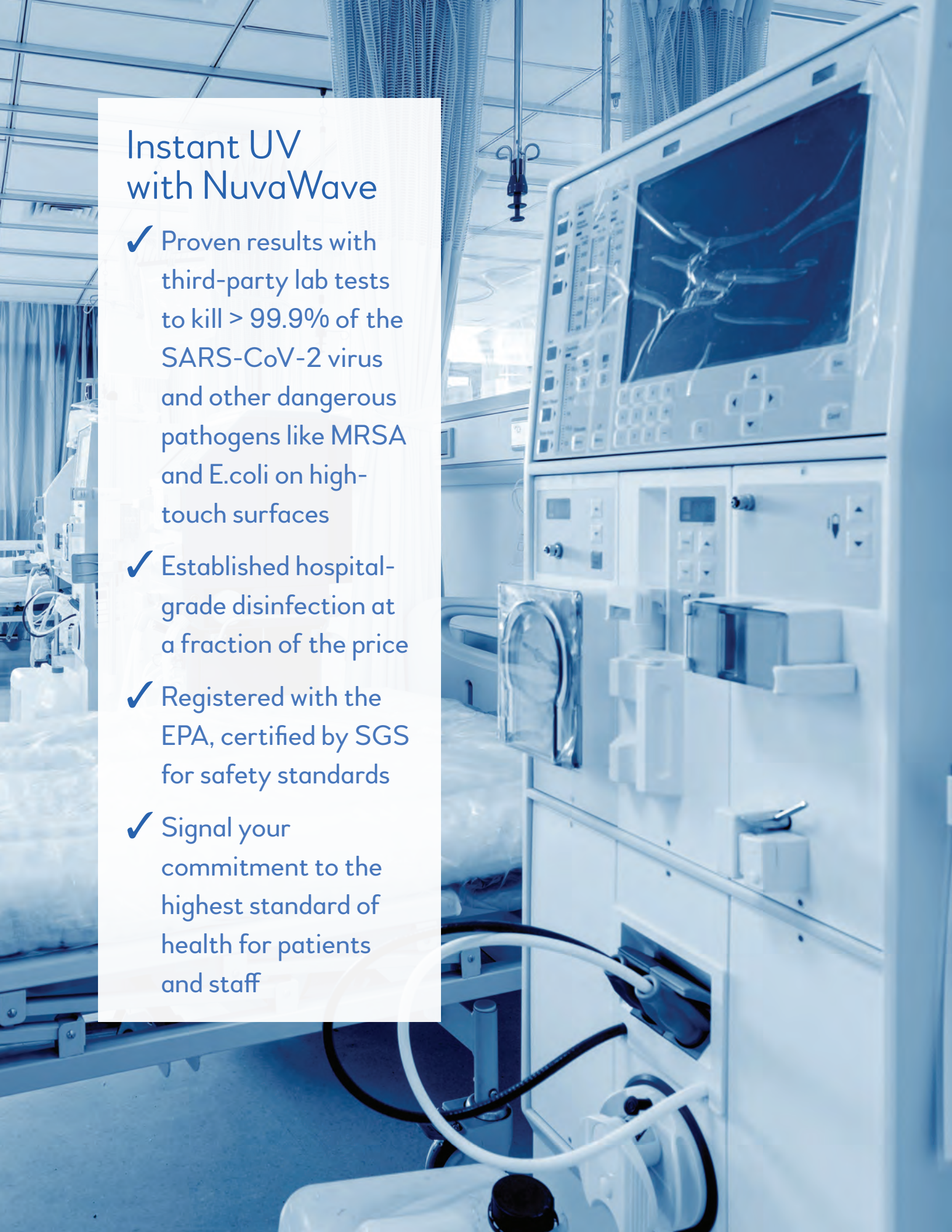
false sense of security for both patients and staff. The Centers for Disease Control and Prevention (CDC) does not recommend wide-area spraying as the principal means of SARS-CoV-2 surface disinfection due to safety concerns.

There is also growing evidence and concern around the use of aerosolized disinfectants to those who clean. Cleaning workers have the highest rates of occupational asthma. Instant UV with NuvaWave offers a chemical-free, non-toxic disinfectant option for environmental service (EVS) and other healthcare staff.

Other ultraviolet (UV) technologies, including UV upper air systems and UV towers, can be effective disinfection options in the patient care setting, but neither technology can effectively close the disinfection gap that exists on high-touch surfaces. UV air systems can address airborne pathogens when adequately cleaned and maintained but eradicating only airborne pathogens is insufficient in preventing the overall spread of pathogens. If repositioned to eliminate shadowing, UV towers can effectively disinfect a patient room but require 30- to 60-minute run cycles and cannot be operated in the presence of unprotected people. As such, UV towers are only used after a patient is discharged (patients' hospital stays last an average of five to six days). During the patient's stay, the bioburden within their room accumulates and spreads, increasing the risk of HAIs.

Instant UV with NuvaWave

- ✓ Proven results with third-party lab tests to kill > 99.9% of the SARS-CoV-2 virus and other dangerous pathogens like MRSA and E.coli on high-touch surfaces
- ✓ Established hospital-grade disinfection at a fraction of the price
- ✓ Registered with the EPA, certified by SGS for safety standards
- ✓ Signal your commitment to the highest standard of health for patients and staff



Bridging the Disinfection Gap

Instant UV with NuvaWave is uniquely positioned to bridge critical disinfection gaps and

improve pathogen protection. NuvaWave is your new weapon for pathogen elimination:



VERSATILE

Can be used on virtually any surface, including soft surfaces, fabrics, and sensitive medical equipment

Chemical-free and non-toxic

Can be safely used around people



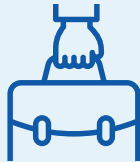
FAST

Fastest hospital-grade disinfectant available

Kills over 99.9% of common pathogens in only 1 second

Uses 270 nm ultraviolet C (UVC) light for peak germicidal efficacy

No warm-up time



PORTABLE

Three hours of continuous use per charge

Weighs only 1.5 pounds

Cordless operation

Connects to wearable holster



INTELLIGENT

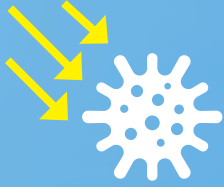
UV activation indicators

System monitoring

Vibration warnings

Drop detection

How NuvaWave Works



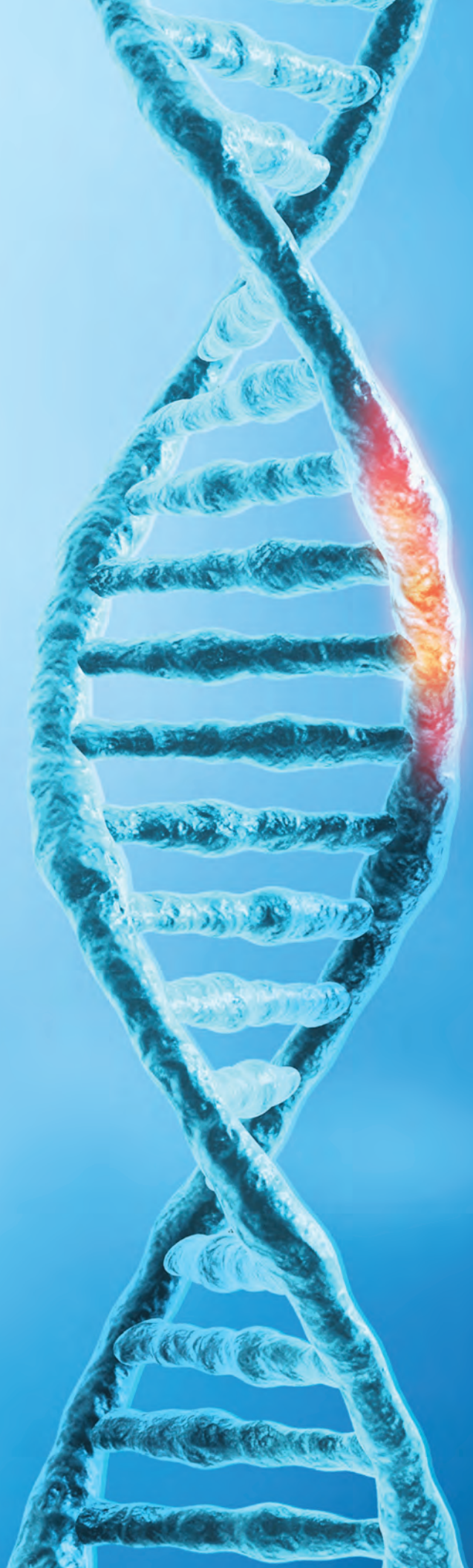
- 1) Targeted high-energy UVC light waves penetrate the pathogen



- 2) Energy from the UVC waves damages pathogen DNA and/or RNA



- 3) The pathogen acquires enough DNA and/or RNA damage in one second of UVC exposure to either kill the pathogen or eliminate its ability to replicate and cause illness.



The Innovation Behind Instant UV

UVC light is a proven method of disinfection and has been used extensively for disinfecting water, air, and surfaces to destroy a host of harmful pathogens. Hospitals have been using UVC light for years to disinfect rooms after patient discharge. The reason it is not used more frequently—even though bioburdens are continuously building—is that it is considered unsafe to be used with humans nearby. The reason is that direct exposure of skin and eyes to UVC light may cause eye injury and skin reactions.

However, **Instant UV with Nuvawave** was specifically designed to address these current UVC limitations:

- ✓ Nuvawave emits a very narrow wavelength band of radiation in a targeted manner to limit ancillary and dangerous exposure common with traditional UV towers.
- ✓ Disposable gloves or tight-weave fabric are barrier to UVC light waves making it easy to protect the Nuvawave user from UVC exposure. Personal protective equipment (PPE) is worn by device users to ensure no skin or eyes are exposed.
- ✓ People without PPE can be present when Nuvawave is in use provided they remain at least six feet away from the device.
- ✓ Pathogens are invisible. So is UVC light. But Nuvawave users know the device is emitting its UVC disinfection weapon when the blue Glow Ring and white Spotlight indicators are on.

- ✓ By releasing the light trigger, the targeted Instant UV disinfection immediately ceases, eliminating any risk of exposure



Nuvawave has been third-party tested at two independent laboratories, EMSL Analytical, Inc. and Texas Biomedical Research Institute, to verify the germicidal efficacy of this newest, portable UVC technology. The device is the fastest hospital-grade disinfectant available and is registered with the Environmental Protection Agency (EPA).

Easily Integrate Instant UV with NuvaWave into Disinfection Workflows

NuvaWave's speed and portability make it easy to integrate frequent surface disinfection into existing workflows. To effectively disinfect virtually any surface:

- 1) Hold the device 1 to 3.5 inches from the surface to be disinfected with the UVC reflector plate facing away from you.*
- 2) Press and hold the UVC light trigger.
- 3) Sweep the device over the surface, exposing each point for at least 1 second.

* Consistent with existing protocols, soiled surfaces must be manually cleaned before disinfection.



UVC
LIGHT
SOURCE

INSTANT ON/
OFF TRIGGER

INTEGRATED
ELECTRONICS

HOLSTER
CLIP

ON/OFF SWITCH
AND BATTERY
CONNECTION



SPECIFICATIONS:

- Average output power @ 2" across 4" x 4" disinfection area – 12mW/cm²
- Kills 99.9%+ of pathogens in seconds
- Operates at 270 nm, the peak of the germicidal curve
- Lightweight, handheld device weighs ~1.5 pounds
- External battery pack lasts ~3 hours per charge
- 5,000-hour, mercury-free, solid-state light source
- Users are recommended to wear: gloves, UVC-protective face shield or glasses, long sleeves and pants, closed-toe shoes

EACH NUVAWAVE KIT CONTAINS:

- NuvaWave UVC Handheld Device
- (2) NuvaWave UVC Face Shields
- (2) Three-hour rechargeable batteries
- AC battery charger
- Utility belt with battery mount and device holster
- Instructions for Use

RECOMMENDED UNITS

Professional Office (2-5 people)	1 unit
Surgical Center (3-4 ORs)	1-2 units
Dialysis Center, Imaging Lab (6-10 rooms)	3-5 units
Urgent Care or Emergency Center (12-15 rooms)	4-6 units
Large Medical Center (multiple floors)	Please contact your Henry Schein representative

1 Kanamori H, Weber D, Rutala W. Role of the Healthcare Surface Environment in Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Transmission and Potential Control Measures. *Clinical Infectious Diseases*, ciaa1467, <https://doi.org/10.1093/cid/ciaa1467>

2 Centers for Disease Control and Prevention. Cleaning and disinfecting your facility. April 5, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>

3 Del Re, D., Ikeno, C., Smid, K., Swift, D. (2015). Effects of Disinfectant Wipes on Touch Screen Surfaces. *American Journal of Infection Control*. Retrieved from [https://www.ajicjournal.org/article/S0196-6553\(15\)00295-3/fulltext](https://www.ajicjournal.org/article/S0196-6553(15)00295-3/fulltext)

4 CDC. 2021. Available at <https://www.cdc.gov/nchs/data/hus/2015/082.pdf>.

To close the disinfection gap today,
place an order for NuvaWave.

Call **1.866.515.5181** or email
healthcare@wellairsolutions.com.

