

The Value of Whole Room Disinfection

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Summary

In today's healthcare environment, hospitals and ambulatory surgery centers face increasing pressure to improve clinical outcomes while controlling costs and maximizing operational efficiency. The fight against disease doesn't always end with diagnosis and subsequent treatment. For many patients, the hospital that is supposed to make them better actually makes them worse. These are the results of Hospital Acquired Infections (HAI's). HAI's, specifically, Surgical Site Infections (SSI's) and Central Line Acquired Bloodstream Infections (CLABSI's) combine to cause harm to over half a million patients and equates to approximately \$10billion in Economic burden on an annual basis. By properly addressing the Environment of Care, as well as the other spokes on the Antimicrobial Stewardship wheel, these types of infections can be prevented much more frequently.

Clinical Challenge

The Association for Professionals in Infection Control and Epidemiology (APIC) vision is to provide a safer world through the prevention of infection. In a recent article published by the CEO of APIC; Devin Jopp states, "Infection Prevention & Control [IPC] remains a blind spot in many healthcare boardrooms; not because boards don't care, but because it's still treated as an operational rather than strategic risk."

When a patient gets an infection because of; surgery, central line or catheter placement, being placed on a ventilator; there is much more collateral damage than, "treat the infection with antibiotics." From the patient's perspective, HAI's result in increased length of stay (LoS), surgical revisions, antibiotics, psychological damage, and decreased quality of life. From the hospital's perspective, HAI's result in financial penalties for poor performance, incurring cost from surgical revisions, administering antibiotics, and decreased hospital throughput. In addition to the obligation of the Hippocratic Oath, there is logistical, operational, and financial incentive to prevent harm.

Surgical Site Infections are often broken down into 3 categories; Superficial, Incisional, and Organ Space. Each of these infections are critical to patients and their families; similarly, these infections are critical to the hospital that caused them. The cost of a single Surgical Site Infection varies from \$20,000 to over \$90,000 if the infection involves prosthetic implants.

ForTec Solution

Our Compound

Hydrogen peroxide (H₂O₂) has been recognized for its antiseptic and antimicrobial properties since its discovery in the early 19th century. Today, hydrogen peroxide remains a cornerstone of healthcare disinfection practices and is widely used to sterilize medical devices, decontaminate surfaces, and support infection prevention efforts across the continuum of care.

When dispersed as a fine dry mist or fog, hydrogen peroxide can reach surfaces that may be missed during manual cleaning and disinfection processes. This allows healthcare facilities to supplement their existing environmental services protocols with a standardized, repeatable method of whole-room disinfection.

ForTec's mobilized hydrogen peroxide fogging solution is designed to integrate into existing terminal cleaning workflows without requiring facilities to purchase, maintain, or manage specialized equipment. Healthcare organizations can leverage advanced whole-room disinfection technology while avoiding capital expenditures, maintenance contracts, equipment storage concerns, and staff training burdens associated with ownership.

Data & Comparison

Early data suggests that Hydrogen Peroxide fogging has a positive impact on Clinical outcomes

HAI Type	Rooms	Start Date	CL Days or Surgeries	Infections	Infection Rate	% Change
non-MBI CLABSI's*	56 Critical Care Rooms	2024	Baseline	23,781	37	1.556
			Intervention	13,631	8	0.587
SSI**	30 OR's	2022	Baseline	560	23	4.11%
			Intervention	1223	16	1.31%

Notes:
 *per 1,000 CL Days
 **Follows Solutions for Patient Safety (SPS) Definition (ortho, cardiac, neuro)

Conclusion

The goal of any infection prevention initiative is simple: reduce patient harm. By addressing environmental contamination as part of a comprehensive infection prevention strategy, healthcare facilities may reduce opportunities for pathogen transmission and support safer patient care environments. For patients, this may translate into fewer preventable infections, shorter lengths of stay, fewer readmissions, and improved overall outcomes. For healthcare organizations, effective environmental decontamination supports quality metrics, patient satisfaction, and operational efficiency while reinforcing a culture of safety.