

INDUSTRY INNOVATIONS

Where Product Innovation Meets Best Practice

Volume 6, Number 2, Winter 2024/25



PREVENTING PERIOPERATIVE SEPSIS

REVOLUTIONIZING INFECTION
PREVENTION: HOW HYGIENIC ECHO'S
INNOVATIONS ARE TRANSFORMING
HAND HYGIENE IN HEALTHCARE

USING SURFACE
PROTECTION TECHNOLOGIES
IN THE HEALTHCARE SETTING

THE SIGNIFICANCE OF
CHOOSING HUMAN-USE, ANTISEPTIC
DRUG-COMPLIANT ABHRS IN
HEALTHCARE SETTINGS

Don't spread it STOP it!*

IS YOUR HEALTHCARE FACILITY READY?



 **2 - 10 million**

We have 2 - 10 million bacteria between fingertip and elbow

 **1 in 5**

When you wash your hands, you can prevent 1 in 5 respiratory infections

 **80%**

80% of all infections are transmitted by hands

 **3 hours**

Germs can stay alive on hands for up to 3 hours

Healthcare workers are at a higher risk of getting the flu.**

**<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7431651/>

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VISION

A world without preventable infections.

MISSION

To advance infection prevention and control by advocating for our members and providing access to evidence-based resources, education and networking opportunities.

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Foreword



“With the likely related rise in certain healthcare-associated infections and the mounting concern of antimicrobial resistance, innovative industry solutions that serve to increase patient safety from an infection prevention perspective are more needed than ever.”

Dear IPAC Canada members,

We hope you enjoy the Winter 2024 edition of **Industry Innovations**, which features a potpourri of innovative product offerings supporting a variety of infection prevention and control (IPAC) practices in healthcare environments.

Our healthcare systems are facing growing pressures due to increases in patient acuity and complexity. Existing system challenges were also exacerbated by the COVID-19 pandemic, especially with regard to health human resources. With the likely related rise in certain healthcare-associated infections and the mounting concern of antimicrobial resistance, innovative industry solutions that serve to increase patient safety from an infection prevention perspective are more needed than ever. Evidence-informed solutions with the added benefit of decreasing provider workload are especially welcomed.

This issue of **Industry Innovations** includes articles from Sepsis Canada, which summarizes key measures to prevent surgical site infections, and three industry partners. SC Johnson’s article speaks to the importance of thoroughly reviewing alcohol-based hand rubs to ensure efficacy, and consequently staff and patient safety. Elimagen Technologies reminds of the importance of cleaning and disinfecting high touch surfaces and offers a product that may increase safety between cleanings. Finally, Hygienic Echo’s innovative Buddy Badge and Green Badge Systems serve to elevate hand hygiene performance by prompting healthcare workers to perform hand hygiene when needed, if not already done. Consistent across all is the acknowledgement of the pressures on healthcare facilities and teams to do more with less and the subsequent offering of industry tools to close the gap and improve safety.

On a related note, as IPAC Professionals, you have an in depth understanding of how industry products and technologies can prevent or contribute to transmission of organisms within a healthcare setting. Sharing feedback and design recommendations with industry partners is an important way we can contribute to patient safety on a large scale, and allows us the opportunity to focus on the prevention aspect of our roles. If you come across a product in your facility (or better yet, before it enters your facility) that could use some design modifications to facilitate cleaning and disinfection, requires additional testing to ensure compatibility with approved disinfectants, or has features that could increase infection risk, reach out to the vendor to let them know. Our specialized knowledge is often welcomed by industry partners and used to improve products. The most entrepreneurial amongst you, may even use your knowledge and experience to create new opportunities for innovation!

Advances in technology, materials, engineered systems, education and processes have the ability to improve the safety of patients, staff and all who enter the healthcare facility; and ultimately, the delivery of healthcare services. It is exciting to see examples of this biannually in IPAC Canada’s publication of **Industry Innovations**.

Lorraine Maze dit Mieusement, RN, MN, CIC
Guest Editor, *Industry Innovations* ■



Sepsis Canada
Suspect sepsis. Save lives. Support recovery.

Preventing Perioperative Sepsis

Sepsis is life-threatening organ dysfunction caused by a dysregulated host response to infection¹. It's a complex disease that affects an estimated 48.9 million people worldwide every year². It is the third leading cause of death in Canada³. In Ontario, sepsis survivors incur the highest costs to the healthcare system, with sepsis costing the system \$1 billion annually.^{4,5}

Surgical patients are at high risk for sepsis. Surgical site infections (SSI) alone account for 20% of all hospital-acquired infections, with an 11-fold increase in risk of death⁶. However, simply following current evidence-based guidelines can prevent around 60% of SSIs⁶.

This article reviews best practices that can be implemented in the perioperative period to prevent and appropriately treat surgical infections before they progress to sepsis. We will focus on general principles that are applicable across surgical subspecialties. However, we do recognize that there are certain surgical procedures, patient populations and other factors that carry their own inherent increased risk of infection and can make implementation of these interventions more challenging. Most of these recommendations focus on preventing SSIs, as this has become a metric of healthcare quality in the North America, but the concepts are broadly applicable.

Preoperative

When preoperative preparation is feasible, the primary focus should be

on optimizing patient factors. Strategies such as smoking cessation, improving nutritional status and optimizing glucose control have all been proven to reduce the risk of infection⁷. To minimize potential contamination from skin microbes, patients should take a full body shower or bath on the night before or the morning of surgery⁶. Patients should also not shave near where the procedure will be done⁸. Taking any prophylactic oral antibiotics before surgery is usually not recommended⁶.

Intraoperative

Once the patient enters the operating room (OR), the focus shifts to mitigating modifiable infection risk factors related to the environment and the surgery itself. A well-controlled operating environment is essential to prevent microbial contamination this includes having adequate ventilation and minimizing traffic in and out of the OR⁸. All equipment, instruments, and drapes must be adequately sterilized. All non-sterile surfaces, including the anesthetic equipment, should be thoroughly cleaned between cases⁹. Finally, the anesthesiology team must practice proper hand hygiene prior to all patient interactions and procedures⁹.

Administering prophylactic antibiotics at the correct time is crucial for reducing the risk of SSI. Intravenous antibiotics should be administered within 60 minutes before the first incision⁶. To emphasize its importance, this step has been included

in modern surgical safety checklists¹⁰. For most patients and procedures, cefazolin is the antibiotic of choice but if the patient has a known penicillin allergy, then either clindamycin or vancomycin can be given^{6,8}. Regardless, both the surgeon and anesthesiologist should be well-versed in surgery-specific antibiotic guidelines, including any weight-based dose adjustments and the time interval for intraoperative redosing^{6,8}.

Preparing the operative site is another critical step in infection prevention. Hair removal should generally be avoided unless necessary and if required, clippers should be used rather than razors to minimize skin abrasions⁸. Then the skin around the incision site should be cleaned extensively using an alcohol-based antiseptic agent to reduce microbial load and contamination risk with recent evidence favouring chlorhexidine over iodine mixtures^{6,11}.

The surgical team plays a vital role in maintaining sterility. Team members should perform a thorough surgical scrub using either antimicrobial soap and water or an alcohol-based liquid, as both are equally effective⁶. Double gloving is recommended to provide an additional layer of protection against contamination⁶. Throughout the procedure, strict aseptic techniques must be adhered to.

During surgery, best practices for infection prevention should be implemented. Whenever possible, the surgeon should opt for the least

invasive approach, with laparoscopy preferred over open surgery due to its reduced infection risk¹². Concurrently, the anesthesia team should prioritize maintaining the patient's body temperature within the normal range (normothermia), as hypothermia has been linked to higher infection rates and delayed wound healing⁶.

Proper wound management at the end of the procedure is essential. Contaminated wounds should not be irrigated with an antibiotic solution, instead a povidone-iodine solution can be used and in cases of high infection risk, a vacuum-assisted closure device (VAC) may be applied over the incision^{6,13}. When traditional dressings are used, they should be breathable, absorbent and provide complete coverage of the surgical site¹⁴.

Postoperative

In the initial post-operative period, care is focused on optimizing wound healing and facilitating the patient's return to their baseline level of functioning without undue delay. While in hospital, this includes minimizing the spread of infectious organisms with strict adherence to hand hygiene policies¹⁵. Implementing an Enhanced Recovery After Surgery (ERAS) protocol if applicable to facilitate early mobility, appropriate nutritional intake and prompt removal of extraneous lines and tubes¹⁶. As well as maintaining euglycemia in all patients, including those without a history of diabetes, as it is associated with improved outcomes⁶. Applying topical antimicrobials to surgical wounds or giving additional prophylactic systemic antibiotics are not recommended, as they have not been shown to reduce the incidence of SSIs^{6,8}.

Proper management of wound dressings after surgery is also important. Dressings should be checked regularly but there is no definitive evidence on the optimal timing for removal. In practice, surgical dressings are usually removed around 48 hours post-operatively, which also coincides with the traditional timing of a patient's first shower. However, studies have not demonstrated an increased risk of SSI when showering

is permitted earlier⁶. For patients with wound VAC devices, these are typically removed by post-operative day five¹⁷.

Despite implementing these best practices, post-operative infections may still occur. When they do, early identification and intervention are key to preventing progression to sepsis. A complete infectious work-up should be initiated, including a chest x-ray and urinalysis, along with blood, wound, and any other cultures prior to starting antibiotics (if possible)¹⁸. Empiric antibiotic treatment should be guided by the most likely source of infection and causative pathogens¹⁸. If the source of infection is identified and amenable to intervention, source control measures should be undertaken. For a superficial SSI this requires opening, irrigating, draining and/or debriding the area then ensuring ongoing wound care¹⁸. Deep organ space infections may require percutaneous or surgical drainage¹⁸.

In conclusion, sepsis is deadly, common and treatment is largely supportive. This underscores the importance of infection prevention and early recognition throughout the entire perioperative period. Surgical patients are uniquely vulnerable, and the measures outlined above are critical for improving outcomes and saving lives.

Veronica Stewart, MD
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On behalf of Sepsis Canada

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Dr. Alison Fox-Robichaud is Professor of Medicine at McMaster University and a Critical Care Specialist and Director of Medical Education at Hamilton Health Services in Ontario, Canada. Her research interests include the pathophysiology of sepsis and how evidence is transferred into clinical care. She is the Scientific Director of Sepsis Canada, a nationally funded collaborative of 200 scientists, knowledge users, patients and carers. Dr Fox-Robichaud has authored more than 100 peer-reviewed publications reflecting a broad engagement in academic medicine. She has been honoured nationally for her work in electronic early warning scores to prevent patient deterioration. Internationally, in 2018 the Global Sepsis Alliance awarded her an individual award for her sepsis leadership.

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Choosing Human-Use, Antiseptic Drug-Compliant ABHRs in Healthcare Settings

Hand hygiene is the cornerstone of infection prevention and control in healthcare facilities. Healthcare-associated infections (HAIs) pose a significant risk to patients, leading to prolonged hospital stays, increased healthcare costs, and even mortality. Alcohol-based hand rubs (ABHRs), with their ability to quickly and conveniently kill or inactivate microorganisms, have become indispensable tools in combating HAIs. However, not all ABHRs are created equal.

While there are numerous considerations when choosing an ABHR, efficacy is paramount. How do you know if a product is truly effective? Infection Prevention and Control professionals need assurances of the efficacy of ABHR specific to various pathogens. When it comes to choosing an ABHR, it's essential to understand the distinctions between products designed for domestic use versus those designed for use in healthcare settings. According to Health Canada, professional-use ABHRs must meet the safety and efficacy requirements of the Human-Use Antiseptic Drugs (HUAD) guidance. Choosing a product that is approved by Health Canada as meeting HUAD guidance ensures you are using ABHRs that have passed the rigorous safety and efficacy testing standards specific for healthcare settings.

Alcohol-Based Hand Rub (ABHR) Use in Healthcare

Infection Prevention and Control Canada (IPAC) says that using ABHRs, gels and rinses is the preferred method of hand hygiene. In the U.S., the CDC Healthcare Infection Control Practices Advisory Committee guidelines issued in 2002, and still in place today, defined alcohol-based hand rubbing as the standard of care for hand hygiene practices in healthcare settings, whereas handwashing is reserved for specific situations. The World Health Organization's hand hygiene guidelines support these positions.

Hand Hygiene and Public Perception

The COVID-19 pandemic changed the way healthcare workers and the world emphasized the importance of hand hygiene. During the pandemic, governments and healthcare agencies recommended behavioural modifications like social distancing, frequent hand hygiene, and the use of personal protective equipment to slow the spread of the virus. This elevated public perception of the importance of good hand hygiene.

Natural Health Products Regulations and Monographs

ABHRs are natural health products (NHPs) in Canada that are regulated

under Natural Health Products Regulations (NHPR). These regulations are designed to give Canadians access to a wide range of NHPs which are safe and effective, and all marketed ABHRs must adhere to the NHPR. There are two pathways to approval of an ABHR in Canada.

In the first route, the product will be licensed and receive a Natural Product Number if the ABHR meets all requirements of the antiseptic skin cleansers monograph (2018). This monograph is used to register products that have specific concentration ranges of active ingredients and are limited in the statements that can be included on the labels. In the case of ABHRs, the concentration range is 60-80% ethanol or 60-75% isopropanol (isopropyl alcohol). Products approved under the monograph are for domestic use only.

The other route is for applications that go beyond the parameters of the monograph, such as professional products for use in healthcare settings, or that make additional efficacy claims which are not eligible for licensing under the monograph process. In these cases, an applicant must provide supporting evidence about the safety and efficacy of the product to receive a product license for professional use. This is where the HUAD guidance comes into play.

Health Canada HUAD Guidelines

Health Canada plays a pivotal role in safeguarding public health by regulating and monitoring various healthcare products. Its HUAD guidelines support the regulation of professional- and commercial-use antiseptic skin products, such as ABHRs and other non-monograph personal use products. The intent of the guidance is for these products to be supported by data and provide sufficient labelling information to promote safe use. The supporting data may vary relative to the risk associated with the environment in which the products are used and the claims being made. Sufficient information to support the labelling claims must meet HUAD guidelines.

HUAD Guidance: Ensuring Quality in Healthcare Products

Through HUAD guidance, Health Canada regulates ABHRs and other topical antiseptic healthcare products to assure their safety and efficacy. ABHRs that comply with HUAD standards have undergone extensive and rigorous testing to demonstrate that they meet the required safety and antimicrobial efficacy levels necessary to protect patient safety in healthcare settings. These compliance measures address critical aspects of the product, including alcohol concentration, efficacy claims, and labelling.

Key reasons to choose HUAD-guidance-compliant ABHRs include:

1. Assuring the product is appropriate for use in healthcare settings.

Choosing HUAD-compliant ABHRs ensures that the product has undergone rigorous testing to assess its efficacy in healthcare

environments. Compliance with HUAD guidance standards assures Infection Prevention and Control Professionals that the product is effective against common pathogens in healthcare settings, and does not pose unnecessary risks or hazards to patients, staff, or visitors.

2. Assuring products are effective.

The primary purpose of ABHRs is to eliminate microorganisms and prevent their transmission. HUAD-compliant ABHRs are specifically formulated and tested to ensure their efficacy against a broad range of bacteria, viruses, and other pathogens commonly encountered in healthcare settings. Using compliant products provides confidence that the ABHR is effective in reducing the risk of infections.

3. Building trust and enhancing a healthcare provider's reputation.

By using HUAD-compliant ABHRs, healthcare providers demonstrate their commitment to patient safety and infection control. This adherence to regulatory standards not only upholds professional trust, but also contributes to the reputation of the hospital or healthcare institution as a whole. It sends a message that patient well-being and safety are of utmost importance.

Microsan: First Alcohol-Based Hand Rub Approved by Health Canada to Make Anti-Viral Claims

SC Johnson Professional® offers the healthcare industry's first ABHRs, Microsan Encore® and Microsan® Optidose™, approved by Health Canada

to make virucidal claims. These products have undergone extensive testing to prove they kill 99.9% of bacteria, are effective against all enveloped viruses and some (norovirus and rotavirus) but not all non-enveloped viruses, and effective against fungi.

Microsan® ABHRs are a great option for healthcare settings as they are fragrance- and dye-free, hypoallergenic and latex- and nitrile-glove compatible. These ABHRs also contain skin moisturizer to help prevent drying, leaving skin feeling smooth after use. The ABHRs are available in a 1L cartridge, a 1L TouchFREE cartridge, a 400mL pump bottle, and a 50 mL pump bottle to meet the hand hygiene program requirements of any healthcare facility.

Conclusion

In Canadian hospitals, selecting HUAD-guidance-compliant ABHRs is of paramount importance to ensure that products meet required healthcare standards. While all ABHRs in Canada are NHPs and are regulated under NHPR, not all are tested for efficacy in healthcare settings. ABHRs that comply with HUAD standards have undergone extensive and rigorous testing to demonstrate that they meet the required safety and antimicrobial efficacy levels necessary to protect patient safety in healthcare environments. By prioritizing use of HUAD-compliant ABHRs, healthcare providers can enhance their infection control practices. Make hand hygiene a top priority by ensuring that only HUAD-guidance compliant ABHRs like SC Johnson Professional Microsan are used. ■



Using Surface Protection Technologies in the Healthcare Setting

Elimagen Surface Protection is a durable, clear, non-porous barrier designed for high-touch surfaces that, along with added fingerprint-resistant technology, cleans easily while improving the appearance of the items to which it has been applied. It is applied once with no need to reapply. In addition, built in Microban® antimicrobial technology works around the clock, 24/7 for the life of the coating to provide protection against odour-causing bacteria, mould and mildew. The actual application is quick and minimally disruptive making it suitable for retrofitting existing spaces as well as incorporation into new builds. In addition to having the ability to coat items off site in our facility prior to their installation, what truly sets us apart is our ability to apply our coating to items in an existing space. This is in large part due to the use of UV technology. Our ability to coat multiple substrates, from plastics to stainless steel, with finishes that range from matte to high gloss is also truly unique. While not meant to replace regular disinfection protocols, with human resource challenges affecting all healthcare teams, Elimagen Surface Protection offers a welcomed added level of protection between cleanings.

Elimagen Surface Protection is in short, a urethane-based, UV-activated coating. Application is done using a

contained spray and HEPA filtration. Once applied, the coated surface is exposed to heat and subsequently UV light, rendering the surface “touch dry” in just two to three minutes. This process allows for a quick turn around for the end user with little or minimal disruption to regular operations. The smooth, non-porous nature of the coating and the added fingerprint-resistant technology make for easy cleaning. Elimagen also rates well on the hardness scale, resulting in a tough, scratch-resistant surface. Built in antimicrobials start working immediately and provide round-the-clock protection effectively reducing odour-causing bacteria, mould and mildew. Elimagen Surface Protection has undergone rigorous testing for its compatibility, adhesion, hardness, and appearance in accordance with international standards such as ASTM/ISO. It has also been successfully tested for 250,000 plus wash cycles using hospital-grade disinfectants. Additionally, our coating also showed no ill effects with extreme temperature testing. All of our technicians are competent, fully trained, and company-certified, using the most current technology, resulting in professional, consistent applications.

With environmental services and facilities management teams constantly looking for ways to improve facility

cleanliness, this product offers a practical solution. Growing concerns over handling high-touch surfaces, such as door handles, computer keyboards^{2,3,4}, light switches, elevator buttons^{5,6} and handrails⁶ has spurred numerous scientific studies, with the importance of cleanliness and hand hygiene being paramount. In high-traffic locations with numerous high-touch surfaces, environmental services staff may be unable to keep up, with some surfaces left unattended for hours. A product such as Elimagen, that offers continuous protection between cleanings, can offset this gap.

Once applied, Elimagen Surface Protection can help ease the burden on environmental services staff and, as previously mentioned, although not meant to replace regular disinfection protocols, it can bridge that all important gap between cleanings. There is no special maintenance required once applied, other than regular cleaning and disinfection using a hospital-grade disinfectant. In the event that the coating ever did become damaged or scratched, the built in antimicrobials continue to be effective and, should the need arise, the coating can be reapplied. In addition to a one-year on-site follow-up visit, Elimagen Technologies offers a limited 10-year commercial warranty on the coating. The benefits to staff, patients and the

public is in the knowledge that extra steps have been taken to address real concerns.

Currently, many high-touch items are being manufactured with built-in antimicrobials and, although these products are individually available in the marketplace, the cost of replacing existing products, such as a door handle set, is prohibitive. Elimagen Surface Protection offers “a pennies on the dollar” solution. Our pricing model is based on identifying high-traffic zones and affected high-touch surfaces, effectively creating a map with which we can offer a tailored package quote for multiple items. The more surfaces quoted for treatment the more cost effective each per unit price becomes.

Hand hygiene and frequent surface disinfection currently work together to create a cleaner environment. Elimagen Surface Protection can add one more much-needed level of protection.

For further information, or to inquire how Elimagen Surface Protection can benefit your facility, please contact: paul@elimagentechnologies.com, or visit www.elimagentechnologies.com.

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Revolutionizing Infection Prevention: How Hygienic Echo's Innovations Are Transforming Hand Hygiene in Healthcare

Hospitals and long-term care (LTC) facilities are sanctuaries of healing, but also paradoxical hotspots for preventable infections. For patients, these spaces embody hope, but often carry hidden risks of healthcare-associated infections (HAIs), a silent epidemic contributing to an estimated 500,000 deaths annually across North America. For nurses and caregivers, every day brings relentless challenges: managing time, prioritizing patient needs, and maintaining vigilance under immense pressure. Amid this chaos, one critical element often falls through the cracks: hand hygiene.

The Human Cost of Low Hand Hygiene Compliance

Imagine a young mother undergoing treatment for a chronic illness. Her family places their trust in the hands of healthcare professionals. Unbeknownst to her, a lapse in hand hygiene – a missed moment to sanitize before or after patient contact – can lead to an infection with devastating consequences. For nurses managing dozens of patients, the task is Herculean. A single lapse, compounded over a shift, can mean the difference between life and loss.

Compliance rates for hand hygiene, often lauded at 90%, hide a sobering truth. As Hygienic Echo's research



reveals, this aggregate compliance can mask significant individual discrepancies. While many caregivers may achieve near-perfect hand hygiene compliance, even a single caregiver who consistently misses opportunities to clean their hands can significantly increase the risk of infection. This highlights the importance of identifying and addressing these gaps, as one individual's lapses can undermine the safety of an entire care environment. This is about more than percentages; it is about saving lives.

The Buddy Badge: A Revolution in Real-Time Infection Prevention

The Buddy Badge, developed by Hygienic Echo, redefines infection prevention through cutting-edge innovation. Unlike traditional systems that only measure compliance after incidents occur, the Buddy Badge transforms infection prevention into a proactive endeavour.

Real-time reminders act as a gentle nudge, ensuring that hand hygiene is performed at critical moments. Think of its subtle vibration as a tap on the

shoulder, a timely prompt to act. When a caregiver washes their hands at the right time, a celebratory green light acknowledges their diligence. If a lapse occurs, the badge prompts them to act, turning potential risks into teachable moments. With the Forensic Replay feature, healthcare facilities can trace every movement and uncover hidden infection pathways that would otherwise remain invisible.

This innovation elevates infection prevention by incorporating Patient Exposure Risk (PER) metrics. The Buddy Badge does not simply report what happened, but provides actionable insights that help prevent outbreaks before they occur.

**The Green Badge:
Tailored for Long-Term Care**

In LTC facilities, the challenges of infection control are magnified. Caregivers operate in intimate, family-like settings where close contact is essential for daily activities such as feeding, dressing, and comforting residents. Traditional hand hygiene protocols can feel intrusive or unrealistic. This is where Hygienic Echo’s Green Badge shines.

The Green Badge System is uniquely designed for LTC environments, where hand hygiene must be both rigorous and seamlessly integrated into caregiving routines. Its visual cues, such as a glowing green badge after handwashing, provide continuous reassurance: “Green is Clean.” If caregivers enter a high-risk area like a washroom without sanitizing, the badge turns red, signaling immediate action. It is simple, intuitive, and profoundly impactful.

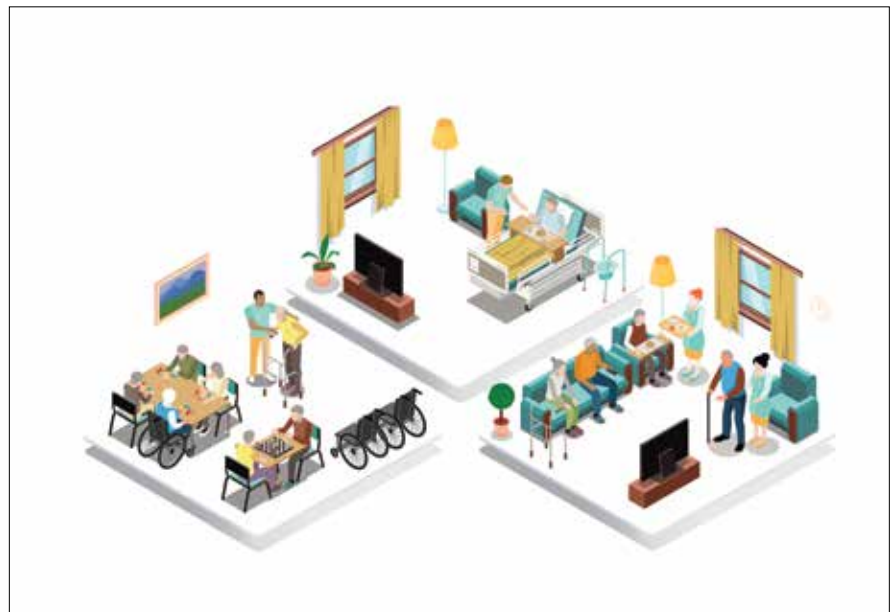
This innovation fosters a culture of safety. Caregivers feel supported, not scrutinized. Residents and families gain peace of mind, knowing that every caregiver is equipped with the tools to protect their loved ones.

The Real-World Impact: Lives Saved and Resources Preserved

Early insights from healthcare facilities implementing Hygienic Echo’s innovations underscore the transformative potential of these systems.



Precision in Protection: Buddy Badge Adapts Hand Hygiene to Every Caregiver and Space



Keeping Care Safe: Green Badge Ensures Hygiene Excellence in Long-Term Care

The Buddy Badge has demonstrated sustained hand hygiene compliance rates exceeding 90% in hospitals where it has been adopted. While long-term outcomes are still under investigation, hand hygiene is widely recognized as a cornerstone of preventing healthcare-associated infections (HAIs). With the World Health Organization (WHO) reporting a return of \$16 for every \$1 invested in hand hygiene, the potential for significant improvements in infection prevention and cost savings is compelling.

For example, the Buddy Badge system aims to:

- Enhance caregiver accountability and strengthen infection control protocols, ultimately improving overall safety.
- Streamline workflows, enabling caregivers to focus more on patient care by reducing the need for manual compliance logging.

Initial feedback on the Green Badge system in LTC facilities also highlights its potential to maintain high hygiene

standards while accommodating the unique and intimate caregiving routines of residents. Although formal studies are ongoing, the design is tailored to meet the specific demands of long-term care, fostering safety without disrupting personalized care.

These innovations represent a promising path forward for healthcare systems grappling with challenges such as bed shortages, rising operational costs, and overburdened staff. Hygienic Echo's solutions, supported by predictive analytics and advanced AI, offer the tools to transform patient safety, operational efficiency, and financial sustainability.

The Future of Infection Prevention: AI and Beyond

Hygienic Echo's innovations are leading a shift in how infection prevention is understood and implemented. By combining predictive analytics, adaptive AI, and massive data insights, the company is setting a new standard for hand hygiene.

- Predictive Analytics assess caregiver behaviour and room risks, offering personalized infection prevention strategies.
- Forensic Replay provides a moment-by-moment visual timeline, uncovering infection pathways and enabling swift responses.
- Adaptive Learning ensures the system evolves with the needs of healthcare facilities, improving outcomes over time.

This is not simply about compliance but about transforming patient care. Hygienic Echo's systems have the potential to foster environments where infection risks are meaningfully mitigated, patient recovery is supported, and healthcare systems can operate with greater efficiency.

A Global Mission, A Human Focus

Hygienic Echo's vision is clear: to save millions of lives while reducing healthcare costs and improving outcomes worldwide. Their innovations resonate far beyond hospitals and LTCs, with potential applications in food services, public spaces, and travel hubs. By addressing a



Every Hand Matters: Buddy Badge Highlights Risks Across All Caregivers and Locations



See Every Step, Stop Every Risk: Forensic Replay Uncovers Hidden Infection Pathways

\$100 billion global crisis, Hygienic Echo is poised to become the global leader in infection prevention.

For patients, families, and caregivers, this is a promise of safety, hope, and healing. For healthcare systems, it is a lifeline. And for the world, it is a future where every touch is safe, every caregiver is empowered, and every life matters.

Conclusion: The Echo of Innovation

Hygienic Echo is more than a company; it represents a movement. Through the Buddy Badge and Green Badge, they

have turned the science of infection prevention into an art – seamless, effective, and compassionate. By leveraging the power of AI, data, and human ingenuity, they are paving the way toward a future where HAIs are significantly reduced, transforming patient safety and care standards. Together, we can redefine what's possible in healthcare and move closer to a world where preventable infections are no longer a threat, but a lesson from the past that drives us toward a safer tomorrow. ■

ELEVATING SAFETY, EMPOWERING CARE

The Buddy Badge: Redefining Infection Prevention



Imagine a caregiver's day: a constant balance of patient needs, protocols, and time constraints. In the midst of these challenges, the Buddy Badge offers a solution that is both supportive and transformative. With its gentle vibrations and real-time prompts, it ensures that hand hygiene is never forgotten, no matter how hectic the environment. A green light celebrates compliance, a small but powerful acknowledgment that reinforces excellence. The Buddy Badge goes beyond monitoring; it integrates seamlessly into daily workflows,

transforming infection prevention from a task into a habit. Its Forensic Replay feature provides unparalleled insights, helping healthcare teams uncover hidden infection pathways and refine their strategies. With this innovation, caregivers are empowered, patients are protected, and safety becomes second nature. **The Buddy Badge isn't just a tool; it's an AI-powered partner in care, redefining what's possible in infection prevention and creating a future where every touch is safer and every action counts.**



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