THE RISK OF INFECTION IN EMERGENCY MEDICINE

Patients seeking evaluation and awaiting treatment in emergency settings are not only able to spread communicable infectious diseases to healthcare professionals and other patients, but are also at risk of acquiring new infections (hospital acquired infections (HAIs)) associated with the care they receive[1].

Elderly patients who visit the emergency department are three times more likely to acquire an acute infection[2].

PREVENTION OF INFECTION TRANSMISSION IN EMERGENCY SETTINGS

Preventing the transmission of infectious microorganisms in emergency settings is vital in reducing the number of HAIs.

Decontamination of surfaces and medical equipment must be routinely performed in between patients to help prevent cross-infections amongst patients and healthcare professionals.

Patients infected with microorganisms such as MRSA, MDRAB, CRE, VRE and Coronaviruses can transfer these pathogens to sites in their immediate vicinity such as mattresses, bedpans, IV poles, guard rails, overbed tables, blood pressure cuffs, and the floor[1]. Decontamination involves the cleaning of any heavy soiling (e.g. blood spills) and disinfection with the use of a high-level disinfectant such as JET and FUSE.

Future patients are also at risk when hospitalised in a room previously occupied by a patient infected with drug resistant microorganisms due to environmental contamination[1].

Using good hand hygiene etiquette routinely helps disrupt the transmission of infections and the spread of microorganisms from one area or person to another[1]. Hand hygiene protocols should always be followed, especially when a healthcare professional enters the vicinity of an infected patient[1].

Always adhere to standard precautions and use personal protective equipment (PPE) such as gloves, protective gowns, masks, and eyewear. The implementation of reasonable healthcare safety precautions and infection control can minimise transmission of most contact-related infections and infectious microorganisms in emergency medicine[3].

An estimated 300,000 NHS patients per year acquire healthcare associated infections[4].

References:

1. Liang, S., Theodoro, D., Schuur, J. and Marschall, J., 2014. Infection Prevention in the Emergency Department. Annals of Emergency Medicine, 64(3), pp.299-313.
2. Quach, C., McArthur, M., McGeer, A., Li, L., Simor, A., Dionne, M., Levesque, E. and Tremblay, L., 2012. Risk of infection following a visit to the emergency department: a cohort study. Canadian Medical Association Journal, 184(4), pp.E232-E239.
3. Suri, P., Gopaul, R. and Bearman, G., 2018. [online] International Society for Infectious Disease. Available at: <http://isid.org/wp-content/uploads/2018/02/ISID_InfectionGuide_Chapter24.pdf> [Accessed 3 August 2020].
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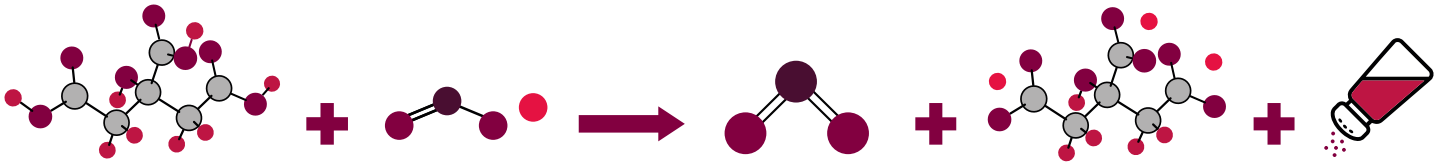
THE POWER OF CHLORINE DIOXIDE CHEMISTRY



CITRIC ACID ($C_6H_8O_7$) + SODIUM CHLORITE ($NaClO_2$) → CHLORINE DIOXIDE (ClO_2) + SODIUM CITRATE ($Na_3C_6H_5O_7$) + SALT (NaCl)

Chlorine Dioxide (ClO_2) achieves its potent biocidal effect through oxidation. ClO_2 oxidises lipids and proteins present in cell membranes, leading to a loss in membrane integrity and ultimately cell death. ClO_2 can also penetrate cells and degrade nucleic acids via an oxidative pathway. Similar mechanisms are responsible for the ability of ClO_2 to inactivate viral particles. ClO_2 is proven effective in preventing biofilm build-up and in removing it from surfaces.

High-level disinfection is achieved within short contact times, enabling a quick turnaround of medical devices and surfaces.

- EFFECTIVE IN SHORT CONTACT TIMES.
- DOSED AT POINT OF USE.
- SPORICIDAL, VIRUCIDAL, MYCOBACTERICIDAL, YEASTICIDAL AND BACTERICIDAL ACTIVITY.
- ONE CONCENTRATION FOR ALL EFFICACY.
- GOOD SAFETY PROFILE.
- HANDY FOR PORTABLE TRAVEL.

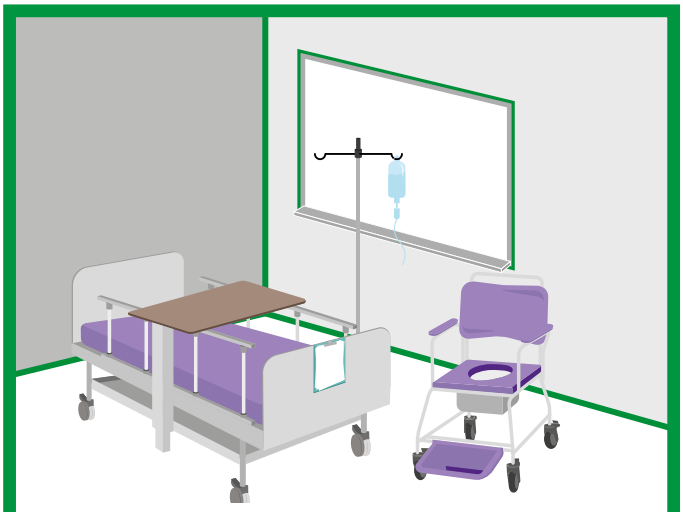
THE PRODUCTS POWERED BY CHLORINE DIOXIDE

JET*: HIGH TOUCH AREAS

SUCH AS NEAR THE PATIENT AND EMERGENCY VEHICLES

JET is a powerful sporicidal disinfectant for use on near patient surfaces, providing the best safeguard for patients and staff wherever risks of infection are highest. Each bottle of JET produces 570 ready-to-use doses of foam which can be used with any spreader. JET achieves high-level disinfection, including sporicidal efficacy and virucidal efficacy against emerging viruses like SARS-CoV-2**, in one minute.

1 min



FUSE*: LARGE SURFACE AREAS

SUCH AS FLOORS AND WALLS IN THE EMERGENCY ROOM

FUSE is ideal for the high-level disinfection of large surface areas, including walls and floors. Each FUSE sachet produces five litres of working solution at one concentration, with one contact time to destroy a wide range of microorganisms. FUSE achieves high-level disinfection, including sporicidal efficacy against emerging viruses like SARS-CoV-2**, in five minutes.

5 min

cache™

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*FUSE refers to Tristel Fuse for Surfaces. JET refers to JET (Cache). **Based on EN14476 Virucidal activity. Use biocides safely. Always read the label and product information before use.