

POSITION PAPER: Electronic devices practice recommendations

This position statement was developed by IPAC Canada’s Standards and Guidelines Committee:

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Electronic devices (for example, cellular phones, tablets, portable computers) are increasingly important in healthcare for myriad functions, some of which result in their classification as non-critical medical devices. Most are at risk of becoming fomites for the transmission of microorganisms. Standards and regulations addressing infection prevention and control (IPAC) considerations for electronic devices have been lacking or generally lagged behind their use.

The best practices in this document are based on the assumption that healthcare settings in Canada already have basic IPAC systems and programs in place, including Routine Practices and Additional Precautions; adequate resources for their IPAC program; hand hygiene; disinfection and sterilization of used medical equipment; environmental services/ housekeeping (cleaning and disinfection of rooms and equipment); and education and training (including orientation and continuing education).

This document focuses on electronic devices used for Information Technology (IT) purposes, including personal devices and accessories that:

- Stay with the healthcare worker (HCW) in clinical areas (e.g., smartphone);
- Are used for patient teaching and may stay with the patient in clinical areas (e.g., tablet); and
- Move from patient to patient in clinical areas (e.g., computer/ workstation on wheels).

STAKEHOLDERS

All HCWs who use portable electronic devices as part of their duties; electronic device manufacturers; and infection control professionals.

INFECTION PREVENTION AND CONTROL PRACTICE RECOMMENDATIONS FOR ELECTRONIC (IT) DEVICES

1. Hand hygiene is the most important factor in the prevention of transmission of microorganisms. IT devices should be approached with clean hands. Hand hygiene should be performed between patient contact and before and after accessing a device. [1-4]
2. Gloves inhibit hand hygiene and therefore should not be routinely worn when using IT equipment. [1, 2]
3. Electronic (IT) devices should be cleanable: Prior to selection and purchase of electronic devices, manufacturer’s guidelines for use, cleaning/disinfection, and maintenance should be reviewed to ensure these guidelines meet the standards for cleaning and low-level disinfection that are necessary to disinfect devices of all pathogens of epidemiological significance. [1-3, 5-8]
 - Items that cannot be adequately cleaned should not be used OR accessed in patient rooms OR be touched by patients.
4. Cover: If an item cannot be adequately cleaned and will be accessed in a patient room or touched by patients,

it requires a cleanable cover.

Impervious keyboard or tablet covers, skins, or solid, fluid-resistant keyboards that can be cleaned and disinfected are recommended.

5. Risk Assessment: If an item cannot be cleaned with a low-level disinfectant and is necessary for patient care, a risk assessment should be done with IPAC to determine the best approach to mitigate the risk of transmission of microorganisms.
6. Cleaning: All touch surfaces of IT devices used at or near point-of-care must be cleaned and disinfected with a low-level disinfectant (per manufacturer’s instructions) if used or touched during the encounter with the patient. Where manufacturer’s recommendations are not sufficient to adequately meet national standards for cleaning and disinfection of the item and products are not in keeping with the manufacturer’s recommendations, review cleaning/disinfection processes and consider establishing a policy and protocol based on the best evidence available, including published evidence in recent peer-reviewed journals. Alternatives for safe use should also be considered (e.g., plastic sealable bags, screen covers).
 - Use soft, non-absorbent, lint-free cloths for cleaning as damage to equipment can compromise cleaning.
 - The surface of telephone components, pagers, and computer mice should be cleaned in a

manner that prevents damage to internal systems from excessive fluid. LCD screens in non-clinical areas should only be cleaned with item's manufacturer-approved screen cleaning products.

- Do not use compressed air to clean IT equipment such as keyboards, as this aerosolizes debris and microorganisms. [2]
7. Responsibility: The user/owner of the device is responsible for routine cleaning and disinfection of the device and that responsibility must be clearly communicated. The identified staff must follow facility protocols for cleaning and disinfection after each patient encounter in which the device is potentially contaminated.
 8. Frequency: If the device remains with the patient or is in a public area, it should be cleaned at least daily. [2]
 9. Policy and procedure must be in writing and staff education provided and documented.

GLOSSARY/DEFINITIONS

As per the Canadian Standard Association: "SHALL" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard;

"SHOULD" is used to express a recommendation or that which is advised but not required; and

"MAY" is used to express an option or that which is permissible within the limits of the standard, an advisory or optional statement.

Low-level disinfectants: Disinfectants suitable for processing non-invasive medical equipment (i.e., non-critical equipment) and some environmental surfaces after thorough cleaning. Low-level disinfectants kill most vegetative bacteria (e.g., MRSA) and some fungi as well as enveloped (lipid) viruses (e.g., Hepatitis B and C, hantavirus, and HIV). Low-level disinfectants do not kill mycobacteria (e.g., TB) or bacterial spores (e.g., *C. difficile*). A low-level disinfectant has a drug identification number from Health Canada indicating its approval for use in Canadian hospitals.

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