



IPAC CANADA PRACTICE RECOMMENDATIONS

Infection Prevention and Control Related to Electronic (IT) Devices in Healthcare Settings

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Electronic devices (for example, cellular phones, tablets, portable computers) are increasingly important in health care for myriad functions, some of which result in their being classified as non-critical medical devices. Most are at risk of becoming fomites for the transmission of microorganisms, especially skin commensals but also potential pathogens such as methicillin-resistant *Staphylococcus aureus*, *Clostridioides difficile*, and *Escherichia coli*.^{1,2} Standards and regulations addressing infection prevention and control 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 and/or have shared electronic devices in their settings; electronic device manufacturers; and infection control professionals.

Infection Prevention and Control Practice Recommendations for Electronic (IT) Devices

1. Use of personal electronic devices should be avoided in healthcare organizations, especially in clinical areas. Healthcare organizations should have organizational policies regarding such limits and restrictions, and procedures and protocols to address processes for their cleaning and disinfection before use onsite, and between uses/rooms/patients.
2. 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

3. Gloves inhibit hand hygiene and therefore should not be routinely worn when using IT equipment.^{1,2}
4. Electronic (IT) devices should be cleanable:
Prior to selection and purchase of electronic devices, manufacturer's instructions 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.^{1-3,6-9}
Items that cannot be adequately cleaned should NOT be used, accessed in patient rooms, or touched by patients.
5. 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.
6. Risk Assessment: If an item cannot be cleaned and disinfected with a low-level disinfectant and is necessary for patient care, a risk assessment should be done with infection prevention and control to determine the best approach to mitigate the risk of transmission of microorganisms.
7. Cleaning and Disinfection: 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 the 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
 - Consider the use of UV-C light technology for hand-held items that can not be easily disinfected with chemicals. Pre-cleaning is recommended.¹⁰
8. 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.
9. Frequency: If the device remains with the patient or is in a public area, it should be cleaned and disinfected at least daily.²
10. Policy and Procedure must be in writing and staff education provided and documented.

Glossary/Definitions

As per the Canadian Standard Association (CSA):

“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, 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 (DIN) from Health Canada indicating its approval for use in Canadian hospitals.

Patient: A person who is waiting for or undergoing medical investigation, care, or treatment (CSA). In the context of this document, the term “patient” also represents residents in non-acute facilities, and clients in other healthcare settings.

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