



ACCREDITATION STANDARDS

Infection Prevention & Control

ANESTHESIA EQUIPMENT REPROCESSING

The Canadian Anesthesiologists' Society (CSA) *Guidelines to the Practice of Anesthesia* (2013) state that “Anesthesia providers ensure that potentially infectious materials or agents are not transferred from one patient to another.”

The BC Ministry of Health sets out the required practices for reprocessing of medical devices in all settings where care is provided. These settings include but are not limited to pre-hospital care, hospitals, outpatient clinics and physician offices.

Anesthesia and respiratory equipment includes but is not limited to facemasks, endotracheal tubes, laryngeal mask airways (LMAs), laryngoscopes, fiber-optic devices, stylets, forceps, and oral and nasal airways.

Definitions

cleaning	The physical removal of foreign material (e.g. dust, soil and organic material, blood, secretion, excretions, micro-organisms). Cleaning physically removes rather than kills micro-organisms. It is accomplished with water, detergents and mechanical action. Cleaning must be performed before high-level disinfection or sterilization.
critical medical devices	Medical devices that enter sterile tissues, including the vascular system (e.g. surgical instruments, biopsy forceps, dental equipment including high-speed dental hand pieces). Critical medical devices present a high risk of infection if the device is contaminated with any micro-organisms, including bacterial spores. Reprocessing critical devices involves meticulous cleaning followed by sterilization.
disinfection	A process that kills most disease-producing microorganisms. Disinfection does not destroy all bacterial spores. Medical devices must be cleaned thoroughly before effective disinfection can take place. There are two levels of disinfection—high and low.
disposable	A term given by the manufacturer of medical devices that is intended for one use only.

high-level disinfection	A process capable of killing vegetative bacteria, mycobacteria including mycobacterium tuberculosis, fungi and lipid and non-lipid viruses, as well as some but not necessarily high numbers of bacterial spores. High-level disinfection is considered to be the minimum level of disinfection required for semi-critical medical devices. Medical devices shall be thoroughly cleaned prior to high-level disinfection
low-level disinfection	A process capable of killing most vegetative bacteria, some viruses and some fungi. This class of disinfection cannot be relied on to kill micro-organisms such as mycobacteria, including mycobacterium tuberculosis or bacterial spores. Level of disinfection required when processing non-critical medical devices and some environmental surfaces.
non-critical medical device	Device that either touches only intact skin (but not mucous membranes) or do not directly touch the patient. Reprocessing of non-critical devices involves cleaning and may also require low-level disinfection (e.g. blood pressure cuffs, stethoscopes).
reposable	A term given by the manufacturer of medical devices that allow it, through the selection of materials and/or components, to be reused for a limited number of times.
reusable	A term given by the manufacturer of medical devices that allow it, through the selection of materials and/or components, to be reused.
semi-critical medical device	Medical device that comes in contact with non-intact skin or mucous membranes but ordinarily does not penetrate them (e.g. anesthesia and respiratory therapy equipment, specula). Reprocessing semi-critical devices involves meticulous cleaning followed by, at a minimum, high-level disinfection.
single-use medical devices	A device designated by the manufacturer for single use only. Single-use items shall not be reused. Single-use medical devices are usually labeled by the manufacturer with the following symbol: 

Airways, filters, breathing circuits and bags are used and discarded or reprocessed in accordance with the BC Ministry of Health best practice guidelines for reprocessing

INDICATORS:

- Single-use anesthesia equipment is preferred
- Single-use airways are used and discarded after each patient
- Single-use bacterial/viral filters are used and discarded after each patient
- Single-use breathing circuits are discarded after each patient use

- Single-use breathing bags are discarded after each patient use
- Disposable breathing circuits are discarded in accordance with the manufacturer's instructions for use (e.g. after each patient, daily, weekly) at a minimum
- Disposable breathing bags are discarded in accordance with the manufacturer's instructions for use (e.g. after each patient, daily, weekly) at a minimum
- Reusable breathing circuits are reprocessed in accordance with the frequency recommended by the manufacturer's instructions for use (e.g. after each patient, daily, weekly) at a minimum
- Reusable breathing bags are reprocessed in accordance with the frequency recommended by the manufacturer's instructions for use (e.g. after each patient, daily, weekly) at a minimum

Reusable anesthesia and respiratory equipment is reprocessed in accordance with the BC Ministry of Health best practice guidelines for reprocessing

INDICATORS:

- Reusable devices with small lumens or other characteristics that make them difficult to clean (e.g. oral airways) are designated single-use and are not reprocessed and reused
- Single-use anesthesia and respiratory equipment is discarded after each patient use
- Reusable anesthesia and respiratory equipment is cleaned and high-level disinfected at a minimum (sterilization is preferred)
- Glidescope, used with or without a sheath, is cleaned and high-level disinfected at a minimum (sterilization is preferred) after each patient use
- Laryngoscope handles are cleaned and high-level disinfected at a minimum (sterilization is preferred)
- Anesthesia workstation and equipment that touches only intact skin (e.g. ECG cables, oximeters, stethoscopes, blood pressure cuffs) are cleaned and low-level disinfected after each patient use
- Reprocessed anesthesia and respiratory equipment is clearly distinguished from non-reprocessed equipment
- Reprocessed anesthesia and respiratory equipment is handled, packaged and stored in a manner that prevents contamination

Reusable laryngeal mask airways (LMA) are tracked to prevent overuse

INDICATORS:

- The number of times each LMA has been used and reprocessed is tracked
- The LMA is tracked using a unique identification system such as its serial number
- The number of times each LMA is used and reprocessed is limited to the number recommended by the manufacturer

Appendix A: Cleaning, disinfection and sterilization

Information contained in this appendix provides a general overview of the requirement. The Ministry of Health *Best Practice Guidelines for Cleaning, Disinfection and Sterilization of Critical and Semi-critical Medical Devices* shall be referenced in addition to this appendix. The Ministry of Health document represents detailed requirements for medical device reprocessing in non-hospital medical/surgical facilities.

INDICATORS:

- Cleaning is always required prior to disinfection or sterilization
- Medical devices should be pre-treated to prevent organic matter from drying on it
- Contaminated devices shall be transported in covered, fully enclosed, puncture-resistant containers that prevent spill of liquids—containers shall be decontaminated after each use
- Cleaning shall be done manually or using mechanical cleaning machines (e.g. washer-disinfector, ultrasonic washer) after gross soil has been removed
- Washer disinfectors used for high-level disinfection are validated for thermal disinfection in accordance with CSA/ISO 15883 and licensed by Health Canada
- Appropriate racks, spray arms and cycle settings are used in washer-disinfectors validated for thermal disinfection
- Devices are rinsed thoroughly after cleaning with water to remove residues
- Devices are dried to prevent dilution of chemical disinfectants
- Products used for disinfection are mixed according to the manufacturer's recommendations in order to achieve the correct dilution
- Follow the manufacturer's instructions for exposure time required to achieve the desired level of disinfection/sterilization

References

British Columbia Ministry of Health. Best practice guidelines for cleaning, disinfection and sterilization of critical and semi-critical medical devices in BC health authorities [Internet]. Victoria: Ministry of Health, 2011. [cited 2015 Feb 19]. Available from:

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Canadian Standards Association. Decontamination of reusable medical devices. Mississauga: Canadian Standards Association; 2008 [cited 2014 Aug 18]. 87 p. CSA Standard No.: Z314.8-08 [reaffirmed 2013].

Merchant R, Chartrand D, Dain S, Dobson G, Kurrek MM, Lagace A, Stacey S, Thiessen B. Guidelines to the practice of anesthesia--revised edition 2014. Can J Anaesth [Internet]. 2014 Jan [cited 2015 Feb 19];61(1):46-59. Available from: http://www.cas.ca/English/Page/Files/97_Guidelines_2014_web.pdf