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Recommendations for Education, Training and Certification for Reprocessing in Clinical Office Settings

Education and training of staff is required for all individuals in clinical office settings to ensure both worker and patient safety.

The first step in choosing the appropriate education, training and certification requirements for staff is to determine what activities are being performed in the clinical office setting. Cleaning and disinfection are routinely required in all clinical office settings. Reprocessing of equipment using high level disinfection (HLD) or sterilization will be required in many settings. Staff responsible for cleaning and reprocessing should be trained to a level that is required for the volume and complexity of the equipment to be reprocessed.

Reusable medical equipment must be cleanable and be able to be disinfected or sterilized as appropriate for the equipment. This may not be cost-effective or timely for small establishments, and other options should be considered. The amount and frequency of equipment use should guide whether reprocessing is feasible or whether disposable equipment is more cost-effective.

Organizational Risk Assessment

An organizational risk assessment should be conducted to determine what education, training, and certification is recommended for staff in each clinical office setting. Note that there are also distinct responsibilities that apply to the physician under the Ontario Occupational Health and Safety Act (OHSA) in their separate roles as employer, supervisor, and worker.

The risk assessment must be based on the activities performed and the equipment used[1]. The reprocessing method and products required for medical equipment/devices will depend on the intended use and the potential risk of infection transmission. Reprocessing staff in a medical device reprocessing centre (MDRC) in a hospital will require different competencies than staff in a family practice office, and these will be different again for staff in an endoscopy clinic or plastic surgery centre.

An organizational risk assessment should include knowledge of the spectrum of microbial life in terms of resistance to destruction by heat or chemicals. When combined with Spaulding's Criteria the minimum level of reprocessing required for medical equipment/devices can be determined (Table 1).

Table 1: Spaulding's classification of medical equipment and required level of processing[4]

Class	Use	Minimum Level of Reprocessing	Examples
Critical	Enters sterile body site, including the vascular system	Cleaning followed by sterilization	• Surgical instruments • Biopsy instruments • Foot care/podiatry equipment
Semicritical	Comes in contact with non- intact skin or mucous membranes but does not penetrate them	Cleaning followed by high-level disinfection Sterilization is preferred	• Vaginal specula • Endoscopes • Anaesthesia equipment • Tonometer
Noncritical	Touches only intact skin and not mucous membranes, or does not directly touch the patient	Cleaning followed by low-level disinfection (in some cases, cleaning alone is acceptable)	• ECG machines • Oximeters • Stethoscopes

Risk assessment thus assesses the activity category (critical, semi-critical, non-critical) and matches this against the appropriate infection, prevention and control (IPAC) method. Meticulous cleaning is **always** required prior to disinfection or sterilization.

Note that reprocessing requirements for similar equipment will differ depending on their intended use. For example, endoscopes can be classified as either critical (arthroscopes and laparoscopes entering critical spaces such as joints and sterile cavities) or semicritical (flexible fibreoptic or videoscopes used in hollow viscera such as laryngoscopes, colonoscopes, gastroscopes and sigmoidoscopes). Selecting and applying the correct reprocessing method is critical to ensure patient safety.

See Provincial Infectious Diseases Advisory Committee (PIDAC) *Best Practices for Infection Prevention and Control for Clinical Office Practice, Appendix K, Reprocessing Options for Clinical Offices/Clinics*, for methods of reprocessing that are available based on the minimum level of reprocessing required.

When HLD or sterilization is required to ensure equipment/devices are safely reprocessed, additional education and training are also required.

Education, Training and Certification

Basic Infection Prevention and Control Education and Training

All clinical office practice staff should receive regular education (including orientation and continuing education) and have support in place to help staff consistently implement appropriate IPAC practices[1, 2]. Note that education and training regarding staff safety and use of personal protective equipment/devices is legislated under the OHSA.

Effective education programs emphasize:

- the risks associated with infectious diseases, including acute respiratory infection and gastroenteritis
- the importance of appropriate immunization
- hand hygiene, including the use of alcohol-based hand rubs and hand washing
- principles and components of Routine Practices as well as additional transmission-based precautions (Additional Precautions)
- assessment of the risk of infection transmission and the appropriate use of personal protective equipment (PPE), including safe application, removal and disposal
- reprocessing of reusable medical equipment
- appropriate cleaning and/or disinfection of surfaces or items in the health care environment[1].

In all clinical office settings, a comprehensive training program should be in place, covering the following topics at a minimum:

- Occupational health
- Principles of IPAC
- Policies and procedures (including manufacturer's instructions for use)
- Handling and transporting soiled devices
- Cleaning
- Low level disinfection

In settings where equipment requiring a higher level of reprocessing is used, (i.e. high level disinfection and/or sterilization), additional education and training are required regarding:

- Appropriate selection of HLD and proper ventilation requirements
- Operating the steam sterilizer or HLD equipment
- Preparing and packaging
- Storage of disinfected/sterilized equipment
- Quality Assurance (including responding to indicator failure, competency testing and auditing)[4]

All reprocessing education should include theoretical and practicum components. The training program should be documented and include a training manual along with ongoing continuing education.

Education and Training for Endoscopy and Surgical Centres

Individuals responsible for reprocessing endoscopes require training and must meet the health care setting's written endoscope processing competency requirements, which include ongoing education and training:

- Staff assigned to reprocess endoscopes must receive device-specific reprocessing instructions to ensure proper cleaning and high-level disinfection or sterilization.
- Competency testing of personnel reprocessing endoscopes shall be performed at least annually and documented.
- Staff shall not be allowed to reprocess endoscopes until competency has been established[2].

In addition to the above, all staff performing reprocessing in surgical centres, such as plastic surgery centres and endoscopy clinics should have completed a recognized course and at least one person should pursue certification in medical device reprocessing.

The policies of the health care setting shall specify the requirements for, and frequency of, education and training as well as competency assessment for all personnel involved in the reprocessing of medical equipment/devices and will ensure that:

- Any individual involved in any aspect of reprocessing obtains education, orientation and training specific to the medical equipment/device to be reprocessed (e.g., dental hygienists, radiation technologists, nurses in long- term care, nurses in physician offices).
- There is a process in place to ensure continued competency, including continuing education provided at regular intervals and periodic competency assessment.
- All orientation, training and continuing education is documented[2, 3].
- Refer to the Canadian Standards Association's (CSA) SPE 1112-14 *Medical Device Reprocessing in Community Health Care Settings* for further details regarding specific requirements of training, orientation, and continuing education programs for reprocessing staff.

Certification

The Certified Medical Device Reprocessing Technician examination verifies that an individual possesses the knowledge, skills and decision-making abilities necessary to perform the proper techniques for cleaning, disinfection and sterilization of medical instruments and devices. There are minimum education and practical requirements that have to be met in order to be eligible to write the exam.

Summary

In summary, education and training of staff is required for all individuals in clinical settings to ensure both worker and patient safety. Legislative requirements shall be met to remain in compliance with the OSHA.

The level of education, training and certification required depends on the volume and complexity of the reprocessing activity, as determined by an organizational risk assessment. Activities requiring high level disinfection or sterilization for reprocessing require additional education and training.

A formal endoscopy training program (e.g., Olympus), is required for all individuals reprocessing endoscopes.

Online competency modules are available, including a PHO competency program designed for a typical office practice setting, such as community based family physician or specialist where only minor procedures would be performed.

Out-patient surgical centres (usually Out-of-Hospital Premises (OHPs)), performing more complex procedures, often under general anaesthesia require more in-depth education, training and certification.

References

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Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario), Cividino M, Moore D, Deeves M. Recommendations for education, training and certification for reprocessing in clinical office settings. Toronto, ON: Queen's Printer for Ontario; 2016.

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Public Health Ontario acknowledges the financial support of the Ontario Government.

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