GLOBAL STANDARD

Infection Prevention and Control

Health Service Provider Series

People powered health™
Infection Prevention and Control

The Infection Prevention and Control (IPC) standard provides a framework to plan, implement, and evaluate an effective IPC program based on evidence and best practices in the field. The literature shows that well-designed IPC programs are cost-effective because they reduce health care-associated infections, shorten the length of hospital stays, and decrease the cost of treating health care-associated infections.

The standard outlines the key routine practices and additional precautions necessary for an effective IPC program, including:

- Point-of-care risk assessment
- Hand hygiene
- Aseptic techniques
- Personal protective equipment
- Cleaning and disinfection of the physical environment
- Handling waste and linen

Promoting a collaborative approach to protecting the safety of clients and the team, the Infection Prevention and Control standard contains the following sections:

1. Planning and Developing the IPC Program
2. Implementing the IPC Program
3. Evaluating the Impact of the IPC Program

Note on Reprocessing of Reusable Medical Devices standard

The Reprocessing of Reusable Medical Devices standard was developed to evaluate reprocessing activities that are completed inside the Medical Device Reprocessing (MDR) department.

The reprocessing content was introduced to the Infection Prevention and Control (IPC) standard for organizations that do not have a Medical Device Reprocessing (MDR) department and therefore will not be evaluated against the Reprocessing of Reusable Medical Devices standard. To avoid duplication in requirements, the reprocessing section will be removed for organizations that are using the Reprocessing of Reusable Medical Devices standard.

Normative References

The HSO Standards below are also referenced in the criteria of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

- HSO 5052:2018 – Infection Rates
- HSO 5054:2018 – Reprocessing
- HSO 5050:2018 – Hand-Hygiene Compliance
- HSO 5051:2018 – Hand-Hygiene Education and Training

HSO 4001:2018
Quality Dimensions

HSO Quality Framework: Health and social services stakeholders around the world are committed to delivering the best quality possible. However, given the rapidly changing environment and the numerous challenges facing all health and social service sectors, quality can sometimes be perceived as complicated and difficult to achieve. Using a quality framework – also known as a structure underlying quality – provides common language as to what it means, and brings focus on its key elements.

HSO Standards are based on the HSO Quality Framework. The framework consists of eight quality dimensions that all play a part in providing safe, high quality care in all health and social services sectors. These dimensions are the basis for the standards, whereby each requirement (criterion) is linked to one of the eight quality dimensions. In this way, the underlying focus of each criterion is clear, and users of the standards understand the intent of the criterion. These are the quality dimensions that underlie HSO’s quality framework:

- **Population Focus**
  Work with my community to anticipate and meet our needs

- **Continuity of Services**
  Coordinate my care across the continuum

- **Appropriateness**
  Do the right thing to achieve the best results

- **Efficiency**
  Make the best use of resources

- **Worklife**
  Take care of those who take care of me

- **Safety**
  Keep me safe

- **Accessibility**
  Give me timely and equitable services

- **Client-centred Services**
  Partner with me and my family in our care

These dimensions provide a common language about health care quality. The quality dimensions are strongly related to each other, can be mutually supporting, and help ensure balance within the framework. At the same time, there may be a stronger emphasis on a particular dimension if the case/situation requires it. HSO encourages health and social services professionals and policymakers to explore this framework and use the dimensions of quality for strategic planning, program and service delivery, and evaluation and quality improvement activities. Ultimately, the quality framework will help health care providers assess and improve the health services they deliver to patients and patients.
PLANNING AND DEVELOPING THE INFECTION PREVENTION AND CONTROL PROGRAM

1.0 The Infection Prevention and Control (IPC) program is planned and developed based on organizational priorities, evidence, and best practices.

1.1 Infection prevention and control program components are regularly reviewed based on a risk assessment and organizational priorities.

Guidelines
The Infection Prevention and Control (IPC) Standards identify the key components of an effective IPC program. The standards include criteria on policies and procedures for routine practices and additional precautions, education program, surveillance plan, and ongoing evaluation activities.

1.2 Evidence and best practices in Infection Prevention and Control (IPC) are reviewed when planning and developing the IPC program.

Guidelines
Evidence and best practices can be accessed through publications, presentations, and conferences. The Infection Prevention and Control Standards include a list of references that organizations can refer to as part of this work.

1.3 The resources needed to support the infection prevention and control program are regularly reviewed.

Guidelines
The resources needed to support the Infection Prevention and Control (IPC) program will depend on the size of the organization and the type of services provided. In some jurisdictions, IPC resources are specified in applicable regulations. Determining the resources needed is a collaborative approach that involves different teams in the organization.

The IPC Standards outline the key resources needed to support the IPC program. The standards include criteria on having a qualified IPC physician, an IPC professional, and an interdisciplinary committee to promote the IPC program, as well as access to a microbiology laboratory that can assist with surveillance information.
2.0 A collaborative approach is used to support the infection prevention and control program.

2.1 There is an Infection Prevention and Control (IPC) team responsible for planning, developing, implementing and evaluating the IPC program.

Guidelines

Infection Prevention and Control (IPC) programs are coordinated by team members with expertise and experience in IPC and epidemiology. Examples of IPC team members include physicians (e.g., medical microbiologist), nurses, epidemiologists, client and family representatives, and administrative team members.

The size of the IPC team will depend on the size of the organization and the type of services provided. In some jurisdictions, the size of the IPC team is specified in applicable regulations.

2.2 There are one or more qualified Infection Prevention and Control (IPC) professionals as part of the IPC team.

Guidelines

Infection Prevention and Control (IPC) professionals are also referred to as Infection Control Practitioners (ICPs). The number of IPC professionals required may be based on the number of in-patient beds and/or the level and type of services provided. In some jurisdictions, the number of IPC professionals required is mandated and is set out in applicable regulations.

The education and certification requirements for IPC professionals will vary by jurisdiction. IPC professionals have expertise and experience in program administration, surveillance, epidemiology, and critical appraisal of the literature. Some organizations maintain a list of IPC educational courses on their websites and offer certification exams in IPC that are recognized in their jurisdiction.

2.3 There is access to a qualified Infection Prevention and Control (IPC) physician to provide input to the IPC team.

Guidelines

The Infection Prevention and Control (IPC) physician works with the IPC professional to support the IPC program. This may be either an on-site or contract physician with experience and expertise in IPC (e.g., medical microbiologist).
2.4 There is an interdisciplinary committee to provide guidance about the infection prevention and control program.

**Guidelines**

Infection Prevention and Control (IPC) is a collaborative process that involves representatives from across the organization. Committee membership may include representation from physicians, nursing, surgical care, microbiology, medical device reprocessing, environmental services, occupational health services, pharmacy services, risk management, quality improvement, and public health.

The committee may be specifically assigned to IPC or have IPC as one of its functions. This committee may function at an organizational level, regional or district health authority level. The roles and responsibilities of this committee may include developing IPC policies and procedures, education programs, and evaluation activities. The structure of the committee may vary across organizations. Various subcommittees may be established as needed to meet its functions.

2.5 The interdisciplinary committee regularly evaluates the program's structure and functions and makes improvements as needed.

**Guidelines**

This evaluation may look at the structure of the committee, committee membership, terms of reference and work plan, roles and responsibilities assigned to the committee, meeting attendance, and the frequency of meetings.

2.6 The infection prevention and control team is consulted when planning and designing the physical environment, including planning for construction and renovations.

**Guidelines**

The Infection Prevention and Control (IPC) team is involved during the planning stages of any new construction or renovation project. It identifies IPC-related risks (e.g., Aspergillus and Legionella) and plans the cleaning and disinfecting work that will take place during and following the renovations or construction.

2.7 Input is gathered from the infection prevention and control, and the occupational health services teams to maintain optimal environmental conditions within the organization.
Guidelines
Poor air quality can promote the transmission of microorganisms within the organization. For example, excessive humidity levels can increase the survival rate of microorganisms on surfaces. Optimal environmental conditions are maintained throughout the organization including in airborne infection isolation rooms and sterile supply areas.

2.8 Environmental services and the infection prevention and control team are involved in maintaining processes for laundry services and waste management.

Guidelines
This includes environmental cleaning and waste handling. Linen should be handled carefully to avoid the transmission of microorganisms within the organization. For example, clean linen should be transported and stored in a manner that prevents contamination by dust.

2.9 Input is gathered from the infection prevention and control team to maintain processes for selecting and handling medical devices/equipment.

Guidelines
Medical devices/equipment are one of the key sources of health care-associated infections.

Handling medical devices/equipment includes 1) safely transporting contaminated medical devices/equipment to a central area for reprocessing, and 2) storing clean medical devices/equipment in separate clean storage areas.

A recognized classification system such as Spaulding is used to identify critical, semi-critical, and non-critical medical devices/equipment based on the use of the medical device/equipment and the risk of infection.

2.10 Applicable standards for food safety are followed to prevent food-borne illnesses.
Guidelines

Proper storage, preparation, and handling of food are critical to preventing food-borne illness. Food storage, preparation, and handling are monitored even if food is made using pre-prepared mixes or ingredients, or if the preparation is done outside of the main kitchen or off-site. When food services are contracted to external providers, there is a mechanism to define the infection prevention and control role of the external contractor and verify the quality of the services provided.

In some jurisdictions, food services are inspected by public health or the governing body responsible for agriculture. Areas for improvement identified by these regulatory authorities are followed-up on.

2.11 Input is gathered from the infection prevention and control team when planning for pandemics at the organizational level.

Guidelines

Key partners include public health, infection prevention and control, and emergency management. Pandemic planning is part of the organization’s overall plan for disasters and emergencies (this is covered in the Leadership Standards). In some jurisdictions, the governing body responsible for health is responsible for planning for pandemics. In this case, organizations validate the governing body’s pandemic plan at an organizational level.

3.0 The organization collaborates with partners to promote infection prevention and control.

3.1 The organization partners with organizations across the continuum of care to implement infection prevention and control activities.

Guidelines

The extent of the organization’s partnerships will depend on its size, mandate, and scope of services. Examples of infection prevention and control activities include hand hygiene, education, and awareness campaigns. Working with partners may include joint initiatives, complementary roles and responsibilities in the community, and creating consistent education and communication messages.

3.2 Trends in health care-associated infections and significant findings are shared with other organizations, public health agencies, clients and families, and the community.
Guidelines

What information is shared, and in what format, depends on the results gathered by tracking health care-associated infection rates. Certain health care-associated infections must be reported to national and regional public health agencies. Surveillance data can be used for benchmarking.
IMPLEMENTING THE INFECTION PREVENTION AND CONTROL PROGRAM

4.0 Infection prevention and control policies and procedures are maintained based on applicable regulations, evidence and best practices, and organizational priorities.

4.1 A risk assessment is completed to identify high-risk activities, and the activities are addressed in policies and procedures.

Guidelines
Risk assessments are completed in collaboration with infection prevention and control, occupational health services, and environmental services. Examples of high-risk activities include performing aerosol-generating medical procedures; handling spills, specimens, and sharps; and exposure to contaminated medical devices/equipment and waste.

4.2 There are policies and procedures that are in line with applicable regulations, evidence and best practices, and organizational priorities.

Guidelines
Policies and procedures should be clear and concise. The Infection Prevention and Control (IPC) Standards cover key IPC policies and procedures regarding routine practices. The standards include criteria on hand hygiene practices; additional precautions; aseptic techniques when performing invasive procedures and handling injectable products; wearing personal protective equipment appropriate to the task; handling contaminated items; and occupational health services such as work restrictions.

Organizations seek input from clients and families when developing policies and procedures, specifically around hand hygiene.

4.3 There are policies and procedures for using aseptic techniques when preparing, handling, and administering sterile substances both within the preparation area and at the point of care.
Guidelines

The infection prevention and control team is involved when developing relevant medication management processes including the use of aseptic techniques. Adherence to aseptic techniques should be promoted for invasive procedures, including the insertion of central lines, handling intravenous systems, spinal procedures, and safe injection practices (including the use of multidose vials).

Examples include vaccines, parenterally administered medications, total parenteral nutrition (TPN), and diagnostic media. The contamination of medical devices/equipment; a vaccine, medication, or nutrition; or a client, or team member can occur at several points during the preparation and delivery of injected substances.

4.4 There are policies and procedures for loaned, shared, consigned, and leased medical devices.

Guidelines

If loaned, shared, consigned, or leased medical devices are used extensively, policies and procedures are developed to address their transport to and from the organization, and to handle items that are delivered unexpectedly, unclean, not sterilized, or incomplete.

4.5 Team members and volunteers are provided with access to infection prevention and control policies and procedures.

Guidelines

Infection prevention and control policies and procedures are available in a written or electronic format that is easily accessible to team members and volunteers.

4.6 Compliance with infection prevention and control policies and procedures is monitored and improvements are made to the policies and procedures based on the results.

Guidelines

This includes a process for team members, volunteers, and clients and families to provide feedback and report non-compliance with Infection Prevention and Control (IPC) policies and procedures.

Audit tools can be used to monitor compliance with IPC policies and procedures.
4.7 Infection prevention and control policies and procedures are updated regularly based on changes to applicable regulations, evidence, and best practices.

5.0 Team members, clients, families, and volunteers are engaged in promoting an infection prevention and control culture within the organization.

5.1 A multi-faceted approach to promoting infection prevention and control is used within the organization.

Guidelines

A broader approach is used to help increase compliance with routine practices and additional precautions for infection prevention and control. Examples include posting reminders throughout the organization, providing interactive education sessions, developing promotional videos, and delivering awareness campaigns.

5.2 Team members, clients and families, and volunteers are engaged when developing the multi-faceted approach for infection prevention and control.

Guidelines

For example, the organization may set up one or several design teams to identify strategies for promoting infection prevention and control based on organizational priorities.

5.3 The multi-faceted approach to Infection Prevention and Control (IPC) includes an education program tailored to IPC priorities, services, and client populations.

Guidelines

Depending on roles and responsibilities around Infection Prevention and Control (IPC), the IPC education program may cover topics such as IPC policies and procedures, contact information for those responsible for IPC in the organization, and common health care-associated infections affecting the organization and trends. The program also provides access to educational resources such as peer-reviewed journals, technology (e.g., computers, the internet), and linkages with professional associations on IPC.

5.4 Information on how to safely perform high-risk activities is provided, including appropriately using personal protective equipment as outlined in its policies and procedures.
Guidelines

High-risk activities require using Personal Protective Equipment (PPE) that is appropriate to the task. Team members learn how to select PPE based on the type of exposure anticipated as well as the PPE's durability, appropriateness, and fit. Team members also know how to select, wear, change, and remove the PPE. This information can be provided through education sessions and/or reminders posted in the organization.

5.5 Team members and volunteers are required to attend the Infection Prevention and Control (IPC) education program at orientation and on a regular basis based on their IPC roles and responsibilities.

Guidelines

The organization may maintain an electronic learning management system to track attendance at education sessions, identify necessary follow-up training, and identify individuals overdue for education.

Client and family representatives involved in the organization also attend the orientation.

5.6 The effectiveness of the multi-faceted approach for promoting infection prevention and control is evaluated regularly and improvements are made as needed.

Guidelines

The multi-faceted approach is evaluated by asking team members for input, and using performance measures for routine practices and additional precautions. For example, a self-assessment may be completed, and a strategy developed to improve compliance with hand hygiene based on the results.

6.0 Clients, families, and visitors are engaged in infection prevention and control practices.

6.1 Clients, families, and visitors are provided with information about routine practices and additional precautions as appropriate, and in a format that is easy to understand.
Guidelines

Clients, families, and visitors play an important role in promoting hand hygiene. Information provided may include the appropriate use of personal protective equipment, and the importance and timing of their hand and respiratory hygiene.

Information is provided verbally and in writing. Written materials may be available in a variety of languages depending on the population(s) served. The language used is easy to understand, and may include visual cues to improve understanding. Written materials may include pamphlets, posters, or electronic formats such as in-room televisions.

6.2 Client, families, and visitors are provided with access to hand hygiene resources and personal protective equipment based on the risk of transmitting microorganisms.

Guidelines

Hand hygiene resources include dedicated hand-washing facilities and alcohol-based hand rubs at the point of care.

6.3 Clients are screened to determine whether additional precautions are required based on the risk of infection.

Guidelines

Team members are trained to determine if additional precautions are required to prevent the transmission of microorganisms within the organization. Team members refer to applicable Infection Prevention and Control (IPC) policies and procedures, and may need to involve the IPC professional as appropriate to complete the risk assessment. This information is documented in the client record by the team member or IPC professional as applicable. Examples may include using appropriate personal protective equipment, placing the client in an airborne infection isolation room, and asking the client to use a separate bathroom.

7.0 The occupational health and safety program addresses organizational priorities for infection prevention and control.

7.1 There are occupational health and safety policies and procedures to reduce the risk of transmitting microorganisms among team members, and clients.
Guidelines

These policies and procedures are part of the organization's occupational health and safety program which is based on the level of risk for health care-associated infections. The Infection Prevention and Control Standards outline the key safety precautions for team members. The standards include criteria on having a pre-placement policy (including immunization status and tuberculosis screening); providing access to personal protective equipment appropriate to the task; promoting sharps safety and preventing exposure to blood borne pathogens; and setting work restrictions if needed.

7.2 An immunization policy is developed or adopted to screen and offer vaccinations to team members.

Guidelines

Vaccination is a cost-effective method of preventing illness. Possible vaccinations include mumps, measles, rubella, tetanus, diphtheria, pertussis, influenza, hepatitis B, and screening for tuberculosis. In some jurisdictions, specific vaccinations or evidence of immunity are required for team members working in an acute care setting. In some jurisdictions, the organization follows the immunization policy set at their regional health governing body level or national recommendations.

7.3 There are policies and procedures for using personal protective equipment that are appropriate to the task.

Guidelines

Policies and procedures address when to use Personal Protective Equipment (PPE) and how to wear and remove PPE, as well as N95 respirator fit testing.

7.4 There are work restrictions that are in line with occupational health services guidelines for team members, and volunteers with transmissible infections.
Guidelines

Work restrictions prevent team members, and volunteers with transmissible infections from having direct contact with clients, food, or sterile supplies, devices, and equipment. These restrictions may include limiting roles and responsibilities and wearing personal protective equipment as appropriate. Examples of transmissible infections include acute conjunctivitis, acute respiratory infection, gastroenteritis with vomiting and/or diarrhea, varicella, and open, infected skin lesions or herpetic skin lesions on the hands.

7.5 Policies, procedures, and legal requirements are followed when handling bio-hazardous materials.

Guidelines

This is a collaborative approach that involves infection prevention and control, environmental services, and occupational health services. The appropriate handling of bio-hazardous materials minimizes the risk of exposure to microorganisms. Handling includes collection, storage, transportation, and disposal. Used equipment and devices are considered contaminated and potentially infectious, and they are transported appropriately to a dedicated decontamination or disposal area. Definitions and the disposal of bio-hazardous materials will vary per jurisdiction.

7.6 There are policies and procedures for disposing of sharps at the point of use in appropriate puncture-, spill-, and tamper-resistant sharps containers.

Guidelines

Sharps include needles and blades.

7.7 Safety engineered devices for sharps are used.

Guidelines

Safety engineered devices protect the user from exposure to bio-hazardous or chemical substances (e.g., blood borne pathogens, cytotoxic medications). They have a built-in mechanism to protect the user from a sharps injury (e.g., needles that retract after use).

8.0 A comprehensive hand-hygiene strategy is in place.
8.1 To help decrease health care-associated infections, the organization shall conform to the requirements contained in HSO 5051:2018 - Hand-Hygiene Education and Training.

8.2 There is a process to select and review products for hand hygiene, including alcohol-based hand rubs and hand soaps.

**Guidelines**

The process includes seeking input from team members.

8.3 Team members, client, families, and volunteers have access to alcohol-based hand rubs at the point of care.

**Guidelines**

Placing alcohol-based hand rubs at the bedside and/or making portable hand rubs available reminds team members to sanitize their hands before providing care. Existing guidelines on hand hygiene require that alcohol-based hand rubs be within one metre of where care is delivered. However, fire regulations or other considerations may limit the placement of alcohol-based hand rubs.

The availability of hand-hygiene equipment and supplies in the service environment is audited.

8.4 Team members, and volunteers have access to dedicated hand-washing sinks.

**Guidelines**

Using dedicated hand-washing sinks helps prevent the transmission of microorganisms. Dedicated hand-washing sinks are only used for hand-washing and should not be used for other purposes, such as the disposal of fluids or the cleaning of equipment. This requirement is considered when planning for construction or renovations.

8.5 Reminders are posted about the proper techniques for hand-washing and using alcohol-based hand rubs.

**Guidelines**

Appropriate placement for reminders is determined based on a risk assessment.
8.6 To help decrease health care-associated infections, the organization shall conform to the requirements contained in HSO 5050:2018 - Hand-Hygiene Compliance.

9.0 A clean and disinfected physical environment is maintained.

9.1 The areas in the physical environment are categorized based on the risk of infection to determine the necessary frequency of cleaning, the level of disinfection, and the number of environmental services team members required.

Guidelines

This may be done in collaboration with infection prevention and control and environmental services. Completing a risk assessment of the physical environment helps identify grey areas in the organization. The physical environment may be divided into several areas depending on the risk of transmitting microorganisms. The criteria used to identify these areas can include the level of client traffic (e.g., in waiting rooms and elevators, on mobile equipment), the type of activity performed (e.g., clinical versus administrative), the type of clients (e.g., clients with an infectious disease or a compromised immune system), and the probability of being exposed to body fluid (e.g., in an operating room or laboratory). The number of environmental services team members required is considered in the event of an outbreak or flood.

A risk stratification matrix may be used to determine the frequency of cleaning.

9.2 Roles and responsibilities are assigned for cleaning and disinfecting the physical environment.

Guidelines

Roles and responsibilities address those most involved in cleaning and disinfecting the physical environment, such as environmental services team members. This includes assigning team members to clean and disinfect the gray areas identified in the physical environment. The roles and responsibilities of other team members, and volunteers are also clarified, particularly around checking the cleanliness of the physical environment and reporting problems to the appropriate individual or group.

9.3 There are policies and procedures for cleaning and disinfecting the physical environment and documenting this information.
Guidelines
Cleaning activities cover all surfaces within the organization; the primary focus is on high-touch surfaces in client care areas (e.g., client rooms, bedrails, bathrooms). There are also practices for cleaning the walls, windows, and ceilings; removing waste; promptly cleaning and managing spills; and maintaining general tidiness.

Documentation of cleaning activities includes the date and time, the team member's name, and the choice of cleaners or disinfectants used.

9.4 There are policies and procedures for cleaning and disinfecting the rooms of clients who are on additional precautions.

Guidelines
Policies and procedures cover daily and terminal cleaning of these areas (e.g., after the discharge/transfer of a client) and the use of personal protective equipment. Some best practice guidelines include a sample procedure for cleaning and disinfecting the rooms of clients on contact precautions for Clostridium difficile infection (CDI).

9.5 Compliance with policies and procedures for cleaning and disinfecting the physical environment is regularly evaluated, with input from clients and families, and improvements are made as needed.

Guidelines
This may include client and team surveys, visual assessments, and routine sampling of the physical environment. The information is documented and evaluation results are reviewed to identify areas for improvement with input from team members.

9.6 When cleaning services are contracted to external providers, a contract is established and maintained with each provider that requires consistent levels of quality and adherence to accepted standards of practice.

9.7 When cleaning services are contracted to external providers, the quality of the services provided is regularly monitored.

Guidelines
For example, copies of reports and any other documentation that demonstrates the quality monitoring that was performed by the external provider are reviewed.
10.0 Manufacturers’ instructions and accepted standards of practice are followed when cleaning, disinfecting, and sterilizing reusable medical devices and equipment.

10.1 Clear and concise policies and procedures are developed and maintained for cleaning, disinfecting, and sterilizing reusable medical devices and equipment.

Guidelines

The organization’s policies and procedures for cleaning, disinfecting, and sterilizing reusable medical devices address all stages of the process (e.g., from disassembly of the device to reprocessing and re-assembly). The policies and procedures address all stages of cleaning, disinfection, and sterilization (as appropriate to the organization’s role) and cover the following topics:

- Training and education
- Occupational health and safety
- The management and reporting of patient safety incidents
- Cleaning, disinfecting, and/or sterilizing devices or equipment according to their risk class and the manufacturers’ instructions
- Cleaning, disinfecting, and sterilizing loaned, shared, consigned, or leased devices and equipment
- Special precautions for devices or equipment that are difficult to clean, disinfect, or sterilize
- Disassembly and reassembly of devices
- Functional testing of complex devices following reassembly
- Offsite transportation of medical devices (when applicable)
- Quality control
- Recall procedures
- Emergency procedures for various emergencies including sterilizer shutdowns, utility failures, or shutdown

10.2 If neurosurgical services are provided, there are policies and procedures to prevent the transmission of Creutzfeldt-Jakob Disease (CJD).

Guidelines

Policies and procedures include completing a pre-operative assessment for high-risk surgical procedures; completing a pre-operative assessment for high risk patients; and having either 1) a dedicated set of neurosurgical, neuroendoscopic, ortho-spine devices and intubation equipment to be used when the diagnosis of Creutzfeldt-Jakob Disease (CJD) has been made or is suspected pre-operatively, or 2) re-usable equipment that is quarantined immediately post-surgery and prior to reprocessing until the post-operative diagnosis of CJD is either validated or ruled out.
10.3 Required training, education, and experience are defined for all team members that participate in cleaning, disinfecting, and/or sterilizing medical devices and equipment.

**Guidelines**

The required training, education, and experience will vary by role. It may be defined by a professional regulating body, may be formal or informal, and may include lived experience or work experience.

Verifying the qualifications of staff involved in the reprocessing of medical devices/equipment is important in preventing the mishandling or improper reprocessing of these devices.

10.4 Current manufacturers' instructions are upheld when cleaning, disinfecting, or sterilizing medical devices and equipment.

10.5 Policies, SOPs and manufacturers' instructions are accessible to all team members.

**Guidelines**

The instructions may be in written form (e.g., binders, manuals, or monographs) and/or in electronic format. Team members know where and how to access the instructions.

10.6 Cleaning, disinfection, and sterilization of critical and semi-critical single-use devices (SUD) is not permitted on-site, in line with the organization's policy and regional regulations.

10.7 If cleaning, disinfection, or sterilization of reusable medical devices and equipment is contracted to external providers, a written agreement or contract is maintained with each provider that outlines requirements and respective roles and responsibilities.

**Guidelines**

The agreement requires that contracted service providers adhere to accepted standards of practice and monitoring the quality of reprocessing services. Examples include daily monitoring of printouts or electronic records, maintaining records of each sterilization cycle, and having a process to report issues with reprocessed devices (e.g. defective wraps or medical devices and equipment that arrive soiled).

10.8 When cleaning, disinfection, or sterilization of reusable medical devices and equipment is contracted to external providers, the organization regularly monitors the quality of the services provided.
Guidelines
The organization verifies that the external provider follows accepted standards of practice to monitor the quality of services (e.g., daily monitoring of printouts and data, reporting systems, and mechanisms to report deficiencies). The organization reviews copies of reports and printouts and any other documentation demonstrating the quality monitoring performed by the external provider.

10.9 When, cleaning, disinfection, and/or sterilization of medical devices or equipment is done in-house, team members involved in these processes are provided with education and training in how to do so when they are first employed and on an ongoing basis.

Guidelines
Training addresses the organization's policies and procedures; information on cleaning, disinfection, and sterilization (as appropriate); occupational health and safety issues; and infection prevention and control issues related to reprocessing.

10.10 When an organization cleans, disinfects, and/or sterilizes devices and equipment in-house, there are designated and appropriate area(s) where these activities are done.

Guidelines
The designated area(s) should have adequate space for cleaning and storage and be separate from areas where clean devices and equipment are handled or stored. Air exchanges, temperature, and humidity should be appropriate to the activity and the cleaning products being used (refer to manufacturer's recommendations).

Cleaning, disinfection, and sterilization done outside the designated area should be kept to a minimum.

10.11 The area where cleaning, disinfection, and/or sterilization of medical devices and equipment are done is equipped with hand hygiene facilities.

Guidelines
Examples of hand hygiene facilities include designated hand-washing sinks and alcohol-based hand rub stations. Hands that are soiled should be washed with soap and water.

10.12 Eating and drinking, food storage, cosmetics application, and the contact lens handling are all prohibited in the area where cleaning, disinfection, and/or sterilization of medical devices and equipment are done.
10.13 Items that require cleaning, disinfection, and/or sterilization are safely contained and transported to the appropriate area(s).

**Guidelines**

Cleaning, disinfection, and/or sterilization may be done in the organization or at another site or be outsourced to another company.

Used medical devices and equipment should be considered to be contaminated. When transporting contaminated devices and equipment, applicable regulations are followed, environmental conditions are controlled, and clean and appropriate bins, boxes, bags, and transport vehicles are used.

Contaminated items are transported separately from clean items, and away from care delivery areas and high-traffic areas.

10.14 Appropriate personal protective equipment is worn when cleaning, disinfecting, or sterilizing medical devices and equipment.

**Guidelines**

Depending upon the task, the appropriate personal protective equipment may include gloves that are appropriate to the task; a fluid-resistant cover garment with sleeves (e.g. backless gown, jumpsuit, or surgical gown); and a full face shield or a fluid-impervious face mask to fully protect eyes, nose and mouth.

10.15 Contaminated devices and equipment are cleaned before disinfection or sterilization is done.

**Guidelines**

Devices and equipment that has been used should be considered to be contaminated.

Cleaning is essential before disinfection or sterilization. If an item is not cleaned, soil, such as blood, body fluids, or dirt, can protect microorganisms from disinfection and sterilization processes, or can inactivate the disinfectant so it will not work.

10.16 Detergents, solutions, sterilants and disinfectants selected are in line with manufacturers' instructions, and are compatible with the devices being cleaned, disinfected, or sterilized, and the equipment and processes for cleaning, disinfection or sterilization.
Guidelines
All disinfectants have a unique identifier. Others in the organization may need to be consulted (e.g. infection prevention and control, or occupational health and safety) when selecting appropriate detergents or disinfectants.

10.17 For each detergent, solution, sterilant, and disinfectant, manufacturers’ instructions for use are followed.

Guidelines
Manufacturers’ instructions address topics such as ventilation requirements, contact time, shelf life, storage requirements, appropriate dilution, how to test the concentration and effectiveness, and the appropriate personal protective equipment to wear when handling the detergent, solution, sterilant or disinfectant.

10.18 Each device or set of devices are prepared for sterilization according to manufacturers’ instructions.

10.19 An internal chemical indicator is placed in each package or container, according to the organization's quality control processes, to verify that sterilizer penetration has occurred.

10.20 Sterilized packages are clearly identifiable and distinguished from non-sterilized items.

Guidelines
This helps prevent the release and use of non-sterilized medical devices.

10.21 The integrity of each sterile package is maintained.

Guidelines
Items that have been properly decontaminated, wrapped, sterilized, stored, and handled will remain sterile indefinitely, unless the integrity of the package is compromised. The integrity of the package is based on: the type of wrapper used; the method of sealing the package; the type of shelving used, including open or closed; the method and frequency of handling; the method, frequency, and conditions of transportation and distribution; the environmental conditions of the storage area, e.g. temperature, humidity, ventilation, cleanliness; and, control and monitoring of access to storage areas.
10.22 There is a process that allows for the tracking of medical devices associated with a sterilizer or sterilization cycle.

Guidelines

The record includes information that may be required for a recall action.

Instruments, devices, and supplies could be recalled for a variety of reasons, such as when sterilization activities fail.

10.23 To help reduce health care-associated infections, the organization shall conform to the requirements of HSO 5054:2018 - Reprocessing.

11.0 Specific requirements are followed to reprocess flexible endoscopic devices. [Note: The following criteria are additional requirements that apply specifically to reprocessing flexible endoscopes. Rigid endoscopes are almost exclusively critical devices requiring sterilization, and are addressed by the other standards in this document.]

11.1 Team members are trained on the policies and procedures for reprocessing flexible endoscopes.

Guidelines

Verifying the qualifications and competencies of staff involved in the reprocessing of flexible endoscopic devices is important in preventing the mishandling or improper reprocessing of these devices. Examples of flexible endoscopic devices include gastroscopes, duodenoscopes, colonoscopes, sigmoidoscopes, bronchoscopes, laryngoscopes, enteroscopes, and nasopharyngeal endoscopes.

11.2 Areas for reprocessing flexible endoscopes are physically separate from client care areas.

11.3 Endoscope reprocessing areas are equipped with separate cleaning and decontamination work areas as well as storage, dedicated plumbing and drains, and proper air ventilation.

Guidelines

Ventilation helps remove toxic vapors from the work areas. The storage areas are also well ventilated and are regularly cleaned and disinfected.
11.4 Manufacturers' instructions are followed to pre-clean flexible endoscopes immediately at point of use.

**Guidelines**

If cleaning is not done immediately following a procedure, soil residue on the endoscope can harden, becoming very difficult to remove.

11.5 Before cleaning, the flexible endoscope is checked for internal and external damage, and if repair is required, the endoscope is prepared and packaged for shipping in accordance with manufacturers' instructions.

**Guidelines**

The integrity of the flexible endoscope is verified through leak testing. Damaged flexible endoscopes are identified, removed from service, and shipped for repair following the manufacturers' packaging, labeling, and shipping instructions; the shipping is also done in compliance with national or regional regulations for the transportation of dangerous goods.

11.6 Before beginning high-level disinfection, each flexible endoscope is cleaned, rinsed, and dried according to the manufacturer's instructions.

11.7 Before beginning high level disinfection, immersible endoscopic components are soaked and manually cleaned using water and an approved cleaning agent.

**Guidelines**

An approved cleaning agent is an enzymatic detergent solution prepared and used according to the manufacturer's instructions and that is compatible with the device.

While immersed, channels and lumens are flushed and brushed to remove debris; brushes are appropriately sized, inspected before and after use, and either discarded or cleaned and dried after use. Irrigation adaptors or manifolds that are compatible with the endoscopic device may be used to facilitate cleaning.

11.8 Flexible endoscopes are stored in a manner that minimizes contamination and damage.
Guidelines
The organization does not store flexible endoscopes coiled or in their cases. Flexible endoscopes with channels or lumens are stored with channel valves stored separately. Flexible endoscopes are stored in a validated drying and storage cabinet.

11.9 A permanent record is maintained of the reprocessing history for each flexible endoscope.

11.10 The record of endoscopic device reprocessing includes the identification number and the type of endoscope, the identification number of the automated endoscope reprocessor (if applicable), the date and time of reprocessing, the name or unique identifier of the client, the results of the individual inspection and leak test, and the name of the person reprocessing the endoscope.

Guidelines
Identifying the client, the endoscopic device, and the reprocessing equipment used helps facilitate outbreak investigations, device tracking, and quality control.

11.11 Preventive and scheduled maintenance, including repairs, is completed and documented for each automated endoscope reprocessor.

Guidelines
Documentation about the maintenance and repair of reprocessing equipment assists with device tracking and recall.
EVALUATING THE IMPACT OF THE INFECTION PREVENTION AND CONTROL PROGRAM

12.0 A surveillance plan is in place to monitor health care-associated infections.

12.1 There is a surveillance plan that is in line with applicable regulations, evidence and best practices, and organizational priorities.

Guidelines

The Infection Prevention and Control (IPC) Standards identify the key components of a surveillance plan. The standards include criteria on tracking and reporting health care-associated infections and quickly identifying the source of infections. Results are used to respond to pandemics and outbreaks, and to make improvements to the IPC program such as investing in additional resources, updating policies and procedures, and reviewing education programs.

12.2 To help prevent and manage health care-associated infections, the organization shall conform to the requirements contained in HSO 5052:2018 - Infection Rates.

12.3 There is a process to promptly detect suspected health care-associated infections in the organization.

Guidelines

Methods of detecting health care-associated infections may be passive (i.e., identified during the course of routine service delivery) or active (i.e., identified by trained professionals using planned monitoring of multiple data and sources).

Voluntary reporting by team members, clients, families, and volunteers is promoted, and additional methods are used to detect infections, such as active identification, automated methods of detection, or centralized identification through the microbiology laboratory.

12.4 There is access to a microbiology laboratory that offers expertise to the organization about identifying health care-associated infections.
Guidelines

Microbiology laboratories are playing a growing role in infection prevention and control surveillance by, for example, identifying new or rare infections, tracking antibiotic-resistant organisms (AROs) such as methicillin-resistant Staphylococcus aureus (MRSA) or vancomycin-resistant Enterococcus (VRE), and identifying outbreaks.

The microbiology laboratory supports the organization in identifying health care-associated infections by ensuring timely access to laboratory analyses; this includes providing a quick turnaround time when testing for high-risk infections such as Clostridium difficile.

12.5 Those responsible for receiving and responding to information about suspected health care-associated infections are identified.

Guidelines

Team members, clients, families, and volunteers know to whom they must report infection prevention and control issues.

12.6 The source or cause of health care-associated infections is investigated.

Guidelines

Methods of investigation may include epidemiological, root-cause, or statistical analysis. The investigation process includes identifying high-risk or problem-prone agents or microorganisms requiring special attention or expertise (e.g., antibiotic-resistant microorganisms, airborne agents, or highly contagious agents).

12.7 There are policies and procedures to contain and prevent the transmission of microorganisms by applying routine practices to all clients and additional precautions as necessary.

Guidelines

Additional precautions may include a private room, isolation facilities, or an airborne infection isolation room. Other measures include vaccination; early detection, testing, and treatment; and post-exposure protocols.

Policies and procedures to contain and prevent the transmission of microorganisms are applicable to everyone who may be at risk, including clients, families, visitors, team members, and volunteers.
12.8 Infection prevention and control or public health experts are consulted with to control health care-associated infections, and the necessary information is reported to the appropriate authorities in line with the applicable regulations.

Guidelines

Experts may include infectious diseases physicians, medical microbiologists, nurses, public health, or other professionals.

The frequency and location of certain health care-associated infections must be reported to authorities such as public health agencies. Reporting requirements vary per jurisdiction.

12.9 Standard definitions and accepted statistical techniques are used to share and compare information about health care-associated infections.

Guidelines

Standard definitions are available for many infections to facilitate comparisons.

Statistical techniques may include epidemiological principles to identify at-risk populations, detect infections, and analyze trends and risk factors.

12.10 The results of investigations are used to improve programs, policies, or procedures, and to prevent health care-associated infections from recurring.

13.0 There is a coordinated approach for responding to outbreaks.

13.1 There are policies and procedures for identifying and responding to outbreaks in line with applicable regulations.

Guidelines

Policies and procedures address how to detect an outbreak; identify the cause of the outbreak (including those resulting from contaminated food); collect data and specimens to look for additional cases; and contain an outbreak once it is identified.

13.2 Team members and volunteers are provided with access to policies and procedures for identifying and managing outbreaks.
13.3 The organization collaborates with its partners, such as public health agencies, to define outbreaks in terms of person, place, and time.

Guidelines

Using the “person, place, and time” approach helps characterize the outbreak and provides the organization with clues about strategies to control healthcare-associated infections.

Describing the “person” helps to understand the population at risk of acquiring the infection. Client demographics and characteristics such as age, underlying illness, possible exposures to microorganisms, and procedural or therapeutic risks such as surgery are evaluated.

Describing the “place” in terms of service, unit, or location helps an organization understand if the outbreak is localized, or if it has organization- or community-wide implications.

Describing the “time” entails defining the exact period of the outbreak, from the first case or first indications, and drawing the epidemic curve. It is based on diagnosis and a probable period of exposure. It helps determine if the outbreak is from a single (common) source or a propagated source (continuing source or person-to-person transmission).

13.4 Policies and procedures address how to manage emerging, rare, or problematic organisms, including antibiotic-resistant organisms.

Guidelines

Processes for managing new, rare, or problematic microorganisms may include exchanging information with partners, other organizations, and the community.

13.5 There are policies and procedures about the roles and responsibilities of team members, and volunteers who are involved in identifying and managing outbreaks.

13.6 Information is communicated about outbreaks to clients, families, team members, partners, other organizations, and the community when appropriate.
Guidelines

Those responsible for communicating and reporting information about outbreaks are identified.

Information is disseminated to clients and families, team members, partners, other organizations (including public health agencies), and the community. Following an outbreak, a summary report including background information, details of the investigation, results, and recommendations is made available to partners, other organizations, and the community.

13.7 Policies and procedures are regularly reviewed and improvements are made as needed following each outbreak.

14.0 Ongoing improvements to the infection prevention and control program are made.

14.1 There is a quality improvement plan for the infection prevention and control program.

Guidelines

The Infection Prevention and Control (IPC) Standards outline the key sources for evaluating the IPC program. The standards include criteria on having a surveillance plan to evaluate the impact of the organization's risk-reduction strategies on health care-associated infection rates; monitoring compliance with policies and procedures for IPC (including hand hygiene); cleaning and disinfection of the physical environment; evaluating the IPC education program; seeking input from team members, and clients and families about the IPC program; and monitoring process and outcome measures.

14.2 Infection prevention and control performance measures are monitored.

Guidelines

Performance measures to monitor Infection Prevention and Control (IPC) are determined based on IPC priorities. Examples of structure-related indicators include the number of interdisciplinary committee meetings per year, or client information booklets containing information on health care-associated infections. Process indicators may include hand-hygiene compliance rates or disinfection audits of surfaces. Outcome measures may include health care-associated infection rates.

14.3 Input is gathered from team members, volunteers, and clients and families on components of the infection prevention and control program.
Guidelines

Examples include surveys, focus groups, interviews, or meetings.

14.4 The information collected about the infection prevention and control program is used to identify successes and opportunities for improvement, and to make improvements in a timely way.

14.5 Results of evaluations are shared with team members, volunteers, clients, and families.

Guidelines

Sharing the evaluation results and improvements helps team members, and volunteers become familiar with the concept and benefits of quality improvement. It also increases clients' and families' awareness of the organization's commitment to ongoing quality improvement.