

INFECTION PREVENTION AND CONTROL RESOURCE MANUAL FOR RESIDENTIAL HOSPICE SETTINGS

This document has been developed through collaboration with
members of the:

Hospice Association of Ontario

Provincial End-of-Life Care Networks

Public Health Units

Regional Infection Control Networks

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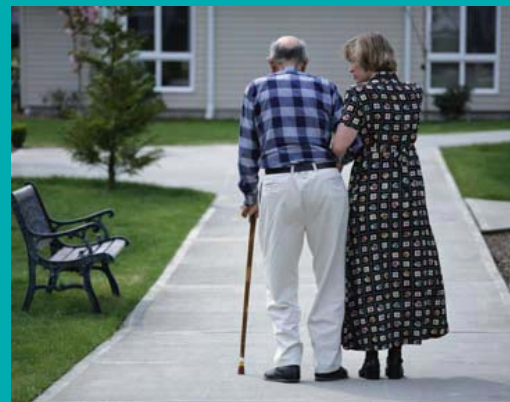


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DISCLAIMER

This collaborative manual has been developed to standardize activities and to assist in decision-making related to Infection Prevention and Control (IPAC) issues in residential hospice settings. While every effort has been made to help ensure the accuracy of the contents at the time of publication, the Ontario Agency for Health Protection and Promotion (“OAHPP”) and the associations involved assume no responsibility whatsoever for inaccuracies or omissions in this manual. It is the responsibility of the user to ensure that they are using the most current infection prevention and control best practices available for their practice settings. OAHPP and the associations involved are not responsible for the results of the use by anyone of this document.

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REVIEW PROCESS

This manual has been developed by a working group with expertise in Infection Prevention and Control, Public Health and Hospice Care. It has undergone a rigorous review process involving content experts and stakeholders to ensure that it is current, valid and reflects the best practices available at this time. As best practices and guidelines change, this manual will be modified and updated as required.

- This manual may be accessed at: <http://www.ricn.on.ca>.

The final editing and writing of this manual was completed by **Shirley McDonald**.

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1. Introduction and Overview

In March 2002, the Canadian Hospice Palliative Care Association published *A Model to Guide Hospice Palliative Care: Based on National Principles and Norms of Practice* (The Model). The Model sets out principles and norms of practice for hospice palliative care, which have been endorsed by hospice palliative care caregivers and organizations across the country.⁷

The purpose of The Model is to create a shared vision for hospice palliative care in Canada and encourage a consistent approach to providing care and organizing services. It provides a common language, values and principles that people can use to guide their work. In September 2004, the Hospice Association of Ontario (HAO) developed Community Residential Hospice Standards based on the principles and norms of practice outlined in *A Model to Guide Hospice Palliative Care*.⁷ Norm 5.19 states: “an infection control program guides all clinical activities”.¹⁶ This norm is supported by the Provincial Infectious Disease Advisory Committee’s (PIDAC) *Best Practices for Infection Prevention and Control Programs in Ontario* that states “all health care settings in Ontario must assess needs for, develop, provide and evaluate an active, effective infection prevention and control program that meets the mandate and goal to decrease the risk of health care-associated infections and improve health care safety”.³⁰

The goal at the residential hospice is to ensure that the final days and weeks of the resident are as comfortable as possible and that the resident, family members and friends have the opportunity for a meaningful and valuable experience.⁷

Since the care in a hospice setting is comfort-oriented versus cure-oriented, IPAC measures may require a different approach and adaptation based on the residents’ and families’ needs and wishes. Despite the different focus, basic IPAC practices remain an integral part of safe resident care. Care should include measures to prevent infection transmission between residents, staff, volunteers and visitors, while supporting residents and families through the palliative process.

The Regional Infection Control Networks (RICN) have been approached by residential hospice care providers requesting information and education on a variety of IPAC issues. Since the RICN have been created to coordinate IPAC activities and promote standardization in health care facilities across Ontario, a working group was established to address the expressed needs of the unique residential hospice group.³⁹

PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide IPAC information and guidance for residential hospice settings to reduce the risk of transmission of infection. Executive directors, managers, and health care providers can use this document to guide decisions regarding appropriate practices and activities that will reduce the risk of palliative care residents acquiring and spreading infections in the residential hospice setting. It is not meant to guide the IPAC practices for residents receiving palliative care in an acute or long-term care setting (i.e., hospital, long-term care home). Although this manual is not written for health care staff providing palliative care in the home care setting, many principles will apply.

This document has been developed through collaboration between members of the Hospice Association of Ontario, RICN, Public Health and the Provincial End-of-Life Care Network. It was important that the health care professionals were represented from the above listed sectors. Members were invited to ensure that adequate relevant discussion of the evidence and current guidelines took place.

The majority of the content was derived from PIDAC's best practice guidelines. A detailed list of references is included at the end of this document. This document will be reviewed and revised by the working group members or designates every three years to ensure the IPAC best practices described remain current and relevant. This document will be available electronically for download or print on the HAO and the RICN websites.

Barriers to the implementation of the best practices described in the document may be present in the residential hospice setting, including but not limited to: user attitudes, knowledge and acceptance of IPAC best practices, lack of financial and human resources and maintaining a focus of compassionate end of life care. Barriers should be identified and addressed early, as infection prevention and management strategies will help provide residents with the best care possible.

2. Glossary

Additional Precautions: Additional Precautions (i.e., Contact Precautions, Droplet Precautions, Airborne Precautions) that are necessary in addition to Routine Practices for certain pathogens or clinical presentations. These precautions are based on the method of transmission (e.g., contact, droplet, airborne).³⁴

Aerosol: Small droplets of moisture that may carry microorganisms. Aerosols may be light enough to remain suspended in the air for short periods of time, allowing inhalation of the microorganism.³⁴

Alcohol-Based Hand Rub (ABHR): A liquid, gel or foam formulation of alcohol which is used to reduce the number of microorganisms on hands in clinical situations where the hands are not visibly soiled. ABHRs contain emollients to reduce skin irritation and are less time-consuming to use than washing with soap and water.²⁹

Antibiotic-Resistant Organism (ARO): A microorganism that has developed resistance to the action of several antimicrobial agents and that is of special clinical or epidemiological significance.³¹

Audit: In the context of this document, an audit tool is a tool used to examine a process for errors or omissions. An audit tool usually consists of a checklist of items which must be completed or be in place in order for a process to be considered to be correct.³⁰

Bioburden: The number and types of viable microorganisms that contaminate the equipment/ device.²⁷

Biomedical Waste: Contaminated, infectious waste from a health care setting that requires treatment prior to disposal in landfill sites or sanitary sewer systems. Biomedical waste includes human anatomical waste; human and animal specimens (excluding urine and faeces); human liquid blood and blood products; items contaminated with blood or blood products that would release liquid or semi-liquid blood if compressed; body fluids visibly contaminated with blood; sharps; and broken glass which has come into contact with blood or body fluid.²⁸

Case: A person who has the particular disease, health disorder, or condition which meets the case definition for surveillance and outbreak investigation purposes. The definition of a case for surveillance and outbreak investigation purpose is not necessarily the same as the ordinary clinical definition.⁴³

Case Definition: A set of diagnostic criteria that must be fulfilled for an individual to be regarded as a case of a particular disease for surveillance and outbreak investigation purposes. Case definitions can be based on clinical criteria, laboratory criteria or a combination of the two with the elements of time, place and person.⁴¹

Chain of Transmission: A model used to understand the infection process.³⁴

Cleaning: The physical removal of foreign material (e.g., dust, soil, organic material such as blood, secretions, excretions and microorganisms). Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents and mechanical action.²⁸

Client/Patient/Resident: Any person receiving health care within a health care setting. Throughout this document, all persons receiving care within the residential hospice setting will be referred to as *resident*.³¹

***Clostridium difficile* (C. difficile):** Gram-positive, spore-forming, anaerobic bacillus. It is widely distributed in the environment and colonizes up to 3-5% of adult humans without causing symptoms. Certain conditions may cause the production of two toxins, which cause symptoms ranging from diarrhea to severe life-threatening disease.³²

Colonization: The presence and growth of a microorganism in or on a body with growth and multiplication but without tissue invasion or cellular injury. The resident will be asymptomatic.³¹

Contamination: The presence of an infectious agent on hands, in a substance or on a surface.²⁷

Critical Medical Equipment/Devices: Medical equipment/devices that enter sterile tissues, including the vascular system (e.g., biopsy forceps, foot care equipment, dental handpieces, etc.). Critical medical equipment/devices present a high risk of infection if the equipment/device is contaminated with any microorganisms, including bacterial spores. Reprocessing critical equipment/devices involves meticulous cleaning followed by sterilization.²⁷

Decolonization: The use of antimicrobials to eradicate colonization of resistant bacteria.³¹

Decontamination: The process of cleaning, followed by the inactivation of microorganisms, in order to render an object safe for handling.²⁷

Detergent: A synthetic cleansing agent that can emulsify oil and suspend soil. A detergent contains surfactants that do not precipitate in hard water, and may also contain protease enzymes and whitening agents.²⁸

Direct Care: Providing hands-on care, such as bathing, washing, turning resident, changing clothes/diapers, dressing changes, care of open wounds/lesions, or toileting. Feeding and pushing a wheelchair are not classified as direct care.³⁴

Discharge/Terminal Cleaning: The cleaning of a resident room or bed space following discharge, death or transfer of the resident, in order to rid it of contaminating microorganisms that might be acquired by subsequent occupants. In some instances, terminal cleaning might be used once some types of Additional Precautions have been discontinued.²⁸

Disinfectant: A product that is used on surfaces or medical equipment/devices which results in disinfection of the equipment/devices. Disinfectants are applied only to inanimate objects. Some products combine a cleaner with a disinfectant.²⁸

Disinfection: The inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores. Medical equipment/devices must be cleaned thoroughly before effective disinfection can take place.²⁷

Drug Identification Number (DIN): Disinfectant manufacturers must obtain a drug identification number (DIN) from Health Canada prior to marketing, which ensures that labelling and supporting data have been provided and that it has been established by the Therapeutic Products Directorate that the product is effective and safe for its intended use.²⁷

Fit-Test: A qualitative or quantitative method to evaluate the fit of a specific make, model and size of respirator on an individual. Fit-testing is to be done periodically, at least every two years and whenever there is a change in respirator face piece or the user's physical condition which could affect the respirator fit.³⁴

Hand Hygiene: A process for the removal of soil and transient microorganisms from the hands. Hand hygiene may be accomplished using soap and running water or the use of alcohol-based hand rubs. Optimal strength of alcohol-based hand rubs should be 70% to 90% alcohol.²⁹

Health Care-Associated Infection (HAI): An infection that was neither present nor incubating at the time of initiation of care in the resident's place of residence; also known as *nosocomial* infection.³⁵

Health Care Setting: Any location where health care is provided, including settings where emergency care is provided, hospitals, long-term care homes, outpatient clinics, community health centres and clinics, physician offices, dental offices, offices of allied health professionals, hospices and home health care.³⁰

High-Level Disinfection (HLD): The level of disinfection required when processing semicritical medical equipment/devices. HLD processes destroy vegetative bacteria, mycobacteria, fungi and enveloped (lipid) and non-enveloped (non-lipid) viruses, but not necessarily bacterial spores. Medical equipment/devices must be thoroughly cleaned prior to high-level disinfection.²⁷

High-Touch Surfaces: Surfaces that have frequent contact with hands. Examples include doorknobs, call bells, bedrails, light switches, wall areas around the toilet and edges of privacy curtains.²⁸

Hospice Palliative Care: Care that aims to relieve suffering and improve quality of living and dying.⁷

Hospital-Grade Disinfectant: Disinfectant that has a Drug Identification Number (DIN) from Health Canada, indicating its approval for use in Canadian hospitals.²⁷

Infection: The entry and multiplication of an infectious agent in the tissues of the host. Asymptomatic or sub-clinical infection is an infectious process similar to that of clinical disease but below the threshold of clinical symptoms. Symptomatic or clinical infection is one resulting in clinical signs and symptoms (disease).³⁵

Infection Prevention and Control (IPAC): Evidence-based practices and procedures that, when applied consistently in health care settings, can prevent or reduce the risk of transmission of microorganisms to health care providers, other residents and visitors.³⁰

Infectious Agent: Microorganism which is capable of invading body tissues, multiplying and causing infection.³⁴

Low-Level Disinfection (LLD): Level of disinfection required when processing noncritical medical equipment/devices or some environmental surfaces. Low-level disinfectants kill most vegetative bacteria and some fungi as well as enveloped (lipid) viruses. Low-level disinfectants do not kill mycobacteria or bacterial spores. Medical equipment/devices must be thoroughly cleaned prior to low-level disinfection.²⁷

Manufacturer: Any person, partnership or incorporated association that manufactures and, under its own name or under a trade mark, design, trade name or other name or mark owned or controlled by it, sells medical equipment/devices.²⁷

Medical Equipment/Device: Any instrument, apparatus, appliance, material, or other article, whether used alone or in combination, intended by the manufacturer to be used for human beings for the purpose of diagnosis, prevention, monitoring, treatment or alleviation of disease, injury or handicap; investigation, replacement, or modification of the anatomy or of a physiological process; or control of conception.²⁷

Methicillin-Resistant *Staphylococcus aureus* (MRSA): A strain of *S. aureus* that is resistant to all of the beta-lactam classes of antibiotics, such as penicillins and cephalosporins.³¹

Noncritical Medical Equipment/Device: Equipment/device that either touches only intact skin (but not mucous membranes) or does not directly touch the resident. Reprocessing of noncritical equipment/devices involves cleaning and may also require low-level disinfection (e.g., blood pressure cuffs, stethoscopes).²⁷

Norm: A statement of usual or average practice. A norm is less rigid than a standard.⁷

Outbreak: An increase in the number of cases above the number normally occurring in a particular health care setting over a defined period of time.³⁵

Personal Protective Equipment (PPE): Clothing or equipment worn by staff for protection against hazards.³⁴

Plain Soap: Detergents that do not contain antimicrobial agents or that contain very low concentrations of antimicrobial agents that are present only as preservatives.²⁹

Point-of-Care: The place where three elements occur together: the resident, the health care provider and care or treatment involving resident contact. The concept refers to a hand hygiene product which is easily accessible to staff by being as close as possible, i.e., within arms-reach to where resident contact is taking place. Point-of-care products should be accessible to the health care provider without leaving the resident environment, so they can be used at the required moment.²⁹

Reprocessing: The steps performed to prepare contaminated medical equipment/devices for reuse (e.g., cleaning, disinfection, sterilization).²⁷

Reprocessing Department: Centralized area within the health care setting designated for cleaning, disinfection and/or sterilization of medical equipment/devices. In community settings, any segregated area where reprocessing of equipment/devices takes place, away from residents and clean areas (e.g., Central Processing Department – CPD, Central Processing Service - CPS, Central Surgical Supply -CSS, Surgical Processing Department - SPD, etc.).²⁷

Reservoir: Any person, animal, substance or environmental surface in or on which an infectious agent survives or multiplies, posing a risk for infection.³⁴

Respiratory Etiquette: Personal practices that help prevent the spread of bacteria and viruses that cause acute respiratory infections (e.g., covering the mouth when coughing, care when disposing of tissues).³⁴

Routine Practices: The system of infection prevention and control practices recommended by the Public Health Agency of Canada to be used with all residents during all care to prevent and control the transmission of microorganisms in health care settings.³⁴

Semicritical Medical Equipment/Device: Medical equipment/device that comes in contact with nonintact skin or mucous membranes but ordinarily does not penetrate them (e.g., respiratory therapy equipment, transrectal probes, specula etc.). Reprocessing semicritical equipment/devices involves meticulous cleaning followed by, at a minimum, high-level disinfection.²⁷

Sharps: Objects capable of causing punctures or cuts (e.g., needles, syringes, blades, glass).³⁴

Single Patient-Use: Medical equipment/device that may be used on a single resident and may be re-used on the same resident, but may not be used on other residents.²⁷

Single-Use/Disposable: Medical equipment/device designated by the manufacturer for single-use only. Single-use equipment/devices must not be reprocessed.²⁷

Staff: Anyone conducting activities within a health care setting including: all health care providers (e.g., emergency service workers, physicians/practitioners, nurses, respiratory therapists and other allied health professionals, students); support services (e.g., housekeeping); and volunteers.³⁰

Sterilant: A chemical used on medical devices which results in sterilization of the device.²⁷

Sterilization: The level of reprocessing required when processing critical medical equipment/devices. Sterilization results in the destruction of all forms of microbial life including bacteria, viruses, spores and fungi. Equipment/devices must be cleaned thoroughly before effective sterilization can take place.²⁷

Syndromic Surveillance: The detection of individual and population health indicators of illness (i.e., signs and symptoms of infectious disease) that are discernible before confirmed laboratory diagnosis are made.³⁵

Vancomycin-Resistant Enterococci (VRE): Strains of *Enterococcus faecium* or *Enterococcus faecalis* that are resistant to the antibiotic vancomycin.³¹

3. Abbreviations

ABHR	Alcohol-Based Hand Rub
APIC	Association of Professionals in Infection Control and Epidemiology, Inc.
ARI	Acute Respiratory Infection (formerly <i>Febrile Respiratory Infection – FRI</i>)
ARO	Antibiotic-Resistant Organism
CAUTI	Catheter-Associated Urinary Tract Infection
CHICA	Community and Hospital Infection Control Association – Canada
CDI	<i>Clostridium difficile</i> Infection (formerly <i>Clostridium difficile-associated Disease – CDAD</i>)
CVAD	Central Venous Access Device
DIN	Drug Identification Number
ESBL	Extended Spectrum Beta-Lactamase
GI	Gastrointestinal
HAO	Hospice Association of Ontario
HEPA	High Efficiency Particulate Air
HIV	Human Immunodeficiency Virus
HLD	High-Level Disinfection
HVAC	Heating, Ventilation and Air Conditioning
ICP	Infection Control Professional
IPAC	Infection Prevention and Control
IPACC	Infection Prevention and Control Committee
IV	Intravenous
LLD	Low-Level Disinfection
MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>
OHS	Occupational Health and Safety
PIDAC	Provincial Infectious Diseases Advisory Committee
PPE	Personal Protective Equipment
ppm	Parts per million
psi	Pounds per square inch
RICN	Regional Infection Control Networks
VRE	Vancomycin-Resistant Enterococcus
WHMIS	Workplace Hazardous Material Information System

4. Infection Prevention and Control (IPAC) Program

Overview

To fulfill the Community Residential Hospice Standards Norms of Practice (specifically Norm 5.19 that states “an infection control program guides all clinical activities”), it is recommended that residential hospices develop and maintain an effective IPAC program.¹⁶

Goals of the IPAC Program

The goals of the IPAC Program are:

- to protect residents from health care-associated infections resulting in reduced pain, suffering and morbidity associated with infections;
- to prevent the spread of infections between residents, staff, volunteers, family and others in the health care environment.

In order to achieve these goals in a cost-effective manner, there is a need for an active, effective, organization-wide IPAC program and support of senior administration.³⁰

Core Functions of the IPAC Program

Strategies to protect residents, staff and others from exposures to infections include:^{13, 15}

- implementation of evidence-based practice standards and guidelines through setting-specific policies and procedures;
- syndromic surveillance for health care-associated and other infections, including outbreak identification and management;
- effective Occupational Health and Safety (OHS) programs;
- education and training of staff, residents and their families;
- communication of infection-related issues and relevant practices to administration, staff and others;
- ongoing evaluation and continuous improvement of the IPAC program.

Infection Prevention and Control Committee (IPACC)

Each hospice is responsible to review the above functions and recommend changes as needed. Due to the smaller size associated with hospice settings, an IPACC may not be present. It is important to ensure that IPAC issues are standing agenda items on other committees, such as a clinical care committee or quality care committee, in order to meet Accreditation Canada Standards. The committee responsible for IPAC issues should be multidisciplinary, meet on a regular basis, and report to administration.³⁰

It is recommended that each residential hospice setting designate a staff member to be the IPAC Lead. The designated IPAC Lead will be accountable for the day-to-day IPAC program core functions. The professional role of the IPAC Lead may vary among residential hospices, but always serves as a leader, mentor and role model for IPAC. Allocation of sufficient time to carry out these activities will be required. It is recommended

that the IPAC Lead will have ongoing education in IPAC.

INFECTION PREVENTION AND CONTROL LEAD

“All health care settings should have access to a certified Infection Prevention and Control Professional (ICP) or trained individuals to implement the IPAC program and resources that are proportional to the size, sophistication, case mix and estimated risk of the populations served by the health care setting.”

PIDAC’s *Best Practices for Infection Prevention and Control Programs in Ontario*³⁰, 2008 [Page 45]

Additional Resources

For additional information and guidance about IPAC Programs, refer to the following documents in the *Resources* section of this manual:

- Sample IPAC Program Policies and Procedures
- Sample IPAC Lead Policies and Procedures

5. Infectious Disease Process

Overview

Humans live in an environment that is abundant with microscopic organisms ('microorganisms'), such as bacteria, fungi, moulds and viruses. Under certain circumstances, some microorganisms cause disease, but others do not. The infectious disease process provides an explanation for the factors that determine the relationships among humans, microorganisms in the environment and normal flora. Changes in any one of the three elements can lead to the development of an infectious disease.

The Normal Flora of the Human Body

Your body is host to billions of bacteria of many different types. These bacteria exist in different parts of the body and usually do not cause any problems for the host body.^{18,42} The mixture of microorganisms regularly found at any anatomical site is referred to as the *normal flora*. Bacteria are the most numerous and obvious microbial components of the normal flora (Table 1).

Normal flora provides direct benefits, such as making vitamins or aiding digestion. Even if normal flora microorganisms merely take up space and resources, they help prevent pathogens (disease-causing microbes) from easily invading the body and causing illness. Although there are many different species of normal flora, these bacteria, fungi and protozoans typically fall into one of two categories: resident flora and transient flora.

Resident flora typically colonize the surface of the skin, mucous membranes, digestive tract, upper respiratory system and distal portion of the urogenital system. These microbes have a commensal relationship with their host, meaning that they do not cause harm while they benefit from feeding on the cellular waste and dead cells of the host's body.

Transient flora are just passing through. Although they may attempt to colonize the same areas of the body as do resident flora, transients are unable to remain in the body for extended periods of time due to:

- competition from resident flora;
- elimination by the body's immune system;
- physical or chemical changes within the body that discourage the growth of transient microbes.

Under normal conditions, resident and transient flora cause the host no harm. However, if the opportunity arises, some of these microorganisms are able to cause disease and become opportunistic pathogens. This can happen due to a number of different conditions:

- when the immune system isn't working properly, normal flora can overpopulate or move into areas of the body where they do not normally occur;
- when the balance of normal microorganisms is disrupted, for example when a person takes broad spectrum antibiotics, microorganisms that are normally crowded out by resident flora have an opportunity to take over; tougher, antibiotic-resistant bacteria, can then predominate;

- disease can result when normal flora are traumatically introduced to an area of the body that is normally sterile or that they do not normally occupy; invasive medical procedures that introduce catheters or surgical wounds can allow microorganisms into areas of the body that are normally sterile.

Table 1: Bacteria commonly found on the surfaces of the human body

Bacterium	Skin	Conjunctiva	Nose	Pharynx	Mouth	Lower GI	Anterior urethra	Vagina
<i>Staphylococcus epidermidis</i>	++	+	++	++	++	+	++	++
<i>Staphylococcus aureus</i> *	+	+/-	+	+	+	++	+/-	+
<i>Streptococcus mitis</i>				+	++	+/-	+	+
<i>Streptococcus salivarius</i>				++	++			
<i>Streptococcus mutans</i> *				+	++			
<i>Enterococcus faecalis</i> *				+/-	+	++	+	+
<i>Streptococcus pneumoniae</i> *		+/-	+/-	+	+			+/-
<i>Streptococcus pyogenes</i> *	+/-	+/-		+	+	+/-		+/-
<i>Neisseria spp.</i>		+	+	++	+		+	+
<i>Neisseria meningitidis</i> *			+	++	+			+
<i>Enterobacteriaceae</i> * (e.g., <i>Escherichia coli</i>)		+/-	+/-	+/-	+	++	+	+
<i>Proteus spp.</i>		+/-	+	+	+	+	+	+
<i>Pseudomonas aeruginosa</i> *				+/-	+/-	+	+/-	
<i>Haemophilus influenzae</i> *		+/-	+	+	+			
<i>Bacteroides spp.</i> *						++	+	+/-
<i>Bifidobacterium bifidum</i>						++		
<i>Lactobacillus spp.</i>				+	++	++		++
<i>Clostridium spp.</i> *					+/-	++		
<i>Clostridium tetani</i>						+/-		
<i>Corynebacteria</i>	++	+	++	+	+	+	+	+
<i>Mycobacteria</i>	+		+/-	+/-		+	+	
<i>Actinomycetes</i>				+	+			
<i>Spirochetes</i>				+	++	++		
<i>Mycoplasmas</i>				+	+	+	+/-	+

LEGEND:

++ = nearly 100%

+ = common (about 25%)

+/- = rare (less than 5%)

* = potential pathogen

Source: Todar's Online Textbook of Bacteriology, located at: <http://www.textbookofbacteriology.net/index.html>

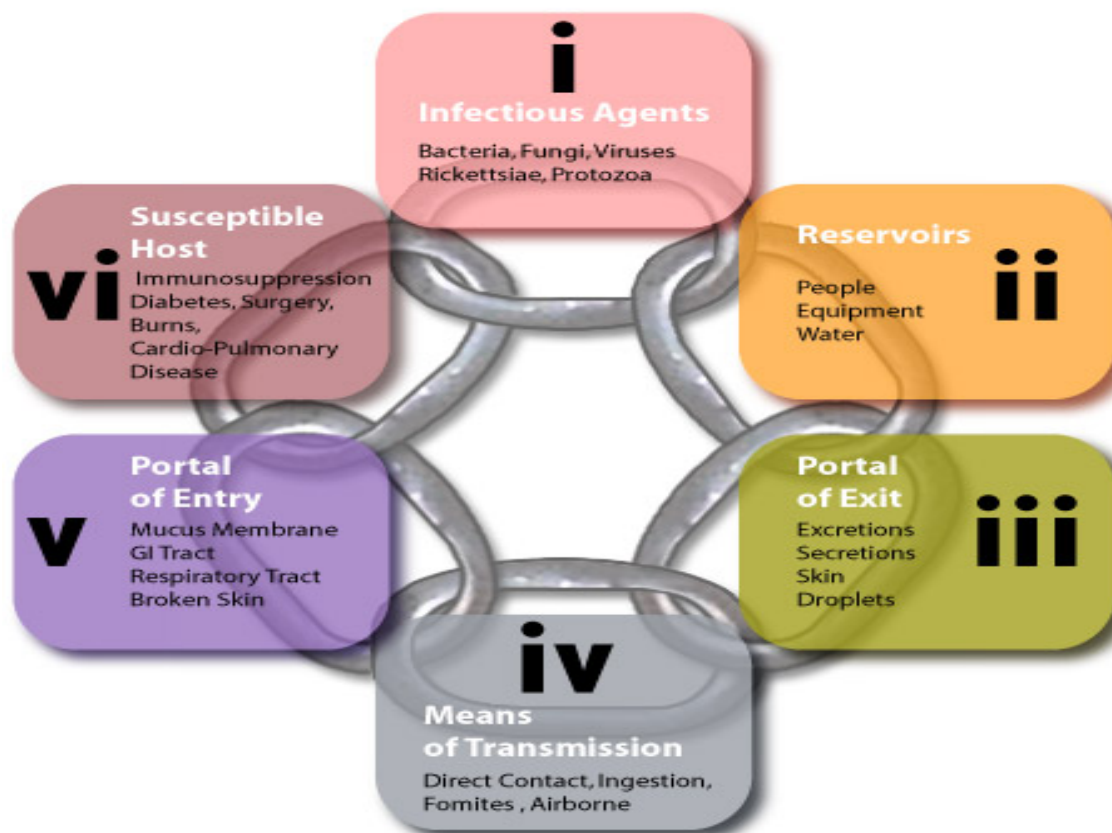
When collecting specimens, it is important to avoid contaminating the specimen with normal flora (e.g., a midstream urine sample allows urethral flora to be flushed away first; cleaning a wound before expressing exudate for a swab will avoid contamination with skin flora).

Interpretation of laboratory results should take into account the normal flora of the area that was sampled. For example, a wound swab that shows *Staphylococcus epidermidis* or a sputum sample showing *Streptococcus viridans* are more indicative of contamination with normal flora than infection. Clinical

symptoms and status will dictate whether an infection is present or whether treatment is unnecessary, even though a laboratory result shows the presence of bacteria in the sample.

Chain of Transmission

The transmission of disease-causing microorganisms within the hospice setting may be likened to a 'chain', with each link representing a factor related to the spread of microorganisms. Transmission does not take place unless all six of the elements or 'links' in the chain are present. By eliminating any one of the links, transmission is terminated.³⁴



Chain of Transmission: Breaking the Chain

Chain of Transmission	Breaking the Chain
<p>Infectious Agent</p> <p>Any organism that is capable of causing an infection. Their ability to produce infection depends on:</p> <ul style="list-style-type: none"> ▪ a person's own defence mechanism ▪ the pathogenicity of the microorganism ▪ the degree of contamination <p>Examples of infectious agents include:</p> <p>Bacteria – e.g., <i>Staphylococcus aureus</i>, <i>Streptococcus pyogenes</i>, <i>Salmonella</i> species, <i>Escherichia coli</i> (<i>E. coli</i>)</p> <p>Viruses – e.g., mumps, influenza, norovirus, varicella (chickenpox), human immunodeficiency virus (HIV)</p> <p>Fungi – e.g., <i>Candida</i> species, <i>Aspergillus</i> species</p> <p>Parasites – e.g., scabies, lice</p>	<p>Infectious Agent</p> <p>The rapid identification of organisms helps deal with the agents in a timely manner.</p> <p>Ways to eliminate infectious agents include the following:</p> <ul style="list-style-type: none"> ▪ hand hygiene ▪ cleaning ▪ disinfection/sterilization
<p>Reservoir</p> <p>A reservoir is the place where an infectious agent lives and reproduces in such a manner that it can be transmitted. Infectious agents can live in or on people, animals, insects, soil or water.</p> <p>Reservoirs of infection include:</p> <ul style="list-style-type: none"> ▪ people who are temporarily ill with an infectious disease (e.g., influenza) or who are long-term carriers of microorganisms, e.g., carriers of hepatitis B ▪ animals, e.g., pets infested with parasites ▪ the inanimate environment, e.g., contaminated water in cooling towers or shower heads 	<p>Reservoir</p> <p>It is important to contain and control the location of the infectious agent through:</p> <ul style="list-style-type: none"> ▪ environmental cleaning ▪ waste management ▪ disinfection/sterilization of surfaces/equipment ▪ maintaining proper food temperatures ▪ maintaining good health
<p>Portal of Exit</p> <p>When the infectious agent leaves the reservoir, spread of infection is likely to occur. This includes:</p> <ul style="list-style-type: none"> ▪ excretions and secretions ▪ non-intact skin (e.g., draining wounds) ▪ respiratory tract (e.g., sneezing, coughing, talking) ▪ gastrointestinal tract (e.g., vomiting, diarrhea, stool) ▪ mucous membranes (eyes, nose, mouth, vagina) 	<p>Portal of Exit</p> <p>Infection control practices break the chain at the point where the infectious agent leaves the reservoir:</p> <ul style="list-style-type: none"> ▪ hand hygiene, personal protective equipment ▪ environmental cleaning ▪ containing excretions and secretions: <ul style="list-style-type: none"> ○ ensuring coughs/sneezes are covered ○ covering wounds ○ safe disposal of infected body fluids

Chain of Transmission	Breaking the Chain
<p>Mode of Transmission</p> <p>The way that germs “travel” from the reservoir to a host is known as the mode of transmission. Every form of direct and indirect human contact provides an opportunity for disease-producing microorganisms to be transmitted, such as:</p> <p>Contact</p> <ul style="list-style-type: none"> ▪ Direct (e.g., contaminated hands) ▪ Indirect (e.g., contaminated equipment) <p>Droplet</p> <ul style="list-style-type: none"> ▪ Droplets (e.g., sneezing, coughing, talking) <p>With respect to droplet transmission, it is suggested that a distance of 2 metres is necessary to avoid transfer of disease-producing microorganisms.</p> <p>Airborne (i.e., circulating in air currents)</p> <p>Common source (e.g., contaminated food)</p> <p>Vector (e.g., insects carrying disease)</p> <p>Parenteral (e.g., needlestick injuries)</p>	<p>Mode of Transmission</p> <p>Creating barriers and proper cleaning are factors in controlling the way microorganisms are spread.</p> <p>Contact transmission is controlled by:</p> <ul style="list-style-type: none"> ▪ hand hygiene ▪ personal protective equipment (PPE) ▪ environmental cleaning ▪ exclude/isolate ill residents/staff <p>Droplet transmission is controlled by:</p> <ul style="list-style-type: none"> ▪ hand hygiene ▪ respiratory etiquette ▪ spatial separation ▪ PPE ▪ exclude/isolate ill residents/staff <p>Airborne transmission is controlled by:</p> <ul style="list-style-type: none"> ▪ hand hygiene ▪ use of PPE ▪ exclude/isolate ill residents/staff ▪ air flow control
<p>Portal of Entry</p> <p>The point where the germ enters a new host is known as the portal of entry, such as:</p> <ul style="list-style-type: none"> ▪ non-intact skin (e.g., broken skin such as bed sores or wounds coming in contact with contaminated material) ▪ respiratory tract ▪ gastrointestinal tract (e.g., eating contaminated food) ▪ mucous membranes (e.g., eyes, nose or mouth exposures with infectious agents) ▪ parenteral (e.g., exposure to a contaminated sharp instrument) 	<p>Portal of Entry</p> <p>Effective use of barriers and techniques can block the pathway by which bacteria or other pathogenic agents gain entry to the body:</p> <ul style="list-style-type: none"> ▪ hand hygiene ▪ use of PPE ▪ preventing skin breakdown ▪ safe use/handling of sharps ▪ aseptic technique ▪ catheter care

Chain of Transmission	Breaking the Chain
<p>Susceptible Host</p> <p>Any person who may be at risk of infection is a susceptible host. Humans can become hosts to microorganisms when normal body defences are compromised. We may all be at risk depending on circumstances, but there are certain factors that increase the risk of susceptibility, such as:</p> <ul style="list-style-type: none"> ▪ age (very young or very old) ▪ other illnesses (e.g., immunocompromised) ▪ require hands-on care ▪ invasive devices/procedures ▪ poor nutrition/general health 	<p>Susceptible Host</p> <p>Interventions include:</p> <ul style="list-style-type: none"> ▪ immunization – immunity is the ability of a potential host to resist an infection. Antibodies are needed to prevent future infections. Antibodies are created by ‘natural immunity’ (resulting from a previous infection, e.g., chickenpox); by ‘artificial immunity’ (vaccines are given to stimulate antibody production, e.g., influenza vaccine); or by ‘passive immunity’ (antibodies are introduced into the body from an outside source, e.g., transfer of antibodies from mother to fetus via the placenta). ▪ isolation – this is required when persons are harbouring infectious agents which can be transmitted in order to protect others ▪ recognition of high-risk residents ▪ treatment of underlying disease

Additional Resources

A resource has been developed by the RICN. The interactive *Chain of Transmission* will walk you through simple descriptions of the factors that need to be present for infection to occur. IPAC measures which target various ‘links’ help to reduce or prevent the spread of infection.

- To explore the *Chain of Transmission* go to: <http://ricn.on.ca/chainoftransmission/>.

6. Routine Practices and Additional Precautions

Routine Practices Overview

The term *Routine Practices* is used to describe IPAC practices that were previously known as ‘Universal Precautions’ and ‘Body Substance Precautions’ (terminology no longer used). Routine Practices recognizes that any individual may carry microorganisms that are capable of spreading illness to others. Implementing consistent best practices **routinely** will help prevent the spread of pathogenic microorganisms.³⁴

Routine Practices are based on the principle that each individual’s blood, body fluids, secretions, excretions, mucous membranes and non-intact skin are potentially infectious. Staff must perform a risk assessment before each interaction with a resident. Following a risk assessment, staff must institute any number of the risk reduction strategies that comprise Routine Practices.

Hierarchy of Controls

There are important concepts regarding infection prevention and control measures that have been clarified over the past decade. Working with Occupational Health and Safety groups and building engineers has created a framework that includes three levels of control: engineering controls, administrative controls and personal protective measures:

A. Engineering Controls

Engineering controls are built into the design (e.g., private bathrooms, single rooms, HVAC systems) of a health care facility. IPAC professionals should be involved in the design and planning of new facilities. An IPAC Risk Assessment should be done to evaluate and mitigate potential risks for microorganism transmission by means of air, water and environmental sources.

B. Administrative Controls

Administrative controls include education, training and protocols, such as hand hygiene; immunization of residents and care givers; managing care givers and residents during an outbreak; and caring for residents with a communicable disease.

C. Personal Protective Measures

Personal protective equipment (PPE) is the least desirable way to control hazards, as it does not eliminate them; it merely contains the hazard and is dependent on its appropriate use by educated, knowledgeable staff.

Most
Effective

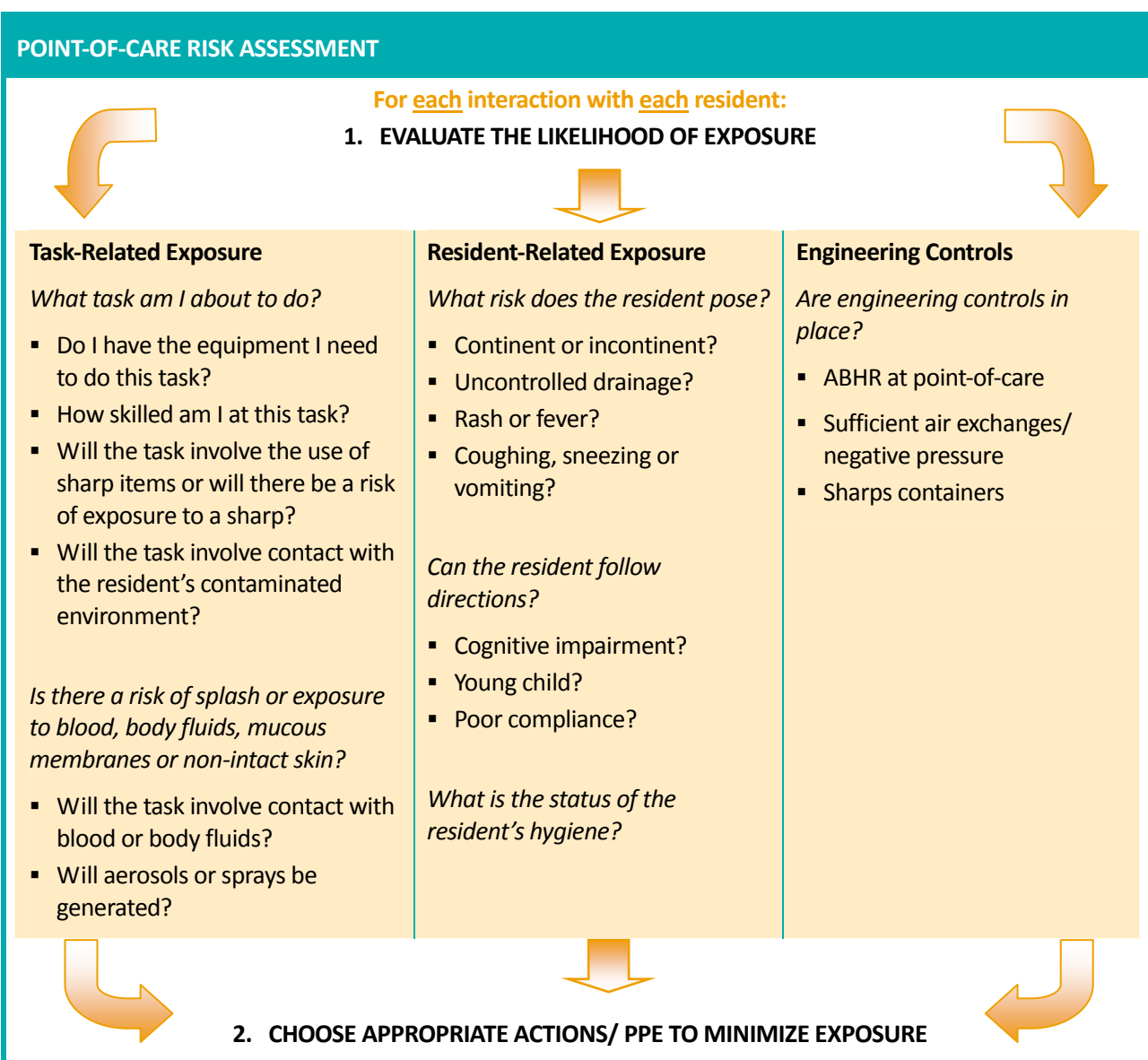


Least
Effective

Point-of-Care Risk Assessment

A point-of-care risk assessment is an assessment of the infectious risk posed to the staff member and to other residents, visitors and staff. This risk assessment is based on professional judgement about the clinical situation and up-to-date information on how the specific hospice has designed and implemented engineering and administrative controls, along with the availability of PPE.

A risk assessment must be done **before each interaction** with a resident and his/her environment in order to determine which interventions are required to prevent transmission of microorganisms. Staff must assess the risk of transmission of microorganisms by thinking about the task about to be performed and the status of the resident receiving care.



Risk Reduction Strategies

Once a staff member performs the necessary risk assessment, he/she should then choose which risk reduction strategies are required.³⁴ The risk reduction strategies that comprise Routine Practices are:

- a) hand hygiene;
- b) appropriate use of PPE;
- c) appropriate resident accommodation;
- d) proper cleaning and disinfection of the environment and equipment;
- e) proper handling of linen and waste;
- f) sharps injury prevention.

A. Hand Hygiene

Hand carriage of microorganisms can provide a significant route of transmission from person-to-person. Hand hygiene refers to killing or removing microorganisms on the hands as well as maintaining good skin and nail integrity. The purpose of hand hygiene is to destroy or remove microorganisms that have been picked up from contact with residents or staff, contaminated equipment, or the environment. Appropriate hand hygiene results in a reduction of health care-associated infections. Hand hygiene is the single most effective way to reduce the spread of microorganisms.^{2, 11, 12, 23, 29, 34}

Indications for Hand Hygiene

When providing direct care, hand hygiene should be performed according to the following four moments:

- before initial resident/ resident environment contact (e.g., stroking an arm, giving a massage);
- before performing aseptic procedures (e.g., oral care, eye care, wound care, injections);
- after resident body fluid exposure (e.g., oral care, cleaning up vomit, urine or faeces);
- after resident/resident environmental contact (e.g., touching bed rail, leaving resident room).

It is also important to perform hand hygiene:

- after performing personal functions such as using the toilet, coughing or sneezing;
- before preparing or handling food;
- after handling raw meats or unwashed vegetables and fruits;
- after smoking, eating, or drinking;
- before and after touching any animal or animal excrement.

Hand Hygiene with Alcohol-Based Hand Rub (ABHR)

Performing hand hygiene with an alcohol-based hand rub (ABHR) is the preferred method for decontaminating hands when they are not visibly soiled. ABHRs provide a rapid kill of most transient microorganisms on the hands. It is preferred that ABHR have a minimum alcohol concentration of 70-90%.^{23, 29}

Point-of-care is the place where three elements occur together: the resident, staff and the care or treatment involving resident contact. Hand hygiene products available at point-of-care are easily accessible to staff by being as close as possible (i.e., within arm's reach) to where resident contact is taking

place. Point-of-care products should be accessible without leaving the zone of care/treatment. Installing ABHR at the point-of-care has been shown to be an effective way to increase hand hygiene compliance in the health care setting.^{23, 29}

- See the *Resources* section of this manual for instructional materials related to ABHR.

Hand Hygiene with Soap and Water

Washing hands with soap and water is the preferred method for decontaminating hands when they are visibly soiled. The combination of adequate friction, lather (for at least 15 seconds) and rinsing removes germs from the hands.^{23, 29} When performing hand hygiene with soap and water:

- hand washing for routine care may be done with plain liquid soap and water;
- antimicrobial soap is not recommended for routine use;
- bar soap must not be used for staff and should be reserved for individual resident use only;
- hand soap must be dispensed from disposable, single-use containers only;
- liquid products must be dispensed in a disposable, pump dispenser that is discarded when empty; they should never be 'topped-up' or refilled;
- whenever possible, hand washing sinks are to be used for hand washing only.

- See the *Resources* section of this manual for instructional materials related to hand washing.

Effectiveness of Hand Hygiene

There are a number of factors that may influence the effectiveness of hand hygiene:

Skin Condition

Intact skin is the body's first line of defence against microorganisms, so it is important that staff take good care of their hands. Not only do dry hands provide a reservoir for microorganisms, but dry skin results in shedding of skin cells that contain microorganisms. Hand lotions and creams increase skin hydration and regular use of lotions or creams (e.g., twice a day) can help prevent and treat dry skin and irritant contact dermatitis. Lotions or creams that are petroleum-based can interfere with the integrity of gloves and should not be used in the hospice setting.^{23, 29}

Finger Nails

Long natural nails, chipped nail polish, and artificial nails or nail enhancements can harbour microorganisms and have potential for less effective removal of these microorganisms. They have been associated with serious outbreaks in the health care setting. Keep nails clean and short, avoid artificial nails and nail enhancements.^{23, 29}

Jewellery

Jewellery on the hands and wrists, such as rings, bracelets and wrist watches, can hinder effective hand hygiene. A greater number of microorganisms can be found on and around jewellery. Jewellery can also contribute to skin irritation from residual hand hygiene products and has been known to cause tears in gloves. In general, rings and bracelets should not be worn for direct care of a resident.^{23, 29}

Encouraging/Supporting Hand Hygiene for Residents, Visitors, and Staff

Staff, residents and visitors have a role to play in preventing the spread of microorganisms in the hospice setting. It is important that the hospice setting encourage hand hygiene for all individuals.^{23, 29} This can be achieved by:

- providing access to ABHR and or hand hygiene sinks (kitchen, common areas, entrance);
- providing visual reminders (e.g., signage) in all bathrooms and other common areas;
- offering hand hygiene opportunities/assistance to residents, including before meal times.

B. Appropriate Use of Personal Protective Equipment (PPE)

PPE is chosen and worn based on the assessment of risk of transmission of microorganisms. The need for this specialized clothing or equipment should be determined by the hospice staff person.^{11, 34, 36} Staff must be provided with sufficient supplies of PPE in appropriate sizes and easy access to supplies where required.³⁴ The types of PPE used in health care include gloves, gowns, masks and eye protection. Included below are important points to consider when using these various types of PPE. These points relate to PPE use for Routine Practices, however, staff should be aware that PPE is also required if Additional Precautions are indicated for resident care. Additional Precautions are discussed further in this manual.

- See the *Resources* section of this manual for instructional materials related to PPE.

Gloves

Gloves are the most commonly used PPE. Gloves are used to reduce the risk of staff exposure to resident's blood, body fluids, secretions, excretions, mucous membranes and non-intact skin.^{11, 34, 36} A vinyl exam glove is appropriate for most uses, and provides adequate protection. A medical grade glove (made of synthetic latex) may be used when performing tasks that require prolonged exposure to blood, body fluids, chemotherapy or chemicals. A sterile glove is appropriate when performing sterile procedures.

APPROPRIATE USE OF GLOVES

- ✓ Wear the correct size of gloves for your hands.
- ✓ Gloves should be put on immediately before the activity for which they are indicated.
- ✓ Clean hands before putting on gloves for a clean/aseptic procedure.
- ✓ Gloves must be removed and discarded immediately after the activity for which they were used.
- ✓ Hand hygiene must be performed immediately after glove removal.
- ✓ Change or remove gloves if moving from a contaminated body site to a clean body site within the same resident.
- ✓ Change or remove gloves after touching a contaminated site and before touching a clean site or the environment.
- ✓ Do not wash or re-use gloves.
- ✓ The same pair of gloves must not be used for the care of more than one resident.

PIDAC's *Routine Practices and Additional Precautions in All Health Care Settings*³⁴, 2009 [Page 29, Box 2]

Gowns

Long-sleeved gowns serve to protect the forearms and clothing of staff from splashing and soiling from resident's body substances. They are recommended for use during routine resident care activities in which this is likely to occur.^{11, 34, 36}

Masks

Masks should be worn where appropriate to protect the mucous membranes of the nose and mouth during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.^{11, 34, 36} Fluid-resistant procedure/surgical masks are worn to protect from acquisition of infections transmitted by large respiratory droplets (e.g., acute respiratory illness, influenza, streptococcal throat infection). Procedure/surgical masks (non-fluid-resistant) may be used by residents, when tolerated, to contain respiratory droplets when leaving their room. N95 respirators/masks are used by staff (not residents) to prevent acquiring infections transmitted by small airborne particles, (e.g., chickenpox, measles, tuberculosis). N95 respirators should not be worn by anyone who has not been 'fit-tested' for the respirator.³⁴

Eye Protection

Goggles, face shields, or a mask with attached face shield should be worn where appropriate to protect the mucous membranes of the eyes during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.^{11, 34, 36}

FAMILY-CENTRED CARE

"It is traumatic for family members to have to apply gloves while caring for a loved one on precautions. They want to feel and touch those who are dying. Prevention is essential!"

Comment from a health care provider from Dr. Bob Kemp Hospice

NOTE: If gloves are not used, strict attention to hand hygiene is essential.

C. Appropriate Resident Accommodation

Routine Practices highlights the importance of a resident's accommodation to decrease the risk of transmission of infectious microorganisms to others. Ideally, all residents will have a single room with a dedicated bathroom and sink. In hospice settings where this is not feasible, Routine Practices states that a single room should be used for any resident who contaminates the environment. It also stipulates that the resident should perform hand hygiene on leaving his/her room.^{11, 34, 36}

D. Proper Cleaning and Disinfection of the Environment and Equipment

Routine Practices also includes the concept that contaminated surfaces and equipment can be the source of microorganisms. Because of this, appropriate cleaning and disinfection of both the health care environment and equipment used for care is recommended. Transmission of microorganisms has also been linked to improperly cleaned and disinfected equipment.^{10, 34}

E. Proper Handling of Linen and Waste

It is important to handle linen in a fashion that will reduce the potential risk of cross-contamination. To do this, linen should be handled in such a way as to minimize agitation. Laundry hampers should be located as close to the point-of-care as possible, so that soiled linen does not need to be carried for any great distance.^{10, 34}

Waste management must comply with provincial and federal legislation.²¹ In health care, several different types of waste are created (e.g., biological), each of which require a protocol for proper handling and disposal. Your hospice may already have a protocol in place regarding the appropriate way to handle waste.

F. Sharps Injury Prevention

Residential hospices must be committed to safe disposal of all sharps and the ongoing evaluation of new safety-engineered products that will reduce staff exposure to sharps.^{25, 34} Parenteral or percutaneous exposure to a needle or other sharp instrument contaminated with blood or body fluids can lead to serious and/or fatal infections such as hepatitis B, hepatitis C, or human immunodeficiency virus (HIV). Whenever available, safety-engineered needles must be used.

Employee Education on Safe Handling and Disposal of Sharp Medical Devices

All employees who handle sharp medical devices need to attend an orientation to the policies and procedures related to use and disposal of sharps used in the hospice. Prior to the introduction of any new sharp devices, education sessions should be provided.

Additional Precautions Overview

Additional Precautions refers to IPAC interventions that are used in addition to Routine Practices. Additional Precautions are based on the mode of transmission of the suspected or identified disease-causing microorganism.^{11, 34} Additional Precautions must be instituted as soon as symptoms suggestive of an infection are noted, not only when a diagnosis is confirmed.

There are three categories of Additional Precautions: Contact Precautions, Droplet Precautions and Airborne Precautions. Some microorganisms may be transmitted by more than one route, e.g., respiratory viruses may remain viable for some time in the resident environment and may be picked up on the hands of staff, volunteers and visitors. Therefore a combination of Droplet and Contact Precautions would be utilized.

Additional Precautions includes:

- signage specifying the precautions needed, but protecting resident confidentiality;
- PPE as appropriate;
- equipment dedicated to the resident;
- additional cleaning measures;
- effective communication and education to staff, visitors, volunteers and residents.

It is important to discontinue Additional Precautions as soon as it is safe to do so.³⁴ In some cases, consultation with outside experts may be required (e.g., Public Health). **Additional Precautions should only be discontinued by someone with expertise in infection prevention and control.**

Although Additional Precautions are necessary to protect both residents and staff, there may be negative impacts associated with these practices for residents, including:

- limited contact with staff, which may result in lack of monitoring and care-giving processes;
- fewer visits from family and friends, which may result in feelings of loneliness;
- isolation, which may result in anxiety, depression etc.

A. Contact Precautions

Contact transmission is the most frequent mode of transmission of health care-associated infections. Transmission occurs from direct physical contact between an infected or colonized individual and a susceptible host. Indirect contact involves passive transfer of microorganisms to a susceptible host via an intermediate object, such as contaminated hands that are not washed between residents, or contaminated instruments or other inanimate objects in the resident environment. PPE consisting of gloves and gown (Contact Precautions) are needed by staff and visitors when providing direct resident care.^{11, 34, 38}

Examples:

Clostridium difficile Infection

Gastroenteritis

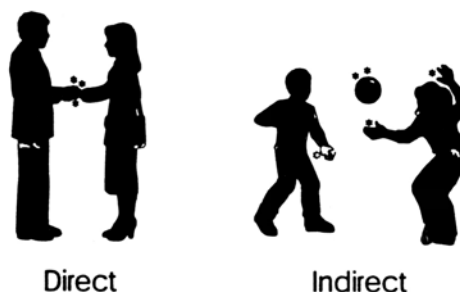
Undiagnosed Diarrhea

Scabies

Head Lice

Undiagnosed Rash

Antibiotic-resistant Organisms, e.g., methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), extended-spectrum beta-lactamase producing bacteria (ESBL).



VRE PRECAUTIONS IN RESIDENTIAL HOSPICE SETTING

“Two days after admitting a lady to our hospice we received notification that she was VRE positive. This had devastating results for the resident as we then had to isolate her. Staff and visitors wore gowns and gloves each time they entered the room, regardless of what they were entering for. The resident, although confined to bed, was not allowed out of her room. To have a person in isolation takes away from the homelike atmosphere we are attempting to create. This resident experienced significant emotional stress and disappointment as a result of being in isolation.”

With the knowledge we have learned from the ‘Infection Prevention and Control Resource Manual for Residential Hospice Settings’ any future resident admitted with VRE would not have to remain in their room. We understand that VRE is spread by contact and therefore staff would be required to wear gown and gloves for direct care only. This would allow residents to enjoy the hospice setting while still protecting staff and other residents from the diseases spread.”

Lisaard House

B. Droplet Precautions

Droplet transmission refers to the large droplets generated from the respiratory tract of the source resident during coughing, sneezing, talking and singing. These droplets are propelled a short distance, up to 2 metres, through the air and deposited on the mucosa of the eyes, nose, or mouth of the potential new host. Large droplets do not remain suspended in the air; therefore special ventilation is not required. PPE consisting of a fluid-resistant procedure/surgical mask and eye protection are needed when staff and visitors are within two metres of the resident.^{11, 34, 38}

Examples:

Acute Respiratory Illness
Influenza
Meningitis
Pertussis (Whooping Cough)
Pneumonia
Respiratory Syncytial Virus (RSV)



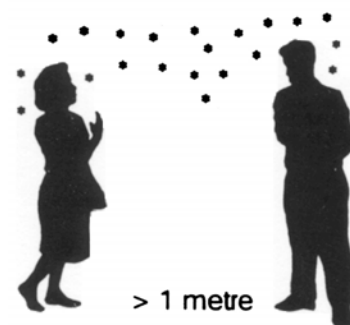
Residents with infectious diseases that are spread by respiratory droplets should be placed on Droplet Precautions. Consider adding Contact Precautions for residents who are unable to maintain/contain their own excretions/secretions or if the virus is viable for extended periods in the environment.

C. Airborne Precautions

Airborne transmission refers to dissemination of microorganisms in the air. Microorganisms are contained in airborne droplet nuclei or in dust particles containing debris that remains suspended in the air for long periods of time. Such microorganisms are widely dispersed by air currents and inhaled by susceptible hosts who may be a distance away from the source. Environmental controls are important; special air handling and ventilation help reduce airborne transmission. PPE consisting of a N95 respirator is needed.^{11, 34, 38}

Examples:

Pulmonary Tuberculosis
Measles
Chickenpox
Disseminated Zoster



Residents with infectious diseases that are spread by airborne droplet nuclei should be placed on Airborne Precautions and be transferred to a facility where they can be managed safely and appropriately.

Additional Resources

For additional information and guidance about Routine Practices and Additional Precautions (e.g., posters, signs, policies and procedures) refer to the *Resources* section of this manual. These tools are designed to make Additional Precautions easier to implement, but require staff education and IPAC review of practices to ensure their effectiveness.

The Ontario Ministry of Health and Long-Term Care has developed IPAC core competencies. Three self-learning modules (Hand Hygiene, Chain of Transmission and Routine Practices) are available on the Ministry of Health website for free download:

http://www.health.gov.on.ca/english/providers/program/infectious/infect_prevent/ipccce_ref.html.

7. Resident Care

Overview

Implementing knowledge of best practices regarding infections and their transmission can be applied to daily resident care to reduce the risk of infection.¹²

Urinary Catheterization and Catheter

Catheter-associated urinary tract infection (CAUTI) is the most common of health care-associated infections. Prolonged catheterization is the most important risk factor for CAUTI. Although not all CAUTI can be prevented, proper placement and management of the indwelling catheter can contribute to the prevention of infections.^{2, 3, 41}

Infection Prevention

- ✓ Use indwelling catheters only when medically necessary.
- ✓ Use aseptic insertion technique with appropriate hand hygiene and sterile gloves.
- ✓ Allow only trained health care providers to insert catheter.
- ✓ Secure catheters properly after insertion to prevent movement and urethral traction.
- ✓ Maintain a sterile closed drainage system.
- ✓ Maintain good hygiene at the catheter-urethral interface.
- ✓ Maintain unobstructed urine flow.
- ✓ Maintain drainage bag below level of bladder at all times.
- ✓ Remove catheters when no longer needed.
- ✓ Do not change indwelling catheters or urinary drainage bags at arbitrary fixed intervals.
- ✓ Use external (or condom-style) catheter, if appropriate, in men.

Respiratory Care

Pneumonia is the second most common health care-associated infection, most commonly caused by:^{2, 12, 28, 34, 40}

- aspiration of microorganisms;
- introduction of microorganisms via suction catheters;
- inhalation of aerosols containing microorganisms.

A. Aspiration Prevention

- ✓ Keep the head of the bed at 30° to 45° for residents at high risk for aspiration.
- ✓ Verify the appropriate placement of enteral feeding tubes.
- ✓ Adjust rate of enteral feeding to avoid reflux aspiration.
- ✓ Provide meticulous mouth care using a decontaminating antiseptic agent.

B. Respiratory Secretions***Suctioning***

- ✓ Perform hand hygiene and wear PPE as indicated in Routine Practices.
- ✓ Use a sterile catheter, sterile gloves and sterile normal saline for open suctioning systems.
- ✓ Use liners with suctioning collection canisters. The liners should be capped and disposed of in the biohazard container when full.
- ✓ Change suction collection, tubing and canisters between residents.

Tracheostomy Care

- ✓ Perform hand hygiene and wear PPE as indicated in Routine Practices.
- ✓ Clean inner cannula with soap and water and friction:
 - soak in 3% hydrogen peroxide for 20 minutes;
 - rinse with sterile water;
 - allow to air dry on clean towel or paper towel;
 - store in a clean closable jar that has been cleaned or in a new plastic bag;
 - clean inner cannula frequently enough to keep the skin clean and dry to prevent excoriation around the stoma.
- ✓ Change the external dressing at least daily and as needed when soiled.

C. Inhalation of Aerosols***Nebulization Therapy***

- ✓ Clean, disinfect, rinse and allow handheld nebulizers to dry between treatments on the same resident.
- ✓ Use only sterile fluid for nebulization.
- ✓ Use single dose vials or containers for aerosolized medications, whenever possible.
- ✓ Clean immediate area around the resident after the treatment is complete.
- ✓ If multidose medication vials are used, follow manufacturer's directions regarding handling, storing, and dispensing.

Oxygen Therapy

- ✓ Wipe the outside tips of the nasal cannula with a damp cloth each morning.
- ✓ Replace nasal cannula, tubing and humidifier between residents.
- ✓ Replace nasal cannula and tubing every two weeks if used continuously or monthly if used as required.

Infusion Therapy

It is important to maintain venous access for medication and comfort. Bloodstream infections may compromise this access. Infusion therapy allows bacteria to enter the bloodstream, resulting in an infection. Host factors, such as immunosuppressive diseases, can increase risk of infection.⁴¹ Strict adherence to hand hygiene and aseptic technique are the most important preventive measures.^{2, 12, 34, 40, 41}

A. Central Venous Access Device (CVAD)/ Peripherally-Inserted Central Catheter (PICC)

Follow specific agency policies and procedures for care of CVADs.

- For more information, see the Safer Healthcare Now! Intervention for central line-associated infection at: <http://www.saferhealthcarenow.ca/EN/Interventions/CLI/Pages/default.aspx>.

Infection Prevention

- ✓ Perform hand hygiene before accessing CVAD.
- ✓ After performing hand hygiene, put on either sterile gloves or non-sterile, clean gloves to be used with a 'no-touch' technique.
- ✓ Replace administration sets and injection caps at appropriate intervals:
 - intermittent administration sets should be replaced every 24 hours;
 - continuous administration sets should be replaced every 72 hours;
 - change injection caps every 7 days with dressing change.
- ✓ Do not replace PICC lines solely to prevent infection.
- ✓ Do not replace PICC lines solely because of fever unless intravenous infection is suspected; replace the catheter if there is purulence at the exit site.
- ✓ Maintain appropriate catheter and catheter site care:
 - scrub the hub or injection caps for 15-30 seconds with antiseptic;
 - access lumens aseptically;
 - use transparent semi-permeable dressing. This dressing is changed every 7 days, but can be done every 6 days to align with tubing changes, or when the integrity of the dressing is compromised, i.e., dressing not intact, evidence of inflammation, accumulation of blood or moisture under dressing;
 - a gauze dressing on a central line should be changed every 48 hours and as required. A gauze dressing beneath a transparent dressing must be changed every 48 hours;
 - change securement devices weekly;
 - apply 2% chlorhexidine gluconate solution to the site in a back-and-forth motion and allow to air dry; do not remove excess antiseptic; the antiseptic solution must be compatible with the catheter material.
- ✓ Ensure only trained staff maintain central catheters.
- ✓ Notify supervisor if there are signs of infection at the site or systemically.
- ✓ Hospices should have access to infusion therapy nursing expertise.

B. Peripheral Intravenous Catheter (PIV)

Follow specific agency policies and procedures on the care and maintenance of peripheral venous access devices and PICC lines.

- For more information, refer to the Registered Nurses' Association of Ontario's (RNAO) '*Care and Maintenance to Reduce Vascular Access Complications*' (2008), available at: <http://www.rnao.org/Page.asp?PageID=924&ContentID=796>

Infection Prevention

- ✓ Use sterile technique when inserting.
- ✓ Use Routine Practices and Additional Precautions to prevent the spread of infection.
- ✓ Stabilize the device and change dressing as in RNAO recommendations:
 - change gauze dressings every 48 hours;
 - change transparent dressings weekly;
 - change dressings when soiled or wet.
- ✓ Assess peripheral line site daily for infection, occlusion and change as necessary to reduce infection.
- ✓ Change tubing or add-on devices every 72 hours.
- ✓ Replace peripheral IV every 72 – 96 hours.
- ✓ Remove peripheral IV when no longer needed.
- ✓ Educate residents on care of their intravenous access.
- ✓ Hospices should have access to infusion therapy nursing expertise.

C. Hypodermoclysis

Hypodermoclysis is the administration of fluids via subcutaneous infusion. The incidence of infection is rare when aseptic technique is employed on insertion of the cannula.

Infection Prevention

- ✓ Perform hand hygiene and put on PPE as indicated in Routine Practices.
- ✓ Prepare site with 70% alcohol and 2% chlorhexidine gluconate using back-and-forth motion, allowing 30-60 seconds contact time with the alcohol. Allow to dry.
- ✓ Create a loop in the tubing around the needle site to prevent the needle from being pulled out if set is inadvertently tensioned.
- ✓ Secure needle and loop against the skin with a sterile occlusive dressing.
- ✓ Change administration fluid bag and tubing every 24 hours.
- ✓ Change subcutaneous site every 48-72 hours.

Wound Management

Wound care is an essential component of palliative care for dying residents with existing or developing wounds.⁴¹ All wounds are colonized with bacteria.⁵ Proper cleansing of the wound is the most effective way to keep the bacterial levels down.^{2, 5, 17, 34, 41}

- For more information about wound care, visit the Canadian Association of Wound Care (CAWC) website at: <http://www.cawc.net/>.

Infection Prevention

- ✓ Use minimal force when cleaning a wound with gauze, cloth or sponges. Healthy tissue can be damaged.
- ✓ Best wound cleansing is achieved by irrigation with 10 psi .
- ✓ Sterile normal saline is the preferred cleansing agent.

- ✓ 'No touch' technique should be used for dressing changes. Avoid touching wound or surface of dressing that will contact the wound.
- ✓ Pack openings as it provides a collection space for bacterial growth, loosely pack to absorb drainage.
- ✓ Keep wound moist while keeping surrounding skin dry and intact, usually with protective ointment.

Lymphatic Drainage

This procedure may increase comfort and improve symptom management by the provision of subcutaneous lymphedema drainage in end-stage palliative care residents. Each case should be assessed on an individual basis in relation to the potential risks and benefits.

Infection Prevention

- ✓ Perform hand hygiene and put on gloves.
- ✓ Observe sites for signs and symptoms of infection.
- ✓ Change sites every 3-7 days or when leaking, reddened or painful.
- ✓ Observe lymph fluid for changes in colour, blood in fluid, odour etc.

Specimen Collection and Handling for Microbiology

Specimen handling and collection involves the sampling of tissue or fluid for laboratory examination:

- to allow for the isolation and identification of microorganisms that cause disease;
- to determine antibiotic sensitivity of microorganisms to guide selection of appropriate antimicrobial therapy.

The quality of the specimen received in the laboratory can have a major impact on the subsequent microbiological and clinical diagnosis and validity of results that rely on the specimen being of the required quantity, collected in an aseptic manner and stored appropriately prior to laboratory examination. False results may occur if specimens are kept for prolonged periods before examination in the laboratory, as some microorganisms may outgrow others, while other delicate microorganisms may not survive.^{18, 19, 34}

Animal-Assisted Therapy and Pet Visitation

There is strong evidence that people benefit from interactions with animals socially, psychologically, and physiologically.²⁶ Animal visiting programs are important for resident health and well-being. Some evidence also suggests that there are also risks to residents and the visiting animals. Guidelines for animal therapy are recommended in all health care facilities, including the hospice setting, to ensure a safe environment is provided for both the animal and the resident and to minimize the risk of transmission of infection.⁴

The following are some important guidelines which need to be followed when animals are visiting a hospice:

- hand hygiene is important; residents, staff and pet handlers should perform hand hygiene before and after handling animals;

- specify the responsibilities of the hospice:
 - develop a written policy for animal visits;
 - designate one person to keep track of visits (in collaboration with the visiting program staff);
- specify the responsibilities of the pet visitation program:
 - handlers of program animals should be trained;
 - handlers must comply with volunteer health screening protocols;
- specify suitable animals:
 - policies address both official program animals and resident's animals;
 - exclude shelter animals and high-risk species, such as reptiles;
 - animals should be a minimum of one year of age (ideally two years old for dogs);
 - official visiting animals should be temperament tested;
- prepare animals for visits:
 - animals should be groomed and be free of fleas or ticks;
 - animals are transported in a clean carrier or on a clean leash;
 - animals must be leashed at all times or in a carrier between rooms;
 - animals must be healthy on the day of the visit;
 - animals must not have received raw food within 90 days of visiting;
- ensure appropriate resident and animal contact:
 - prevent animals from entering room on Additional Precautions;
 - prevent contact of animals with invasive devices or open wounds;
 - prevent animals from licking or shaking paws;
 - use barrier methods when placing animals on beds.

Post-Mortem Care

Bedside post-mortem care is the process of preparing the deceased for visitation from the family and preparation to be received by the funeral home. Following the principles listed below will ensure that the risk of transmission of infectious microorganisms is low:

- maintain Routine Practices throughout the procedure to protect from exposure of blood and body fluids;³⁴
- remove all invasive lines and devices;⁴¹
- pack wounds and natural openings with absorbent material and bandage to contain body fluids;⁴¹
- if the resident was on Contact Precautions prior to death, wear gloves and gown if potential contamination of uniform is anticipated;³⁴
- if the resident was on Airborne or Droplet Precautions prior to death, wearing a mask post mortem is not necessary unless the staff member anticipates that aerosols may be generated during the handling of the body;⁴¹
- clean and disinfect the room as per routine terminal cleaning.³⁴ Refer to *The Environment* section of this manual for more information;

- discard the resident's personal creams, lotions and soaps.³⁴

Additional Resources

For additional information about Resident Care, refer to the following document in the *Resources* section of this manual:

- Sample Specimen Collection Policies and Procedures
- Sample Pets and Pet Therapy Policies and Procedures

8. Surveillance, Reportable Diseases and Outbreaks

Overview

A simple, practical system needs to be established in all hospices for the ongoing collection of information on infections in both residents and staff.^{20, 35} Screening of residents, staff and/or visitors for symptoms of an infectious illness is an important component of infection prevention. Syndromic surveillance should be done on a regular basis. The minimum information collected should include type of infection, date of onset, location in the hospice and any relevant laboratory result. The IPAC Lead should be responsible to:

- review surveillance information and recommend IPAC measures in response to identified problems;
- utilize the surveillance information to direct appropriate resident care, detect an increase in infections and intervene to prevent outbreaks.

Goals of Surveillance

Surveillance is carried out to:

- help prevent/reduce transmission of infection;
- identify opportunities to reduce risk;
- provide a mechanism to detect the increased incidence of infection;
- measure effectiveness of control measures;
- identify infections and communicable diseases early in order to take immediate action and prevent transmission.

Resident Admission Surveillance and Screening

If possible, perform active surveillance prior to admission by communicating with the health care provider or primary caregiver about possible infections or contagious illnesses. As part of a systems assessment that is done in the first 24 hours, consider including the following:

- ✓ Has the resident ever been colonized or infected with an antibiotic-resistant microorganism (e.g., MRSA, VRE)?
- ✓ Is the resident experiencing undiagnosed nausea, vomiting, or diarrhea?
- ✓ Has the resident had *Clostridium difficile* (*C. difficile*) in the last 60 days?
- ✓ Does the resident have a new cough/worse cough or shortness of breath?³³
- ✓ Is the resident febrile?
- ✓ Is there any evidence of an undiagnosed rash or any open wounds?

These questions will help staff plan and prepare to manage infections and prevent transmission to others.

Resident Syndromic Surveillance

Staff will have heightened awareness to residents experiencing signs and symptoms of infection and report to the IPAC Lead or Resident Care Coordinator,^{23, 24} e.g.:

- respiratory – fever, cough, shortness of breath with no known cause;
- gastrointestinal (GI) – sudden onset diarrhea and vomiting with no known cause;
- new rash with no known cause.

In addition:

- use Additional Precautions for any resident with these syndromes until further assessment has been completed;
- look for same symptoms in other residents;
- liaise with physician, and/or others as necessary regarding management of resident symptoms;
- document findings;
- report any concern to the local public health unit;
- use standardized case definitions of infections as provided in the *Resources* section of this manual.

Staff and Volunteer Syndromic Surveillance

Syndromic surveillance is important for staff and volunteers:

- staff and volunteers are encouraged to stay home when sick.
- it is important to identify if there is an increased number of illnesses related to communicable diseases in staff and volunteers.
- document all staff and volunteer illness and report identified trends to IPAC Lead.

Family and Visitor Syndromic Surveillance

Family and visitors are extremely important at end-of-life care. Incorporating both active and passive screening measures may reduce exposures of infectious diseases to the resident population.³⁵

Any visitor who has a potential or suspected infection (e.g., fever and new or worse cough OR have new onset vomiting and diarrhea with no known cause) should refrain from or postpone the visit if possible. Suggest that visitors discuss strategies to protect others with staff prior to the visit. If visitors are ill and will be visiting, recommend that they:

- perform hand hygiene upon entrance to the facility, the resident's room, prior to touching the resident, after performing body functions and when leaving the resident's room;
- only visit with the loved one they came to see, avoid visiting other residents, families and visitors;
- shorten the length of the visit when possible;
- leave the facility immediately after the visit;
- encourage respiratory etiquette:
 - use elbow, or tissue to contain respiratory secretions when sneezing and coughing;

- wear a procedure mask (if tolerated), if fever and cough are present;
- discard tissue in waste basket and perform hand hygiene;
- avoid common gathering areas, e.g., kitchen, living room, lounges.

Passive Screening

Place signage at the entrance of the hospice recommending no visiting when ill (recommended at all times). This involves reliance on all that enter the building to follow the posted instructions.³⁵

Active Screening

Consider having a volunteer screen the visitors when able, especially during times when epidemic levels of active communicable disease are present in the community, e.g., influenza season (active screening may not be possible). This involves actively seeking out potentially contagious individuals on a regular basis.³⁵

Reportable Diseases

Ontario's *Health Protection and Promotion Act* states that certain infectious diseases or suspected occurrences of these diseases must be reported to Public Health by health care providers, laboratories and administrators of institutions. Public Health in turn must report these diseases, known as *reportable diseases*, to the Ministry of Health and Long-Term Care. Diseases that are deemed 'reportable' require that staff report any incidence of these diseases because they may be a public health risk. The source of the disease needs to be investigated in order to prevent others from getting infected and transmitting the disease.¹⁴

- know how to contact the local public health unit if you have concerns about a reportable disease; also need to ascertain who is responsible to make this contact;
- those diseases on the reportable disease list that are marked with an asterisk "*" are deemed to be of high urgency and should be called to Public Health immediately; do not make a judgment as to the need to report a reportable disease - there is a duty to report; all public health units have a 24/7 on-call system; Public Health can provide a reportable disease list and contact information for reporting;
- when a staff member suspects that the resident has or may have (i.e., query or suspect) a reportable disease, they should notify Public Health as soon as possible;
- each disease does require additional information; Public Health may contact the professional providing care to the resident after the report has been received;
- institutional gastroenteritis and respiratory infection outbreaks are reportable.

- Refer to *Specification of Reportable Diseases*, O. Reg 559/91 under the *Health Protection and Promotion Act* for the list of reportable diseases in Ontario; available from:
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_910559_e.htm.

Outbreak Prevention and Management

Surveillance information can be used to detect and prevent outbreaks of infection within the residential hospice. A written policy should be developed that defines the authority for intervening in an outbreak situation. This policy would include communication, initiating precautions, assessing visitors, volunteers and

staff, collection of lab specimens, administering prophylaxis and/or treatment and liaison with Public Health.²³

Examples of outbreaks which must be reported to Public Health:

- an increased number of respiratory or gastrointestinal infections;
- a single case of *Legionella* or another disease listed on the reportable disease list.

It is recommended to call Public Health as soon as a concern is identified. Ensure you know who to call and how to report during weekdays and after hours.

OUTBREAK PREVENTION AND MANAGEMENT

“The term outbreak refers to an incidence of hospice-acquired infection that is greater than expected or the occurrence of an unusual infection, even if it is only a few cases. The term is used to alert the hospice care organization’s leaders that something out of the ordinary may be occurring and should be investigated. There is no specific arbitrary or statistical threshold that signals the occurrence of infectious disease in epidemic proportions. Detection is more a matter of judgment based on experience and, if available, data.”

Infection Control in Home Care and Hospice⁴¹, 2005 [Page 187]

Pandemic Influenza Planning

Each hospice needs to have an internal plan for managing an influenza outbreak that includes staffing, supplies, etc. It is important to have triggers to identify accountabilities and steps to move into various phases within the internal pandemic plan. As well, it is prudent for hospices to collaborate with local Community Care Access Centres and Public Health to ascertain whether external, regional pandemic plans may have implications for the hospice pandemic plan. The Ontario Ministry of Labour is responsible to ascertain whether hospices have a pandemic plan, in order to ensure staff safety and needs have been taken into account.^{24, 35}

Additional Resources

For additional information and guidance on surveillance for reportable diseases and outbreaks, refer to the following in the *Resources* section of this manual:

- IPAC Audit Tool for Hospices
- Standard Definitions of Infections
- Syndromic Surveillance Tool: Monthly Report of Infections
- Febrile Respiratory Illness Screening Tool
- Visitor Screening “Stop” Sign for Entrances
- Reportable Disease List
- Sample GI Outbreak Management Policies and Procedures
- Sample Outbreak Management Team Policies and Procedures

Resources to build a hospice pandemic plan may be found by reviewing the Ontario Pandemic Influenza Plan by the Emergency Management Unit of Ontario, located at:

http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/pan_flu_plan.html.

LOCAL PUBLIC HEALTH CONTACTS

Complete the following information and ensure it is readily available to staff for notification of Public Health as needed. A list of reportable diseases may be found in the *Resources* section of this manual.

Name of Health Unit: _____

Address: _____

Phone Number: _____

Fax Number: _____

Website: _____

Medical Officer of Health: _____

Communicable Disease Contact: _____

Phone Number: _____

Fax Number: _____

Email: _____

9. The Environment

Overview

The physical environment of a hospice setting can harbour many microorganisms that are capable of causing infection in susceptible residents. One of the Routine Practices risk reduction strategies is maintaining a clean and safe environment; this can be achieved by cleaning the hospice according to cleaning guidelines on a routine and consistent basis.²⁸

Selecting Finishes and Surfaces

When purchasing furnishings and selecting finishes:

- consider ease of cleaning in the choice of materials/finishes;
- materials/finishes should be compatible with hospital-grade cleaners/disinfectants;
- consider seeking IPAC expertise and/or environmental services expertise when choosing materials/finishes;
- surfaces in health care settings should be:
 - easy to maintain/repair;
 - cleanable;
 - unable to support microbial growth;
 - smooth, nonporous;
 - seamless;
- replace worn, stained, torn, cracked items;
- do not use cloth furnishings that cannot be cleaned especially in common areas;
- surfaces treated with antimicrobials are not recommended as their usage is not currently supported by research.

Environmental Cleaning

A. Evidence for Cleaning

Health care environments have been shown to be a reservoir for bacteria (e.g., MRSA, VRE, *C. difficile*), viruses (e.g., influenza, norovirus) and fungi. In general:

- the environment around the resident can contribute to transmission of infection;
- cleaning and disinfection reduces the numbers of microorganisms in the health care environment;
- the goal of cleaning is to keep the environment safe for residents, staff, and visitors.

B. The Environment as a Reservoir

The environment of health care settings is a steady source of microorganisms:

- residents shed microorganisms into the health care environment;
- bacteria and viruses survive on surfaces for days to months;

- many surfaces and care equipment have been shown to be contaminated;
- cleaning disrupts the transfer of microorganisms to staff hands and other residents.

C. Important Cleaning Principles

The frequency of cleaning an object or surface depends on whether it is classified as ‘high-touch’ or ‘low-touch’.

High-Touch Surfaces:

- surfaces that have frequent contact with hands;
- examples include doorknobs, bed rails, hall rails, light switches and computer keyboards;
- require more frequent cleaning and disinfection than minimal contact surfaces;
- cleaning of these items should be done at least daily.

Low-Touch Surfaces:

- surfaces that have minimal contact with hands;
- examples include walls, ceilings, mirrors and window sills;
- require cleaning on a regular (but not necessarily daily) basis, when soiling or spills occur, and when a resident leaves the hospice.

D. Carpet Care

Despite the evidence of bacterial growth and persistence in carpeting, there is only limited epidemiologic evidence to demonstrate that carpets influence health care-associated infection rates in areas housing *immunocompetent* residents. Carpeting should not be used in areas where spills/contamination are likely or areas for *immunocompromised* residents, as there is evidence to suggest that it can influence health care-associated infection rates in that population.²⁸ Other considerations:

- if carpeting is used, it should be cleanable and maintained;
- both vacuuming and shampooing or wet cleaning can disperse microorganisms into the air;
- vacuuming of carpets should be done with a HEPA-filtered vacuum;
- cleaning equipment, especially those used for wet cleaning and extraction, should be cared for and properly maintained as they can serve as a reservoir for waterborne microorganisms;²⁸
- vacuuming carpets during outbreaks of norovirus has the potential to re-circulate the virus and is not recommended;²⁸
- to assess the cleanliness of carpet, the following criteria can be used:
 - carpet is free of debris, visible dust;
 - stains and spills are cleaned immediately for extraction;
 - torn carpeting is promptly repaired and/or replaced.

SAMPLE CLEANING CHECKLIST: Cleaning a Biological Spill on Carpet

- ☐ Contain the spill and note any splashing on surrounding walls or furniture.
- ☐ Assemble materials required for dealing with the spill prior to putting on PPE.
- ☐ Restrict the activity around the spill until the area has been cleaned and disinfected and is completely dry.
- ☐ Put on gloves; if there is a possibility of splashing, wear a gown and facial protection (mask and eye protection or face shield).
- ☐ Mop up as much of the spill as possible using disposable towels.
- ☐ Disinfect the entire spill area with a hospital-grade disinfectant and allow it to stand for the amount of time recommended by the manufacturer.
- ☐ Safely dispose of the cleanup materials and gloves by placing them in the waste receptacle, unless the soiled materials are so wet that blood can be squeezed out of them, in which case, they must be segregated into the biomedical waste container (i.e., yellow bag).
- ☐ Remove gloves and perform hand hygiene.
- ☐ Arrange for the carpet to be cleaned with an industrial carpet cleaner as soon as possible.

Adapted from PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings²⁸, 2009 [Page 98, Box 33]

E. Cleaning Agents and Disinfectants²⁸

Cleaning agents and disinfectants include alcohols, chlorines, hydrogen peroxide, accelerated hydrogen peroxide and quaternary ammonium compounds.¹⁰ When using cleaning and disinfecting agents:

- commercial formulations of disinfectants must be registered with Health Canada and display a Drug Identification Number (DIN);
- disinfectants are not always interchangeable; a given product is designed for a specific purpose and is to be used in a certain manner
- read labels carefully to ensure the correct product is selected for the intended use and is applied efficiently and correctly.

F. Microfibres²⁸

Microfibre is densely constructed, polyester and polyamide (nylon) fibres that are approximately 1/16 the thickness of human hair:

- positively charged microfibres attract dust and bacteria (which have a negative charge), using a combination of static attraction and capillary action;
- microfibre materials are more absorbent than conventional cloths or cotton-loop mops;
- microfibre materials can be used dry for dusting or wet for general-purpose cleaning;
- microfibre materials can be damaged by fabric softeners, oils and grease, highly alkaline products such as bleach, some surfactants, and high heat (washing temperature cannot exceed 93°C/200°F; drying temperature cannot exceed 60°C/140°F);
- ultramicrofibres are thinner than regular microfibres and woven from a continuous strand; they are designed to be used with low volumes of water containing neither detergent nor biocidal additives.

G. Antimicrobial-Impregnated Supplies and Equipment²⁸

Items are continually being developed that incorporate antibacterial or antimicrobial chemicals into them (e.g., toothbrushes, flooring, countertops, pens, linens). There is no evidence to suggest that the use of these products will make individuals healthier or prevent disease.

H. Green Cleaning

There is an increasingly popular movement to adapt 'green'/environmentally friendly practices into the health care environment:

- this includes the use of green products for cleaning and disinfection;
- the purpose of this movement is to reduce both the health and environmental impacts of cleaning and disinfection products and procedures;
- it is possible to clean effectively, efficiently, and with less impact on the health and environment;
- hospices should consider the use of 'greener' products whenever possible, but should ensure that the product still meets the cleaning and/or disinfection needs of the facility.

IPAC for Housekeeping**A. Education**

Those performing housekeeping duties must receive ongoing training in IPAC practices as well as proper cleaning procedures. This should be done on hire, annually (at a minimum) and whenever deemed necessary (e.g., when a new cleaning product is introduced).²⁸ Educational programs should include:

- Routine Practices, including:
 - hand hygiene;
 - appropriate use of PPE, including:
 - types of PPE including gloves, gown, masks, and respirators;
 - proper technique to put on and take off PPE;
 - cleaning rooms of residents on precautions (e.g., selecting appropriate PPE);
 - prevention of blood and body fluid exposure, including sharps safety;
 - principles of cleaning, including:
 - cleaning spills of blood and body fluids;
 - cleaning techniques;
 - Workplace Hazardous Material Information System (WHMIS) training;
 - handling and application of cleaning agents and disinfectants;
 - handling of laundry;
 - waste management;
- Additional Precautions, including:
 - Contact Precautions;
 - Droplet Precautions;
 - Airborne Precautions.

B. Frequency of Cleaning

Cleaning frequency will depend on:

- whether the surface is high-touch or low-touch (see glossary for examples of high/low-touch surfaces);
- type of activity taking place in the area;
- vulnerability of residents in the area;
- probability of contamination.

C. Assessment of Cleanliness

There are many ways to assess/audit cleanliness including visual assessment, observation of performance, resident satisfaction surveys, and methods to measure residual bioburden:

- cleaning audits should occur at a regular interval to ensure ongoing monitoring of cleaning processes;
- results of cleaning assessments should be provided to those who are cleaning, to ensure that correction of any deficiencies occurs.

D. Terminal Cleaning

Terminal cleaning may also be termed *vacancy* cleaning:

- performed when a resident is discharged, transferred, dies, or when precautions are discontinued;²⁸
- bed space requires a thorough cleaning before the next admission;^{10, 28}
- duties include (in addition to routine cleaning practices):
 - removal or discarding of medical supplies;
 - emptying of suction bottles, discarding IV bags and tubing, discarding urinary catheter collection bags, emptying and disinfection of bedpans/commodes/urinals/washbasins;
 - removal of oxygen therapy equipment;
 - disposal of, or return to family, personal articles left by the resident (**do not re-use**).

E. Cleaning of Resident Rooms on Additional Precautions²⁸

The following additional measures should be taken when cleaning resident rooms on precautions:

- rooms on Additional Precautions should be stocked with supplies sufficient for 1 shift;
- before putting on required PPE, assemble all required cleaning supplies;³⁴
- after cleaning room, remove and discard all PPE prior to moving to another room;³⁴
- for Contact Precautions, wear a gown and gloves to enter the room;³⁴
- for Droplet Precautions, wear facial protection (i.e., mask and eye protection) when working within two metres of the resident;^{27, 33}
- for Airborne Precautions, wear a fit-tested N95 respirator;^{27, 34}
- for residents with *Clostridium difficile*, specialized cleaning is required:^{32, 34}
 - clean rooms of residents with *C. difficile* twice daily with a hospital-grade disinfectant;
 - clean bathrooms of residents with *C. difficile* twice daily with a sporicidal agent such as sodium hypochlorite (1000 ppm), accelerated hydrogen peroxide (4.5%), or peracetic acid (1.6%);
- for residents with VRE, fresh cloths, mop heads and bucket must be used for each room and only for

- that room; some facilities may require double-cleaning;
- for residents with MRSA, specialized cleaning of rooms is not required.³¹

SAMPLE CLEANING CHECKLIST: Daily Routine Cleaning of a Resident Room

- ☐ Check for Additional Precautions signs and follow the precautions indicated
- ☐ Ensure an adequate supply of clean cloths is available
- ☐ Prepare fresh disinfectant solution according to manufacturer's instructions
- ☐ Clean doors, door handles, push plate and touched areas of frame
- ☐ Check walls for visible soiling and clean if required
- ☐ Clean light switches and thermostats
- ☐ Clean wall-mounted items such as alcohol-based hand rub dispenser, glove box holder and replace as necessary
- ☐ Check and remove fingerprints and soil from interior glass partitions, glass door panels, mirrors and windows with glass cleaner
- ☐ Clean all furnishings and horizontal surfaces in the room including:
 - ☐ Chairs
 - ☐ Window sill
 - ☐ Television and cords
 - ☐ Telephone
 - ☐ Computer keyboards
 - ☐ Night table and other tables or desks
- ☐ Wipe equipment on walls such as top of suction bottle, intercom and blood pressure manometer as well as IV pole
- ☐ Clean bedrails, bed controls and call bell, including cord
- ☐ Clean bathroom/shower according to facility procedure for bathrooms
- ☐ Clean floors according to facility procedure for floors
- ☐ Place soiled cloths in designated container for laundering
- ☐ Check sharps container and change when 3/4 full (do not dust the top of a sharps container)
- ☐ Place obvious waste in receptacles
- ☐ Remove waste
- ☐ Replace supplies as required (e.g., toilet paper, paper towels, soap, alcohol-based hand rub, gloves, sharps container)
- ☐ Replace privacy curtain

Adapted from PIDAC's *Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings*²⁸, 2009 [Page 74, Box 15]

F. Cleaning Spills of Blood and Body Substances²⁸

A written policy and procedure should be available for staff outlining the steps to take when cleaning up a blood or body substance spill, including who is responsible for cleaning such spills. Spills of blood and other body substances such as urine, feces and vomit must be contained, cleaned and disinfected immediately.

SAMPLE CLEANING CHECKLIST: Cleaning a Biological Spill

- ☐ Assemble materials required for dealing with the spill prior to putting on PPE
- ☐ Restrict the activity around the spill until the area has been cleaned and disinfected and is completely dry
- ☐ Put on gloves; if there is a possibility of splashing, wear a gown and facial protection (mask and eye protection or face shield)
- ☐ Confine and contain the spill; wipe up any blood or body fluid spills immediately using either disposable towels or a product designed for this purpose. Dispose of materials by placing them into regular waste receptacle, unless the soiled materials are so wet that blood can be squeezed out of them, in which case they must be segregated into the biomedical waste container (i.e., yellow bag)
- ☐ Disinfect the entire spill area with a hospital-grade disinfectant and allow it to stand for the amount of time recommended by the manufacturer
- ☐ Inspect the area around the spill thoroughly for splatters or splashes
- ☐ Wipe up the area again using disposable towels and discard into regular waste
- ☐ Care must be taken to avoid splashing or generating aerosols during the clean up
- ☐ Remove gloves and perform hand hygiene

*Adapted from PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings*²⁸, 2009 [Page 97, Box 32]

Tub Cleaning and Disinfection

Considerations related to cleaning and disinfection of tubs include:

- only residents who are continent and have intact skin can use a shared tub;
- tubs should be properly maintained according to the manufacturer's directions;²⁸
- shared tubs and shared tub equipment, such as a tub stretcher or chair, must be drained, cleaned, and disinfected with a low-level disinfectant between each resident use;²⁸
- evaluation of the cleanliness of a tub includes:
 - tub and fixtures are free of visible dust, soiling, soap scum, and stains;
 - cracked and/or broken tubs are reported promptly for repair and/or replacement.²⁸

Laundry and Linen

When all elements of Routine Practices and the use of PPE are used, there is little potential for transmission of infection from soiled linen.^{10, 28} Laundry from residents on Additional Precautions requires no special handling.²⁸

The following principles should be adhered to when handling resident linens and laundry:²⁸

- appropriate PPE, such as gloves and gown or aprons, should be available;
- linen should be handled with a minimum of agitation and shaking;
- if items may be soiled with blood or body fluids, sorting and rinsing should not occur in care areas;
- heavily soiled linen should be rolled or folded to contain the heaviest soil in the centre of the bundle;

- large amounts of solid soil, feces, or blood clots should be removed from linen with a gloved hand and toilet tissue, then placed into a bed pan or toilet for flushing;
- soiled linen should be bagged at the site of collection;
- double bagging of linen is only necessary if the outer bag is leaking or torn;
- linen and laundry for residents on Additional Precautions do not need to be separated from other resident laundry;
- laundry bags should not be over-filled;
- linen bags should be washed after each use;
- clean linen should be transported and stored in a manner that prevents its contamination and ensures its cleanliness;
- if low temperature water is used for laundry cycles, chemicals suitable for low temperature washing at the appropriate concentration should be used;
- high temperature washes (>71.1°C) are necessary if cold water detergents are not used;
- a hand washing sink should be readily available in laundry areas.

Mattress Maintenance and Cleaning

When selecting a mattress type for your facility, it should be:²⁸

- seamless where possible or have double-stitched seams;
- easily accessed for cleaning;
- resistant to mould;
- made of moisture-resistant material that is easy to clean;
- not damaged by detergents and disinfectants;
- quick-drying;
- maintained in good repair.

Other considerations:

- fabric covers are not recommended; if used, they should be laundered between residents;
- plastic mattress covers may be considered to help prevent bed bug infestations;
- patches for tears and holes in mattresses do not provide an impermeable surface over the mattress so mattresses should be replaced when worn, stained, or torn.

Maintenance and cleaning of the mattress includes:

- cleaning of the top side of mattress, turning over, and cleaning the underside; if turning the mattress over is not possible, the mattress bottom should be inspected when cleaning to ensure the mattress is not damaged or soiled underneath;
- checking for worn, stained, or torn areas and sending for repair or replacement;
- allowing the mattress to dry completely once cleaning is complete;
- using cleaning products that are compatible with the type of mattress in use;
- following manufacturer's instructions for cleaning and disinfecting of specialized mattresses;
- cleaning mattress between residents, when visibly soiled and according to facility cleaning regimen.

Ice Machines

Many incidents of bacteria being isolated from ice, ice-storage chests and ice-making machines have been reported^{2, 10, 28}.

- ice may become contaminated if the water source for the ice is contaminated and from contaminated hands touching the ice;
- to minimize contamination, ice machines that dispense ice directly into a container are preferred; if an older machine is used, a scoop must be provided that is cleaned and disinfected on a daily basis;
- ice scoops must be stored outside of the ice machine to prevent the handle that people touch from coming into contact with the ice; ice is a medium for norovirus as well as other viruses and bacteria which can be transmitted to ice from unwashed hands;
- ice machines and ice chests should be cleaned at least quarterly, and when visibly soiled.

SAMPLE CLEANING CHECKLIST: Ice Machines

Daily

- ☐ Visually inspect ice machines daily and report any signs of mould.
- ☐ Replace ice scoop daily and send for cleaning.
- ☐ Do not store food or other items in ice chests or machines.

Quarterly

- ☐ Disconnect power supply to ice machine.
- ☐ Remove machine away from resident care area.
- ☐ Remove and discard ice from bin.
- ☐ Allow unit to warm to room temperature.
- ☐ Disassemble removable parts of machine.
- ☐ Thoroughly clean machine and parts with water and detergent.
- ☐ Remove scale from machine components.
- ☐ Rinse components with fresh potable tap water.
- ☐ Clean ice storage chest or bin with fresh water and detergents; rinse with fresh potable tap water.
- ☐ Sanitize machine by circulating 100 ppm solution of sodium hypochlorite through the icemaking and storage systems for two hours.
- ☐ Drain sodium hypochlorite solution and flush with fresh potable tap water.
- ☐ Allow all surfaces to air dry.
- ☐ Check for required repairs or maintenance (e.g., filter changes).
- ☐ Apply a label to the ice machine noting date of cleaning.

Adapted from PIDAC's *Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings*²⁸, 2009 [Page 83, Box 21]

Toy Cleaning

Toys can be a reservoir for potentially pathogenic microorganisms that can be present in saliva, respiratory secretions, feces, or other body substances.²⁸ Outbreaks associated with toys have been described.²⁸ If your hospice has toys for visiting children, be sure to observe the following principles. Toys should:²⁸

- be nonporous and able to withstand rigorous mechanical cleaning;
- be dedicated to individual residents when possible (e.g., plush toys, colouring books, crayons);
- not be used if water-retaining;
- not be cleaned with phenolics.

SAMPLE CLEANING CHECKLIST: Toys

Daily Clean with Detergent and approved Disinfectant

- ☐ Clean toys that may be 'mouthed' (e.g., infant and toddler toys).
- ☐ Clean high-touch surfaces of shared electronic games (e.g., keyboards, joysticks).
- ☐ Clean high-touch surfaces of playhouses/climbers/rocking horses.
- ☐ Clean high-touch surfaces in playrooms (e.g., tables, chairs, doorknobs).
- ☐ Discard shared books, magazines, puzzles, cards and comics when visibly soiled and after use in rooms where the resident is on Additional Precautions.

Scheduled Clean

- ☐ Clean toy storage bins/boxes/cupboards/shelves.
- ☐ Clean all surfaces of playhouses/climbers.

Adapted from PIDAC's *Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings*²⁸, 2009 [Page 84, Box 22]

Heating, Ventilation and Air Conditioning (HVAC)

HVAC systems are known to be a source of microorganisms²⁸:

- the spread of microorganisms such as *Legionella* species, *Aspergillus* species, and *Mycobacterium tuberculosis* have been linked to poor maintenance and handling of facility ventilation systems;
- it is imperative that facilities have an effective air handling system that is appropriate to the requirements of the facility and is maintained according to the manufacturer's/Canadian Standards Association (CSA) specifications;
- several regulations and standards are in place to guide your facility in HVAC system design and maintenance. Contact your local RICN to access these resources or for answers to your heating and ventilation questions related to IPAC.

Construction, Renovation, and Maintenance

The built environment is a source of bacteria and fungi:

- construction, renovation and maintenance projects should be reviewed for their infection control risks before commencement;
- several standards are in place to guide your facility in managing the IPAC risks involved in construction, renovation, and maintenance; refer to Canadian Standards Association documents located at: <http://www.shopcsa.ca/onlinestore/GetCatalogDrillDown.asp?Parent=3680>;
- when projects are occurring in the hospice setting, regular rounds should be made to examine whether appropriate IPAC principles are followed;
- if there is a risk of dust generation, barriers should be erected to protect the rest of the facility.

Rodent and Pest Control

Adequate control of rodents and pests is important to prevent vectorborne infections and to keep food safe:

- cockroaches, flies, ants, mosquitoes, mites, bedbugs and mice are some examples of pests/rodents that may be encountered in the hospice setting; these can act as vectors in disease transmission;
- in order to minimize the risk of rodent and/or pest problems:
 - educate staff, residents, and visitors about the importance of not keeping food in drawers and closets in resident rooms;
 - label and date food left in the resident's room and placed it in an adequate storage container with a tight fitting lid;
 - ensure that food disposal processes are appropriate (e.g., disposing of kitchen scraps);
 - inspect the outside of the building regularly for bird nests, bee hives and other evidence that rodents, pests, and/or animals are living close to the building;
 - keep screens in good condition and repair promptly when required;
 - do not leave doors to the outside open;
 - consider contacting a reliable pest/rodent control company if there is a pest or rodent issue;
 - regular service by a licensed pest control operator is recommended to help prevent pest problems (it is harder to get rid of a problem than prevent the problem).

Waste Management

Legislation dictates that biomedical waste be handled and disposed of in a manner that avoids transmission of potential infectious microorganisms:^{21, 34}

- biomedical waste shall be segregated into either a plastic bag or rigid container with a non-removable lid; the container shall be capable of withstanding the weight of the biomedical waste without tearing, cracking, or breaking;
- waste bags should be waterproof and thick enough that they will not puncture or tear easily;
- double-bagging is only necessary when the first bag becomes stretched or damaged, or when waste has spilled on the exterior;

- when a bag is three-quarters full, it should be closed and tied;
 - segregated waste should be removed to central holding areas at frequent intervals and be stored in leak-proof bins that are cleaned with a disinfectant solution prior to reuse;
 - waste bags in use should never be allowed to sit (rest) directly on the floor.
- Refer to Table 2 describing different types of waste and their disposal streams.

Table 2: Disposal Streams for General and Biomedical Waste

Waste Category	Colour Code	Examples	Disposal
Anatomical waste	Red	Tissues, organs, body parts	<ul style="list-style-type: none"> ▪ Incineration ▪ Package in a sealed, impervious container that is refrigerated or frozen until disposal ▪ Do not store longer than one week
Microbiologic waste	Yellow	Diagnostic specimens, cultures	<ul style="list-style-type: none"> ▪ Incineration, <i>or</i> ▪ Treatment that is capable of inactivating spores (e.g., autoclave), then landfill
Fluid waste	Yellow	Drainage collection units, suction container contents, blood, blood products, bloody body fluids and other materials that will release liquid or semi-liquid blood if compressed	<ul style="list-style-type: none"> ▪ Sanitary sewer, if permitted by municipal bylaws, <i>or</i> ▪ Incineration, <i>or</i> ▪ Treatment that is capable of inactivating spores (e.g., autoclave), then landfill
Sharps	Yellow <i>or</i> red if incinerated	Needles, syringes, lancets, blades, clinical glass	<ul style="list-style-type: none"> ▪ Incineration, <i>or</i> ▪ Treatment that is capable of inactivating spores, then landfill
General waste	Green, black or clear	<p>Dressings, sponges, diapers, incontinent pads, PPE, disposable drapes, dialysis tubing and filters, empty IV bags and tubing, catheters, empty specimen containers, lab coats, aprons and pads that will not release liquid or semi-liquid blood if compressed</p> <p>Isolation waste from Contact, Droplet and Airborne Precautions rooms</p> <p>Waste from offices, kitchens, washrooms, public areas</p>	<ul style="list-style-type: none"> ▪ Landfill

Adapted from PIDAC's *Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings*²⁸, 2009 [Page 49]

- For more information about biomedical waste, refer to the *Management of Biomedical Waste in Ontario* (Guideline C-4), available at:
<http://www.ene.gov.on.ca/moescripts/format-env.asp?format=pdf>.

Additional Resources

For additional information and guidance on the Environment refer to the following documents in the *Resources* section of this manual:

- IPAC Audit Tool for Hospices
- Selection Criteria for Surface Cleansers/Sanitizers
- Selection Criteria for Low-Level Disinfectants
- Sample Room Cleaning Policies and Procedures

10. Cleaning, Disinfection and Sterilization of Medical Equipment and Devices

Overview

Appropriate cleaning, disinfection and/or sterilization of medical equipment and devices is critical in limiting the transmission of microorganisms within the residential hospice setting. The method utilized for reprocessing of specific piece of equipment or device will depend on its intended use and the risk of infection to the resident.^{1,2,8,9,27}

The majority of medical equipment/devices used in a hospice setting are considered to be noncritical items (e.g., bedpans, stethoscope). Items shared between residents are to be disinfected using a low-level disinfectant.

The process required to achieve high-level disinfection or sterilization of medical equipment/devices involves multiple steps and important considerations. This process is complex, requiring specialized equipment, dedicated space, trained staff and regular monitoring to ensure standards are being met. The steps for sorting, cleaning, drying, packaging, high-level disinfecting, sterilizing and storing need to be completed correctly to make certain the instruments are safe to be re-used on other residents.^{1,2,8,9,27} Residential hospices that choose to reprocess medical equipment/devices on-site must be compliant with the standards and best practices relating to all processes involved in cleaning, disinfection and sterilization.^{1, 8, 9, 27}

- For complete information regarding reprocessing medical equipment/devices, refer to PIDAC's *Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices in All Health Care Settings, 2010*,²⁷ available at:
http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html.

Written Policies and Procedures

It is recommended that hospices have policies and procedures based on current recognized standards/recommendations that are reviewed, at a minimum, annually.²⁷

Policies and procedures of the hospice setting should include:

- responsibilities of management staff;
- qualifications, education and training for staff involved in reprocessing;
- assessment of competency in reprocessing;
- health and safety activities;
- preventive maintenance requirements;
- manufacturer's recommendations and protocols for all medical equipment/devices.

Education and Training

Staff involved in the cleaning, disinfection and sterilization of medical equipment/devices must be properly trained and their practices audited on a regular basis to verify that standards are met.²⁷

Occupational Health and Safety Issues

The person responsible for OHS in the residential hospice setting will:²⁷

- review all protocols for reprocessing medical equipment/devices;
- verify that worker safety measures are followed and are in compliance with appropriate *Occupational Health and Safety Act(s)*;
- ensure that appropriate policies regarding staff safety are in place for:
 - appropriate PPE;
 - hepatitis B immunity or hepatitis B immunization;
 - management of injuries from sharp objects;
 - immediate response to worker exposure to blood and body fluids.

Environmental Considerations

Best practice dictates that reprocessing will occur in a centralized area and not in any resident care area.²⁷ The environment where cleaning is performed will:

- have adequate space for the cleaning process and storage of necessary equipment and supplies;
- be an area of minimal traffic;
- be distinctly separate from areas where clean, disinfected and/or sterile equipment/devices are handled or stored;
- have easy access to hand hygiene facilities;
- have surfaces that can be easily cleaned;
- have air changes, temperature and humidity appropriate to the process/product being used;
- be aware of the quality of its water supply and develop policies to address known problems.

Single-Use Medical Equipment/Devices

Specific items are classified as single-use only. These items must never be reprocessed or re-used. If in doubt, refer to the manufacturer's recommendations.

The symbol at right indicates *single-use* and is usually placed on the packaging by the manufacturer.



Purchasing and Assessing Medical Equipment/Devices

The appropriate selection of equipment and devices is imperative to ensure that they can be adequately cleaned and disinfected. No medical equipment or device should be used in the hospice setting if it cannot be properly cleaned and disinfected or sterilized.

If you are not involved in the purchasing procedures for your equipment and devices (i.e., it is done by a central organization such as Community Care Access Centre), you remain responsible for ensuring that the item can be cleaned and disinfected or sterilized appropriately. You should notify the purchaser if an item cannot be adequately reprocessed in your setting. You should also consider OHS requirements, resident safety and environmental safety issues when assessing the appropriateness of a piece of equipment or a medical device.

In addition to the appropriate selection of equipment and devices, products used for any/all stages of reprocessing (e.g., cleaning, disinfection, and sterilization) must be appropriate for their intended use.

Selection of Process for Reprocessing

The reprocessing method and products required for medical equipment/devices will depend on the intended use of the equipment/device and the potential risk of infection involved. The classification system developed by Spaulding divides medical equipment/devices into three categories based on the potential risk of infection involved in their use (Table 3).

Table 3: Spaulding's Classification of Medical Equipment/Devices and Required Level of Processing/Reprocessing

Classification	Definition	Level of Processing/ Reprocessing
Critical equipment/device	Equipment/device that enters sterile tissues, including the vascular system.	Cleaning followed by sterilization.
Semicritical equipment/device	Equipment/device that comes in contact with nonintact skin or mucous membranes but does not penetrate them.	Cleaning followed by high-level disinfection (as a minimum). Sterilization is preferred.
Noncritical equipment/device	Equipment/device that does not touch the resident or that touches only intact skin. Does not touch mucous membranes.	Cleaning followed by low-level disinfection (in some cases cleaning alone is acceptable).

Adapted from: Spaulding: *The role of chemical disinfection in the prevention of nosocomial infections*. In: International Conference on Nosocomial Infections; Chicago, IL: American Hospital Association; 1970.

The products and process used for cleaning, disinfection and/or sterilization must be compatible with the medical equipment/devices and appropriate to the level of reprocessing that is required for the use of the equipment/device. All medical equipment/devices that will be purchased and will be reprocessed must have:

- written device-specific manufacturer's instructions for cleaning, disinfection, wrapping and sterilization;
- detailed instructions with pictures must be included if disassembly and reassembly is necessary.

"Effective reprocessing requires rigorous compliance with recommended protocols".

*PIDAC's Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices
in All Health Care Settings,²⁷ 2010 [Page 17]*

Reprocessing Steps

A. Transportation and Handling of Contaminated Medical Equipment/Devices²⁷

Special handling of contaminated equipment and devices is required:

- disposable sharps, such as needles and blades, shall be removed and disposed of in an appropriate puncture-resistant sharps container at point-of-use, prior to transportation;
- medical equipment/devices must be submerged in tepid water and/or detergent and enzymatic cleaner to prevent organic matter from drying on it if it cannot be cleaned immediately following use;
- there should be a process that will ensure that medical equipment/devices which have been reprocessed can be differentiated from equipment/devices which have not been reprocessed (e.g., colour-coding).

B. Disassembly and Cleaning²⁷

Disassembly and cleaning is always essential prior to disinfection or sterilization. An item that has not been cleaned cannot be disinfected or sterilized:

- all equipment/devices need to be disassembled prior to cleaning;
- the cleaning process physically removes microorganisms from the equipment/device rather than destroying or killing them;
- cleaning is achieved using water, detergents and the mechanical action of scrubbing;^{1,2}
- where splashing is likely to occur, the use of a mask, protective eyewear and gown is recommended.³⁴

C. Rinsing^{1, 2, 27}

All equipment/devices need to be rinsed thoroughly with potable water to remove residues which might react with the disinfectant/sterilant.

D. Drying^{8, 9, 27}

Drying is an important step that prevents dilution of chemical disinfectants which may render them ineffective and prevents microbial growth. Equipment/devices may be air-dried or dried by hand with a clean, lint-free towel.

E. High-Level Disinfection^{2, 8, 9, 27}

Semicritical medical equipment/devices that are owned and used by a single resident in the hospice do not require disinfection between uses provided that they are adequately cleaned prior to reuse.

Semicritical medical equipment/devices should receive, at a minimum, high-level disinfection, although sterilization is the preferred method of decontamination:

- all equipment/devices should be dry prior to immersing into the high-level disinfectant to prevent the dilution of chemical concentration;
- all equipment/devices must be fully immersed and soaked in the high-level disinfectant for the minimum amount of contact time stated on the product label;
- all high-level disinfectants must:
 - have a DIN from Health Canada;
 - be compatible with both the equipment/device manufacturer's instructions for disinfection and the cleaning products involved in the reprocessing of the equipment/device;
- once removed from disinfectant, all equipment/devices must be thoroughly rinsed at least three times with fresh, sterile water to remove chemical residues that may harm the resident;
- use manufacturer's recommended test strips to ensure effective concentration of active ingredient(s).

F. Wrapping^{8, 9, 27}

Equipment/devices that are to be sterilized require wrapping prior to sterilization. Materials used for wrapping shall:

- be prepared in a manner that will allow adequate air removal, steam penetration and evacuation;
- have the ability to maintain sterility during storage.

Hinged instruments should be processed open and unlocked.

G. Steam Sterilization

Critical medical equipment/devices must be sterilized. Semicritical medical equipment/devices should be sterilized wherever possible:^{1, 8, 9, 27}

- all sterilization processes shall follow the manufacturer's instructions for installation, operation, preventive maintenance and quality assurance monitoring of the equipment;
- do not over fill the sterilizer. Allow for adequate steam circulation;
- the following shall be completed to ensure that effective sterilization has been achieved:
 - mechanical monitoring including time, temperature, and pressure graphs;
 - chemical monitoring – each pack must have internal and external chemical indicators;

- biological monitoring – a biological monitor shall be included in the first load of each day a sterilizer is used;
- the following processes shall not be used for sterilization:
 - boiling;
 - ultraviolet light;
 - glass bead sterilization;
 - microwave ovens.

H. Storage and Use of Reprocessed Medical Equipment/Devices^{1, 8, 9, 27}

Maintain sterility until equipment/device is used:

- store reprocessed medical equipment/devices in a clean, dry location in a manner that minimizes contamination or damage;
- at point-of-use, upon opening the reprocessed medical equipment/device, check for integrity of the packaging and the equipment/device;
- validate results of chemical monitors, if present.

I. Documentation^{1, 8, 9, 27}

A permanent record of reprocessing shall be completed and retained. Recommended documentation includes the following information:

- the identification of the equipment/device to be sterilized;
- results of each inspection;
- date and time;
- results of mechanical indicator;
- results of external chemical indicator;
- results of biological indicator;
- the name of the person completing the reprocessing.

Additional Resources

For additional information and guidance on Cleaning, Disinfection and Sterilization of Medical Equipment/Devices, refer to the following documents in the *Resources* section of this manual:

- IPAC Audit Tool for Hospices
- Examples of Equipment/Devices used in the hospice setting and the level of Reprocessing, Classification, and Products Recommended

11. Food Safety

Overview

Consuming contaminated food may cause serious illness and even death to residents. People with weakened immune systems are particularly susceptible to foodborne illnesses. You can protect the health of your residents by ensuring that those who handle food in your facility are properly trained.^{2,6}

Food Preparation

It is recommended that anyone who is preparing food for residents should complete a food handler certification course.

Many public health units offer a Food Handler Certificate course and a variety of educational materials that are designed to familiarize food service staff with safe food handling practices and skills that ensure food is stored and served in a manner that is in compliance with *Food Premises*, RRO 1990, Regulation 562 under the *Health Protection and Promotion Act*.

A food handler certificate is awarded after completing the course. Food handler certification courses are offered by Public Health and meet the Ministry of Health and Long-Term Care's mandatory food handler training requirements. Such programs cover topics that include the role of the public health inspector and public health legislation, food microbiology, food allergies, temperature control, cross-contamination, personal hygiene, sanitizing, cleaning, pest control, and healthy eating. Safe food handling principles include four basic concepts: cleaning, separating, cooking and chilling.

A. Cleaning

Cleaning includes the concepts of hand hygiene as well as the appropriate cleaning and disinfection/sanitizing of countertops, cutting boards, and utensils both before and after food preparation. Worn and damaged cutting boards should be discarded. Careful selection and use of cleaning cloths should occur in order to ensure effective cleaning and disinfection/ sanitization.⁶

B. Separating

Microorganisms can spread easily from raw foods to cooked foods. This is why it is imperative that raw meat, poultry and seafood and their juices are kept away from ready-to-eat foods. Raw meat, poultry and seafood should be kept separate from receiving to the table. They should be stored on the bottom shelf of a refrigerator to ensure that juices do not drip onto other foods. One cutting board should be segregated for use with raw meat, poultry, or seafood and another for foods that are ready-to-eat, such as fruits and vegetables.⁶

C. Cooking

Foods must be cooked at required (or recommended) temperatures for the right amount of time to ensure that harmful bacteria are killed. This can be achieved by using a food probe thermometer to measure internal temperatures of cooked meats and poultry and by cooking ground meat, eggs and fish thoroughly.⁶

D. Chilling

Once foods are properly cooked they must be cooled quickly (within 2 hours), to eliminate the risk of growth of microorganisms. It is imperative that refrigerator and freezer temperatures are kept at recommended levels. Keep refrigerators at 4°C (40°F) or colder. Keep freezers at -18°C (0°F) or colder. Keep a refrigerator thermometer in the fridge and a freezer thermometer in the freezer to help you monitor the temperatures.

Keeping foods cold is one of the best ways to reduce the risk of foodborne illness. Additional principles that should be observed include:⁶

- storing food in the refrigerator in such a way as to allow for circulation of cold air;
- not defrosting food at room temperature;
- refrigerating or freezing perishable items as soon as possible after purchase;
- separating large amounts of leftovers into small, shallow containers for quicker cooling.

Personal Resident Food

Residents who have personal food (i.e., food brought to their rooms by themselves or family members) should not return any food to the hospice's communal kitchen. This principle applies to all residents, but is especially important for those who are on Additional Precautions for a communicable microorganism. Encourage the use of single portions.

Family Involvement in Food Preparation

Any food prepared within the hospice should be done by an individual who has undergone formal food handler training. If a family member is preparing food for a loved one or is bringing food from outside of the hospice setting, this training is not required; however, food should be prepared for the loved one only, and should not be shared amongst other hospice residents or staff.

Eating in Designated Staff Areas

Shared foods at nursing stations have been linked to the transmission of microorganisms such as norovirus, leading to subsequent outbreaks of GI illness. If shared food is permitted in designated staff areas, it should be limited to single wrapped items. Communal foods, such as candy in dishes, should be avoided, as they increase the potential for spread of microorganisms. Staff members must be diligent about performing hand hygiene before and after eating food in any area of the hospice.

CASE SCENARIO

"We have only been open one week and food safety in the kitchen area has been a challenge for us. We have created signage that is posted to encourage families to follow the steps of food safety."

Case Scenario from St. Joseph's Hospice

Refrigerators

Each refrigerator within the facility should be maintained according to the manufacturer's instructions. Temperatures should be monitored and maintained according to *Food Premises*, RRO 1990, Regulation 562 under the *Health Protection and Promotion Act*. For more information, contact your local public health unit.⁶

Each refrigerator in the facility should be on a regular cleaning schedule and the cleaning of such refrigerators should be assigned to a designated person. Ensure that food kept in all refrigerators is dated and/or have an expiry date noted. All food must be checked regularly and discarded as appropriate.⁶

Food must not be stored in a refrigerator that is used for specimens and/or medications.⁶

Role of Public Health

Public Health may be involved in the running of a hospice kitchen if the hospice falls under the definition of a food premise in the *Food Premises* regulation. Public Health will inspect the facility's kitchen on a regular basis and will offer assistance and advice regarding appropriate kitchen design, safe food handling, and education of food handlers, to name a few examples. If your hospice is exempt from the *Food Premises* regulation (i.e., meals are provided to less than 10 residents), you may still benefit from contacting a public health inspector at the local health unit.

Additional Resources

- There are 36 health units in Ontario. Access this website to find a health unit closest to your hospice: http://www.health.gov.on.ca/english/public/contact/phu/phuloc_mn.html.
- Additional information regarding safe food handling can be found on The Canadian Partnership for Consumer Food Safety Education website at: <http://www.canfightbac.org/en/>. This is a national association of public and private organizations committed to educating Canadians about the ease and importance of food safety in the home.

12. Healthy Workplace

Overview

The health and well-being of hospice staff is a priority. The organization should take a proactive approach in identifying OHS needs.

Components of a Healthy Workplace

The IPAC components of a healthy workplace program should be consistent and include the following:

A. Risk Assessment

Evaluate the workplace to identify hazards related to occupation and to assess and analyze the occupational risk associated with exposure to potentially harmful infectious diseases, taking into consideration events, circumstances, and practices.³⁶

All staff and volunteers working in a hospice setting should provide a record of their communicable disease immunity and results of a 2-step Mantoux test. This information allows for restriction of staff and volunteers, if susceptible to a particular disease, e.g., hepatitis B, chickenpox. This information should be recorded at the beginning of employment and updated as needed.

B. Risk Control Measures

Measures that reduce risk and promote staff safety include:

- implement appropriate OHS policies, procedures, and programs to prevent and/or manage exposures or infections in staff members, including outbreak management and immunization programs;³⁶
- establish mechanisms to ensure appropriate and timely communication with allied health professionals;
- demonstrate fiscal responsibility through policies, procedures and programs that prevent or reduce occupational infections, absenteeism and disability;
- commit to promoting immunization for vaccine preventable diseases.³⁷ Recommended immunizations for staff include:
 - annual influenza immunization;
 - measles, mumps and rubella –MMR (2 doses);
 - diphtheria, tetanus, acellular pertussis - Dtap (every 10 years);
 - hepatitis B (full series) with verification of antibody >10 IU/L;
 - varicella (chickenpox) vaccine for susceptible health care providers (i.e., no history of varicella and/or negative serology);
- complete staff fit-testing, education and training in the use of N95 respirators every 2 years;
- maintain documentation of immunization and N95 respirator fit-testing;
- assess and treat staff exposures to body fluids/sharps (see Box, *Exposure Management and Follow-up*);
- review exposure incident with the affected staff member to determine whether there is a need to

change practices/procedures to prevent further incidents.

EXPOSURE MANAGEMENT AND FOLLOW-UP

- ✓ If this is a sharps injury, allow the puncture site to bleed freely. Do not squeeze the area. Wash the site with soap and water and wipe the area with alcohol. If eyes, nose, mouth or non-intact skin are involved, flush well with large amounts of water.
- ✓ Immediately inform the supervisor and resident (if known) of the accidental exposure. The supervisor should inform the individual responsible for follow-up of the exposure so they can determine the need for medical attention for the staff member and arrange for counselling and any necessary testing of the source resident.
- ✓ If the exposure is deemed to require medical attention, direct the staff member to proceed to the nearest emergency department. They should identify themselves as a health care provider and state that they have had an occupational exposure to blood. If the exposure is to a body fluid and requires medical attention, the employee may choose to arrange to be seen by their family physician.
- ✓ Counsel the staff member about the possible consequences of the exposure if he/she chooses not to seek medical attention. No further follow-up of the source resident is required.
- ✓ Report all exposures to the Workplace Safety and Insurance Board within 3 days.

Ontario Hospital Association's Communicable Disease Surveillance Protocols;²⁰ *Blood Borne Diseases*, 2008.

C. Education

Provide educational programs for staff regarding the importance of sound personal hygiene habits and compliance with recommended IPAC practices. IPAC education should be provided annually including:

- hand hygiene;
- Routine Practices;
- use of PPE;
- indications for remaining home from work due to illness, such as:
 - acute respiratory illness;
 - shingles that cannot be covered;
 - diarrhea;
 - rash that might be infectious;
 - eye infections (until treated).

D. Evaluation

Implement ongoing, systematic evaluation to ensure that policies, procedures and programs are consistent with current recommendations, achieve their stated objectives and are in compliance with current regulations.

Additional Resources

For additional information and guidance on Healthy Workplace refer to the following documents in the *Resources* section of this manual:

- Pre-placement Health Survey/Immunization Status Form
- Sample Immunization and Healthy Workplace Policies and Procedures
- OHS – Disease Specific Recommendations
- Pregnant Health Care Provider Pamphlet
- IPAC Audit Tool for Hospices

IPAC RESOURCES



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Hand Hygiene Posters



Ontario Ministry of Health and Long-Term Care. *Just Clean Your Hands Program*. Retrieved from website: <http://www.health.gov.on.ca/en/ms/handhygiene/>.

How to handwash

Lather hands for 15 seconds



1
Wet hands with warm water.



2
Apply soap.



3
Lather soap and rub hands palm to palm.



4
Rub in between and around fingers.

Lather hands for 15 seconds



5
Rub back of each hand with palm of other hand.



6
Rub fingertips of each hand in opposite palm.



7
Rub each thumb clasped in opposite hand.



8
Rinse thoroughly under running water.



9
Pat hands dry with paper towel.



10
Turn off water using paper towel.



11
Your hands are now safe.










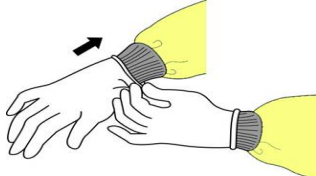
**JUST CLEAN
YOUR HANDS**



Catalogue No. CIB-2152908 30M Jan/08 © Queen's Printer for Ontario

Ontario Ministry of Health and Long-Term Care. *Just Clean Your Hands Program*. Retrieved from website: <http://www.health.gov.on.ca/en/ms/handhygiene/>.

Personal Protective Equipment (PPE) Posters

1 Clean Your Hands	<i>Alcohol-based hand rub, OR...</i>	 <i>...Soap & water</i>
2 Put on Gown  		
3a Put on Mask 	3b <i>Or</i> N95 Respirator 	
4 Put on Eye Protection <i>(Unless combination mask with attached eye protection)</i>  		
5 Put on Gloves 		

HOW TO SAFELY USE PPE

- Keep gloved hands away from face
- Avoid touching or adjusting other PPE
- Take off gloves if they become torn; clean your hands before putting on new gloves
- Limit surfaces and items touched

*See reverse for detailed
instructions*



REGIONAL INFECTION
CONTROL NETWORKS

*Adapted from the Center for Disease Control: Guideline for Isolation Precautions:
Preventing Transmission of Infectious Agents in Healthcare Settings 2007
Version Date: December 11, 2008*

Where to Put On PPE: Outside resident room**1 Clean Your Hands**

- Alcohol-based hand rub is preferred for cleaning hands (*when hands are not **visibly soiled***)
- Clean between fingers, backs of hands, fingertips and thumbs
- Clean hands for a minimum of 15 seconds

2 Put on Gown

- Select appropriate size and type
- Put on with opening to the back
- Secure neck and waist
- If gown is too small, use two gowns:
 1. Gown #1 ties in front
 2. Gown #2 ties in back

3a Put on Mask

- Use a fluid-resistant procedure mask or surgical mask or mask with attached eye protection
- Place over nose, mouth and chin
- Fit flexible nose piece over nose bridge
- Secure on head with ties or ear loops
- Adjust fit

3b OR Put On N95 Respirator

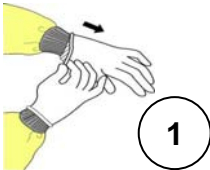
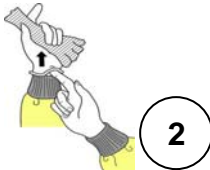

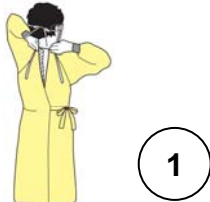

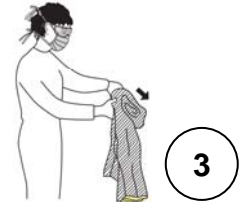







- Select respirator according to fit-testing
- Place over nose, mouth and chin
- Fit flexible nose piece over nose bridge
- Secure on head with top elastic followed by bottom elastic
- Adjust to fit
- Perform a seal-check:
 1. Inhale – respirator should collapse
 2. Exhale- check for leakage around face

4 Put on Eye Protection

- Position goggles over eyes and secure to the head using the ear pieces or headband
- Position face shield over face
- Adjust to fit comfortably

5 Put on Gloves

- Select correct type and size
- Put on gloves
- Extend gloves over cuffs of isolation gown

1	Take Off Gloves			
2	Take Off Gown			
3	Clean Your Hands	<i>Alcohol-based hand rub, OR...</i>		<i>...Soap & water</i>
5	Take Off Eye Protection <i>(Unless combination mask with attached eye protection)</i>			
5a	Take Off Mask			5b Or N95 Respirator 
6	Clean Your Hands	<i>Alcohol-based hand rub, OR...</i>		<i>...Soap & water</i>

HOW TO SAFELY USE PPE

- Keep gloved hands away from face
- Avoid touching or adjusting other PPE
- Take off gloves if they become torn; clean your hands before putting on new gloves
- Limit surfaces and items touched

*See reverse for detailed
instructions*



REGIONAL INFECTION
CONTROL NETWORKS

*Adapted from the Center for Disease Control: Guideline for Isolation Precautions:
Preventing Transmission of Infectious Agents in Healthcare Settings 2007
Version Date: December 11, 2008*

Where to Take Off PPE: At doorway, before leaving resident room

1 Take Off Gloves

- Grasp outside edge near wrist
- Peel away from hand, turning glove inside-out
- Hold in opposite gloved hand
- Slide ungloved finger under the wrist of the remaining glove
- Peel off from the inside, creating a bag for both gloves
- Discard

2 Take Off Gown

- Unfasten ties
- Peel gown away from neck and shoulders
- Turn contaminated outside toward the inside
- Fold or roll into a bundle
- Discard in laundry hamper or waste

3 Clean Your Hands

- Alcohol-based hand rub is preferred for cleaning hands (*when hands are not **visibly soiled***)
- Clean between fingers, backs of hands, fingertips and thumbs
- Clean hands for a minimum of 15 seconds

4 Take Off Eye Protection

- Grasp ear or head pieces with ungloved hands
- Lift away from face
- Place in waste or clean reusable eye protection

5a Take Off Mask

- Untie the bottom, then top tie or remove ear loops
- Lift away from face while holding the ties or loops
- Discard

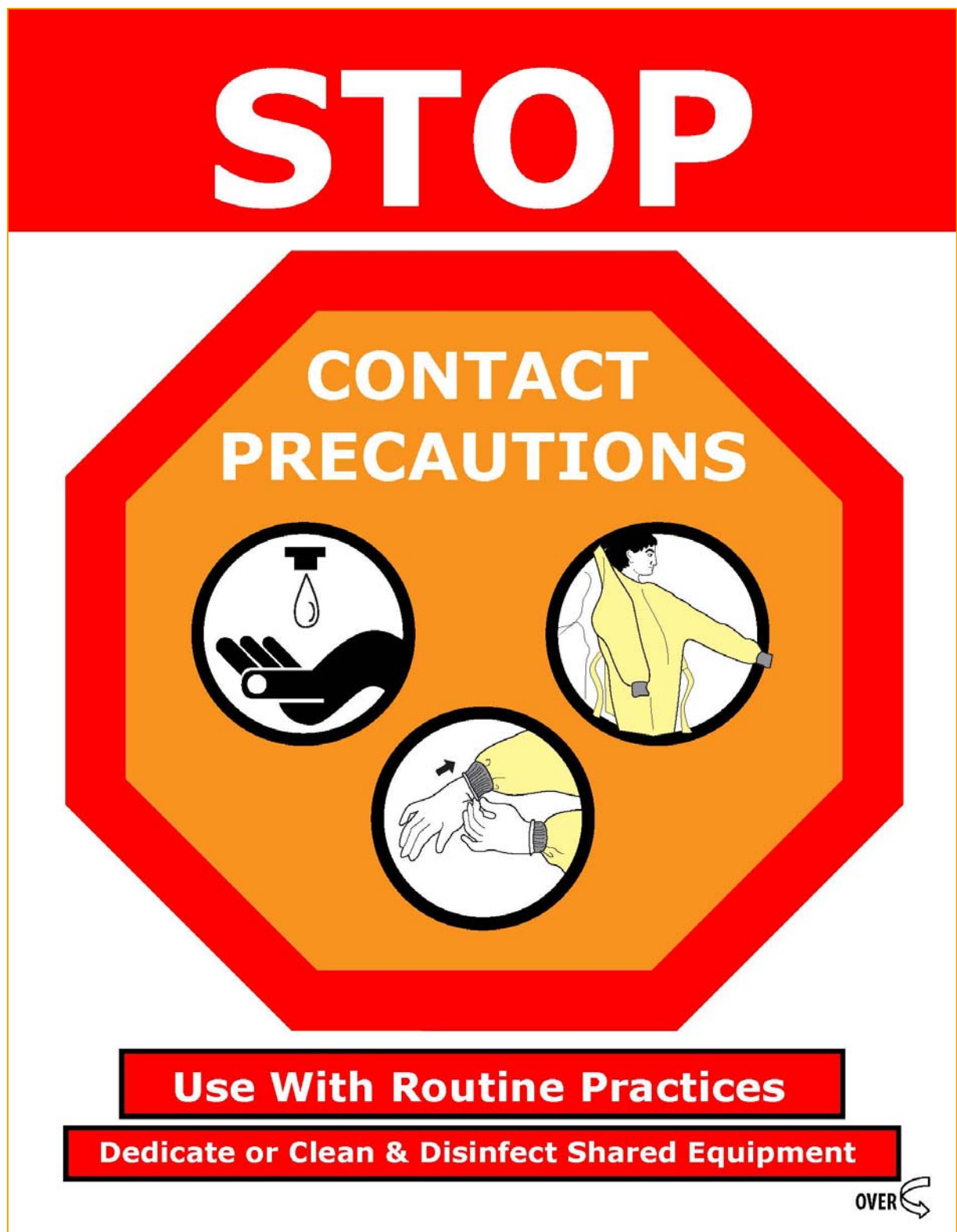
5b OR Take Off N95 Respirator

- Lift the bottom elastic over your head first
- Then lift off the top elastic
- Lift away from face while holding the elastic
- Discard

6 Clean Your Hands

- Immediately after taking off PPE
- Anytime you think your hands have become contaminated
- Avoid using resident sink, if possible

Additional Precautions Signs



Contact Precautions

(Other PPE as per Routine Practices Risk Assessment)

Use Contact Precautions for:

- Diarrhea
- Draining infected wounds if secretions cannot be contained
- Lice/Scabies
- *C. difficile* * (requires twice daily room cleaning)
- Norovirus: use Droplet/Contact Precautions if vomiting
- Antimicrobial Resistant Organisms (ARO)
 - Example: 1. MRSA (Methicillin Resistant *Staphylococcus aureus*)
 - 2. VRE (Vancomycin Resistant Enterococcus)
 - 3. ESBL (Extended Spectrum Beta-Lactamase)
 - 4. Multi-drug Resistant Pseudomonas

NOTE: not all illnesses or conditions have been listed which require Contact Precautions

TO DO

Acute Care

- Wear gloves on room entry
- Wear gown for direct care or when in contact with items in a patient's environment

Non-Acute Care

- Wear gown and gloves when providing direct care or when in contact with items in client/resident environment

- Clean your hands before and after care, treatment and/or contact with the environment
- Do not share toileting equipment
- Persons may ambulate outside of room as long as they fit the 5 C's: Clean hands; Clean clothes and equipment; Contained drainage; Continent (or Contained); Compliant (with instructions)
- Dedicate or clean and disinfect shared equipment after each use

Notify Infection Prevention & Control

STOP

Droplet Precautions



Use With Routine Practices

Dedicate or Clean and Disinfect Shared Equipment

OVER

DROPLET PRECAUTIONS

(Other PPE as per Routine Practices Risk Assessment)

Use Droplet Precautions for:

- Bacterial Meningitis (meningococcal) until 24 hrs of appropriate antibiotic therapy
- Pertussis (Whooping Cough)
- Rubella (German Measles)
- Mumps (Infectious parotitis)
- Epiglottitis (Haemophilus influenza Type B)
- Invasive Group A Streptococcus * **Add Contact Precautions if draining wound — until 24 hrs of appropriate antibiotic therapy**

NOTE: not all illnesses or conditions have been listed which require Droplet Precautions

TO DO

- Clean your hands before and after care, treatment and/or contact with environment
- Maintain at least a 2 metre separation between patients and draw a privacy curtain
- Wear procedure/surgical face mask and eye protection within 2 metres of patient
- Patient to wear a procedure/surgical mask when outside of room
- Only immune healthcare workers to be assigned to patient with known or suspected mumps/rubella. Exceptions to be discussed with Occupational Health and Infection Prevention & Control
- Pregnant healthcare workers should not be assigned a patient with rubella

Notify Infection Prevention & Control

February 2010



STOP

Droplet/Contact Precautions



Use With Routine Practices

Dedicate or Clean & Disinfect Shared Equipment

OVER

DROPLET/CONTACT PRECAUTIONS

(Other PPE as per Routine Practices Risk Assessment)

Use Droplet/Contact Precautions for:

- Patients presenting with new/worse cough or new/worse shortness of breath that is abnormal for this patient AND FEVER 38° C or greater (Elderly and immunocompromised may not have a fever)
- Influenza (seasonal)
- Any Acute Viral Respiratory Illness
- Norovirus—if vomiting
- Invasive Group A Streptococcus— **if draining wound — until 24 hrs of appropriate antibiotic therapy**

NOTE: not all illnesses or conditions have been listed which require Droplet/Contact Precautions

TO DO

Acute Care

- Wear gloves on room entry
- Wear gown for direct care or when in contact with items in a patient's environment
- Wear a procedure/surgical mask and eye protection within 2 metres of patient

Non-Acute Care

- Wear gown and gloves when providing direct care or when in contact with items in client/resident environment
- Wear a procedure/surgical mask and eye protection within 2 metres of client/resident

- Clean your hands before and after care, treatment and/or contact with environment
- Maintain at least a 2 metre separation between patients and draw a privacy curtain
- Patient should wear a procedure/surgical mask when outside of isolation room
- Dedicate or clean and disinfect shared equipment after each use

Notify Infection Prevention & Control

February 2010



STOP

Airborne Precautions



Use With Routine Practices

Dedicate or Clean & Disinfect Shared Equipment

OVER 

Airborne Precautions

(Other PPE as per Routine Practices Risk Assessment)

Use Airborne Precautions for:

- **Mycobacterium tuberculosis (or suspect TB) - pulmonary or laryngeal**
- **Measles (Rubeola)**
- **Chicken pox (Varicella zoster virus)**
- **Disseminated zoster**

TO DO

- Clean hands before and after care, treatment and/or contact with the environment
- Negative pressure ventilated room required
- Keep door closed at all times
- All healthcare workers entering the room to wear N95 respirator for TB patients
- Seal-check respirator on every entry to the room
- Only immune healthcare workers should be assigned to patient with known/suspected chicken pox, disseminated zoster or measles. Exceptions to be discussed with Occupational Health and Infection Prevention & Control
- Refer to facility policy for guidelines during transport of suspect TB cases

Notify Infection Prevention & Control

February 2010





Do you have any of the following symptoms?

- **Fever (greater than 38°C)**
- **Chills**
- **New cough**
- **Sore throat**
- **Vomiting**
- **Diarrhea**

If you have any of these symptoms, we ask that you speak to one of our staff members before you visit.

Thank you.

Fact Sheets

Clostridium difficile

Information Sheet for Residents and Visitors

What is *Clostridium difficile* (*C. difficile*)?

C. difficile is one of the many types of bacteria that can be found in stool (bowel movement).

How is *C. difficile* Spread?

When a person has *C. difficile* disease, the bacteria in the stool can contaminate surfaces such as toilets, handles, bedpans, or commode chairs. When touching these items our hands can become contaminated. If we then touch our mouth without washing our hands, we can become infected. Our soiled hands can also spread the bacteria to other surfaces.

Who Can Get *C. difficile*?

C. difficile disease usually occurs during or after the use of antibiotics. Old age, presence of other serious illnesses and poor overall health may increase the risk of severe disease.

What Special Precautions are Required for *C. difficile*?

It is important that special precautions are taken to stop *C. difficile* from spreading to other residents. These precautions include:

- A long-sleeved gown and gloves must be worn by those who provide direct care to you.
- The room and the equipment used will be cleaned and disinfected regularly.
- Everyone who interacts with you must clean their hands well.

What About Family and Visitors?

Your family and visitors should not assist other residents with their personal care as this may cause the germ to spread. They may be required to wear a gown and gloves while in your room. Before leaving your room they must clean their hands.

Good Hand Hygiene Practices

Remind all staff and visitors to clean their hands before and after they touch you (15 seconds with soap and water OR alcohol-based hand rub). You need to clean your hands:

- after using the bathroom
- after blowing your nose
- before eating and drinking
- before and after you touch your wounds
- when your hands are dirty
- before you leave your room

Ask your health care provider if you require additional information.

Adapted from the Provincial Infectious Diseases Advisory Committee (PIDAC): 'Annex C: Testing, Surveillance and Management of Clostridium difficile in All Health Care Settings', 2010

Methicillin-Resistant *Staphylococcus aureus* (MRSA)

Information Sheet for Residents and Visitors

What is MRSA?

Staphylococcus aureus is a germ that lives on the skin and mucous membranes of healthy people. Occasionally *S. aureus* can cause an infection. When *S. aureus* develops resistance to certain antibiotics, it is called methicillin-resistant *Staphylococcus aureus*, or MRSA.

How is MRSA Spread?

MRSA is spread from one person to another by contact, usually on the hands of caregivers. MRSA can be present on the caregiver's hands either from touching contaminated material excreted by the infected person or from touching articles contaminated by the skin of a person with MRSA, such as towels, sheets and wound dressings. MRSA can live on hands and objects in the environment.

Who Can Get MRSA?

MRSA is not harmful to healthy people. A person may get MRSA if they are frequently on antibiotics, frequently hospitalized, elderly, have poor nutrition, have open wounds or have poor personal hygiene.

What Special Precautions are Required for MRSA?

It is important that special precautions are taken to stop MRSA from spreading to other

residents. These precautions include:

- A long-sleeved gown and gloves must be worn by those who provide direct care to you.
- The room and the equipment used will be cleaned and disinfected regularly.
- Everyone who interacts with you must clean their hands well.

What About Family and Visitors?

Your family and visitors should not assist other residents with their personal care as this may cause the germ to spread. They may be required to wear a gown and gloves while in your room. Before leaving your room they must clean their hands.

Good Hand Hygiene Practices

Remind all staff and visitors to clean their hands before and after they touch you (15 seconds with soap and water OR alcohol-based hand rub). You need to clean your hands:

- after using the bathroom
- after blowing your nose
- before eating and drinking
- before and after you touch your wounds
- when your hands are dirty
- before you leave your room.

Ask your health care provider if you require additional information.

Adapted from the Provincial Infectious Diseases Advisory Committee (PIDAC): 'Annex A: Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs) in All Health Care Settings', 2010

Vancomycin Resistant Enterococcus (VRE) Information Sheet for Residents and Visitors

What is VRE?

Enterococci are germs that live in the bowels of most individuals and generally do not cause harm. Vancomycin-resistant enterococci (VRE) are strains of enterococci that are resistant to the antibiotic vancomycin. If a person has an infection caused by VRE, such as a urinary tract infection or blood infection, it may be more difficult to treat.

How is VRE Spread?

VRE is spread from one person to another by contact, usually on the hands of caregivers. VRE can be present on the caregiver's hands either from touching contaminated material excreted by an infected person or from touching articles soiled by stool. VRE can live on hands and can survive for weeks on inanimate objects such as toilet seats, taps, bedrails and bedpans. VRE is easy to kill with disinfectants and good hand cleaning.

Who Can Get VRE?

VRE is not harmful to healthy people. A person may get VRE if they are frequently on antibiotics, frequently hospitalized, elderly, have poor nutrition or have poor hygiene.

What Special Precautions are Required for VRE?

It is important that special precautions are taken to stop VRE from spreading to other

residents. These precautions include:

- A long-sleeved gown and gloves must be worn by those who provide direct care to you.
- The room and the equipment used will be cleaned and disinfected regularly.
- Everyone who interacts with you must clean their hands well.

What About Family and Visitors?

Your family and visitors should not assist other residents with their personal care as this may cause the germ to spread. They may be required to wear a gown and gloves while in your room. Before leaving your room they must clean their hands.

Good Hand Hygiene Practices

Remind all staff and visitors to clean their hands before and after they touch you (15 seconds with soap and water OR alcohol-based hand rub). You need to clean your hands:

- after using the bathroom
- after blowing your nose
- before eating and drinking
- before and after you touch your wounds
- when your hands are dirty
- before you leave your room.

Ask your health care provider if you require additional information

Adapted from the Provincial Infectious Diseases Advisory Committee (PIDAC): 'Annex A: Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs) in All Health Care Settings', 2010

Extended-Spectrum Beta Lactamase-Producing Bacteria (ESBL) Information Sheet for Residents and Visitors

What are ESBLs?

ESBL-producing bacteria produce enzymes called 'beta-lactamases' that break down antibiotics, so that the usual antibiotics don't work and more expensive or more toxic antibiotics may need to be used to treat an infection. Some people carry ESBL bacteria but do not have an infection.

How are ESBLs Spread?

ESBL bacteria can be spread to other people directly through touch from unwashed hands, or indirectly by contact with soiled equipment, particularly urine-care equipment such as catheters and urinals.

Who Can Get ESBLs?

ESBLs are not harmful to healthy people. A person may get ESBL if they are frequently on antibiotics, frequently hospitalized, elderly, have poor nutrition, have a urinary catheter or have poor personal hygiene.

What Special Precautions are Required for ESBLs?

It is important that special precautions are taken to stop ESBLs from spreading to other residents. These precautions include:

- A long-sleeved gown and gloves must be worn by those who provide direct care to you.
- The room and the equipment used will be cleaned and disinfected regularly.
- Everyone who interacts with you must clean their hands well.

What About Family and Visitors?

Your family and visitors should not assist other residents with their personal care as this may cause the germ to spread. They may be required to wear a gown and gloves while in your room. Before leaving your room they must clean their hands.

Good Hand Hygiene Practices

Remind all staff and visitors to clean their hands before and after they touch you (15 seconds with soap and water OR alcohol-based hand rub). You need to clean your hands:

- after using the bathroom
- after blowing your nose
- before eating and drinking
- before and after you touch your wounds
- when your hands are dirty
- before you leave your room.

Ask your health care provider if you require additional information.

Adapted from the Provincial Infectious Diseases Advisory Committee (PIDAC): 'Annex A: Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs) in All Health Care Settings', 2010

Clinical Microorganisms/Disease with Level of Precautions Required

One of the Routine Practices risk reduction strategies is to initiate Additional Precautions as soon as symptoms appear, not only when a diagnosis is confirmed. This table lists the infectious microorganism or disease, the type of Additional Precautions needed, duration and additional comments. This table is a quick reference guide that provides summarized information and should be used in conjunction with other resources.

Organism/Disease	Type of Precaution	Duration of Precautions	Comments
Abscess (drainage not contained by dressing)	Contact	Continue for the duration of uncontained drainage	
Acute Respiratory Illness	Droplet/Contact	Continue for duration of symptoms	
Adenovirus – conjunctivitis pneumonia	Contact Droplet/Contact	Continue for duration of symptoms	
Cellulitis – with drainage	Contact	Continue for duration of uncontained drainage	
Chickenpox (<i>Varicella</i>)	Airborne	Continue until all lesions have crusted and dried	Reportable Disease Closed door Only immune staff should enter room
<i>Clostridium difficile</i>	Contact	Continue until formed stool for at least 2 consecutive days	Outbreaks are reportable
Common Cold	Droplet/Contact	Continue for duration of symptoms	
Conjunctivitis	Contact	Continue until viral etiology ruled out or for duration of symptoms	
Croup (Whooping cough/Pertussis)	Droplet/Contact	Continue for duration of illness or until infectious cause ruled out	Reportable Disease
Cytomegalovirus (CMV)	Routine Practices		
Dermatitis	Routine Practices		Rule out scabies
Encephalitis (adult)	Routine Practices		Reportable Disease
Enteroviral Infections (adult) (Coxsackie & Echo viruses)	Routine Practices		
Epiglottitis (due to <i>H.influenzae</i> type B) (adult)	Routine Practices		Type B is Reportable Disease

Routine Practices are used in caring for all persons and will interrupt transmission of most infectious agents

Organism/Disease	Type of Precaution	Duration of Precaution	Comments
Extended Spectrum Beta-Lactamase producers (ESBL)	Contact	Review each case separately	
Gastroenteritis (diarrhea, bacterial or unknown cause)	Contact	Continue until stools are formed	<i>Salmonella</i> and <i>E. coli</i> O157:H7 are Reportable Diseases Outbreaks are reportable
German Measles (Rubella)	Droplet	Continue for 7 days after onset of rash	Reportable Disease Only immune staff should provide care
Hepatitis A (faecal incontinence or non-compliant persons only)	Contact	Continue for one week after onset of symptoms	Reportable Disease
Hepatitis B or C	Routine Practices		Reportable Disease
Herpes simplex (disseminated or severe)	Contact	Continue until all lesions have crusted and dried	
HIV	Routine Practices		Reportable Disease
Impetigo (draining, uncontained)	Contact	Continue for duration of uncontained drainage	
Influenza (seasonal)	Droplet/Contact	Continue for 5 days after onset of illness	Reportable Disease
Influenza (pandemic)	Droplet/Contact + N95 respirator for aerosol-generating procedures	Continue for 5 days after onset of illness	Reportable Disease
Invasive Group A Streptococcal Disease	Droplet/Contact	Continue until person has received 24 hours of effective treatment	Reportable Disease
Lice	Routine Practices + gloves for direct contact	Continue until person has received 24 hours of effective treatment	
Measles (Rubeola)	Airborne	Continue for 4 days after start of rash, and for duration of illness in immunocompromised persons	Reportable Disease Closed door Only immune staff should enter room
Meningitis (bacterial/ unknown etiology and meningococcal)	Droplet	Continue until person has received 24 hours of effective treatment	Reportable Disease
MRSA (Methicillin-resistant <i>Staphylococcus aureus</i>)	Contact (+ Droplet if in sputum and coughing)	Continue until discontinued by Infection Control Lead	

Routine Practices are used in caring for all persons and will interrupt transmission of most infectious agents

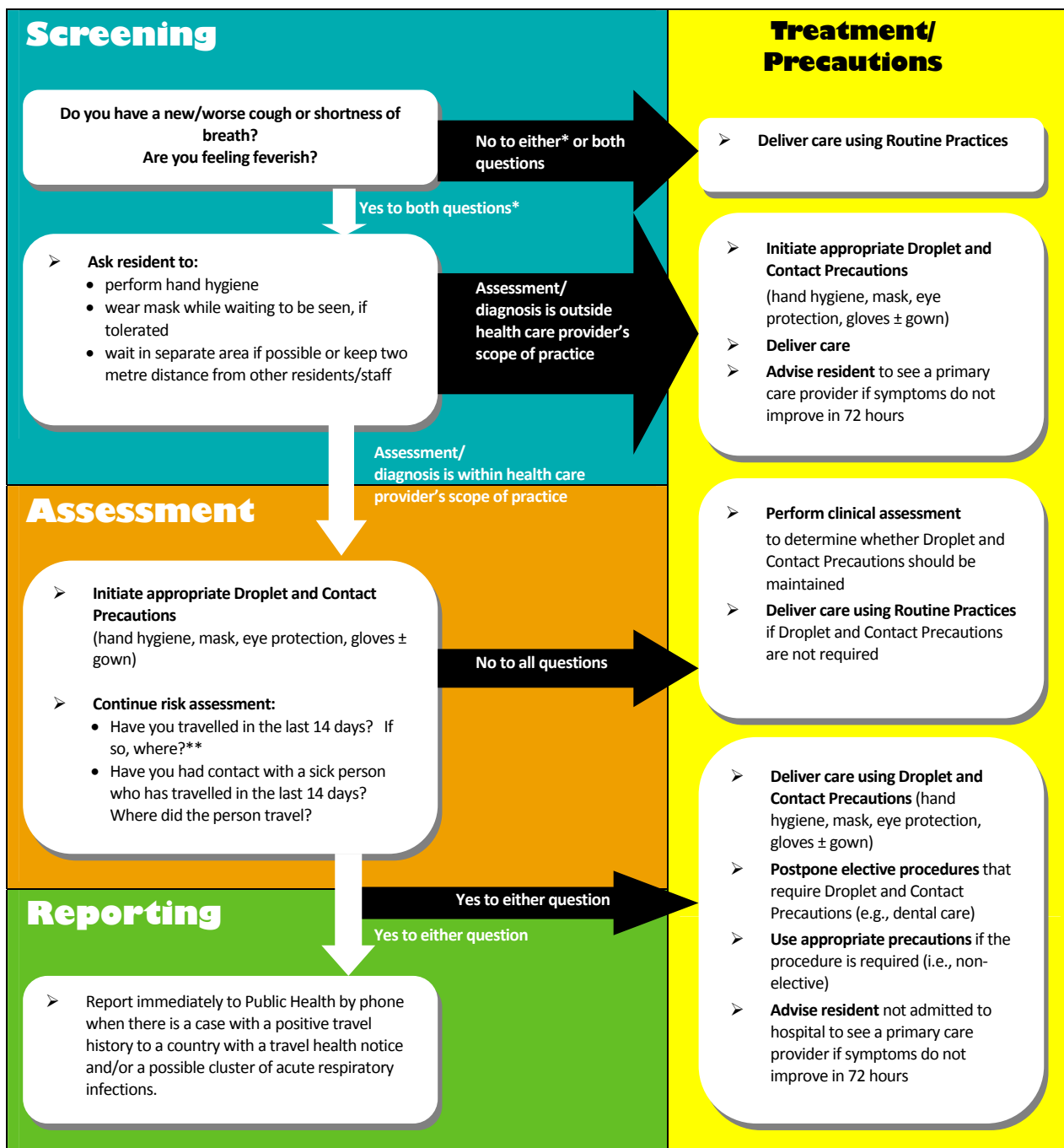
Organism/Disease	Type of Precaution	Duration of Precaution	Comments
Mumps	Droplet	Continue for 5 days after onset of swelling	Reportable Disease
Mycobacteria (non-tuberculosis)	Routine Practices		
<i>Mycobacterium tuberculosis</i> (pulmonary and extra-pulmonary draining lesions)	Airborne	Special ventilation and PPE required See TB section of manual	Reportable Disease
Norovirus	Contact (+ Droplet if vomiting)	Continue until 48 hours after resolution of symptoms	Outbreaks are reportable
Parainfluenza virus	Droplet/Contact	Continue for duration of symptoms	
Parvovirus B19 - aplastic crisis	Droplet	Continue for duration of stay if immunocompromised, or 7 days with other	No longer infectious by the time rash appears
Fifth disease	Routine Practices		
Pneumonia (etiology unknown)	Droplet/Contact	Continue until etiology established or clinical improvement on empiric therapy	
Pharyngitis	Routine Practices		
Respiratory Syncytial Virus (RSV)	Droplet/Contact	Continue for duration of illness	
Rotavirus	Contact	Continue until formed stool	
Scabies	Contact	Continue until 24 hours after application of scabicide	
Shingles - disseminated	Contact/ Airborne	Continue until lesions have crusted and dried	Only immune staff should enter room
Staphylococcal Disease – major wound or burn Toxic shock syndrome (TSS)	Contact Routine Practices	Continue for duration of uncontrolled drainage	
Streptococcal Disease - major wound or burn Toxic shock-like syndrome	Droplet/Contact Routine Practices	Continue until 24 hours of effective treatment	Reportable Disease if invasive
VRE (Vancomycin-resistant enterococcus)	Contact	Continue until discontinued by Infection Control Lead	

Routine Practices are used in caring for all persons and will interrupt transmission of most infectious agents

Adapted from: PIDAC's *Routine Practices and Additional Precautions in All Health Care Settings*, 2009 [Appendix N, pages 93-105].

Surveillance Tools

Case Finding/Surveillance Algorithm for Acute Respiratory Infection



* Elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection, so the presence of new onset cough/shortness of breath may be enough to trigger further precautions.

** For a current list of travel health notices, see: <http://www.phac-aspc.gc.ca/tmp-pmv/pub-eng.php>.

Adapted from: PIDAC's Annex A: Best Practices for Prevention of Transmission of Acute Respiratory Infection in All Health Care Settings, 2010 [Appendix A, page 20]

Definitions of Infections for Surveillance in Hospice Settings

A. Respiratory Tract Infection

1. Upper Respiratory Tract Illness

(includes common cold, pharyngitis)

Must have at least **TWO** of the following:

- ☐ Runny nose or sneezing
- ☐ Stuffy nose (congestion)
- ☐ Sore throat or hoarseness or difficulty swallowing
- ☐ Dry cough
- ☐ Swollen or tender glands in the neck

2. Influenza-Like Illness

Must have **BOTH** of the following:

- ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$
- ☐ At least **THREE** of the following:
 - ☐ Chills
 - ☐ Headache **OR** eye pain
 - ☐ Myalgia (muscle aches)
 - ☐ Malaise (tiredness) **OR** loss of appetite
 - ☐ Sore throat or difficulty swallowing
 - ☐ New **OR** worsening cough

3. Pneumonia

Rule out non-infectious causes of symptoms (e.g., CHF)

Must have **BOTH** of the following:

- ☐ Chest x-ray demonstrating pneumonia, probable pneumonia, or presence of infiltrate
- ☐ At least **THREE** of the following:
 - ☐ New or increased cough
 - ☐ New or increased sputum production
 - ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$
 - ☐ Pleuritic chest pain
 - ☐ New or increased findings on chest examination
 - ☐ Change in breathing status (e.g., shortness of breath, respiratory rate >25 per minute, worsening mental or functional status)

4. Other Lower Respiratory Infection

(includes bronchitis, tracheobronchitis)

Must have at least **THREE** of the following:

- ☐ New or increased cough
- ☐ New or increased sputum production
- ☐ New or increased purulence of sputum
- ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$
- ☐ Pleuritic chest pain
- ☐ New or increased findings on chest examination
- ☐ Change in breathing status (e.g., shortness of breath, respiratory rate >25 per minute, worsening mental or functional status)

B. Eye/ Ear/ Nose/ Mouth

Conjunctivitis

Rule out allergies. Must have **ONE** of the following:

- ☐ Pus from one or both eyes
- ☐ New or increased redness, with or without itching or pain ('pink eye')

Mouth

Infections must be diagnosed by a physician

C. Gastroenteritis

Must have **ONE** of the following:

- ☐ 2 or more loose or watery stools above what is normal for resident within 24-hour period
- ☐ 2 or more episodes of vomiting in a 24-hour period
- ☐ Positive stool culture **OR** toxin assay

AND

At least one sign or symptom of gastrointestinal infection (e.g., nausea, vomiting, abdominal pain, diarrhea)

Eye/ Ear/ Nose/ Mouth, con't.

Sinusitis

Must have **ONE** of the following:

- ☐ Diagnosis by physician
- ☐ Microorganism cultured from purulent material from the sinus cavity
- ☐ **ONE** of the following with no other cause:
 - ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$
 - ☐ Pain **OR** tenderness over the involved sinus
 - ☐ Headache
 - ☐ Purulent exudate **OR** nasal obstruction

Ear Infection

Must have **ONE** of the following:

- ☐ Diagnosis by physician
- ☐ New purulent drainage from one or both ears **AND** ear pain **OR** tympanic redness

D. Urinary Tract Infection

Must have **ONE** of the following:

- ☐ At least **TWO** of the following:
 - ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$ **OR** chills
 - ☐ Flank pain, suprapubic pain, tenderness, frequency **OR** urgency
 - ☐ Change in urine (bloody, foul odour)
 - ☐ Worsening of mental or functional status
- ☐ Bacteriuria **AND** pyuria **AND** at least **ONE** of the following:
 - ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$ **OR** chills
 - ☐ Flank pain **OR** suprapubic pain **OR** tenderness

E. Skin Infection**Cellulitis / Soft Tissue / Wound Infection**

Must have at least **ONE** of the following:

- ☐ Pus present at site
- ☐ At least **FOUR** of the following:
 - ☐ Abnormal temperature $\leq 35.5^{\circ}\text{C}$ or $\geq 38^{\circ}\text{C}$ **OR** worsening mental or functional status
 - ☐ Heat
 - ☐ Redness
 - ☐ Swelling
 - ☐ Tenderness or pain
 - ☐ Serous drainage

F. Septicemia**Primary Bloodstream Infection**

Must have at least **ONE** of the following:

- ☐ A single blood culture with a microorganism that is a recognized pathogen and not related to another infection (e.g., pneumonia, cellulitis)
- ☐ At least **ONE** of the following:
 - ☐ Fever $\geq 38^{\circ}\text{C}$ or hypothermia $< 34.5^{\circ}\text{C}$
 - ☐ Chills
 - ☐ Hypotension (drop in systolic blood pressure of > 30 mm Hg from baseline)**AND** symptoms not related to another infection
AND common skin contaminant (e.g., coagulase-negative staphylococci) cultured from two or more blood cultures drawn at different times

Source: APIC-HICPAC Surveillance Definitions for Home Health Care and Home Hospice Infections; February 2008. Available at:
<http://www.apic.org/AM/Template.cfm?Section=Practice&Template=/CM/ContentDisplay.cfm&ContentFileID=9898>

Daily Tracking Report of Infections

Unit: _____ Month/Year: _____

Place a check mark in the appropriate box to identify any signs of infection in the residents.

Symptoms should be new presentation or a change in the normal status for the resident.

Date	Resident Name	Room #	Onset Date	Status Change	UTI	Skin/Wound	RTI	GI	BSI	CXR + Date	Culture Sent + Date	Drug Name + Date

Legend:

- Status:** change in mental or functional status of the resident (e.g., increased confusion, falls)
- UTI:** urinary tract infection
- Skin/Wound:** skin/cellulitis/wound infection
- RTI:** respiratory tract infection
- GI:** gastrointestinal infection (gastroenteritis)
- BSI:** bloodstream infection
- CXR:** indicate date chest X-ray was done
- Culture Sent:** culture obtained and sent to the laboratory (indicate date sent)
- Drug:** antibiotic/anti-infective ordered by the physician (indicate date started and drug name)

Reportable Disease List

The following specified Reportable Diseases (*Ontario Regulation 559/91* and amendments under the Health Protection and Promotion Act) are to be reported to the local Medical Officer of Health:

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Acquired Immunodeficiency Syndrome (AIDS) • Amebiasis • Anthrax • Botulism • Brucellosis • Campylobacter enteritis • Chancroid • Chickenpox (Varicella) • <i>Chlamydia trachomatis</i> infections • Cholera • <i>Clostridium difficile</i>-associated disease (CDAD) outbreaks in public hospitals • Cryptosporidiosis • Cyclosporiasis • Cytomegalovirus infection, congenital • * Diphtheria • * Encephalitis, including: <ul style="list-style-type: none"> ○ Primary, viral ○ Post-infectious ○ Vaccine-related ○ Subacute sclerosing panencephalitis ○ Unspecified • * Food poisoning, all causes • * Gastroenteritis, institutional outbreaks • * Giardiasis • Gonorrhoea • * <i>Haemophilus influenzae</i> b disease, invasive • Hantavirus pulmonary syndrome • * Haemorrhagic fevers, | <ul style="list-style-type: none"> including: <ul style="list-style-type: none"> ○ Ebola virus disease ○ Marburg virus disease ○ Other viral causes • * Hepatitis, viral: <ul style="list-style-type: none"> ○ Hepatitis A ○ Hepatitis B ○ Hepatitis C ○ Hepatitis D (Delta hepatitis) • Herpes, neonatal • Influenza • * Lassa Fever • Legionellosis • Leprosy • * Listeriosis • Lyme Disease • Malaria • * Measles • * Meningitis, acute <ul style="list-style-type: none"> ○ bacterial ○ viral ○ other ▪ Meningococcal disease, invasive • Mumps • Ophthalmia neonatorum • Paratyphoid Fever • Pertussis (Whooping Cough) • * Plague • * Poliomyelitis, acute • Psittacosis/Ornithosis • * Q Fever • * Rabies • * Respiratory infection outbreaks in institutions • Rubella | <ul style="list-style-type: none"> • Rubella, congenital syndrome • Salmonellosis • * Severe Acute Respiratory Syndrome (SARS) • * Shigellosis • * Smallpox • * Streptococcal infections, Group A invasive • Streptococcal infections, Group B neonatal • <i>Streptococcus pneumoniae</i>, invasive • Syphilis • Tetanus • * Transmissible Spongiform Encephalopathy: <ul style="list-style-type: none"> ○ Creutzfeldt-Jakob Disease, all types ○ Gerstmann-Straussler-Scheinker Syndrome ○ Fatal Familial Insomnia ○ Kuru • Trichinosis • Tuberculosis • * Tularemia • * Typhoid Fever • * Verotoxin-producing <i>E. Coli</i> infection Indicator conditions, including Haemolytic Uraemic Syndrome (HUS) • * West Nile Virus illnesses: <ul style="list-style-type: none"> ○ West Nile Virus Fever and neurological manifestations • * Yellow Fever • Yersiniosis |
|--|---|---|

Diseases marked ‘*’ should be reported immediately to the Medical Officer of Health by telephone. Other diseases are to be reported by the next working day.

This list is current as of 2008. Ensure list is accurate by contacting local public health unit. The list of reportable diseases is available at:

<http://www.search.e-laws.gov.on.ca/en/isysquery/936e24ee-e98e-4bf9-98b5-567ce6c236e2/1/doc/?search=browseStatutes&context=#hit1>

Environmental Cleaning Resources

Selection Criteria for Surface Cleansers/Sanitizers

Product Name: _____ Manufacturer: _____	Criteria Met	
	Yes	No
Product has a Material Safety Data Sheet (MSDS)		
The product label must clearly indicate the following:		
▪ the product name		
▪ its intended use		
▪ a quantitative statement of active ingredient(s)		
▪ the area and site of use		
▪ specific directions for use including the specific types of surfaces/ instruments to be cleaned/sanitized		
▪ any dilution procedure required		
▪ the mode of application		
▪ minimum contact time		
▪ cleaning and rinsing procedures		
▪ the temperature for use		
▪ the reuse period		
▪ appropriate precautionary symbols and statements		
▪ first aid instruction		
Meets cleaner/sanitizer criteria: <u>reduction</u> of vegetative bacterial strains by more than 5-log ₁₀ in the presence of 5% bovine serum		
Product is not corrosive and is compatible to the equipment/surface for which it is intended to be used		
Information on the required personal protective equipment (PPE) is provided		
Product has a long shelf life/expiry date (usage factors and size of product container are factors to consider to decrease risk of opened product contamination)		
Product is safe to transport		
Product is easy to store		
Product is non-toxic to humans and animals		
Product is non-allergenic/non-sensitizing		
Product has no hormone disruption		
Product is safe for the user and the resident		
Product has a DIN number from Health Canada		

Selection Criteria for Low-Level Disinfectants

Product Name: _____ Manufacturer: _____	Criteria Met?	
	Yes	No
Product has a Material Safety Data Sheet (MSDS)		
The product label must clearly indicate the following:		
▪ the product name		
▪ its intended use		
▪ a quantitative statement of active ingredient(s)		
▪ the area and site of use		
▪ specific directions for use including the specific types of surfaces/ instruments to be disinfected		
▪ any dilution procedure required		
▪ the mode of application		
▪ minimum contact time		
▪ cleaning and rinsing procedures		
▪ the temperature for use		
▪ the reuse period		
▪ appropriate precautionary symbols and statements		
▪ first aid instruction		
Meets low-level disinfectant criteria:		
▪ Bactericidal – effective against vegetative bacterial strains by > than 6 log ₁₀ reduction		
▪ General Virucide – effective against Sabin (Type 1 polio) strain, > 3 log ₁₀ reduction		
▪ Virucidal – effective against targeted viruses, > 3 log ₁₀ reduction		
▪ Fungicidal – effective against <i>Trichophyton mentagrophytes</i> , > 5 log ₁₀ reduction		
▪ Tuberculocidal – effective against <i>Mycobacteria terrae</i> , criterion is > 4 log ₁₀ reduction (intermediate disinfectant claim)		
Product is not corrosive and is compatible to the equipment/surface for which it is intended to be used		
Information on the required personal protective equipment (PPE) is provided		
Product has a long shelf life/expiry date (usage factors and size of product container are factors to consider to decrease risk of opened product contamination)		
Product is safe to transport		
Product is easy to store		
Product is non-toxic to humans and animals		

Product Name: _____ Manufacturer: _____	Criteria Met?	
	Yes	No
Product is non-allergenic/non-sensitizing		
Product has no hormone disruption		
Product is safe for the user and the resident		
Product is environmentally sound (biodegradable)		
Product leaves no harmful residual on surface		
Product is cost-effective (cost per use – based on different concentrations, dilution factors, and intended use)		
Training support is provided by the distributor		
Product label provides instructions on use and factors that may influence the activity of the disinfectant, such as temperature, pH, relative humidity and water hardness		
Information regarding the type, concentration and testing of the active chemical properties of the product is provided		
The purchaser is able to provide the required maintenance in order to use the product e.g., if the product produces toxic vapours/needs decanting/dilution equipment		
The product is compatible with BOTH the equipment/surfaces manufacturer's instruction and the existing cleaning products being used for the equipment/surface		
The process can be monitored (i.e., there are mechanical, chemical and biologic monitors/indicators available for the product, if required)		

Uses, Advantages and Disadvantages of Hospital-grade Disinfectants and Sporicides Used for Environmental Cleaning

Process Option	Uses/Comments	Advantages/Comments	Disadvantages/Comments
Alcohols (60-95%)	<ul style="list-style-type: none"> External surfaces of some equipment (e.g., stethoscopes) Noncritical equipment used for home health care Disinfection is achieved after 10 minutes of contact Observe fire code restrictions for storage of alcohol 	<ul style="list-style-type: none"> Non-toxic Low cost Rapid action Non-staining No residue Effective on clean equipment/devices that can be immersed 	<ul style="list-style-type: none"> Evaporates quickly – not a good surface disinfectant Evaporation may diminish concentration Flammable – store in a cool, well ventilated area; refer to Fire Code restrictions for storage of large volumes of alcohol Coagulates protein; a poor cleaner Hardens and swells plastic tubing Harmful to silicone; causes brittleness May harden rubber or cause deterioration of glues Inactivated by organic material
Chlorines	<ul style="list-style-type: none"> Environmental surfaces Noncritical equipment used for home health care Blood spills: use a dilution of household bleach: <u>Undiluted: 5.25%</u> sodium hypochlorite, 50,000 ppm available chlorine <u>Blood spill – major:</u> dilute 1:10 with tap water to achieve 0.5% or 5,000 ppm chlorine <u>Blood spill – minor:</u> dilute 1:100 with tap water to achieve 0.05% or 500 ppm chlorine <u>Surface cleaning, soaking of items:</u> dilute 1:50 with tap water to achieve 0.1% or 1,000 ppm chlorine 	<ul style="list-style-type: none"> Low cost Rapid action Readily available in non-hospital settings Sporicidal 	<ul style="list-style-type: none"> Corrosive to metals Inactivated by organic material; for blood spills, blood must be removed prior to disinfection Irritant to skin and mucous membranes Should be used immediately once diluted Use in well-ventilated areas Must be stored in closed containers away from ultraviolet light and heat to prevent deterioration Stains clothing and carpets

Process Option	Uses/Comments	Advantages/Comments	Disadvantages/Comments
Accelerated hydrogen peroxide 0.5% (7% solution diluted 1:16)	<ul style="list-style-type: none"> Isolation room surfaces Clinic and procedure room surfaces Low-level disinfection is achieved after 5 minutes of contact at 20°C 	<ul style="list-style-type: none"> Safe for environment Non-toxic Rapid action Available in a wipe Active in the presence of organic materials Excellent cleaning ability due to detergent properties 	<ul style="list-style-type: none"> Contraindicated for use on copper, brass, carbon-tipped devices and anodized aluminum
Accelerated hydrogen peroxide 4.5%	<ul style="list-style-type: none"> Disinfection of toilet bowls, sinks, basins and commodes in bathrooms of <i>C. difficile</i> residents Following cleaning, sterility is achieved with a 4.5% solution after 10 minutes of contact Do not use on medical devices or as a general environmental surface cleaner or disinfectant 	<ul style="list-style-type: none"> Sporicidal Available in a gel format to ensure vertical surface adhesion during required contact time (e.g., in toilets) Safe for the environment Non-toxic 	<ul style="list-style-type: none"> Expensive Contraindicated for use on copper-brass, carbon-tipped devices, anodized aluminum, rubber, plastics Do not use on monitors
Hydrogen peroxide 3% (non-antiseptic formulations)	<ul style="list-style-type: none"> Noncritical equipment used for home health care Floors, walls, furnishings Disinfection is achieved with a 3% solution after 30 minutes of contact 	<ul style="list-style-type: none"> Rapid action Safe for the environment Non-toxic 	<ul style="list-style-type: none"> Contraindicated for use on copper, zinc, brass, aluminum Store in cool place, protect from light
Quaternary ammonium compounds (QUATs)	<ul style="list-style-type: none"> Floors, walls, and furnishings Blood spills prior to disinfection 	<ul style="list-style-type: none"> Non corrosive, nontoxic, low irritant Good cleaning ability, usually have detergent properties May be used on food surfaces 	<ul style="list-style-type: none"> Do not use to disinfect instruments Limited use as disinfectant because of narrow microbicidal spectrum Diluted solutions may support the growth of microorganisms May be neutralized by various materials (e.g., gauze)

Adapted from PIDAC's *Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings*, 2009. Appendix E [pages 131-133].

Cleaning, Disinfection and Sterilization Tools

Examples of Equipment/Devices Used in the Hospice Setting and the Recommended Level of Reprocessing, Classification and Products

Level of Processing/ Reprocessing	Classification of Equipment/ Device	Examples of Equipment/ Devices found in a Hospice	Products
Low-level disinfection Low-level disinfectants kill most vegetative bacteria and some fungi as well as enveloped (lipid) viruses. Low-level disinfectants do not kill mycobacteria or bacterial spores.	Noncritical equipment devices Equipment/device that touches only intact skin and not mucous membranes or does not directly touch the resident.	<ul style="list-style-type: none"> ▪ Bath seat/board ▪ Toilet seat ▪ Commode chairs ▪ Urine collection container ▪ Bedrail ▪ Mattress ▪ Call bell ▪ Over bed table ▪ Chair ▪ Emesis basin ▪ Hair wash trays ▪ Intravenous pumps, poles, and warmers ▪ Oximeter probes ▪ Stethoscope ▪ Blood pressure cuff ▪ Suction machines ▪ Transfer boards ▪ Walker ▪ Wheelchair ▪ Lifts/slides 	Concentration and contact time are dependent on manufacturer's instructions <ul style="list-style-type: none"> ▪ 3% hydrogen peroxide (10 minutes) ▪ 60-95% alcohol (10 minutes) ▪ Hypochlorite (1000 ppm) ▪ 0.5% accelerated hydrogen peroxide (5 minutes) ▪ Quaternary ammonium compounds (QUATS) ▪ Iodophors
High-level disinfection (HLD) HLD processes destroy vegetative bacteria, mycobacteria, fungi and enveloped (lipid) and non-enveloped (nonlipid) viruses, but not necessarily bacterial spores.	Semicritical equipment/devices Equipment/device that comes in contact with nonintact skin or mucous membranes but do not penetrate them.	<ul style="list-style-type: none"> ▪ Alligator forceps ▪ Ear cleaning equipment, ear cures, otoscope ▪ tips ▪ Fingernail care equipment used on multiple residents ▪ Respiratory therapy equipment 	Concentration and contact time are dependent on manufacturer's instructions <ul style="list-style-type: none"> ▪ 6% hydrogen peroxide (30 minutes) ▪ 7% accelerated hydrogen peroxide (20 minutes) ▪ 0.2% peracetic acid (30-45 minutes)

Level of Processing/ Reprocessing	Classification of Equipment/ Device	Examples of Equipment/ Devices found in a Hospice	Products
Sterilization The level of reprocessing required when processing critical equipment/devices. Sterilization results in the destruction of all forms of microbial life including bacteria, viruses, spores and fungi.	Critical equipment/devices Equipment/device that enters sterile tissues, including the vascular system.	<ul style="list-style-type: none"> ▪ Surgical instruments <ul style="list-style-type: none"> ○ Forceps ○ Hemostats ▪ Foot care equipment used on multiple residents 	Concentration and contact time are dependant on manufacturer's instructions <ul style="list-style-type: none"> ▪ 7% accelerated hydrogen peroxide (6 hours at 20°C) ▪ Steam ▪ Accelerated hydrogen peroxide (e.g., CS20) – 20 minutes

Healthy Workplace Resources

Pre-Employment Health Survey/Immunization Status Form

Name _____ Work Area _____

Do you have contact with residents? (Circle all that apply) Yes No Face-to-Face Hands-on

HISTORY OF INFECTIOUS DISEASES/IMMUNIZATION (Please circle all that apply):

Measles (Please provide physician certification of immunization or immunity)

- I have received immunization – 1st dose Yes No Date _____
- I have received immunization – 2nd dose Yes No Date _____
- I have evidence of immunity (positive antibody titre) Yes No Date _____

Mumps (Please provide physician certification of immunization or immunity)

- I have received immunization Yes No Date _____
- I have evidence of immunity (positive antibody titre) Yes No Date _____

Rubella (Please provide physician certification of immunization or immunity)

- I have received immunization Yes No Date _____
- I have evidence of immunity (positive antibody titre) Yes No Date _____

Chickenpox

- I have had chickenpox Yes No Date _____
- I do not know if I have had chickenpox Yes No
- I have evidence of immunity (positive antibody titre) Yes No Date _____

Miscellaneous

- I received the polio vaccine series Yes No Date _____
- I received the tetanus/diphtheria vaccine series Yes No Date _____
- I received the hepatitis B vaccine series Yes No Date _____
- I have evidence of hepatitis B immunity (positive antibody) Yes No Date _____

2-step Tuberculin Skin Test (TST) Dates: #1 _____ Result: ☐ negative ☐ positive

#2 _____ Result: ☐ negative ☐ positive

Employee Signature

Date

Occupational Health Disease-Specific Recommendations

Disease/Microorganism	Transmission	Incubation	Workplace Considerations
Gastroenteritis (e.g., rotovirus)	Direct or indirect ingestion of infectious faeces or by ingestion of contaminated food or water	Varies, depending on microorganism	Staff with vomiting and/or diarrhea excluded from contact with residents and from food handling until stools have formed or staff member is cleared to return to work by Public Health
Group A Streptococcus (GAS) Strep throat Scarlet fever Invasive GAS	Droplet, direct or indirect contact of oral or nasal mucous membrane with infectious respiratory or wound secretions	<ul style="list-style-type: none"> 1-3 days Period of communicability is from 7 days before until 24 hours after start of adequate therapy and 10-21 days if untreated 	Exclude ill staff until completion of 24 hours of adequate therapy
Hepatitis A (HAV)	Person-to-person by the faecal/oral route or by ingesting contaminated food or water	<ul style="list-style-type: none"> 15-50 days Communicable from 2 weeks before to 1 week after onset of symptoms 	<ul style="list-style-type: none"> Vaccine is available Staff with HAV should be referred for confirmation of diagnosis and clinical management. Staff are excluded from work until cleared to return by Public Health
Herpes simplex virus (HSV) Cold sores Genital herpes Herpetic whitlow	Direct or indirect contact with primary or recurrent lesions, infectious saliva or genital secretions	<ul style="list-style-type: none"> 2-12 days Period of communicability is until lesions are healed Asymptomatic viral shedding may occur Reinforce Routine Practices and hand hygiene 	<ul style="list-style-type: none"> Staff with oro-facial or weeping lesions wear protective dressing when providing care Staff with herpetic whitlow should not provide direct care to residents until lesions are healed
Influenza (Seasonal)	Droplet and contact	<ul style="list-style-type: none"> 1-3 days Period of communicability is 1 day before to 5 days after onset of symptoms 	<ul style="list-style-type: none"> Annual influenza immunization is the most important way to prevent influenza Staff presenting with symptoms of influenza should not work Symptomatic staff excluded for 5 days after the onset of symptoms or until symptoms have resolved, whichever is sooner

Disease/Microorganism	Transmission	Incubation	Workplace Considerations
Meningococcus <i>Neisseria meningitidis</i>	Droplet and direct contact	<ul style="list-style-type: none"> 2-10 days Period of communicability is 7 days prior to onset of symptoms to 24 hours after start of effective therapy 	<ul style="list-style-type: none"> Reinforce Routine Practices and the consistent use of barriers Vaccine is available for some strains
Parvovirus B 19 Erythema infectiosum Fifth Disease	Droplet and direct contact with the respiratory secretions of infected individuals	<ul style="list-style-type: none"> 4-21 days Individual is no longer infectious by the time the rash appears 	<ul style="list-style-type: none"> Reinforce Routine Practices No work restrictions needed for ill staff
Pediculosis Lice	Head lice – direct head-to-head contact with infested individual or indirectly by objects used by them (e.g., hats, brushes) Body lice – direct skin-to-skin contact or exchange of infested clothing or bedding	<ul style="list-style-type: none"> None Period of communicability continues until head is free of lice and nits 	<ul style="list-style-type: none"> Exclude affected staff until lice and nits are gone Instruct affected staff to follow treatment directions exactly
Pertussis Whooping cough	Droplet or contact with the respiratory secretions of an infected individual	<ul style="list-style-type: none"> 6-20 days Period of communicability is 1-2 weeks before the onset of paroxysmal cough until 3 weeks after cough onset if untreated or 5 days if treated 	<ul style="list-style-type: none"> Vaccine is available but immunity wanes over time. All staff should be considered susceptible Exclude symptomatic or infected staff until 5 days after start of effective therapy or if untreated through the 3rd week after the onset of paroxysms Staff contacts should be assessed for the need for prophylaxis
Respiratory Infections	Droplet or contact with respiratory secretions of an infected individual	Varies depending on microorganism	Staff with acute respiratory infections especially those providing direct resident care should avoid coming to work
Salmonella typhi	<ul style="list-style-type: none"> Ingestion of contaminated food or water Direct or indirect ingestion of infectious faeces or urine 	<ul style="list-style-type: none"> 3-60 days Communicable as long as the microorganism appears in faeces 	<ul style="list-style-type: none"> Exclude ill staff Consult Public Health regarding return to work

Disease/Microorganism	Transmission	Incubation	Workplace Considerations
Scabies (typical or Norwegian)	Direct skin-to-skin contact with an infested individual	<ul style="list-style-type: none"> Symptoms show 4-6 weeks after initial infestation and in 1-4 days for repeat exposures Communicable as long as person is infested and untreated 	<ul style="list-style-type: none"> Exclude affected staff until one application of effective treatment completed Ensure staff follow treatment directions exactly Close contacts require treatment at the same time
Tinea Ringworm	Direct or indirect skin contact with scalp or skin lesions of infected individual or animal or contaminated environment	<ul style="list-style-type: none"> 4-10 days Communicable as long as lesions are present and if persists on contaminated materials 	<ul style="list-style-type: none"> Cover lesions with an occlusive dressing and reinforce hand hygiene If lesions on hands or arms cannot be covered by a dressing, staff member should not provide direct care If facility has pets, assess pets to ensure that they are free of ringworm
Tuberculosis (TB)	Inhalation of airborne droplet nuclei	2-10 weeks	<ul style="list-style-type: none"> All staff should have documented 2-step TST Staff with a positive TST or an exposure to a case are reported to Public Health Staff with TB excluded until cleared by their physician and Public Health for return to work
Varicella-zoster Virus (VZV) Chickenpox	Inhalation of airborne virus or direct or indirect contact with vesicle fluid or respiratory secretions from an infected individual	<ul style="list-style-type: none"> 10-21 days but may be extended to 28 days if VZIG is given Communicable for 1-4 days before onset of rash until 5 days after or until lesions are dry and crusted 	<ul style="list-style-type: none"> Vaccine is available Non-immune staff should not care for residents with disseminated shingles Staff with chickenpox excluded from work until lesions are dry and crusted Facility must identify non-immune staff/residents who may have been exposed to infectious staff/residents

Disease/Microorganism	Transmission	Incubation	Workplace Considerations
Zoster-Herpes (Shingles)	Direct or indirect contact of oral or nasal mucous membranes with infectious vesicle fluid May cause chickenpox in susceptible individuals	<ul style="list-style-type: none"> 10-21 days Communicable until lesions are crusted 	<ul style="list-style-type: none"> Non-immune staff should be excluded from work from 10 days after exposure until 21 days after exposure Staff with localized lesions may work if lesions can be completely covered by a dressing and clothing. If lesions cannot be covered, then staff member should be excluded until lesions are dry and crusted. Staff with disseminated lesions should be excluded from work until all lesions have dried and crusted

Adapted from Health Canada/ Public Health Agency of Canada's *Prevention and Control of Occupational Infections in Health Care*, March 2002. CCDR, Volume 28S1.

Exposure to certain infectious agents may cause congenital syndromes in the fetus when the primary infection is developed during pregnancy. All health care workers should be educated on the potential effects on the fetus from specific infectious agents.

For resident care, the proper use of Routine Practices, including risk assessment and risk reduction strategies such as hand hygiene, proper use of Personal Protective Equipment, sharps safety and equipment cleaning is essential.

Additional Precautions including Contact, Droplet or Airborne Precautions will be required for specific conditions.

References

- 'Stay away from my baby: Protecting your unborn baby from infectious diseases.' Windsor-Essex County Health Unit, 2004.
- Ready Reference to the APIC Text. Joan Wideman and Ruth Carrico (ed.). APIC, 2005.
- Control of Communicable Diseases manual, 19th ed. David Heymann (ed.). American Public Health Association, 2008.

Know your immunization history!

Healthcare associated transmission is possible and can be prevented by pre-exposure vaccination. Use this handy checklist to fill in which vaccinations you have received.

<input type="checkbox"/>	Hepatitis A
<input type="checkbox"/>	Hepatitis B
<input type="checkbox"/>	Rubella
<input type="checkbox"/>	Rubeola
<input type="checkbox"/>	Varicella (chickenpox)
<input type="checkbox"/>	Diphtheria
<input type="checkbox"/>	Smallpox
<input type="checkbox"/>	Influenza
<input type="checkbox"/>	Pneumococcal
<input type="checkbox"/>	Polio
<input type="checkbox"/>	Tetanus

Pregnant women who have not already been vaccinated against measles, mumps, rubella, smallpox, varicella, BCG or yellow fever should not be vaccinated while pregnant.



Giving Health a Helping Hand

September 2010

For further questions, contact your doctor.
If you are exposed to an infectious agent or drugs, contact Motherisk at Sick Kids for information and counselling:

1.416.813.6780
www.motherisk.org

Should I be worried? I'm pregnant and I have to care for a resident with...

Infectious Agent	Resign-							Additional Information				
	Yes	No	Vaccine Avail.	Yes	No	Recommended	Precutions	Routine Prec-	Contact	Droplet	Airborne	
HIV/AIDS	●				●			●				
Cytomegalovirus (CMV)	●				●			●				No restrictions. Virus is excreted in urine, saliva, breast milk, cervical secretions, and semen.
Fifth's Disease	●				●			●				Residents who demonstrate the rash diagnostic of fifth's disease are no longer contagious.
Hepatitis A (HAV)	●			●				●	●			Virus is spread via fecal to oral route.
Hepatitis B (HBV)	●			●		●		●				Vaccine recommended during pregnancy.
Hepatitis C (HCV)	●				●			●				Use masks and goggles if blood spraying is possible.
Herpes simplex	●				●			●				Ensure gloves are used when for direct care.
Influenza	●		●			●		●	●	●		Vaccinate during 3rd trimester.
Meningococcal Meningitis (or bacteremia)	●				●			●		●		Discontinue precautions after 24h of antibiotic therapy.
Mumps	●			●		●		●	●			Vaccinated Staff at little risk if following RP.
MRSA/VRE	●			●				●	●	●		Good hand washing essential. Wear mask if patient is colonized in sputum and is creating aerosols.
Rubella	●			●				●		●		Pregnant staff should not care for residents with rubella.
Rubeola (red measles)	●			●		●		●			●	Any worker who is immune can safely care for a patient with measles.
Shingles (Herpes zoster)	●				●			●	●			Non-immune workers should avoid contact. *Disseminated shingles require Airborne Precautions.
Toxoplasmosis	●				●			●				Avoid cleaning cat litter pans, wear gloves gardening.
Tuberculosis	●				●			●			●	Ensure high-efficiency N95 respirators used.
Varicella (chicken pox)	●			●		●		●	●		●	Non-immune workers (pregnant or not) should avoid contact. Ensure use of Airborne Precautions.

Sample Policies and Procedures

Sample Policy and Procedure: Infection Prevention and Control Program

PURPOSE

The [Hospice name] will provide ongoing IPAC practices, quality improvement and risk management processes to ensure positive outcomes that include and are not limited to:

- early detection of situations with the potential for transmission of an infectious microorganism;
- prevention of exposure to, or transmission of, an microorganism or a communicable disease;
- appropriate management of residents, staff and others with communicable disease(s) or significant microorganisms and protection of those exposed;
- ongoing effective communication strategies (both internally and externally) with all stakeholders;
- promoting wellness and reducing transmission of microorganisms.

POLICY

The [Hospice name] will provide and maintain an effective IPAC Program to recognize, prevent and/or control the development and spread of infectious disease(s) and promote wellness for residents and staff; and will maintain the quality of life while supporting a peaceful and dignified death for residents.

PROCEDURE

1. The IPAC Program will include:
 - a) IPAC policies and procedures;
 - b) consistent use of Routine Practices;
 - c) a system for initiation of Additional Precautions;
 - d) a system of surveillance to detect, investigate infections and control outbreaks;
 - e) a system for notifying the local public health unit of reportable diseases;
 - f) a committee with dedicated agenda items reflecting IPAC issues and program goals.
2. The IPAC Program will provide continuing education in IPAC to staff at orientation and as needed through education and in-service initiatives.
3. The IPAC Program will utilize evidence-based scientific standards and guidelines in reviewing and updating the policies and procedures of the program.
4. The IPAC Lead will be responsible for overseeing the functioning of the program. The IPAC Lead should be allocated sufficient time to carry out these activities within the hospice.

Sample Policy and Procedure: Infection Prevention and Control (IPAC) Lead Roles and Responsibilities

PURPOSE

To provide guidelines for the roles and responsibilities of the IPAC Lead in the hospice.

POLICY

[Hospice name] will have a designated IPAC Lead who is responsible and accountable for the day-to-day functioning, promotion and implementation of policies and procedures of the IPAC Program within the hospice.

The IPAC Lead serves as a leader, mentor and role model for IPAC and should be allocated sufficient time to carry out these activities within the hospice. The IPAC Lead will have ongoing formal education in IPAC.

PROCEDURE

The IPAC Lead will:

- be educated in the principles of IPAC;
- act as representative of the IPAC Program on the assigned committee;
- be responsible for key elements of the IPAC Program:
 - implementation of Routine Practices and Additional Precautions;
 - syndromic surveillance;
 - outbreak management;
 - review and update of IPAC policies and procedures;
 - education of staff, residents and others on IPAC issues;
- follow guidelines for reporting reportable diseases to the local public health unit;
- be an active member of the Outbreak Management Team;
- support and promote immunizations (e.g., influenza) for all staff within the hospice;
- function as a resource regarding the purchase and management of supplies and products.

Sample Policy and Procedure: Outbreak Management Team

PURPOSE

To ensure a consistent and thorough interdisciplinary approach in the management of an outbreak within the hospice.

POLICY

In the event of an outbreak the Outbreak Management Team (OMT) has the overall responsibility for overseeing, directing and ensuring that the outbreak practices and procedures recommended are put into place.

PROCEDURE

1. The OMT should meet daily during the outbreak and/or as needed to receive reports related to the current status of the outbreak, to discuss potential areas of concern and make recommendations on the practices and procedures to be initiated and maintained in each area.
2. The members of the OMT are responsible for the day-to-day functioning of the outbreak practices and procedures and have the ensuing authority and accountability for carrying out the practices, policies and procedures and to report concerns to the IPAC Lead.
3. The members of the OMT have the authority to make decisions and commit resources on behalf of the areas and departments which they represent.
4. Accountability and guidelines for communicating with staff, visitors and the media will be determined.
5. Minutes of each meeting should be recorded and kept on file in the hospice. All minutes will be communicated to the administrator.
6. The IPAC Lead will be responsible for collating data, completing a report on the outbreak and include recommendations following the outbreak. This final report will be discussed and distributed (in collaboration with the local public health department) to the Administrator.
7. The OMT reviews any recommendations made (during the outbreak and following the outbreak), recommendations made from the corporate committee and discuss any changes required for outbreak investigation and management within the facility.

Sample Policy and Procedure: Management of Gastrointestinal Outbreak

PURPOSE

To provide a framework to ensure appropriate management of an outbreak as per Ministry of Health and Long-Term Care (MOHLTC) and the current Ontario Public Health Standards and Protocols.

POLICY

When a gastrointestinal outbreak is suspected, IPAC measures will be implemented to prevent transmission. The IPAC Lead will work in collaboration with the Outbreak Management Team to coordinate all activities related to management of the outbreak.

PROCEDURE

When the IPAC Lead is notified of a possible outbreak of gastrointestinal illness, the following action should be taken:

1. Notify Administrator, Medical Director and Public Health immediately.
2. Initiate outbreak line listings for residents and for staff as provided by the local public health unit.
3. Develop a case definition. For example:
 - a) Two or more episodes of loose/watery bowel movements (conforms to the shape of the container) within a 24-hour period, or two or more episodes of vomiting within a 24 hour period;
 - OR**
 - b) One episode of loose/watery bowel movements (conforms to the shape of the container) and episode of vomiting within a 24-hr period;
 - OR**
 - c) Laboratory confirmation of a known gastrointestinal pathogen and at least one symptom compatible with gastrointestinal infection – nausea, vomiting, diarrhea, abdominal pain or tenderness.
4. Search for additional symptomatic residents and staff.
5. Declare an outbreak based on consultation or direction from Public Health.
6. Organize an Outbreak Management Team (OMT) meeting.
7. Implement Contact Precautions in addition to Routine Practices:
 - a) PPE –gown, gloves as appropriate;
 - b) enhanced environmental cleaning;
 - c) dedicated equipment for symptomatic resident;
 - d) post signage requesting visitors to report to nursing stations.
8. Confine symptomatic residents to their rooms. The use of disposable dishes is not required. Note: The IPAC Lead in conjunction with Public Health and under the guidance of the Medical Director will determine the length of time the resident needs to be confined to the room. An assessment of the resident's symptoms and response to treatment needs to be ascertained.
9. Ensure appropriate specimens have been collected and laboratory requisitions properly completed. Public Health will assist in expediting the laboratory specimens.

10. Public health staff may visit the hospice to inspect the premises and food preparation and storage areas if food is suspected as the causative agent. Food samples, for laboratory analysis, may be collected at this time.
11. Cohort staff and residents, wherever possible.
12. Direct ill staff to stay at home. The OMT will establish criteria for return to work in consultation with Public Health.
13. Assess the need for restrictions within the hospice. Restrictions may range from minimal (e.g., excluding symptomatic residents) to closure of the hospice. The decision will be made by OMT in conjunction with the local public health unit based on the characteristics of the outbreak (e.g., common source or propagated).
14. The OMT will also decide whether food from sources outside of the hospice will be banned.
15. Communicate restrictions and outbreak information to staff, residents, families, visitors and other health care facilities.
16. Continue surveillance for new cases and update the public health unit through faxing of updated line listing on a daily basis.
17. The IPAC Lead will function as a resource for the hospice related to the microorganism and outbreak and provide education to staff, residents and others as needed.
18. In conjunction with the public health unit determine the criteria for declaring the outbreak over and communicate this to other members of the health care team.
19. Once the outbreak is resolved, communicate to all staff, residents, and visitors.
20. The IPAC Lead will link with the local public health unit to assist in preparation of a written report on the outbreak, recommendations to be included to prevent future occurrences.
21. The IPAC Lead will present the above report and forward recommendations to the administration for implementation.

Sample Policy and Procedure: Hand Hygiene

PURPOSE

Appropriate hand hygiene results in a reduction of health care-associated infections (HAIs) by removing or destroying microorganisms that have been picked up from contact with residents or staff, contaminated equipment or the environment.

POLICY

[Name of residential hospice] is committed to a multifaceted, multidisciplinary hand hygiene program that includes the following elements: indications for hand hygiene; how to perform hand hygiene; selection of products used for hand hygiene; management of product dispensing containers; hand care; use of alcohol-based hand rub (ABHR) with appropriate placement of product; education for residents, family, visitors and staff, and hand hygiene compliance and feedback.

PROCEDURE

1. Hand hygiene is performed:
 - a) before initial resident and resident environment contact;
 - b) before aseptic procedure;
 - c) after body fluid exposure risk;
 - d) after resident contact and resident environment contact;
 - e) when hands are visibly soiled;
 - f) after removing gloves or other protective equipment;
 - g) after performing personal functions such as using the toilet or wiping nose;
 - h) before and after handling food;
 - i) with ABHR when hands are not visibly soiled;
 - j) with soap and water when hands are visibly soiled.
2. Technique for using an ABHR:
 - a) ensure hands are visibly clean (if soiled, follow hand washing steps);
 - b) remove hand and arm jewellery and clothing or other items that impede hand hygiene; if a watch is worn, it must be worn above the wrist and fit snugly;
 - c) apply one to two full pumps of product onto one palm;
 - d) spread product over all surfaces of hands, concentrating on finger tips, between fingers, back of hands, and base of thumbs;
 - e) rub hands until product is dry;
 - f) do not rinse with water after use of ABHR.
3. Technique for Hand Washing
 - a) use a sink designated as a care provider hand washing sink;
 - b) remove hand and arm jewellery;
 - c) wet hands thoroughly with warm (not hot) water;
 - d) apply liquid or foam soap; bar soap is not to be used by health care providers;

- e) vigorously lather all surfaces of hands for a minimum of 15 seconds; pay particular attention to finger tips, between fingers, backs of hands and base of the thumbs;
 - f) using a rubbing motion, thoroughly rinse soap from hands;
 - g) dry hands thoroughly by blotting hands gently with a paper towel;
 - h) turn off taps with paper towel, to avoid recontamination of the hands;
 - i) discard paper towel in nearest waste bin.
4. Hand care for staff is addressed. This includes:
- a) regular use of hand lotion;
 - b) provision of an ABHR product that contains emollients;
 - c) education on appropriate hand hygiene;
 - d) assessment of staff skin integrity;
 - e) keeping natural nails short and clean;
 - f) prohibiting artificial nails or enhancements by those who have direct care with residents;
 - g) prohibiting hand or arm jewellery (except watches) by those who have direct care with residents;
 - h) discouraging the use of nail polish; if worn, it should be fresh and free of cracks or chips.
5. Products for hand hygiene are user-friendly, non-irritating and effective.
6. ABHR:
- a) has a Natural Product Number from Health Canada;
 - b) should have a minimum concentration of 70% alcohol;
 - c) will have optimal placement for easy access; e.g., at point-of-care, at entrance to the facility, at entrance to kitchen and other common areas;
 - d) will comply with fire safety codes;
 - e) will be dispensed from disposable, single-use pump or automatic dispensers.
7. Liquid or foam soap:
- a) will be optimally placed all sinks within the residence;
 - b) will be dispensed from disposable single-use pumps or automatic dispensers;
 - c) will not contain antimicrobial agents unless used for invasive procedures.
8. There will be a hand hygiene education program for staff:
- a) all staff and volunteers will receive hand hygiene education during orientation and on an annual basis;
 - b) staff will instruct residents and visitors regarding hand hygiene as needed;
 - c) hand hygiene will be included in the information regarding IPAC Routine Practices in the residential hospice; information material will be given to the resident and family prior to admission.
9. In order to evaluate hand hygiene, practice audits may be done with feedback provided to staff.

Sample Policy and Procedure: Personal Protective Equipment (PPE)

PURPOSE

PPE is used to prevent transmission of microorganisms from resident-to-resident, resident-to-staff and staff-to-resident.

POLICY

The [Hospice name] is committed to providing a safe and healthy work environment in accordance with the Occupational Health and Safety Act and Regulations. The [Hospice name] will provide adequate education on and sufficient supplies of PPE to prevent spread of infectious disease(s) between residents, volunteers and staff.

PROCEDURE

1. Gloves:
 - a) are easily accessible to staff and provided in a variety of sizes and types;
 - b) are chosen based on the type and duration of the task;
 - c) are worn when there is a risk of staff exposure to blood, body fluids, secretions, excretions, mucous membranes and non-intact skin;
 - d) must be changed between residents and before and after certain activities with the same resident (e.g., when moving from a dirty area, such as pericare, to a clean area, such as face-washing);
 - e) are put on and removed according to best practices.
2. Gowns:
 - a) are easily accessible to staff and provided in a variety of sizes;
 - b) are worn to protect the forearms and clothing of staff from splashing and soiling with resident's body substances;
 - c) are long-sleeved;
 - d) are put on and removed according to best practices.
3. Masks:
 - a) are easily accessible to staff;
 - b) are worn where appropriate to protect the mucous membranes of the nose and mouth during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions;
 - c) are changed if moist or wet, interfere with breathing, are damaged, or visibly soiled;
 - d) are put on and removed according to best practices.
4. N95 respirators:
 - a) are easily accessible and provided in a variety of types and sizes based on results of staff fit-testing;
 - b) are used to protect individuals from acquiring infections transmitted by small airborne particles, $\leq 5 \mu\text{m}$ (e.g., chickenpox, measles, tuberculosis);
 - c) are not worn by anyone who has not been fit-tested for the respirator;
 - d) are seal-checked after putting on;

- e) are put on and removed according to best practices.
- 5. Eye protection (goggles, face shield or mask with attached face shield):
 - a) is easily accessible to staff;
 - b) is worn where appropriate to protect the mucous membranes of the eyes during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions;
 - c) is appropriate to the task (e.g., eye glasses are not considered adequate eye protection);
 - d) is put on and removed according to best practices.
- 6. PPE is put on according to a prescribed sequence:
 - a) clean hands
 - b) gown
 - c) mask or N95 respirator
 - d) eye protection
 - e) gloves
- 7. PPE is removed according to a prescribed sequence:
 - a) gloves
 - b) gown
 - c) clean hands
 - d) eye protection
 - e) mask or N95 respirator
 - f) clean hands
- 8. Staff will receive education on PPE during orientation and as needed based on best practices.

Sample Policy and Procedure: Contact Precautions

PURPOSE

To prevent the transmission of diseases spread by the contact route to residents, staff, volunteers and visitors.

POLICY

It is the policy of [Hospice name] to prevent and control the spread of diseases spread by the contact route through education and implementation of IPAC best practices.

PROCEDURE

Upon identification of a symptomatic resident, staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to clean his/her hands prior to leaving their room;
 - c) encourage resident to maintain good personal hygiene;
 - d) encourage family to use appropriate PPE when providing direct care;
 - e) discourage use of common dining/kitchen areas if resident is experiencing vomiting or diarrhea.
2. Resident accommodation includes:
 - a) single room, door may remain open;
 - b) alerting all care providers of Additional Precautions needed (i.e., "Contact Precautions" sign on resident's door, kardex or chart);
 - c) dedicated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) or disinfected between residents;
 - d) dedicated bathroom or commode if single room is not available.
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) gloves;
 - b) gown if soiling of clothing is likely;
 - c) removal of PPE on leaving the room;
 - d) hand hygiene after removing PPE.
4. The IPAC lead will provide staff education on Contact Precautions during orientation and as needed, based on best practices.

Sample Policy and Procedure: Droplet Precautions

PURPOSE

To prevent the transmission of diseases spread by the droplet route to residents, staff, volunteers and visitors.

POLICY

It is the policy of [Hospice name] to prevent and control the spread of diseases spread by the droplet route through education and implementation of IPAC best practices.

PROCEDURE

Upon identification of a symptomatic resident, staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to clean hands and put on a mask prior to leaving his/her room;
 - c) encourage respiratory etiquette practices;
 - d) encourage family to use appropriate PPE when providing direct care;
 - e) include instruction to the resident to maintain a 2-metre separation from other residents if cough and symptoms of fever are present.
2. Resident accommodation includes:
 - a) single room, door may remain open;
 - b) alerting all care providers of Additional Precautions needed (i.e., "Droplet Precautions" sign on resident's door, kardex or chart);
 - c) designated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) or disinfected between residents;
 - d) keeping privacy curtain drawn between residents if single room is not available.
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) fluid-resistant procedure/surgical mask;
 - b) protective eye wear;
 - c) removal of PPE on leaving the room;
 - d) hand hygiene after removing PPE.
4. The IPAC lead will provide staff education on Droplet Precautions during orientation and as needed, based on best practices.

Sample Policy and Procedure: Airborne Precautions

PURPOSE

To prevent the transmission of airborne diseases to residents, staff, volunteers and visitors.

POLICY

It is the policy of [Hospice name] to prevent and control the spread of airborne diseases through education, and implementation of IPAC best practices.

PROCEDURE

Upon identification of a symptomatic resident, staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) instruct resident not to leave his/her room;
 - c) encourage family to use appropriate PPE when entering room.
2. Resident accommodation includes:
 - a) single room, maintaining a negative air pressure to the rest of the residents;
 - b) closed door; if this cannot be accomplished, resident must be transferred to a facility that can accommodate him/her appropriately and safely until no longer infectious;
 - c) alerting all care providers of Additional Precautions needed (i.e. , "Airborne Precautions" sign on resident's door, kardex or chart).
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) fit-tested N95 (or equivalent) respirator for care of residents with infectious pulmonary tuberculosis; an N95 respirator is not needed if the staff member is immune to a suspected airborne infection such as chickenpox or measles;
 - b) removal of PPE on leaving the room;
 - c) hand hygiene after removing PPE.
4. The IPAC lead will provide staff education on Airborne Precautions during orientation and as needed, based on best practices.

Sample Policy and Procedure: Antibiotic Resistant Organisms (AROs)

PURPOSE

To prevent the transmission of AROs to residents, staff, volunteers and visitors

POLICY

It is the policy of [Hospice name] to prevent and control the spread of AROs through education, prudent antibiotic use, and implementation of IPAC best practices.

Definitions

Antibiotic-resistant Organism (ARO): A microorganism that has developed resistance to the action of several antimicrobial agents and that is of special clinical or epidemiological significance.

Extended Spectrum Beta-Lactamase (ESBL)-producing Bacteria: Bacteria that are found in the bowel, urine, blood, skin wounds or sputum. There are several different types of ESBLs, most commonly *Klebsiella pneumonia* and *E. coli*. They produce enzymes that are transmissible to other strains and bacterial species. These enzymes break down beta-lactam antibiotics, rendering them useless. The groups of antibiotics in this category include penicillins, cephalosporins, carbapenems and monobactams.

Methicillin-resistant *Staphylococcus aureus* (MRSA): MRSA are strains of *S. aureus* that are resistant to all of the beta-lactam classes of antibiotics, such as penicillins and cephalosporins.

Vancomycin-resistant *Enterococcus* (VRE): VRE are strains of *Enterococcus faecium* or *Enterococcus faecalis* that are resistant to the antibiotic vancomycin.

PROCEDURE

1. At the time of referral and again on admission, the appropriate staff member will initiate a risk assessment for AROs based on risk factors and results of screening.
2. Additional Precautions will be instituted if deemed necessary, based on the risk assessment.
3. The following risk factors for AROs will be assessed:
 - a) those who have previously been colonized or infected;
 - b) those who have spent time in a health care facility outside of Canada in the last 12 months;
 - c) those who have been admitted to, or who have spent more than 12 continuous hours in any health care facility in the past 12 months;
 - d) those who have recently been exposed to a unit/area of a health care facility with an ARO outbreak;
 - e) those receiving home health care services in the past year;
 - f) those receiving treatment with an indwelling medical device;
 - g) those living in a communal setting (e.g., shelter, halfway home, correctional facility);
 - h) those with a history of injection drug use;
 - i) those who are household contacts of people with MRSA;
 - j) individuals from populations where community-associated MRSA is known to be a problem (e.g., organized sports teams).
4. Specimens for suspected cases are obtained and sent as per physician's orders and according to the appropriate laboratory specimen collection process.

5. Results of specimens are obtained for the purpose of determining the need for continuing or discontinuing Additional Precautions.
6. Routine screening for ESBLs is not recommended.
7. Screening cultures for MRSA should include:
 - a) a swab from the anterior nares; AND
 - b) a swab from the perianal area (a perineal or groin swab is also acceptable); AND
 - c) a swab from skin lesions, wounds, incisions, ulcers and exit sites of indwelling devices, if present, using aseptic technique where indicated.
8. Screening cultures for VRE should include:
 - a) a swab from the rectum that contains stool; OR
 - b) a swab from a colostomy, if the resident has one.
9. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to clean hands prior to leaving his/her room;
 - c) encourage resident to maintain good personal hygiene;
 - d) encourage family to use appropriate PPE when providing direct care;
 - e) cover draining wounds;
 - f) discourage use of common dining/kitchen areas if resident is experiencing vomiting or diarrhea;
 - g) provide residents and visitors with education in the specific ARO, correct and consistent use of hand hygiene and appropriate use of PPE.
10. Resident accommodation includes:
 - a) single room, door may remain open;
 - b) resident instruction and encouragement to perform hand hygiene on leaving his/her room, with assistance given if necessary (residents are not required to remain in their room);
 - c) alerting all care providers of Additional Precautions needed (i.e., "Contact Precautions" sign on resident's door, kardex or chart);
 - d) designated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) or disinfected between residents;
 - e) designated bathroom if single room is not available;
 - f) use of common bath tub/shower; area must be cleaned and disinfected between resident uses;
 - g) daily routine cleaning;
 - h) routine health care cleaning practices for laundering linens/laundry;
 - i) no special handling of eating utensils.
11. Personal protective equipment (PPE) for direct resident care includes:
 - a) gloves;
 - b) gown if soiling of clothing is likely;
 - c) remove PPE on leaving the room;
 - d) clean hands after removing PPE.

12. Treatment recommendations:
 - a) routine decolonization therapy of ESBL/MRSA/VRE residents is not currently recommended;
 - b) infections are treated with appropriate antibiotics that the microorganism is sensitive to;
 - c) consultation with an Infectious Disease Clinician may be required.
12. Contact Precautions are discontinued upon receiving 3 consecutive negative samples taken a week apart from all colonized/infected body sites.
13. The IPAC lead will:
 - a) ensure the appropriate precautions are being followed;
 - b) provide education in the specific ARO, hand hygiene and appropriate use of PPE during orientation and as needed, based on best practices;
 - c) notify Public Health unit if a cluster of residents with the same ARO is identified.

Sample Policy and Procedure: *Clostridium difficile*

PURPOSE

- To prevent the transmission of *Clostridium difficile* (*C. difficile*) to residents, staff, volunteers and visitors.
- To assist staff to promptly identify clusters of *C. difficile* infection (CDI).
- To assist staff in the management of residents with CDI.

POLICY

It is the policy of [Hospice name] to prevent and control the spread of *C. difficile* through education, prudent antibiotic use, prompt notification measures and implementation of IPAC best practices.

PROCEDURE

Upon identification of a symptomatic resident, staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to clean hands prior to leaving his/her room;
 - c) encourage resident to maintain good personal hygiene;
 - d) encourage family to use appropriate PPE when providing direct care;
 - e) provide education to residents and visitors on CDI, correct and consistent use of hand hygiene and appropriate use of PPE.
2. Accommodation of residents with CDI includes:
 - a) single room; door may remain open but resident should remain in room while experiencing symptoms of CDI;
 - b) alerting all care providers of Additional Precautions needed (i.e., “*Contact Precautions*” sign on resident’s door, kardex and/or chart);
 - c) designated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) to the resident or disinfected between residents;
 - d) designated bathroom if single room is not available;
 - e) use of common bath tub/shower if resident is continent of stool; area must be cleaned and disinfected between resident uses;
 - f) resident must perform hand hygiene before leaving his/her room, with assistance given if necessary;
 - g) room cleaning according to best practices and facility protocols for CDI;
 - h) discontinuation of Contact Precautions after at least 48 hours without symptoms of diarrhea.
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) gloves;
 - b) gown if soiling of clothing is likely;
 - c) removal of PPE on leaving the room;
 - d) hand hygiene after removing PPE.

4. When collecting specimens for laboratory testing for *C. difficile* cytotoxin:
 - a) stool sample is collected as soon as possible after the onset of symptoms;
 - b) testing is not done for *C. difficile* cytotoxin on formed stools;
 - c) specimen is transported to the laboratory as soon as possible; if there will be a delay, specimen must be refrigerated;
 - d) appropriate PPE is worn when collecting stool specimens (e.g., gloves, gown);
 - e) repeating cytotoxin testing as a test of cure is not indicated;
 - f) testing for *C. difficile* cytotoxin may be repeated if symptoms do not resolve despite treatment, or to diagnose a relapse of CDI following a period of absence of symptoms.
5. The IPAC lead will:
 - a) ensure the appropriate precautions are being followed;
 - b) provide education on CDI, hand hygiene and appropriate use of PPE to staff during orientation and as needed based on best practices;
 - c) notify Public Health if a cluster of residents with the same symptoms is identified.

Sample Policy and Procedure: Influenza

PURPOSE

To manage residents appropriately to prevent the transmission and of influenza to other residents, staff, volunteers and visitors.

POLICY

It is the policy of [Hospice name] to promptly place residents who are experiencing the signs and symptoms of an influenza-like illness on Droplet/Contact Precautions, thereby decreasing the risk of transmission to other residents, visitors and staff members.

PROCEDURE

Upon identification of a symptomatic resident, staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to clean hands and put on a procedure mask prior to leaving his/her room;
 - c) encourage respiratory etiquette practices;
 - d) encourage family to use appropriate PPE when providing direct care;
 - e) instruct the resident to maintain a 2-metre separation from other residents if cough and symptoms of fever are present;
 - f) provide residents and visitors with education on influenza, correct and consistent use of hand hygiene, and appropriate use of PPE;
 - g) encourage staff and residents to receive annual influenza immunization.
2. Resident accommodation includes:
 - a) single room, door may remain open;
 - b) alerting all care providers of Additional Precautions needed (i.e., "Droplet and Contact Precautions" sign on resident's door, kardex or chart);
 - c) designated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) or disinfected between residents;
 - d) keeping privacy curtain drawn between residents if single room not available;
 - e) routine environmental cleaning.
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) fluid-resistant procedure/surgical mask;
 - b) protective eye wear;
 - c) removal of PPE on leaving the room;
 - d) hand hygiene after removing PPE.
4. Resident's physician will be notified to discuss appropriate treatment; treatment will be initiated within 48 hours of symptom onset.

5. The IPAC lead will:
 - a) ensure the appropriate precautions are being followed;
 - b) provide staff education on influenza, hand hygiene and appropriate use of PPE during orientation and as needed, based on best practices;
 - c) consult with Public Health if a cluster of residents with the same symptoms is identified.

Sample Policy and Procedure: Scabies

PURPOSE

To prevent the transmission of scabies to residents, staff and the environment and manage scabies in the resident population.

POLICY

The [Hospice name] will follow IPAC practices and manage and treat all residents who are identified and diagnosed with scabies.

PROCEDURE

Upon identification of a symptomatic resident staff will initiate the following:

1. Resident and caregiver education will:
 - a) explain the reason for the Additional Precautions;
 - b) encourage resident to remain in his/her room until 24 hours after treatment;
 - c) encourage visitors to use appropriate PPE when providing direct care and to receive treatment if necessary; residents and visitors will receive education on scabies, correct and consistent use of hand hygiene and appropriate use of PPE.
2. Resident accommodation includes:
 - a) single room, door may remain open;
 - b) alerting all care providers of Additional Precautions needed (e.g., “Droplet and Contact Precautions” sign on resident’s door, kardex or chart);
 - c) designated care equipment (e.g., blood pressure cuff, stethoscope, commode chair) or disinfected between residents;
 - d) sending ALL linen (bed linens, towels, clothing) to the laundry in a separate sealed bag;
 - e) handling soiled linen as per the policy and procedure for management of soiled linen;
 - f) removing and replacing resident’s clothing;
 - g) stripping the bed and laundering bedding;
 - h) cleaning and disinfecting mattress; mattress is not used for at least 48 hours;
 - i) remaking bed with fresh linen.
3. Personal protective equipment (PPE) for direct resident care includes:
 - a) gloves;
 - b) gown if soiling of clothing is likely;
 - c) removal of PPE on leaving the room;
 - d) hand hygiene after removing PPE.
4. Treatment procedures include:
 - a) residents and staff are treated simultaneously;
 - b) treatment is recommended in the evening, before the resident goes to bed;
 - c) resident’s skin is clean and dry before treatment;

- d) resident SHOULD NOT take a warm bath before treatment;
 - e) lotion is applied as prescribed (usually 5% permethrin, i.e., Kwellada®);
 - f) resident is not allergic to synthetic pyrethroid, pyrethrin, or to chrysanthemums; treatment is discontinued use if a reaction occurs;
 - g) a sufficient quantity of the lotion is massaged into the skin to cover the entire area from the neck to the soles of the feet, paying particular attention to the areas between the fingers and toes, under the fingernails and toenails, wrists, armpits, genital area and buttocks; the face is not included; NOTE: This product may irritate the eyes – immediately rinse with plenty of water if the eyes become irritated;
 - h) clean clothes are provided for the resident to dress;
 - i) resident's entire body is washed by showering or bathing after 12-14 hours;
 - j) clean clothes for resident to dress;
 - k) re-treatment is only necessary if live mites appear or new lesions develop; re-treatment may be given 7 to 10 days after the first treatment if live mites appear or new skin lesions develop.
5. The IPAC lead will:
- a) ensure the appropriate precautions are being followed.
 - b) provide staff education on scabies, hand hygiene and appropriate use of PPE during orientation and as needed, based on best practices;
 - c) notify Public Health if a cluster of residents with the same symptoms is identified.

Sample Policy and Procedure: Specimen Collection

PURPOSE

Specimen collection involves the sampling of tissue or fluid for laboratory examination:

- to isolate and identify microorganisms that cause disease;
- to determine their antibiotic sensitivity; and
- to assist with the selection of appropriate antimicrobial therapy.

The quality of the specimen received in the laboratory can have a major impact on the subsequent microbiological and clinical diagnosis. Valid results rely on the specimen being of the required quantity, collected in an aseptic manner and stored appropriately prior to laboratory examination.

False results may occur if specimens are kept for prolonged periods before examination in the laboratory.

POLICY

It is the policy of [Hospice name] to provide for the safest means of collection and transport of lab specimens.

PROCEDURE

1. The following general procedures will be followed when collecting laboratory specimens:
 - a) specimens are obtained using safe techniques and practices; hand hygiene and appropriate personal protective equipment (e.g., gloves and gowns) are worn when collecting/handling blood, body fluids, and/or tissue specimens/samples;
 - b) local written guidelines/procedures are followed;
 - c) the correct specimen is taken at the correct time;
 - d) the specimen is taken aseptically, avoiding contamination of the specimen with other microorganisms from the person and/or from any outside source (e.g., the person collecting the specimen);
 - e) an adequate quantity and appropriate number of specimens is sent;
 - f) the specimen transport container is appropriate for the infection being investigated;
 - g) the specimen is safely contained and clearly labelled;
 - h) accurate information about the resident's illness and treatment is documented for interpretation of the results;
 - i) when possible, samples are collected before commencing treatment such as antibiotics or antiseptics; if antimicrobial therapy has already been instigated, the laboratory staff are informed.
2. There is documentation of laboratory specimens:
 - a) specimens collected and sent for laboratory investigation are recorded in the resident's notes;
 - b) requests for microbiological investigations include the following information and are documented on the request form:
 - resident's name, address and date of birth;
 - site of specimen;
 - health card number;

- date and time of specimen collection;
 - diagnosis /reason for specimen collection;
 - relevant signs and symptoms;
 - relevant history, e.g., recent foreign travel;
 - antimicrobial drugs being taken by the resident;
 - site / type of specimen;
 - GP / Consultant's name;
 - name of doctor who ordered the investigation, as it may be necessary to telephone the result before the typed report is dispatched.
3. The person collecting the specimen has a responsibility to ensure that:
- a) the specimen container is leak-proof and securely sealed;
 - b) all traces of body fluid have been removed from the outside of the container;
 - c) the specimen container is not overfilled;
 - d) the specimen container is sealed inside a plastic bag;
 - e) the specimen is dispatched promptly to the laboratory accompanied by a fully completed request form in a separate pocket;
 - f) if specimens cannot be sent to a laboratory immediately, they are stored in a specimen refrigerator at a temperature of 4°C.
4. When collecting specimens:
- a) the procedure is explained and discussed with the resident and privacy is ensured while the procedure is being carried out;
 - b) hands are cleaned before collecting specimens, using soap and water or ABHR;
 - c) the following instructions are included in site-specific collection protocols:

Eye Swab

- Request resident to look upward.
- Using a sterile swab, place the swab parallel to the cornea and gently rotate to collect drainage material from the conjunctiva in the lower eyelid.

Sputum

- Obtain specimen in the morning upon arising.
- Obtain deep respiratory secretions, not saliva or postnasal drainage.
- Perform mouth care or have resident brush teeth prior to obtaining the specimen.
- Encourage resident to take two or three deep breaths and cough deeply.
- Expectorate any sputum directly into a sterile container; the resident should not touch the lip of the container with hands or mouth.
- Collect 10-15mls. of specimen.

Throat Swab

- Ask the resident to position their head facing a light source.
- Tilt the head slightly backward.
- Depress the resident's tongue with a tongue depressor.

- Rub the areas including any lesions, inflammation, or exudate, with the swab.
- Avoid touching any other area of the mouth or tongue with the swab.

Nasopharyngeal Swab

- Gently bend the wire (while in the sterile package to give it a slight arc).
- Tilt the residents head gently back (about 70°).
- Remove any excess mucous using the larger wooden, cotton tipped swab.
- Place the thin wire swab in one nostril about 4-6cm, rub back and forth several times, leave in place a few seconds.
- Withdraw, and place in transport medium.
- Cut excess wire with scissors, and screw the lid on securely.
- Place the specimen in the plastic bag provided.
- Complete the requisition.
- Transport to the lab as soon as possible.
- Refrigerate specimen until it is sent to the lab.

Wound Swab

- Place resident in a comfortable position, exposing the site to be cultured.
- Wounds should be cleaned (with normal saline solution, not antiseptics) prior to wound swabbing.
- Rotate swab gently in the wound bed, sampling inflamed or purulent areas.
- Where there is significant purulent discharge, it is preferable to collect discharge using a sterile syringe and then transferring the material to a sterile container.

Rectal Swab

- Pass the swab, with care, through the anus into the rectum 1 inch.
- Rotate gently and side to side
- Return swab to collection container.

Faeces

- Where possible, ask the resident to defecate into a clinically clean bedpan or hat-type receptacle.
- Stool samples should not be contaminated with urine or water.
- Scoop enough material to fill a third of the specimen container, using the spatula/spoon incorporated in the specimen container. In the case of liquid feces, approximately 15mls. should be collected.
- Examine the specimen for such features as colour, consistency and odour, and record your observations.
- If *Clostridium difficile* is suspected, only liquid stools are collected and stool specimens should be refrigerated and dispatched to the laboratory as soon as possible for toxin identification.

Urine

- Collect urine specimens as soon as possible after the resident awakens in the morning and at the same time each morning if more than one specimen is required.
- Refrigerate all specimens and dispatch to the laboratory as soon after collecting as possible.

Midstream Specimen of Urine: Male

- Retract the prepuce and clean the skin surrounding the urethral meatus with soap and water or 0.9% sodium chloride solution.
- Direct the first and last part of the stream into a urinal or toilet and collect the middle part of the stream into a sterile container.

Midstream specimen of Urine: Female

- Clean the urethral meatus with soap and water or 0.9% sodium chloride solution.
- Clean from the front to the back.
- Ask the resident to micturate into a bedpan or toilet. Ideally the labia should be held apart.
- Place a sterile container or a wide mouthed container under the stream and remove before the stream ceases.
- If the woman is menstruating or has heavy vaginal discharge, she should insert a clean vaginal tampon before beginning the cleansing process.

Catheter Specimen of Urine (CSU)

- A sample of freshly voided urine should be taken from the sample port – not from the catheter bag.
- If there is no urine in the tubing, clamp the tubing below the rubber cuff / access port until sufficient urine collects. The clamp must be removed at the end of the procedure.
- Clean the access point with an isopropyl alcohol swab and, using a sterile syringe (and needle if necessary), aspirate 10-15ml urine.
- Re-clean the access point with an isopropyl alcohol swab and place the urine sample in a sterile container.

Sample Policy and Procedure: Pets and Pet Therapy

PURPOSE

- To acknowledge the therapeutic benefits of pet visitation in the Hospice setting.
- To establish and maintain standards for safe pet therapy through the use of evidence-based infection prevention and control strategies in order to minimize both injuries and the transmission of infectious microorganisms

POLICY

The [Hospice name] acknowledges that the benefits of pet visitors in the hospice setting outweigh the risk of zoonotic transmission. It recognizes the importance and value a pet contributes to the well-being and mental health of its owner or those who interact with pets. Pet therapy has been shown to reduce loneliness and improve health in many different resident settings (Public Health Agency of Canada, 2004).

Animals can be a source of infection transmissible to humans through parasites, fungus or bacteria. Infections such as MRSA seen in humans may be transmitted to an animal, which can then transmit the infection to other humans. Staff need to be aware of any residents of care facilities who experience allergies to animal dander or hair, and the level of risk that animals may present. A balance will be sought to mitigate the risk of transmission of pathogens from animals to humans, while providing the therapeutic benefit of animal interaction, in keeping with the goal of a home-like environment.

PROCEDURE

1. General pet visiting guidelines should include the following:
 - a) guidelines apply to all animals visiting the hospice (i.e., personal family pets, pet therapy animals, resident pets)
 - b) animals must have up-to-date vaccinations, be free of parasites and fleas, and have no open sores, wounds, or lesions;
 - c) reptiles or birds will not be allowed in the hospice, either as resident pets or visitors;
 - d) visiting animals must be on a leash or in a pet carrying case and under the control of their owners at all times;
 - e) pets are not permitted on or in bed;
 - f) female dogs in season are not permitted to visit;
 - g) visitors who enter the site must wash their hands prior to visitation;
 - h) during influenza or other infectious disease outbreak, there will be no animal visitation;
 - i) no animals are allowed in food preparation areas or in common dining rooms;
 - j) family pets can visit in single rooms, dedicated animal visiting room, or outside of the building; NOTE: consideration must be given to other residents who have allergies to animals;
 - k) the owner of the animal and the resident must clean their hands before and after handling the animal;
 - l) the owner must be responsible for the needs of the pet (food, water, outdoor breaks, and picking up after pet);
 - m) personal family pets are to visit with the family member/loved one and should not be visiting with

other residents.

2. Requirements of pet therapy animals include:
 - a) the pet should be preferably over two years of age and in a permanent home for at least 6 months to be considered for visiting residents;
 - b) pet visitation organizations/programs must ensure their animals pass temperament testing by a certified organization with proof of this provided;
 - c) temperament testing is to evaluate:
 - reactions toward strangers;
 - reactions to loud and/or novel stimuli;
 - reactions to angry voices and potentially threatening gestures;
 - reactions to being crowded;
 - reactions to being patted in a vigorous or clumsy manner;
 - reactions to a restraining hug;
 - reactions to other animals;
 - ability to obey handler's commands.
3. The growing body of knowledge regarding transmission of pathogens to humans from animals and from animals to humans suggests that **resident animals** are not appropriate in residential hospice sites, as they may become reservoirs of pathogens transmissible to humans.

Sample Policy and Procedure: General Cleaning

PURPOSE

To prevent the transmission of infectious diseases to residents, staff, volunteers and visitors due to a contaminated environment.

POLICY

It is the policy of [Hospice name] to provide a safe clean environment.

PROCEDURE

The following general practices will be followed for all environmental cleaning in the hospice. For specific cleaning procedures, refer to the *Infection Prevention and Control Resource Manual for Residential Hospice Settings*.

1. The following are requirements before cleaning:
 - a) if Additional Precautions signs are present, precautions are followed as indicated;
 - b) clutter is removed before cleaning;
 - c) waste is collected in a safe manner (e.g., handling plastic bags from the top, not compressing bags with hands);
 - d) manufacturer's instructions are followed for proper dilution and contact time for cleaning and disinfecting solutions;
 - e) materials required for cleaning are gathered before entering the room;
 - f) hands are cleaned on entering the room.
2. The following are requirements during cleaning:
 - a) cleaning progresses from the least soiled areas (low-touch) to the most soiled areas (high-touch) and from high surfaces to low surfaces;
 - b) gross soil is removed prior to cleaning and disinfection;
 - c) turbulence is minimized to prevent the dispersion of dust that may contain microorganisms:
 - damp dusting is preferred over dry dusting or sweeping;
 - mops are not shaken;
 - chemically treated dry mops or HEPA-filtered vacuum cleaners are used for dry-dusting;
 - d) only clean cloths are placed into cleaning solutions; there is no 'double-dipping' of cloths;
 - e) cloths and mop heads are changed frequently;
 - f) cleaning solutions are changed:
 - as per manufacturer's instructions;
 - more frequently in heavily contaminated areas;
 - when visibly soiled;
 - immediately after cleaning blood and body fluid spills;
 - g) disposable containers are used for liquid soap, ABHR, cleaners and disinfectants; liquids are not 'topped up';

- h) carpets are vacuumed using vacuums fitted with a HEPA filter;
 - i) care is taken with needles and other sharp objects:
 - o sharps are picked up using a mechanical device
 - o sharps are placed into a puncture-resistant sharps container;
 - o all sharps incidents are reported to a supervisor;
 - j) hands are cleaned on leaving the room.
3. The following are requirements after cleaning:
- a) rooms are not overstocked;
 - b) tools used for cleaning and disinfecting are cleaned and dried between uses;
 - c) mop heads are laundered daily; all washed mop heads are dried thoroughly before reuse;
 - d) housekeeping cart and carts used to transport waste are cleaned daily.

Sample Policy and Procedure: Cleaning Rooms on Contact Precautions for *Clostridium difficile*

PURPOSE

To prevent the transmission of *Clostridium difficile* (*C. difficile*) to residents, staff, volunteers and visitors.

POLICY

It is the policy of [Hospice name] to provide a safe clean environment, recognizing that *C. difficile* spores are difficult to destroy and are viable in the environment for extended periods of time.

PROCEDURE

In addition to the facility's general cleaning practices, the following additional practices will apply to rooms on Contact Precautions for *C. difficile*:

1. Routine daily cleaning will be performed twice per day.
2. In addition to the General Cleaning procedure:
 - a) a fresh bucket, cloths and mop head (dust mop and wet mop) are used for each room;
 - b) after cleaning, a sporicidal disinfectant is applied to all surfaces in the room for sufficient contact time with the disinfectant (this step may be omitted if the cleaning product is also a sporicidal disinfectant).
3. For terminal/discharge cleaning, a double cleaning is done.
4. In addition to the above, the following are included in terminal/discharge cleaning:
 - a) all dirty/used items are removed (e.g., suction container, disposable items);
 - b) curtains (privacy, window, shower) are removed before starting to clean the room;
 - c) the following are discarded and replaced:
 - soap;
 - toilet paper;
 - paper towels;
 - glove box;
 - d) fresh cloths, mop, supplies and solutions are used to clean the room;
 - e) several cloths are used to clean a room:
 - each cloth is used one time only;
 - cloths are not dipped back into disinfectant solution after use and re-use on another surface;
 - **THERE IS NO REUSE OF USED CLOTHS;**
 - f) all surfaces are cleaned and disinfected for the appropriate contact time with the disinfectant;
 - g) the room is re-cleaned and disinfected using fresh cloths, mop, supplies and solutions, according to the above procedure;
 - h) curtains are replaced with clean curtains following second cleaning.

Sample Policy and Procedure: Routine Terminal/Discharge Cleaning of a Resident Room (does not include rooms on Additional Precautions)

PURPOSE

To prevent the transmission of diseases to residents, staff, volunteers and visitors due to a contaminated environment.

POLICY

It is the policy of [Hospice name] to provide a safe clean environment.

PROCEDURE

1. In addition to the facility's general cleaning practices, the following additional practices are included in terminal /discharge cleaning procedure:
 - a) The bed is cleaned:
 - the bed is stripped and linen is discarded into soiled linen bag; sheets are rolled carefully to prevent aerosols;
 - top and sides of mattress are cleaned, turned over and underside cleaned;
 - exposed bed springs and frame are cleaned;
 - mattress is checked for cracks or holes and replaced as required;
 - there is an inspection for pests;
 - headboard, foot board, bed rails, call bell and bed controls are cleaned, paying particular attention to areas that are visibly soiled and surfaces frequently touched by staff;
 - all lower parts of bed frame, including casters, are cleaned;
 - mattress is allowed to dry;
 - b) privacy curtains are checked for visible soiling and replace if required; in long-term care, curtain is changed;
 - c) inside and outside of resident cupboard or locker is cleaned;
 - d) bedside curtains and window treatments are checked and cleaned or changed if visibly soiled;
 - e) cleaned equipment (e.g., IV poles and pumps, walkers, commodes) is returned to clean storage area;
 - f) bed is re-made
 - g) supplies are replenished as required (e.g., gloves, ABHR, soap, paper towel).

Sample Policy and Procedure: Immunization and Healthy Workplace

Purpose

To prevent the transmission of communicable diseases to residents, staff, volunteers and visitors.

POLICY

[Hospice name] commits to promoting vaccine preventable diseases and a healthy workplace.

PROCEDURE

1. Record history of childhood communicable diseases.
2. The following immunizations are recommended for staff, if not immune:
 - annual influenza;
 - measles, mumps and rubella (MMR) - two doses;
 - tetanus, diphtheria (every 10 years);
 - hepatitis B (full series);
 - for susceptible staff, varicella vaccine is recommended (negative history, non-immune).
3. It is recommended that all staff have a 2-step tuberculin skin test (TST) unless:
 - a) employee can provide documentation of having previous 2-step TST; only a single test is then required;
 - b) employee has a documented prior positive TST; if positive, a chest X-ray to rule out active disease is required.
4. Staff should receive education on when to stay home from work. This includes:
 - a) acute respiratory illness;
 - b) dermatitis on their hands;
 - c) cold sores or shingles that cannot be covered;
 - d) initial days of a respiratory illness;
 - e) diarrhea;
 - f) eye infections until treated.

Infection Prevention and Control Audit Tool for Hospices

Completed by: _____ Date: _____

Audits should be performed and documented at least annually with feedback and an action plan developed.

Item	Yes	No	N/A	Comments/Action	Timeline
Entry to Hospice					
There is signage posted related to screening for communicable diseases					
Hand hygiene station at entrance					
Resident Rooms					
Hand hygiene sinks are accessible					
ABHR is available in the room at point-of-care					
Every room:					
• is clean, orderly and uncluttered					
• has a (puncture-resistant) sharps container					
• has a linen cart for soiled linens					
• has a waste container					
• has dedicated equipment (e.g., bedpan, commode)					
Shared equipment is cleaned					
Urinals, bedpans, wash basins are stored appropriately					
There is a daily and/or routine cleaning schedule for all surfaces, floors, curtains					
Soiled furniture is cleaned and/or replaced with cleanable materials					
Personal care items (e.g., lotions, tissues) are discarded if left behind after any discharge					
Respiratory Equipment					
Suction equipment is clean and dry					
Single-use sterile catheters are used					
Disposable liners are changed when full and between residents					
Saline bottles are dated and changed every 24 hours					

Item	Yes	No	N/A	Comments/Action	Timeline
Medication					
The dispensing area is: <ul style="list-style-type: none"> clean and orderly equipped with a dedicated hand hygiene sink and/or access to ABHR equipped with a dedicated medication refrigerator that is clean and monitored for temperature free of specimens or food 					
Dated sterile solutions are discarded daily					
Sterile solutions are not accessed from a common source that is re-used					
There is a policy on how multi-dose vials are used or handled					
A puncture-resistant sharps container is accessible at point-of-use					
The sharps container is not filled past the fill line					
Tub/Shower Room(s)					
The room is: <ul style="list-style-type: none"> clean and orderly cleaned daily and after each use equipped with a laundry hamper free of personal care items (e.g., creams, razors, bedpans, jugs) free of mould or mildew 					
Toilet					
The toilet room: <ul style="list-style-type: none"> has a waste bin is free of mould or mildew 					
Toilet seat and underneath is clean					
There is a daily cleaning schedule for all surfaces, floors, dispensers, including: soap, paper towels, toilet paper and call bell pulls					
Toilet brushes are dedicated to a room, especially if resident has GI symptoms					

Item	Yes	No	N/A	Comments/Action	Timeline
Nursing Station					
The nursing station:					
• is clean and orderly					
• has ABHR readily available					
• has a routine cleaning schedule for all surfaces and furniture; e.g., phone, keyboards					
• is free of food and beverages					
Housekeeping Supply Room					
The housekeeping supply room:					
• is clean and free from spillages					
• is free of food or beverages					
• is properly ventilated					
• has a clear separation between dirty equipment and clean equipment					
• has equipment that is stored clean, dry and empty (mops, pails, buckets)					
• has waste bags that are not overfilled					
• has a hand hygiene station in the room separate from the service sink					
• has PPE readily available in the room					
Cleaning Chemicals, Product Selection and Management					
Chemicals and disinfecting products:					
• have been reviewed and approved in-house for effectiveness (e.g., IPAC committee, OH)					
• are stored and used according to manufacturers' instructions					
• are labelled with dates: opened, discard and expiry dates					
• have a drug identification number (DIN) from Health Canada (disinfectants only)					
• have WHMIS information and a Material Safety Data Sheet (MSDS) readily available in case of accidents					
Dispensing systems have a preventive maintenance and monitoring system in place					

Item	Yes	No	N/A	Comments/Action	Timeline
Chemical solutions are not 'topped-up'; reusable containers are cleaned and dried before reuse					
Aerosol/sprays are avoided					
General Cleaning Practices					
Cleaning staff education includes:					
• proper preparation and use of cleaning products					
• proper cleaning practices					
• hand hygiene					
• correct use of PPE					
• documentation of education					
Clutter is removed before cleaning					
Cleaning procedures progress from:					
• clean to dirty					
• high to low surfaces					
• outside to inside of room					
Solutions and cleaning tools are changed immediately after cleaning blood and body fluid spills or heavily contaminated areas					
Cleaning cloths and mop heads are laundered after each room					
There is no 'double-dipping' (putting a used cloth back into a clean solution) of cloths or mop heads					
Dust dispersal is minimized (no dry dusting or sweeping, shaking of mops, etc.)					
Containers of liquid soap, lotions and ABHR are disposable and not 'topped-up' (i.e., refilling a partially filled container with fresh solution)					
Dietary Kitchen/Servery					
Food preparation and maintenance of equipment must follow Provincial Public Health Act Food Safety Regulations					
Kitchen areas are:					
• kept clean and sanitized after use					
• cleaned by a dedicated person who is responsible for regular cleaning of the kitchen area, surfaces, handles, frequently handled items (e.g., shakers) and all appliances					

Item	Yes	No	N/A	Comments/Action	Timeline
<ul style="list-style-type: none"> • free of animals, pests and vermin 					
<ul style="list-style-type: none"> • equipped with a dedicated hand hygiene station 					
Refrigerator and freezer temperatures are monitored					
Single-use, disposable tableware is discarded following use					
Opened food is covered and dated					
Personal (resident) food is labelled, dated and in single-use portions					
The food refrigerator is free from specimens and/or staff food					
Hand Hygiene Practice Promote use of either ABHR (preferred method for hand hygiene) or soap and water (when hands are visibly soiled).					
Education on hand hygiene includes:					
<ul style="list-style-type: none"> • correct use of ABHR, soap and water 					
<ul style="list-style-type: none"> • rubbing or lathering all hand surfaces (15 seconds) 					
<ul style="list-style-type: none"> • use of lotion to moisturize skin 					
<ul style="list-style-type: none"> • if using soap and water, correct use of taps and paper towels 					
Nails of health care providers are:					
<ul style="list-style-type: none"> • short, clean and natural (i.e., no artificial, gel or nail extenders) 					
<ul style="list-style-type: none"> • free from chipped nail polish 					
Hands are:					
<ul style="list-style-type: none"> • free of jewellery (except watches) 					
<ul style="list-style-type: none"> • maintained with lotions and creams 					
<ul style="list-style-type: none"> • free of uncovered cuts or abrasions 					
Hands are cleaned:					
<ul style="list-style-type: none"> • before and after initial contact with resident or their environment 					
<ul style="list-style-type: none"> • before aseptic procedure 					
<ul style="list-style-type: none"> • after body fluid exposure risk 					
<ul style="list-style-type: none"> • before preparing, handling or serving food or medication 					
<ul style="list-style-type: none"> • before and after glove use 					
<ul style="list-style-type: none"> • before removal of masks/eye protection 					

Item	Yes	No	N/A	Comments/Action	Timeline
Personal Protective Equipment (PPE): Gloves, Gowns, Mask/Eye Protection					
PPE supplies are accessible in a variety of sizes					
PPE is worn as per Routine Practices (RP) or Additional Precautions (AP) (direct contact with resident or environment, potential for soiling and not worn outside of room/area)					
PPE is put on immediately before direct contact with resident and environment, treatment, when appropriate, and removed as soon as the activity is completed					
Gown is securely tied at the neck and waste and gloves fit over the cuff					
Eye glasses are not worn as a substitute for eye protection					
PPE are worn as single-use items					
Care of the Deceased					
The following are in place prior to care:					
• cleaning procedures					
• disposal of waste					
• hand hygiene (ABHR or soap and water)					
• PPE available					
• leak-proof body bag available					
• sharps container					
Disinfection/Sterilization of Medical Devices					
There are written policies and procedures regarding reprocessing of semicritical and critical equipment/devices					
Single-use devices are used wherever possible					
Manufacturer's instructions are followed for any equipment/device requiring disinfection or sterilization					

Adapted from CHICA-Canada's *Infection Prevention and Control Audit Toolkit*, 2009. Available at: <http://www.chica.org>

Recommended Infection Prevention and Control Websites

Association for Professionals in Infection Control and Epidemiology (APIC)

<http://www.apic.org//AM/Template.cfm?Section=Home1>

Center for Disease Control and Prevention (CDC)

<http://www.cdc.gov/>

Community and Hospital Infection Control Association-Canada (CHICA)

<http://www.chica.org/>

Ontario Agency of Health Protection and Promotion (OAHPP)

<http://www.oahpp.ca/>

Ontario Ministry of Health and Long-Term Care (MOHLTC)

<http://www.health.gov.on.ca/en/>

Provincial Infectious Diseases Advisory Committee (PIDAC)

http://www.health.gov.on.ca/english/providers/program/infectious/pidac/pidac_mn.html

Public Health Agency of Canada (PHAC)

<http://www.phac-aspc.gc.ca/index-eng.php>

Regional Infection Control Networks (RICN)

www.ricn.on.ca

World Health Organization (WHO)

<http://www.who.int/en/>

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REGIONAL INFECTION
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