



A **PRINTED** copy of this guideline may not be the most recent version. The **OFFICIAL** version is located on IHNET at the Policies & Procedures Home Page

<p><b>IH0100: Additional Precautions For All Care Areas</b></p> <p><b>Transmission Tables</b></p>	<p><b>EFFECTIVE DATE:</b> September 2006</p> <p><b>REVISED DATE:</b> November 2010, December 12, 2012, January 2015</p> <p><b>REVIEWED DATE:</b> October 2019</p>
---	---

**1.0 PURPOSE**

Additional Precautions are interventions **used in addition to Routine Practices** to prevent transmission of certain microorganisms to patients and healthcare providers by interrupting transmission of infectious agents that are suspected or identified in a patient.

Routine practices properly and consistently applied should prevent transmission by the contact and droplet routes.

For certain situations that may result in extensive contamination of the environment or for microorganisms with a very low infectious dose, additional precautions may be indicated. These include contact, droplet and airborne precautions.

The **Transmission Tables** identify the transmission characteristics and precautions by condition/clinical presentation or by a specific etiology. This information guides the healthcare provider in determining when to implement and discontinue additional precautions – implementation should occur as soon as disease or risk factors are suspected or identified. A confirmed diagnosis is not necessary for additional precautions to be applied.

**Table 9** identifies the additional precautions that should be used for conditions and/or clinical presentations of patients.

**Table 10** identifies the additional precautions that should be used for specific etiologies identified – that is the causative microorganism has been identified.

## PART C: TRANSMISSION CHARACTERISTICS AND PRECAUTIONS

**Table 9: Transmission characteristics and precautions by condition/clinical presentation. Once specific etiology is known, refer to Table 10**

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
<b>Abscess</b> See draining wound						
<b>Bronchiolitis</b>	RSV, human metapneumovirus, parainfluenza virus, influenza, adenovirus	<b>Droplet and contact</b>	Respiratory secretions	Large droplet and direct and indirect contact	Duration of symptoms	Patient should not share room with high-risk roommates
<b>Burns, infected</b> See draining wound						
<b>Cellulitis</b> Draining: See draining wound Periorbital in child <5 years old without portal of entry	<i>H. influenzae</i> type B in non-immune child <2 years of age; <i>Streptococcus pneumoniae</i> , Group A <i>Streptococcus</i> , <i>S. aureus</i> , other bacteria	<b>Droplet if <i>H. influenzae</i> type B is possible cause, otherwise routine practices</b>	Respiratory secretions	Large droplet, direct contact	Until 24 hours of appropriate antimicrobial therapy received or if <i>H. influenzae</i> type B ruled out	
<b>Cold</b>	Rhinovirus, RSV, human metapneumovirus, parainfluenza, adenovirus, coronavirus	<b>Droplet and contact</b>	Respiratory secretions	Large droplet and direct and indirect contact	Duration of symptoms	Patient should not share room with high-risk roommates
<b>Conjunctivitis</b>	Adenovirus, enterovirus, chlamydia, <i>Neisseria gonorrhoea</i> , other microbial agents	<b>Contact<sup>a</sup></b>	Eye discharge	Direct and indirect contact	Until viral etiology ruled out; duration of symptoms, up to 14 days if viral	<sup>a</sup> Routine if non-viral
<b>Cough, fever, acute upper respiratory tract infection</b>	Rhinovirus, RSV, human metapneumovirus, parainfluenza, influenza, adenovirus, coronavirus, pertussis	<b>Droplet and contact</b>	Respiratory secretions	Large droplet, direct and indirect contact	Duration of symptoms or until infectious etiology ruled out	Consider fever and asthma in child <2 years old as viral infection Patient should not share room with high-risk roommates

### 3 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Cough, fever, pulmonary infiltrates in person at risk for TB	<i>Mycobacterium tuberculosis</i>	<b>Airborne</b>	Respiratory secretions	Airborne	Until infectious TB is ruled out Until patient has received 2 weeks of effective therapy, and is improving clinically, and has 3 consecutive sputum smears negative for acid fast bacilli collected 8–24 hours apart If multi-drug-resistant TB, until sputum culture negative	TB in young children is rarely transmissible Assess visiting family members for cough <a href="http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tbstand07-eng.php">http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tbstand07-eng.php</a>
Croup	Parainfluenza, influenza, human metapneumovirus, RSV, adenovirus	<b>Droplet and contact</b>	Respiratory secretions	Large droplet, direct and indirect contact	Duration of symptoms or until infectious cause ruled out	Patient should not share room with high-risk roommates
Decubitus (pressure ulcer, draining) See draining wound						
Dermatitis See draining wound	Many (bacteria, virus, fungus)	<b>Contact</b>	Pus	Direct and indirect contact	Until infectious etiology ruled out	If compatible with scabies, take appropriate precautions pending diagnosis
Desquamation, extensive See draining wound	<i>S. aureus</i>	<b>Contact</b>	Pus	Direct and indirect contact	Until contained or infection ruled out	
Diarrhea See gastroenteritis Acute diarrhea of likely infectious cause						
Draining wounds	<i>S. aureus</i> , Group A <i>Streptococcus</i> , many other bacteria	<b>Routine Contact:<sup>b</sup> Major wound, droplet<sup>c</sup></b>	Pus	Direct and indirect contact	Duration of drainage	<sup>a</sup> Major: drainage not contained by dressing <sup>c</sup> Droplet for first 24 hours of antimicrobial therapy if invasive group A streptococcal infection suspected
Encephalitis	Multiple microbial agents including herpes simplex virus (HSV), enterovirus, arbovirus (West Nile virus)	<b>ADULT: Routine<sup>d</sup> PAEDIATRIC: Contact<sup>d</sup></b>	Feces, respiratory secretions	Direct and indirect contact (fecal/oral)	Until specific etiology established or until enterovirus ruled out	<sup>a</sup> May be associated with other agents including measles, mumps, varicella. If identified, take appropriate precautions for associated disease

4 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Endometritis	Group A <i>Streptococcus</i> ; many other bacteria	<b>Routine unless signs of toxic shock<sup>e</sup></b>				<sup>e</sup> Contact and droplet for the first 24 hours of antimicrobial therapy if invasive group A <i>Streptococcus</i> suspected.
Enterocolitis See diarrhea						
Epiglottitis In child <5 years old	<i>H. influenzae</i> type B; <b>Possible in non-immune infant &lt;2 years of age</b> , group A <i>Streptococcus</i> , <i>S. aureus</i>	<b>Droplet if <i>H. influenzae</i> type B is possible cause, otherwise routine</b>	Respiratory secretions	Large droplet, direct contact	Until 24 hours of appropriate antimicrobial therapy received or until <i>H. influenzae</i> type B ruled out	
Erysipelas Draining: See draining wound	Group A <i>Streptococcus</i>	<b>Routine</b>				
Febrile respiratory illness Usually present with symptoms of a fever greater than 38 °C and new or worsening cough or shortness of breath	Wide range of droplet-spread respiratory infections, such as colds, influenza, influenza-like illness and pneumonia	<b>Contact and droplet precautions</b>	Respiratory secretions			Note: elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection See <i>Ontario Best Practices for Preventing Acute Respiratory Infection in All Health Care Settings</i>
Fever without focus (acute, in children)	<b>Enterovirus and other pathogens</b>	<b>ADULT: Routine<sup>f</sup> PAEDIATRIC: Contact</b>	Feces, respiratory secretions	Direct or indirect contact (fecal/oral)	Duration of symptoms or until enteroviral infection ruled out	<sup>f</sup> If findings suggest a specific transmissible infection, take precautions for that infection pending diagnosis
Food poisoning	<i>Bacillus cereus</i> , <i>Clostridium perfringens</i> , <i>S. aureus</i> , <i>Salmonella</i> , <i>Vibrio parahaemolyticus</i> , <i>Escherichia coli</i> O157, <i>Listeria</i> and others	<b>ADULT: Routine<sup>g</sup> PAEDIATRIC: Contact</b>	Food; feces if <i>Salmonella</i> or <i>Escherichia coli</i> O157	Foodborne, or direct and indirect contact (fecal/oral)		<sup>g</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
Furuncles See draining wound	<i>S. aureus</i>					

5 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Gas gangrene Draining: See draining wound	<i>Clostridium</i> spp.					
Gastroenteritis	Diarrhea and/or vomiting due to infection or toxin	<b>ADULT: Contact<sup>h</sup></b> <b>PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	Duration of symptoms for <i>C. difficile</i> , norovirus, rotavirus until ruled out. In pediatrics, until normal stools or infectious etiology ruled out	<sup>h</sup> Use contact precautions until <i>C. difficile</i> , norovirus, rotavirus ruled out. Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene See Table 10 for specific etiologies
Gingivostomatitis	HSV, other causes including radiation therapy, chemotherapy, idiopathic (aphthous)	<b>Contact if primary and extensive HSV related.</b> <b>Otherwise routine</b>	Mucosal lesions	Direct contact	While lesions present	
Guillain-Barré syndrome	Some cases associated with infection (e.g., campylobacter) <sup>i</sup>					<sup>i</sup> Take precautions as appropriate for known or suspected associated infection
Hand, foot and mouth disease	Enterovirus	<b>ADULT: Routine</b> <b>PAEDIATRIC: Contact</b>	Feces, respiratory secretions	Direct and indirect contact (fecal/oral)	Duration of symptoms	Contact precautions apply to children who are incontinent or unable to comply with hygiene
Hemolytic-uremic syndrome	Some associated with <i>E. coli</i> O157	<b>ADULT: Routine<sup>j</sup></b> <b>PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	Until <i>E. coli</i> O157 ruled out	<sup>j</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene

6 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Hemorrhagic fever acquired in appropriate endemic or epidemic area	Ebola, Lassa, Marburg, Crimean-Congo and others	<b>Contact and droplet AGMP<sup>k</sup></b>	Blood and bloody body fluids; respiratory secretions; skin if Ebola and urine if Lassa	Direct and indirect contact; possibly aerosol if pneumonia Lassa: Sexual contact	Duration of symptoms or until hemorrhagic fever virus ruled out	Local public health authorities should be notified immediately <sup>k</sup> If AGMP necessary, see strategies to reduce aerosol generation, see <a href="#">Part B, Section IV, subsection iii, 1b</a>
Hepatitis of unknown etiology	Hepatitis A, B, C, E viruses, Epstein-Barr virus and others	<b>ADULT: Routine' PAEDIATRIC: Contact</b>	Feces; blood and certain body fluids	Mucosal or percutaneous exposure to infective body fluids Sexual transmission Vertical; mother to child Direct and indirect contact (fecal/oral) for hepatitis A, E	For 7 days after onset of jaundice or until hepatitis A and E epidemiologically excluded	Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment unless hepatitis A and E are epidemiologically excluded Contact precautions apply to children who are incontinent or unable to comply with hygiene
Herpangina	Enterovirus	<b>ADULT: Routine PAEDIATRIC: Contact</b>	Feces, respiratory secretions	Direct and indirect contact (fecal/oral)	Duration of symptoms	Contact precautions apply to children who are incontinent or unable to comply with hygiene
Impetigo See draining wound	Group A <i>Streptococcus</i> , <i>S. aureus</i>					
Influenza-like illness	Influenza, other respiratory viruses	<b>Contact and droplet</b>	Respiratory secretions	Large droplet, direct and indirect contact	Duration of symptoms or until infectious etiology ruled out	
Kawasaki disease (mucocutaneous lymph node syndrome)	Unknown	<b>Routine</b>				Not known to be transmissible
Meningitis	Bacterial: <i>Neisseria meningitidis</i> , <i>H. influenzae</i> type B possible in non-immune infant <2 years of age, <i>Streptococcus pneumoniae</i> , Group B <i>Streptococcus</i> , <i>Listeria monocytogenes</i> , <i>E. coli</i> and other Gram-negative rods	<b>ADULT: Droplet until <i>Neisseria meningitidis</i> ruled out, otherwise routine PAEDIATRIC: Droplet and contact<sup>m</sup></b>	Respiratory secretions	Large droplet, direct contact	Until 24 hours of appropriate antimicrobial therapy received	<sup>m</sup> Pediatrics: precautions for both bacterial and viral until etiology established. Droplet if viral etiology established Contact precautions apply to children who are incontinent or unable to comply with hygiene
	<i>Mycobacterium tuberculosis</i>	<b>Routine<sup>n</sup></b>				<sup>n</sup> Rule out associated respiratory TB

7 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
	Viral: enterovirus, arboviruses	<b>ADULT: Routine<sup>o</sup></b> <b>PAEDIATRIC: Contact<sup>o</sup></b>	Feces, respiratory secretions	Direct or indirect contact	Until enterovirus ruled out	<sup>o</sup> May be associated with measles, mumps, varicella, HSV. If identified, take appropriate precautions for associated disease
	Fungus	<b>Routine</b>				
Necrotizing enterocolitis	Unknown, probably many organisms	<b>Routine<sup>p</sup></b>			Duration of symptoms	<sup>p</sup> Unknown if transmissible Take precautions if outbreak suspected
Osteomyelitis	<i>H. influenzae</i> type B possible in non-immune infant <2 years of age, <i>S. aureus</i> , other bacteria	<b>ADULT: Routine</b> <b>PAEDIATRIC: Droplet if <i>H. influenzae</i> type B possible; otherwise routine</b>			Until 24 hours of effective antimicrobial therapy or until <i>H. influenzae</i> type B ruled out	
Otitis, draining See draining wound						
Paroxysmal cough, suspected pertussis	<i>Bordetella pertussis</i> , <i>Bordetella parapertussis</i>	<b>Droplet</b>	Respiratory secretions	Large droplets	Until pertussis ruled out or 3 weeks after onset of paroxysms if not treated or until 5 days of antimicrobial therapy received	Close contacts (household and HCWs) may need chemoprophylaxis and/or immunization If HCWs immunization not up to date, refer to OH and/or delegate Refer to Canadian Immunization Guide 7th Ed., 2006 for specific information available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a>
Pharyngitis	Group A <i>Streptococcus</i> , viral, <i>Corynebacterium diphtheriae</i>	<b>Droplet and contact</b>	Respiratory secretions	Direct and indirect contact; large droplets	Duration of symptoms; if Group A <i>Streptococcus</i> until 24 hours of antimicrobial therapy received	If diphtheria suspected, see Table 10.
Pleurodynia	Enterovirus	<b>ADULT: Routine</b> <b>PAEDIATRIC: Contact</b>	Feces, respiratory secretions	Direct and indirect contact (fecal/oral)	Duration of symptoms	Contact precautions apply to children who are incontinent or unable to comply with hygiene

8 | ROUTINE PRACTICES AND ADDITIONAL PRECAUTIONS FOR PREVENTING THE TRANSMISSION OF INFECTION IN HEALTHCARE SETTINGS

Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Pneumonia	Viruses, pertussis, <i>Mycoplasma pneumoniae</i> , <i>H. influenzae</i> type B, <i>S. aureus</i> , group A <i>Streptococcus</i> , Gram-negative enteric rods, <i>Chlamydia</i> , <i>Legionella</i> , <i>Pneumocystis</i> , other fungi; other agents	<b>ADULT: Routine<sup>q</sup></b> <b>PAEDIATRIC: Droplet and contact</b>	Respiratory secretions	Large droplets, direct and indirect contact	Until etiology established, then as for specific organism; no special precautions for pneumonia unless ARO, then use Contact	<sup>q</sup> Routine for adults unless clinical, epidemiologic or microbiologic data to necessitate contact and droplet precautions (i.e., on contact and droplet for viral etiologies) Minimize exposure of immunocompromised patients, patients with chronic cardiac or lung disease, neonates
Pseudomembranous colitis	<i>C. difficile</i>	<b>Contact</b>	Feces	Direct and indirect contact (fecal/oral)	Duration of symptoms	Until 72 hours after stool is normal.
Rash compatible with scabies	<i>Sarcoptes scabiei</i>	<b>Contact</b>	Mites	Direct and indirect contact	If confirmed, until 24 hours after initiation of appropriate therapy	For typical scabies, routine (use gloves and gown for direct patient contact only) See scabies, Table 10
Rash (maculopapular) with fever and one of coryza, conjunctivitis or cough	Measles	<b>Airborne</b>	Respiratory secretions	Airborne	If confirmed, until 4 days after onset of rash	See measles, Table 10
Rash (petechial/purpuric) with fever	<i>Neisseria meningitidis</i>	<b>Droplet if <i>N. meningitidis</i> suspected, otherwise routine</b>	Respiratory secretions	Large droplets, direct contact	Discontinue if <i>Neisseria meningitidis</i> ruled out If <i>N. meningitidis</i> confirmed, until 24 hours of appropriate antimicrobial therapy received	
Rash (vesicular) with fever	Varicella	<b>Airborne and contact</b>	Respiratory secretions, skin lesion drainage	Airborne, direct and indirect contact	If confirmed, until all lesions are dry	See varicella, Table 10
Rash, vesicular/pustular in appropriate epidemiologic context until smallpox, disseminated vaccinia and monkeypox ruled out	Smallpox, disseminated vaccinia, monkeypox	<b>Contact, droplet and airborne</b>	Lesions and respiratory secretions (monkeypox) Skin lesion exudate, oropharyngeal secretions (smallpox, disseminated vaccinia)			
Reye's syndrome	May be associated with viral infection, especially influenza, varicella					Precautions for known or suspected associated viral infection
Scalded skin syndrome (Ritter's Disease)		<b>Routine</b>				



Condition/ clinical presentation	Potential pathogens	Precautions	Infective material	Route of transmission	Duration of precautions	Comments
Septic arthritis	<i>H. influenzae</i> type B possible in non-immune infant <2 years of age; <i>S. aureus</i> , <i>Streptococcus pneumoniae</i> , group A <i>Streptococcus</i> , <i>N gonorrhoea</i> , other bacteria	<b>ADULT: Routine</b> <b>PAEDIATRIC: Droplet if <i>H. influenzae</i> type B possible; otherwise routine</b>	Respiratory secretions for <i>H. influenzae</i> type B	Large droplet, direct contact <i>H. influenzae</i> type B	Until 24 hours of appropriate antimicrobial therapy received or until <i>H. influenzae</i> type B ruled out	
Severe respiratory illness See febrile respiratory illness						
Skin infection See cellulitis						
Toxic shock syndrome	<i>S. aureus</i> , Group A <i>Streptococcus</i>	<b>Droplet<sup>f</sup></b> <b>Routine</b>				<sup>f</sup> Droplet for first 24 hours of antimicrobial therapy if invasive group A streptococcal infection suspected See draining wound if drainage or pus
Urinary tract infection	Many	<b>Routine<sup>s</sup></b>				<sup>s</sup> Contact if ARO
Vincent's angina, Trench mouth	Multiple bacteria	<b>Routine</b>				
Wound infection See draining wound						

**Table 10: Transmission characteristics and precautions by specific etiology**<sup>(15;492;497)</sup>

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Actinomycosis</b> ( <i>Actinomyces</i> sp.)	Cervicofacial, thoracic or abdominal infection	<b>Routine</b>			Variable	Not person to person		Normal flora; infection usually secondary to trauma.
<b>Adenovirus Respiratory strains</b>	Respiratory tract infection (pneumonia)	<b>Droplet and contact</b>	Respiratory secretions	Large droplets; direct and indirect contact	1–10 days	Shortly before and until symptoms cease	Duration of symptoms	Different strains responsible for respiratory and gastrointestinal disease Patient should not share room with high-risk roommates Minimize exposure of immunocompromised patients, patients with chronic cardiac or lung disease, neonates. Symptoms may be prolonged in immunocompromised patients
	Conjunctivitis	<b>Contact</b>	Eye discharge	Direct and indirect contact	5–12 days	Late in incubation period until 14 days after onset	Duration of symptoms, up to 14 days	Careful attention to aseptic technique and reprocessing of ophthalmology equipment to prevent epidemic keratoconjunctivitis
<b>Adenovirus Enteric strains</b>	Diarrhea	<b>ADULT: Routine<sup>a</sup> PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	3–10 days	Until symptoms cease	Duration of symptoms	<sup>a</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Amebiasis</b> ( <i>Entamoeba histolytica</i> )	Dysentery and liver abscess	<b>ADULT: Routine<sup>b</sup> PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	2–4 weeks	Duration of cyst excretion	Duration of symptoms	<sup>b</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Anthrax</b> ( <i>Bacillus anthracis</i> )	Cutaneous, pulmonary	<b>Routine</b>			1–7 days; maybe up to 60 days	Not person-to-person		Acquired from contact with infected animals and animal products Inhalation anthrax may occur as a result of occupational exposure to anthrax spores or as a result of bioterrorism Decontamination and postexposure prophylaxis necessary for exposure to aerosols in laboratory exposures or biological terrorism



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Astrovirus</b>	Diarrhea	<b>ADULT: Routine<sup>e</sup> PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	3–4 days	Duration of symptoms	Duration of symptoms	<sup>e</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Babesiosis</b>		<b>Routine</b>	Blood	Tick borne		Not person to person, except rarely by blood transfusion from asymptomatic parasitaemic donors		
<b>Bacillus cereus</b>	Food poisoning Nausea, vomiting, diarrhea, abdominal cramps	<b>Routine</b>		Foodborne				
<b>Bed bugs (Cimex lectularius)</b>	Allergic reactions and itchy welts.	<b>Routine</b>						Not known to transmit disease If necessary, consult professional pest control for infestation For information see: <a href="http://www.cdc.gov/nceh/ehs/publications/bed_bugs_cdc-epa_statement.htm">http://www.cdc.gov/nceh/ehs/publications/bed_bugs_cdc-epa_statement.htm</a>
<b>Blastomycosis (Blastomyces dermatitidis)</b>	Pneumonia, skin lesions	<b>Routine</b>				Not person to person		Acquired from spores in soil
<b>Bocavirus Respiratory tract infection</b>		<b>Droplet and contact</b>						May cohort if infected with same virus Patient should not share room with high-risk roommates
<b>Botulism (Clostridium botulinum)</b>	Flaccid paralysis; cranial nerve palsies	<b>Routine</b>		Foodborne		Not person to person		
<b>Brucellosis (Brucella sp.) Undulant, Malta or Mediterranean fever</b>	Systemic bacterial disease of acute or insidious onset	<b>Routine</b>			Weeks to months	Not transmitted person to person, except rarely via banked spermatozoa and sexual contact		Acquired from contact with infected animals or from contaminated food, mostly dairy products Brucella is hazardous to laboratory workers. Notify laboratory if diagnosis is suspected Prophylaxis necessary following laboratory exposure

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
	Draining lesions	<b>MINOR:</b> <b>Routine</b> <b>MAJOR:</b> <b>Contact</b> <sup>f</sup>	Drainage from open lesions	Possibly direct contact			Duration of drainage	<sup>f</sup> MAJOR: Contact precautions necessary only if wound drainage cannot be contained by dressings
<b>Burkholderia cepacia</b>	Exacerbation of chronic lung disease in patients with cystic fibrosis	<b>Contact</b> <sup>g</sup>					Until organism cleared as directed by ICP	B. cepacia can result in respiratory tract colonization or infection in patient with cystic fibrosis <sup>g</sup> If other cystic fibrosis patients are on the unit All interactions with other cystic fibrosis patients should be avoided
<b>Caliciviruses</b> <b>See Noroviruses</b>								
<b>Campylobacter</b>	Gastroenteritis	<b>ADULT:</b> <b>Routine</b> <sup>h</sup> <b>PAEDIATRIC:</b> <b>Contact</b>	Contaminated food, feces	Direct and indirect contact (fecal/oral)	2–5 days	Duration of excretion Person-to-person uncommon	Duration of symptoms	<sup>h</sup> Consider contact precautions for adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Treatment with effective antimicrobial shortens period of infectivity Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Candidiasis (Candida sp.)</b>	Many	<b>Routine</b>						Normal flora
<b>Cat scratch disease (Bartonella henselae)</b>	Fever, lymphadenopathy	<b>Routine</b>			16–22 days	Not person to person		Acquired from animals (cats and others)
<b>Chancroid (Haemophilus ducreyi)</b>	Genital ulcers	<b>Routine</b>		Sexual transmission	3–5 days	Until healed and as long as infectious agent persists in the original lesion		
<b>Chickenpox</b> <b>See varicella</b>								
<b>Chlamydia trachomatis</b>	Urethritis, cervicitis, pelvic inflammatory disease; neonatal conjunctivitis, infant pneumonia; trachoma	<b>Routine</b>	Conjunctival and genital secretions	Sexual transmission Mother to child at birth Trachoma: direct/indirect contact	Variable	As long as organism present in secretions		
<b>Chlamydia pneumoniae</b>	Pneumonia	<b>Routine</b>	Respiratory secretions	Unknown	Unknown	Unknown		Rare outbreaks of pneumonia in institutionalized populations

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Chlamydia</b> ( <i>Chlamydophila</i> ) <i>psittaci</i> (Psittacosis, Ornithosis)	Pneumonia, undifferentiated fever	<b>Routine</b>	Infected birds		7–14 days	Not person to person		Acquired by inhalation of desiccated droppings, secretions and dust of infected birds
<b>Cholera</b> ( <i>Vibrio cholerae</i> 01, 0139)	Diarrhea	<b>ADULT: Routine<sup>i</sup> PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	2–3 days	Duration of shedding	Duration of symptoms	<sup>i</sup> Consider contact precautions for adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Clostridium</b> <i>difficile</i>	Diarrhea, pseudo- membranous colitis	<b>Contact</b>	Feces	Direct and indirect contact (fecal/oral)	Variable	Duration of shedding	Duration of symptoms	Bacterial spores persist in the environment Ensure scheduled environmental cleaning During outbreaks, special attention should be paid to cleaning; hypochlorite solutions may be required if continued transmission See Appendix VI. 3. Viral Gastroenteritis Dedicate patient care equipment Relapses are common
<b>Clostridium</b> <i>perfringens</i>	Food poisoning	<b>Routine</b>		Foodborne	6–24 hours	Not person to person		
	Gas gangrene, abscesses, myonecrosis	<b>Routine</b>			Variable	Not person to person		Found in normal gut flora, soil; infection related to devitalized tissue
<b>Coccidioido- mycosis</b> ( <i>Coccidioides</i> <i>immitis</i> )	Pneumonia, draining lesions	<b>Routine</b>			1–4 weeks	Not person to person		Acquired from spores in soil, dust in endemic areas
<b>Colorado tick fever</b> See Dengue Fever (Arbovirus)	Fever	<b>Routine</b>		Tick-borne	3–6 days	Not person to person		
<b>Congenital rubella</b> See Rubella								
<b>Coronavirus (CoV)</b> (other than SARS- CoV) For SARS CoV, see Severe acute respiratory syndrome	Common cold	<b>Droplet and contact</b>	Respiratory secretions	Direct and indirect contact Possible large droplet	2–4 days	Until symptoms cease	Duration of symptoms	May cohort if infected with same virus Patient should not share room with high-risk roommates

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Coxsackievirus</b> See Enteroviral infections								
<b>Creutzfeldt-Jakob disease (CJD)</b>	Chronic encephalopathy	<b>Routine<sup>l</sup></b>	Contaminated neurosurgical instruments; tissue grafts from infected donors					<sup>l</sup> PHAC guidelines for precautions for surgery and other procedures may be accessed at: <a href="http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php">http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php</a>  Notification of a suspected or diagnosed case of CJD should be made to the CJD surveillance system (1-888-489-2999)
<b>Crimean-Congo fever</b> See Viral hemorrhagic fevers								
<b>Cryptococcosis (Cryptococcus neoformans)</b>	Pneumonia, meningitis, adenopathy	<b>Routine</b>			Unknown	Not person to person		
<b>Cryptosporidiosis (Cryptosporidium parvum)</b>	Diarrhea	<b>ADULT: Routine<sup>k</sup></b> <b>PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral)	1–12 days	From onset of symptoms until several weeks after resolution	Duration of symptoms	<sup>k</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Cysticercosis (Taenia solium larvae)</b>	T. solium larval cysts in various organs	<b>Routine</b>	Ova in feces	Direct contact (fecal/oral)	Months to years	While eggs present in feces		Transmissible only from humans with T. solium adult tapeworm in gastrointestinal tract (autoinfection occurs)
<b>Cytomegalovirus</b>	Usually asymptomatic; congenital infection, retinitis, mononucleosis, pneumonia, disseminated infection in immuno-compromised host	<b>Routine</b>	Saliva, genital secretions, urine, breast milk, transplanted organs or stem cells, blood products	Direct <sup>l</sup> Sexual transmission; vertical mother to child in utero, at birth or through breast milk Transfusion, transplantation	Unknown	Virus is excreted in urine, saliva, genital secretions, breast milk for many months; may persist or be episodic for life		No additional precautions for pregnant HCWs <sup>l</sup> Close direct personal contact necessary for transmission Disease is often due to reactivation in the patient rather than transmission of infection







Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Giardia</b> ( <i>Giardia lamblia</i> )	Diarrhea	<b>ADULT:</b> <b>Routine<sup>p</sup></b> <b>PAEDIATRIC:</b> <b>Contact</b>	Feces	Direct and indirect contact (fecal/oral)	3–25 days	Entire period of infection; often months	Duration of symptoms	<sup>p</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene
<b>Granuloma inguinale</b> ( <b>Donovanosis</b> ) ( <i>Calymmatobacterium granulomatis</i> )	Painless genital ulcers, inguinal ulcers, nodules	<b>Routine</b>		Sexual transmission	Unknown; probably between 1 and 16 weeks	Unknown; probably for the duration of open lesions on the skin or mucous membranes		
<b>Haemophilus influenzae type B</b> ( <b>invasive infections</b> )	Pneumonia, epiglottitis, meningitis, bacteremia, septic arthritis, cellulitis, osteomyelitis in a child	<b>ADULT:</b> <b>Routine</b> <b>PAEDIATRIC:</b> <b>Droplet</b>	Respiratory secretions	Large droplets, direct contact	Variable	Most infectious in the week prior to onset of symptoms and during the symptoms until treated	Until 24 hours of appropriate antimicrobial therapy has been received	Close contacts <48 months old and who are not immune may need chemoprophylaxis Household contacts of such children should also receive prophylaxis
<b>Hand foot and mouth disease</b> See Enteroviral infections								
<b>Hansen’s disease</b> See Leprosy								
<b>Hantavirus</b> ( <b>Hantavirus pulmonary syndrome</b> )	Fever, pneumonia	<b>Routine</b>	Rodent excreta	Presumed aerosol transmission from rodent excreta	A few days to 6 weeks	Not well defined, person to person is rare (person to person documented for South American strains)		Infection acquired from rodents
<b>Helicobacter pylori</b>	Gastritis, duodenal ulcer disease	<b>Routine</b>		Probable ingestion of organisms; presumed fecal/oral/oral/oral	5–10 days	Unknown		

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Hepatitis A, E</b>	Hepatitis, anicteric acute febrile symptoms	<b>ADULT:</b> <b>Routine<sup>9</sup></b> <b>PAEDIATRIC:</b> <b>Contact</b>	Feces	Direct and indirect contact (fecal/oral)	A: 28–30 days E: 26–42 days	A: 2 weeks before to 1 week after onset of jaundice Shedding is prolonged in the newborn E: not known; at least 2 weeks before onset of symptoms	1 week after onset of jaundice; duration of hospitalization if newborn	<sup>9</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene Postexposure prophylaxis indicated for non-immune household contacts with significant exposure to hepatitis A if within 2 weeks of exposure Refer to Canadian Immunization Guide for specific information: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> Outbreaks of HAV in HCWs have been associated with eating and drinking in patient care areas
<b>Hepatitis B, C, D, G viruses</b>	Hepatitis, often asymptomatic; cirrhosis, hepatic cancer	<b>Routine</b>	Blood, genital secretions, and certain other body fluids	Mucosal or percutaneous exposure to infective body fluids Sexual transmission; Vertical mother to child	B: 2–3 months C: 2 weeks–6 months D: 2–8 weeks	B: all persons who are hepatitis B surface-antigen-positive are infectious C: indefinite D: indefinite		Refer to Canadian Immunization Guide 7th Ed., 2006 for specific information, available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> Contact OH or delegate if HCW has percutaneous, non-intact skin or mucous membrane exposure. Refer to CDC dialysis recommendations available at: <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5005a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5005a1.htm</a>
<b>Herpes simplex virus</b>	Encephalitis	<b>ADULT:</b> <b>Routine</b> <b>PEDS:</b> <b>Contact</b>						
	Neonatal	<b>Contact</b>	Skin or mucosal lesions; possibly all body secretions and excretions	Direct contact	Birth to 6 weeks of age		Duration of symptoms	Contact precautions are also indicated for infants delivered vaginally (or by C-section if membranes have been ruptured more than 4–6 hours) to women with active genital HSV infections, until neonatal HSV infection has been ruled out



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Influenza Seasonal</b>	Respiratory tract infection	<b>Droplet and contact</b>	Respiratory secretions	Large droplets, direct and indirect contact	1–3 days	Generally 3–7 days from clinical onset Prolonged shedding may occur in immunocompromised individuals.	Duration of symptoms	If private room is unavailable, consider cohorting patients during outbreaks Patient should not share room with high-risk roommates Consider antiviral for exposed roommates See Guidance: IP&C Measures for HCWs in Acute Care and Long-term Care Settings at: <a href="http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php">http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php</a> For further information for all types of influenza see: <a href="http://www.phac-aspc.gc.ca/influenza/index-eng.php">http://www.phac-aspc.gc.ca/influenza/index-eng.php</a>
<b>Pandemic Novel influenza viruses</b>	Respiratory tract infection	<b>Pandemic influenza precautions<sup>r</sup></b>	As seasonal	As seasonal	Unknown; possibly 1–7 days	Unknown, possibly up to 7 days	Duration of symptoms	See Canadian Pandemic Plan Annex F, Infection Prevention and Control and Occupational Health and Hygiene guidelines during Pandemic Influenza in Existing and Temporary Healthcare Settings, available at: <a href="http://www.phac-aspc.gc.ca/influenza/index-eng.php">http://www.phac-aspc.gc.ca/influenza/index-eng.php</a> Refer to PHAC website for specific guidance documents. Available at <a href="http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php">http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php</a>
<b>Avian</b>	Respiratory tract infection, conjunctivitis	<b>Droplet and contact</b>	Excreta of sick birds, possibly human respiratory tract secretions					For current information on Avian influenza, see Human Health Issues Related to Domestic Avian Influenza in Canada, available at" <a href="http://www.phac-aspc.gc.ca/influenza/index-eng.php">http://www.phac-aspc.gc.ca/influenza/index-eng.php</a> <a href="http://www.phac-aspc.gc.ca/publicat/daio-enia/9-eng.php">http://www.phac-aspc.gc.ca/publicat/daio-enia/9-eng.php</a>
<b>Lassa fever See Viral hemorrhagic fever</b>								
<b>Legionella (Legionella spp.) Legionnaires' disease</b>	Pneumonia, Legionnaires' disease, Pontiac fever	<b>Routine</b>			2–10 days;	Not person to person		Acquired from contaminated water sources (inhalation not ingestion)

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Leprosy (Hansen's disease)</b> ( <i>Mycobacterium leprae</i> )	Chronic disease of skin, nerves, nasopharyngeal mucosa	<b>Routine</b>	Nasal secretions, skin lesions	Direct contact	9 months to 20 years			Transmitted between persons only with very prolonged extensive close personal contact Household contacts should be assessed and may be given prophylaxis
<b>Leptospirosis</b> ( <i>Leptospira sp.</i> )	Fever, jaundice, aseptic meningitis	<b>Routine</b>			2–30 days	Direct person to person transmission is rare		Acquired from contact with animals
<b>Lice (pediculosis)</b> Head Body Pubic (crab) ( <i>Pediculus capitis, Pediculus corporis, Pediculus humanus, Phthirus pubis</i> )	Scalp or body itch, itchy rash	<b>Routine, plus gloves for direct patient contact only</b>	Louse	Head and body lice: direct and indirect contact Pubic lice: usually sexual contact	6–10 days	Until effective treatment to kill lice and ova	Until 24 hours after application of appropriate pediculicide; applied as directed	Apply pediculicides as directed on label. If live lice found after therapy, repeat Head lice: wash headgear, combs, pillowcases, towels with hot water or dry clean or seal in plastic bag and store for 10 days. Body lice: as above, for all exposed clothing and bedding
<b>Listeriosis</b> ( <i>Listeria monocytogenes</i> )	Fever, meningitis Congenital or neonatal infection	<b>Routine</b>		Foodborne; Vertical mother to child in utero or at birth	mean 21 days; 3–70 days following a single exposure to an implicated food product			Pregnant women and immunocompromised persons should avoid cheese made with unpasteurized milk, cold cuts and uncooked meat products, including hot dogs Listeria grows well at low temperatures and is able to multiply in refrigerated foods that are contaminated Nosocomial outbreaks reported in newborn nurseries due to contaminated equipment or materials
<b>Lyme disease</b> ( <i>Borrelia burgdorferi</i> )	Fever, arthritis, rash, meningitis	<b>Routine</b>		Tickborne	To initial rash: 3–32 days; mean 7–10 days	Not person to person		
<b>Lymphocytic choriomeningitis virus</b>	Aseptic meningitis	<b>Routine</b>	Urine of rodents		6–21 days	Not person to person		Acquired from contact with rodents
<b>Lymphogranuloma venereum</b> ( <i>C. trachomatis</i> serovars L1, L2, L3)	Genital ulcers, inguinal adenopathy	<b>Routine</b>		Sexually transmitted	Range of 3–30 days for a primary lesion			

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Malaria</b> ( <i>Plasmodium sp.</i> )	Fever	<b>Routine</b>	Blood	Mosquito-borne; rarely transplacental from mother to fetus; blood transfusion	Variable; 9–14 days for <i>P. falciparum</i>	Not normally person to person		Can be transmitted via blood transfusion
<b>Marburg virus</b> See <b>Viral haemorrhagic fever</b>								
<b>Measles</b> ( <i>Rubeola</i> )	Fever, cough, coryza, conjunctivitis, maculopapular skin rash	<b>Airborne</b>	Respiratory secretions	Airborne	7–18 days to onset of fever; rarely as long as 21 days	5 days before onset of rash (1–2 days before onset of initial symptoms) until 4 days after onset of rash (longer in immunocompromised patients)	4 days after start of rash; duration of symptoms in immunocompromised patients	Only immune HCWs, caretakers and visitors should enter the room Respirator needed for non-immune persons who must enter Precautions should be taken with neonates born to mothers with measles infection at delivery Immunoprophylaxis is indicated for susceptible contacts Refer to Canadian Immunization Guide 7th Ed., 2006 for specific information available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a>
	Susceptible contact	<b>Airborne</b>	Respiratory secretions	Airborne		Potentially communicable during last 2 days of incubation period	From 5 days after first exposure through 21 days after last exposure regardless of postexposure prophylaxis	Only immune HCWs, caretakers and visitors should enter the room Respirator needed for non-immune persons who must enter Precautions should be taken with neonates born to mothers with measles infection at delivery Immunoprophylaxis is indicated for susceptible contacts
<b>Melioidosis</b> ( <i>Pseudomonas pseudomallei</i> )	Pneumonia, fever	<b>Routine</b>	Contaminated soil		Variable			Organism in soil in Southeast Asia Person-to-person has not been proven
<b>Meningococcus</b> ( <i>Neisseria meningitidis</i> )	Rash (petechial/purpuric) with fever Meningococcal meningitis, pneumonia	<b>Droplet</b>	Respiratory secretions	Large droplet, direct contact	Usually 2–10 days		Until 24 hours of effective antimicrobial therapy has been received	Close contacts may need chemoprophylaxis as per most recent NACI recommendations available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> and <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-meni-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-meni-eng.php</a>

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Methicillin-resistant Staphylococcus aureus (MRSA)</b> See ARO								
<b>Molluscum contagiosum</b>	Umbilicated papules	<b>Routine</b>	Contents of papules	Direct contact	2 weeks to 6 months	Unknown		Close direct personal contact needed for transmission
<b>Monkeypox</b>	Resembles smallpox; lymphadenopathy is a more predominant feature	<b>Contact,<sup>s</sup> droplet and airborne</b>	Lesions and respiratory secretions	Contact with infected animals; possible airborne transmission from animals to humans			<sup>s</sup> Contact: until all lesions crusted	Transmission in hospital settings is unlikely. See <a href="http://www.cdc.gov/ncidod/monkeypox">http://www.cdc.gov/ncidod/monkeypox</a> for current recommendations
<b>Mucormycosis (phycomycosis; zygomycosis) (Mucor, Zygomycetes)</b>	Skin, wound, rhinocerebral, pulmonary, gastrointestinal, disseminated infection <sup>t</sup>	<b>Routine</b>	Fungal spores in dust and soil	Inhalation or ingestion of fungal spores	Unknown	Not person to person	Unknown	Acquired from spores in dust, soil <sup>t</sup> Infections in immunocompromised patients
<b>Mumps</b>	Swelling of salivary glands, orchitis, meningitis	<b>Droplet</b>	Saliva	Large droplets, direct contact	Usually 16–18 days; range 14–25 days	Viral excretion highest 2 days before to 5 days after onset or parotitis	Until 5 days after onset of parotitis	Droplet precautions for exposed susceptible patients/HCWs should begin 10 days after first contact and continue through 26 days after last exposure For outbreaks, see: <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/10pdf/36s1-eng.pdf">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/10pdf/36s1-eng.pdf</a>
<b>Mycobacterium non-TB (atypical)</b>	Lymphadenitis; pneumonia; disseminated disease in immunocompromised host	<b>Routine</b>			Unknown	Not person to person		Acquired from soil, water, animal, reservoirs



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b><i>Mycobacterium tuberculosis</i> including <i>M. tuberculosis</i> subsp. <i>canetti</i>, <i>M. bovis</i>, <i>M. bovis</i> BCG, <i>M. africanum</i>, <i>M. caprae</i>, <i>M. microti</i> and <i>M. pinnipedii</i></b>	Confirmed or suspected respiratory (including pleural, laryngeal)	<b>Airborne<sup>u</sup></b>	Respiratory secretions	Airborne	Weeks to years	While organisms is viable in sputum	Until deemed no longer infectious If confirmed, until patient has received 2 weeks of effective therapy, and is improving clinically, and has 3 consecutive sputum smears negative for acid fast bacilli, collected 8–24 hours apart with at least 1 early morning specimen If multi-drug-resistant TB, until sputum culture negative	TB in young children is rarely transmissible; due to lack of cavitory disease and weak cough Assess visiting family members for cough Canadian Tuberculosis Standards, <a href="http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tbstand07-eng.php">http://www.phac-aspc.gc.ca/tbpc-latb/pubs/tbstand07-eng.php</a> <sup>u</sup> AGMP, see strategies to reduce aerosol generation Part B, Section IV, subsection iii, 1b
	Nonpulmonary: meningitis, bone or joint infection with no drainage	<b>Routine</b>						Most patients with nonpulmonary disease alone are noncontagious; it is important to assess for concurrent pulmonary TB
	Nonpulmonary: skin or soft tissue draining lesions	<b>Routine, Airborne<sup>v</sup></b>	Aerosolized wound drainage				While viable micro organisms are in drainage	<sup>v</sup> Airborne precautions if procedures that may aerosolize drainage are being performed
	PPD skin test positive with no evidence of current pulmonary disease	<b>Routine</b>		Non communicable				
<b><i>Mycoplasma pneumoniae</i></b>	Pneumonia	<b>Droplet</b>	Respiratory secretions	Large droplets	1–4 weeks	Unknown	Duration of symptoms	



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Pertussis</b> ( <i>Bordetella pertussis</i> , <i>Bordetella parapertussis</i> )	Whooping cough, non-specific respiratory tract infection in infants, adolescents and adults	<b>Droplet</b>	Respiratory secretions	Large droplets	Average 9–10 days; range 6–20 days	To 3 weeks after onset of paroxysms if not treated	To 3 weeks after onset of paroxysms if not treated; or until 5 days of appropriate antimicrobial therapy received	Close contacts (household and HCWs) may need chemoprophylaxis and/or immunization If HCWs immunization not up to date, refer to OH and/or delegate Refer to Canadian Immunization Guide 7th Ed., 2006 for specific information available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a>
<b>Pinworms</b> See <i>Enterobius</i>								
<b>Plague</b> ( <i>Yersinia pestis</i> )	Bubonic (lymphadenitis)	<b>Routine</b>	Rodents and their fleas		1–7 days			
	Pneumonic (cough, fever, hemoptysis)	<b>Droplet</b>	Respiratory secretions	Large droplets	1–4 days	Until 48 hours of appropriate antimicrobial therapy received	Until 48 hours of appropriate antimicrobial therapy received	Close contacts and exposed HCWs may need prophylaxis
<b>Pneumocystis jiroveci (carinii)</b>	Pneumonia in immunocompromised host	<b>Routine</b>		Unknown	Unknown			Ensure roommates are not immunocompromised
<b>Poliomyelitis</b> <b>Infantile paralysis</b>	Fever, aseptic meningitis, flaccid paralysis	<b>Contact</b>	Feces, respiratory secretions	Direct and indirect contact	3–35 days	Virus in the throat for approximately 1 week and in feces for 3–6 weeks	Until 6 weeks from onset of symptoms or until feces viral culture negative	Most infectious during the days before and after onset of symptoms Close contacts who are not immune should receive immunoprophylaxis
<b>Prion disease</b> See Creutzfeldt-Jakob disease								
<b>Psittacosis</b> See <i>Chlamydia psittace</i>								
<b>Q Fever</b> ( <i>Coxiella burnetii</i> )	Pneumonia, fever	<b>Routine</b>	Infected animals, milk	Direct contact with infected animals; raw milk Airborne from aerosolized contaminated dust	14–39 days	Not person to person		Acquired from contact with infected animals or from ingestion of raw milk



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Rubella, acquired</b>	Fever, maculopapular rash	<b>Droplet</b>	Respiratory secretions	Large droplets, direct contact	14–21 days	For about 1 week before and after onset of rash.	Until 7 days after onset of rash	Only immune HCWs, caretakers and visitors should enter the room Pregnant HCWs should not care for rubella patients, regardless of their immune status If it is essential for a non-immune person to enter the room, facial protection should be worn Droplet precautions should be maintained for exposed susceptible patients from 7 days after first contact through to 21 days after last contact Administer vaccine to exposed susceptible non-pregnant persons within 3 days of exposure Refer to Canadian Immunization Guide 7th Ed., 2006 for specific information available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> Exclude susceptible HCWs from duty from day 7 after first exposure to day 21 after last exposure, regardless of postexposure vaccination
<b>Rubella, congenital</b>	Congenital rubella syndrome	<b>Droplet and contact</b>	Respiratory secretions, urine	Direct and indirect contact; large droplets		Prolonged shedding in respiratory tract and urine; can be up to one year	Until one year of age, unless nasopharyngeal and urine cultures done after 3 months of age are negative	As per Rubella, acquired
<b>Rubeola</b> <b>See Measles</b>								
<b>Salmonella (including Salmonella Typhi)</b>	Diarrhea, enteric fever, typhoid fever, food poisoning	<b>ADULT: Routine<sup>w</sup></b> <b>PAEDIATRIC: Contact</b>	Feces	Direct and indirect contact (fecal/oral); foodborne	6–72 hours	Variable	Duration of symptoms	<sup>w</sup> Consider contact precautions for incontinent adults if stool cannot be contained or for adults with poor hygiene who contaminate their environment Contact precautions apply to children who are incontinent or unable to comply with hygiene



Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Smallpox (variola virus) Generalized vaccinia, eczema vaccinatum See Vaccinia for management of vaccinated persons</b>	Fever, vesicular/pustular in appropriate epidemiologic context	<b>Droplet, contact and airborne</b>	Skin lesion exudate, oropharyngeal secretions	Airborne, direct and Indirect contact	7–10 days	Onset of mucosal lesions, until all skin lesions have crusted	Until all scabs have crusted and separated (3–4 weeks)	Immunization of HCWs was stopped in 1977 Refer to Canadian Immunization Guide 7th Ed., 2006 for information regarding vaccine, <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> NACI Statement on Smallpox Vaccination, <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/02vol28/28sup/acs1.html">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/02vol28/28sup/acs1.html</a> Care preferably should be provided by immune HCWs; non-vaccinated HCWs should not provide care if immune HCWs are available Respirator for all regardless of vaccination status
<b>Sporotrichosis (Sporothrix schenckii)</b>	Skin lesions, disseminated	<b>Routine</b>			Variable	Rare person to person		Acquired from spores in soil, on vegetation
<b>Staphylococcus aureus (if methicillin-resistant, see also ARO)</b>	Skin (furuncles, impetigo) wound or burn infection; abscess; scalded skin syndrome, osteomyelitis	<b>MINOR: Routine MAJOR: Contact<sup>2</sup></b>	Drainage, pus	Direct and indirect contact	Variable	As long as organism is in the exudates or drainage	Until drainage resolved or contained by dressings	<sup>2</sup> MAJOR: drainage not contained by dressings
	Endometritis	<b>Routine</b>						
	Food poisoning	<b>Routine</b>		Foodborne				
	Pneumonia	<b>ADULT: Routine PAEDIATRIC: Droplet</b>	Respiratory secretions	Large droplets, direct contact	Variable		Until 24 hours of appropriate antimicrobial therapy received	
	Toxic shock syndrome	<b>Routine</b>						
<b>Streptobacillus moniliformis disease See Rat-bite fever</b>								
<b>Streptococcus pneumoniae</b>	Pneumonia, meningitis and other	<b>Routine</b>			Variable			Normal flora

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Streptococcus, Group A (<i>Streptococcus pyogenes</i>)</b>	Skin (e.g., erysipelas, impetigo), wound or burn infection	<b>MINOR: Routine MAJOR: Contact</b> <sup>aa</sup>	Drainage, pus	Direct and indirect contact	1–3 days, rarely longer	As long as organism is in the exudates or drainage	Until 24 hours of appropriate antimicrobial therapy received	<sup>aa</sup> MAJOR: drainage not contained by dressings
	Scarlet fever, pharyngitis, in children	<b>ADULT: Routine PAEDIATRIC: Contact and droplet</b>	Respiratory secretions	Large droplets,	2–5 days	10–21 days if not treated	Until 24 hours of appropriate antimicrobial therapy received	
	Group A <i>Streptococcus</i> endometritis (puerperal fever)	<b>Routine</b>						
	Group A <i>Streptococcus</i> toxic shock, invasive disease (including necrotizing fasciitis, myositis, meningitis, pneumonia)	<b>Droplet and contact</b>	Respiratory secretions, wound drainage	Large droplets, direct or indirect contact			Until 24 hours of appropriate antimicrobial therapy received	Chemoprophylaxis may be indicated for close contacts of patients with invasive disease or toxic shock syndrome For further information see: <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/06pdf/32s2_e.pdf">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/06pdf/32s2_e.pdf</a>
<b>Streptococcus, Group B (<i>Streptococcus agalactiae</i>)</b>	Group B <i>Streptococcus</i> newborn sepsis, pneumonia, meningitis	<b>Routine</b>		Mother to child at birth	Early onset: 1–7 days of age; late onset: 7 days to 3 months of age			Normal flora
<b>Strongyloides (<i>Strongyloides stercoralis</i>)</b>	Usually asymptomatic	<b>Routine</b>	Larvae in feces		Unknown	Rarely transmitted person to person		Infective larvae in soil May cause disseminated disease in immuno-compromised patient
<b>Syphilis (<i>Treponema pallidum</i>)</b>	Genital, skin or mucosal lesions, disseminated disease, neurological or cardiac disease; latent infection	<b>Routine Gloves for direct contact with skin lesions</b>	Genital secretions, lesion exudates	Direct contact with infectious exudates or lesions Sexual transmission, Intrauterine or intrapartum from mother to child	10–90 days; usually 3 weeks	When moist muco-cutaneous lesions of primary and secondary syphilis are present		





Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Trench fever</b> ( <i>Bartonella quintana</i> )	Relapsing fevers, rash	<b>Routine</b>	Feces of human body lice	Louse-borne	7–30 days	Not person to person in the absence of lice		
<b>Trichinosis</b> ( <i>Trichinella spiralis</i> )	Fever, rash, diarrhea	<b>Routine</b>	Infected meat	Food-borne	5–45 days	Not person to person		Acquired from consumption of infected meat
<b>Trichomoniasis</b> ( <i>Trichomonas vaginalis</i> )	Vaginitis	<b>Routine</b>		Sexually transmitted	4–20 days	Duration of infection		
<b>Trichuriasis (whipworm)</b> ( <i>Trichuris trichiura</i> )	Abdominal pain, diarrhea	<b>Routine</b>			Unknown	Not person to person		Ova must hatch in soil to be infective
<b>Tuberculosis (TB)</b> See <i>Mycobacterium tuberculosis</i>								
<b>Tularemia</b> ( <i>Francisella tularensis</i> )	Fever, lymphadenopathy, pneumonia	<b>Routine</b>			1–14 days	Not person to person		Acquired from contact with infected animals F. tularensis is hazardous to laboratory workers; notify laboratory if diagnosis is suspected
<b>Typhoid/paratyphoid fever</b> See <i>Salmonella</i>								
<b>Typhus fever</b> ( <i>Rickettsia typhi</i> ) <i>Endemic flea-borne typhus</i>	Fever, rash	<b>Routine</b>	Rat fleas	Flea borne	From 1–2 weeks, commonly 12 days	Not transmitted person to person		
<b><i>Rickettsia prowazekii</i></b> <i>Epidemic louse-borne fever</i>	Fever, rash	<b>Routine</b>	Human body louse	Louse borne	1–2 weeks			Person-to-person through close personal contact, not transmitted in absence of louse

Microorganism	Clinical presentation	Precautions	Infective material	Route of transmission	Incubation period	Period of communicability	Duration of precautions	Comments
<b>Vaccinia</b>	Range of adverse reactions to the smallpox vaccine (e.g., eczema vaccinatum, generalized or progressive vaccinia, other)	<b>Contact</b>	Skin exudates	Direct and indirect contact	3–5 days	Until all skin lesions resolved and scabs separated	Until all skin lesions dry and crusted and scabs separated	Vaccinia may be spread by touching a vaccination site before it has healed or by touching bandages or clothing that may have been contaminated with live virus from the smallpox vaccination site. Immunization of HCWs was stopped in 1977. Refer to Canadian Immunization Guide 7th Ed., 2006 for information regarding vaccine, <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a> NACI Statement on Smallpox Vaccination, <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/02vol28/28sup/acs1.html">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/02vol28/28sup/acs1.html</a>
<b>Vancomycin-resistant enterococci (VRE)</b>	Infection or colonization of any body site	<b>Contact</b>	Infected or colonized secretions, excretions	Direct and indirect contact	Variable	Duration of colonization	As directed by ICP	Enterococci persist in the environment; pay special attention to cleaning See Appendix VI, 2. ARO
<b>Vancomycin-resistant S. aureus (VRSA)</b> Theoretical; to date, not reported	Infection or colonization of any body site	<b>Contact</b>	Infected or colonized secretions, excretions	Direct and indirect contact	Variable	Duration of colonization	As directed by ICP	Local public health authorities should be notified immediately See Appendix VI, 2. ARO.
<b>Varicella zoster virus</b> <b>Varicella</b> <b>(chickenpox)</b>	Fever with vesicular rash	<b>Airborne and contact</b>	Skin lesion drainage, respiratory secretions	Airborne, direct and indirect contact	10–21 days	1–2 days before rash and until skin lesions have crusted May be prolonged in immunocompromised patients	Until all lesions have crusted and dried	HCWs, roommates and caregivers should be immune to chickenpox No additional precautions for pregnant HCWs Respirators for non-immune persons that must enter Susceptible high-risk contacts should receive varicella zoster immunoglobulin as soon as possible, latest within 96 hours of exposure Varicella zoster immunoglobulin may extend the incubation period to 28 days Refer to Canadian Immunization for specific information, available at: <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php">http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php</a>



