ENTERITIS SPECIFIC DISEASE PROTOCOL

(Supersedes Diarrhea Specific Disease Protocol)

*latest updates in red

Enteritis is an infection of the gastrointestinal (GI) tract sometimes incorrectly called “the stomach flu”, not to be confused with the Influenza virus that causes seasonal Influenza; a respiratory illness.

Enteritis is caused by germs or their toxins. There are three major types of organisms that commonly cause Enteritis: bacteria, viruses and parasites. Mostly these germs are harmless however in some situations, they can cause illness. Worldwide, acute Enteritis is one of the most common diseases in humans. Many Enteritis cases are self-limiting, highly contagious and may be associated with an increased risk of outbreaks. Symptoms range from mild to severe and in some cases is fatal.

Note: This document does not include Outbreak Management guidelines. In the event of a Gastroenteritis Outbreak please consult the outbreak management documents for your area of care or discuss with Infection Prevention and Control/designate.

1. Definitions

1.1. Diarrhea: Six or more watery/unformed stools in a 36-hour period
OR Three or more watery/unformed stools in a 24-hour period and is new or unusual for the person (in adults only). [9.6]

2. Infection Prevention & Control Measures (9.13)

I. AT ONSET OF SIGNS AND SYMPTOMS OF ENTERITIS				
ELEMENT	ACUTE CARE	LONG TERM CARE	COMMUNITY	
			CLINIC	HOME
Routine Practices	Enteritis transmission may be prevented by following good hand hygiene, and other Routine Practices at all times. Refer to the Routine Practices section of the Infection Prevention and Control Manual and/or the Routine Practices Policy for specific information.			
Contact Precautions	☒ Contact Precautions	☐ Droplet Precautions	☐ Airborne Precautions ☐ Airborne Precautions for AGMPs until _____ am/pm on _____ date	

- Consider Contact Precautions for incontinent adults, if stool cannot be contained, or for adults with poor hygiene who contaminate their environment
- Use Contact Precautions until *C. difficile*, norovirus, rotavirus ruled out
- Pediatric: Contact Precautions apply to children who are incontinent and unable to comply with hygiene
- See below for organism specific precautions and recommendations.

NEW:

Note: Consider using mask and eye protection in addition to **Contact Precautions** when handling feces, emesis, or other body fluids

II. ONCE CAUSATIVE ORGANISM HAS BEEN IDENTIFIED ‡					
Bacteria: Single celled germs found almost everywhere. Many release a toxin that causes infectious enteritis. Common examples:	**Incubation Period**	**ACUTE CARE**	**LONG TERM CARE**	**COMMUNITY‡**	
				CLINIC	**HOME**
Campylobacter	1-10 days	**Adult:** Routine Practices* **Pediatric:** Contact**			
Cholera | Note to Healthcare Provider *Reportable Disease*	Few hours - 5 days				
Yersinia	4-6 days (range of 1-14 days)				
Shigella	1-7 days	**Adult:** Routine Practices* **Pediatric:** Contact			
Salmonella (including *Salmonella* Typhi)	6-72 hours *Salmonella typhi*: 3-60 days				
Escherichia coli-pathogenic strain (e.g., 0157: H7) Note: Contact Site ICP if hemolytic uremic syndrome (HUS) Additional information below	1-8 days				
Clostridioides difficile Additional information below					
Virus: Infectious particles that depend on other living cells for survival. Common examples:	**Incubation Period**	**ACUTE CARE**	**LONG TERM CARE**	**COMMUNITY‡**	
				CLINIC	**HOME**
Noroviruses (Norwalk-like agents, e.g., Calicivirus, Sapovirus[9,19]) Additional information below	Usually: 24-48 hours Range: 10-50 hours	Contact			
Rotavirus	1-3 days	Contact*			
Coxsackievirus	3-5 days	Adult: Routine Practices* Pediatric: Contact			
Adenovirus (enteric strain)	3-10 days	Adult: Routine Practices* Pediatric: Contact			
Astrovirus	3-4 days	Adult: Routine Practices* Pediatric: Contact			
Parasite(s): Single or multi-cell organisms that live in or on another organism. Common examples:	**Incubation Period**	**ACUTE CARE**	**LONG TERM CARE**	**COMMUNITY‡**	
				CLINIC	**HOME**
Amebiasis (Entamoeba histolytica)	2-4 weeks	Adult: Routine Practices* Pediatric: Contact**			
Cryptosporidiosis (Cryptosporidium parvum)	1-12 days				
Giardia (Giardia lamblia)	3-25 days or longer	Adult: Routine Practices* Pediatric: Contact			

‡ In the Community a causative organism is not always identified

*Consider Contact Precautions for adults if stool cannot be contained or for persons with poor hygiene who contaminate their environment.

**Pediatric precautions apply to children who are incontinent or unable to comply with hygiene.

3. Clinical Presentation

The symptoms are based on the specific microorganism (germ). Some infections do not have symptoms while others can cause diarrhea, nausea, vomiting abdominal pain, bloody stools, fever or feeling unwell. Onset of symptoms may start slowly or suddenly and typically last 24 hours but can last for several days.
Symptom severity may vary, depending on the causative germ, from asymptomatic to severe disease leading to dehydration and death. Symptoms include sudden onset of vomiting and non-bloody, watery diarrhea, with abdominal cramps and nausea. Low grade fever may also occur. Diarrhea is more common in children than vomiting. Symptoms usually last anywhere from 48 to 72 hours; dehydration is the most common complication. People of all ages may be infected but the greatest severity is at extreme ages such as young children and the elderly.

4. Transmission

Enteritis is spread through fecal-oral transmission via direct or indirect contact and/or by ingestion of contaminated food or water. Transmission can occur through direct contact via hands or indirectly through contaminated environmental surfaces and equipment.[9.11] [9.7] [9.9]

> ***Note:*** Certain germs have fecal shedding even after symptoms have subsided.

5. Additional Information

5.1. *Clostridioides difficile* Infection (CDI)

5.1.1. Cause/Epidemiology

Clostridioides difficile (*C. difficile*) formerly known as *Clostridium difficile.* Infections often present with diarrhea that develops in association with recent antimicrobial use.[9.11] [9.6] [9.7] [9.9] It is an opportunistic, gram positive, spore-forming bacillus that is part of our normal flora.[9.11] [9.6] [9.7] When the normal intestinal flora is disrupted by use of antimicrobials or other means, colonization resistance is lost and *C. difficile* organism may overgrow and cause disease.[9.6] The spore form does not produce toxin or cause disease until/unless it converts to vegetative form.[9.6] Relapses are common. *C. difficile* can be found in water, soil, meats and vegetables and is very common in hospital environments and equipment (e.g., commodes, bedrails, and bedpans), where spores are hard to kill.[9.6] CDI can be reduced by good antimicrobial stewardship.[9.7]

Children 1 year and under are often asymptomatic carriers of *C. difficile* bacteria. [9.13] Sending a stool sample for *C. difficile* culture/toxin is not recommended in children under 1 year.

5.1.2. Risk factors for CDI include: [9.6] [9.7]

- Prolonged hospital stay
- Previous antibiotics use
- Contact with someone with CDI
- Very young or the elderly
- Chronic underlying disease or health condition
- Intestinal tube feeds
- Gastrointestinal surgery/manipulation
- Agents that alter normal intestinal motility

Risk factors for CDI in children are similar to those for adults: antibiotic use, cancer, other immune suppression conditions and inflammatory bowel disease.[9.11] In healthy children with possible antibiotic associated watery diarrhea, discontinuing antibiotic usually resolves the diarrhea.

5.1.3. Clinical Presentation (Signs and Symptoms): [9.6] [9.9]

- Loose watery stools
- Abdominal pain and cramping
- Fever
- Mucous or blood in the stool and dehydration
- A characteristic odor to the stool
- Mucous or blood in the stool and dehydration

Pseudomembranous colitis (PMC) is an inflammatory condition of the colon that develops in response to toxins produced by germs, usually as a result of antibiotic treatment, a more severe form of CDI in which persons exhibit a colitis characterized by the presence of pseudomembranes on the colon surface.[9.11]

The overall mortality is usually low in people with CDI because of effective treatment. Recurrence of CDI after treatment occurs in 15-25% of people.

5.1.4. Route of Transmission (How It Is Spread)

C. difficile can produce spores that resist routine disinfection processes, enabling it to survive for months in the environment, and can lead to long term transmission.[9.11] Primary mode of transmission for *C. difficile* in healthcare facilities is by person-to-person spread by fecal-oral route. Hands of health-care workers contaminated with spores as well as environmental contamination also play a role in transmission.[9.6]

5.1.5. Additional Infection Control *Clostridioides difficile* Infection (CDI) Specific Considerations

<table>
<tr><th rowspan="2">ELEMENT</th><th rowspan="2">ACUTE</th><th rowspan="2">LONG TERM CARE</th><th colspan="2">COMMUNITY</th></tr>
<tr><th>CLINIC</th><th>HOME</th></tr>
<tr><td rowspan="2">Hand Hygiene</td><td colspan="4">Clean hands at the point of care. Use either alcohol based hand rub (ABHR) or soap and water. ABHR is appropriate to use when caring for patients/resident/clients (PRCs) with C. difficile, except in outbreak or hyperendemic (sustained high rates) settings, when handwashing with soap and water is recommended.</td></tr>
<tr><td colspan="2">Do not use the P/R/C sink for hand hygiene.</td><td colspan="2">N/A</td></tr>
<tr><td>Environment/ Equipment Cleaning</td><td colspan="3">Consider increased environmental cleaning. Dedicate P/R/C care equipment. Bacterial spores persist in the environment.</td><td>N/A</td></tr>
<tr><td>Fact Sheets</td><td colspan="4">See C. difficile Fact Sheet for more information if needed</td></tr>
</table>

Dedicated Caregivers (DC), Accompanying Individuals (AI)/ Visitors and Visiting Other Patients/ Residents	DC/AI/Visitors follow Contact Precaution guidelines		
	If visiting a person on Contact Precautions for CDI avoid visiting other people in the healthcare facility If visiting more than one person in the facility ensure proper use of Personal Protective Equipment (PPE) and appropriate hand hygiene to prevent the spread of germs. [9.13] Persons visiting at a healthcare facility should clean their hands often and with ABHR or soap and water when visiting someone with *C. difficile*. If using soap and water, DC/AI/Visitors must not use the P/R/C's sink. [9.19]. Visitors must use PPE, when they are providing direct care and/or if they are persons at high risk of getting *C. difficile.* This includes the elderly, those with severe underlying illness and people taking certain antibiotics or chemotherapies. [9.9]	N/A	N/A
Discontinuation of Contact Precautions	Discontinue Contact Precautions when the person has had at least 48 hours without diarrhea (e.g., formed or normal stool for the individual).[9.11] [9.6] Re-testing for cure or to determine discontinuation of Additional Precautions is not recommended.[9.11] [9.6]		

5.2. Escherichia coli (abbreviated as *E. coli*) related hemolytic uremic syndrome (HUS).

5.2.1. Discontinuation of Contact Precautions

For Hemolytic Uremic Syndrome (HUS) only: Discontinue Contact Precautions after 2 stools negative for *E.coli* 0157:H7 or 10 days from onset of diarrhea.

Non-HUS: Maintain Contact Precautions for duration of symptoms.

5.3. Norovirus/Sapovirus [9.19]

5.3.1. Cause/Epidemiology

Norovirus/Sapovirus belongs to a group of germs that cause enteric illness. These germs often cause enteritis outbreaks in North America mostly during winter months. They are found in the stool and vomit of infected people. They are very contagious because a small amount of the germ will cause illness.

5.3.2. Clinical Presentation (Signs and Symptoms)

- Nausea
- Vomiting
- Stomach Cramps
- Diarrhea
- Low-grade fever
- Chills
- Headache
- Muscle Aches
- Fatigue

5.3.3. Route of Transmission (How It Is Spread)

Norovirus easily spread from person-to-person by direct or indirect contact with contaminated items (contact with and/or sharing food and utensils with people with Norovirus illness, contact with surfaces/items contaminated with the virus, eating food or drinking water contaminated with Norovirus). Usually outbreak associated. Many strains of noroviruses have been implicated in explosive outbreaks in various settings including hospitals, LTC facilities, and rehabilitation centers. [9.13]

5.3.4. Additional Infection Control Norovirus Specific Considerations

ELEMENT	ACUTE	LONG TERM CARE	COMMUNITY	
			CLINIC	HOME
Hand Hygiene	Ensure staff/visitors that have contact with the infected person or their environment, use appropriate hand hygiene. Hand hygiene should be done after toileting or diaper changes, before preparing, serving or eating food, after assisting someone with Norovirus, and after cleaning vomit/feces.			
Environment/Equipment Cleaning	Pay special attention to cleaning. The virus is able to survive on hard surfaces for hours or days. [9.13]			
Dedicated Caregivers (DC), Accompanying Individuals (AI)/ Visitors and Visiting Other Patients/Residents	DC/AI/Visitors follow Contact Precaution guidelines. If visiting a person on Contact Precautions for Norovirus avoid visiting other people in the healthcare facility. If visiting more than one person in the facility ensure proper use of Personal Protective Equipment (PPE) and appropriate hand hygiene to prevent the spread of germs. [9.13]		N/A	
Discontinuation of Contact Precautions	Contact Precautions can be discontinued after symptoms have resolved for 72 hours.[9.13]			

6. Occupational Environmental Safety and Health (OESH)

Contact Occupational and Environmental Safety and Health (OESH) for staff assessment and/or concerns.

7. References

7.1. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

Appendix A – Gastroenteritis (2018, September). Centers for Disease Control (CDC), Atlanta GA. Accessed December 17, 2018.

7.2. Amebiasis Communicable Disease Management Protocol. (2013, February). Manitoba Health. Accessed March 27, 2019.

7.3. Campylobacter Communicable Disease Management Protocol. (2012, Feb.). Manitoba Health. Accessed March 27, 2019.

7.4. Cholera Communicable Disease Management Protocol. (2018, August). Manitoba Health. Accessed March 27, 2019.

7.5. Communicable Disease Management Protocol, *Clostridium difficile* Infection (CDI). (2019, February). Winnipeg, Manitoba. Manitoba Health, Communicable Disease Control Unit. Accessed March 03, 2019.

7.6. *Clostridioides difficile* Infection (CDI) Communicable Disease Management Protocol. (2019, February). Manitoba Health. Accessed March 27, 2019.

7.7. Clostridium difficile infection. Infection Prevention and Control Guidance for Management in Acute Settings. (2013, November). Public Health Agency of Canada (PHAC). Accessed December 17, 2018.

7.8. Cryptosporidiosis Communicable Disease Management Protocol. (2013, July) .Manitoba Health. .Accessed March 27, 2019.

7.9. Fact Sheet – *Clostridium difficile (C. difficile).* (2014). Public Health Agency of Canada (PHAC). Accessed December 17, 2018.

7.10. Giardiasis Communicable Disease Management Protocol. (2013, Sept.) .Manitoba Health. Accessed March 27, 2019.

7.11. Guide to Preventing *Clostridium difficile* Infections. (2013). Association for Professionals in Infection Control (APIC). Accessed December 17, 2018.

7.12. Norovirus Public Health Fact Sheet. (2018. April). Manitoba Health. Accessed March 27, 2019.

7.13. Routine Practices and Additional Precautions: Preventing the Transmission of Infection in Healthcare. (2019, June). Manitoba Health. Accessed December 18, 2019.

7.14. Salmonellosis (Nontyphoidal) Communicable Disease Management Protocol. (2011, November). Manitoba Health. Accessed March 27, 2019.

7.15. Shigellosis (Bacillary Dysentery) Communicable Disease Management Protocol. (2011, November). Manitoba Health. Accessed March 27, 2019.

7.16. Typhoid and Paratyphoid Fever (Enteric Fever) Communicable Disease Management Protocol. (2012, October). Manitoba Health. Accessed March 27, 2019.

7.17. Verotoxigenic Escherichia coli (VTEC) Communicable Disease Management Protocol. (2007, May). Manitoba Health. Accessed March 27, 2019.

7.18. Yersiniosis Communicable Disease Management Protocol. (2012, February). Manitoba Health. Accessed Mar. 27, 2019.

7.19. Infection prevention and Control Program Team (Dr. John Embil, Dr. Evelyn Lo, Dr. Santina Lee) expert opinion December 15, 2023; April 10, 2024.