Diarrhea, Acute Onset - Nursing Management

Quick Links:

- Definitions: Appendix A
- Clostridium difficile infection guideline (BD-00-07-40084)
- More information on infection control practice can be found in Infection Prevention & Control

Site Applicability

Coastal Acute

Practice Level

Profession	Setting	Basic Skill	Advanced Skill (requiring additional education)
RN	**Acute Care**	Assessment and initiate GI contact precaution	**Nurse Independent Activity:** **The following NIA have been approved for use as noted in the site applicability above.** • Obtain IV access if patient showing signs of dehydration
			Nurse Initiated Protocol: **The following NIPs have been approved for nurses to initiate/ requisition and/or perform:** • Stools for Clostridium Difficile toxin detection, C&S • Stools for O&P (if admitted with Diarrhea or episodes occur within 5 days of admission) • Bloodwork for CBC, electrolytes and creatinine clearance. • Initiation of NPO/Clear Fluids *(see VCH-N-1000: NPO - in process)*

Goal

To assess and provide direction of initial management of acute onset diarrhea.

Policy Statement

- This document does **not reflect the ongoing management of persistent diarrhea. Consultation with a physician or nurse practitioner involved in the client's care is required**.
- The use of NIA is supported within VCH and is defined:
  - Policy: Nurse Independent Activities (NIA) and Nurse Initiated Protocols (NIP) (BCD-11-11-40001)
  - Education includes: LearningHub NIA Course.
- Physician/NP orders override the use of NIA.

Exclusion:

- Patients who are known to be C. Difficile positive and receiving treatment
- Patients undergoing chemotherapy or with confirmed diagnosis of sepsis/GI disorders (i.e. Crohn's)
- Patients in specialty areas such as critical care/high acuity units.

Need to Know

Precautions / Special Considerations:

- Ensure no specimens previously sent
- Hand hygiene is essential in handling various stool specimen types
  - Specimen should be sent to the lab within 3 hours of collection.
  - Initiate GI plus contact precaution.
- For high risk areas (medicine and surgery)
  - Patient showing signs of acute onset diarrhea should be isolated at first sign of change in bowel pattern. Stool specimen should be sent if diarrhea continues.

NOTE: Anti-diarrheal medications (e.g., Imodium/ Pepto-Bismol) are contraindicated for patients with C. Difficile. Do NOT give without Physician Order.

Acute onset diarrhea can result from numerous conditions

Most cases of acute diarrhea in adults are of infectious etiology. The major causes of acute infectious diarrhea include:

- Viruses (i.e. norovirus, rotavirus, adenoviruses, astrovirus)
- Bacteria (i.e. Salmonella, Campylobacter, Shigella, enterotoxigenic escherichia coli, Clostridium difficile)
- Protozoa (i.e. Cryptosporidium, Giardia, Cyclospor, entamoeba)

C. difficile must be distinguished from other infectious and non-infectious causes of diarrhea.

Example diagnoses that can cause diarrhea include: (*not all inclusive*)	
Abdominal distention:	Small bowel ileus, volvulus, or ischemia. History, physical exam, surgical consultation and further diagnostic radiographic imaging are required for further diagnosis.
Shock:	Severe hypotension may be signs of bowel perforation with peritonitis. Shock due to other causes must be distinguished from severe hypotension due to C. difficile infection via cardiac and hemodynamic assessment.
Infectious diarrhea:	Other organisms cause antibiotic-associated diarrheas include Staphylococcus aureus, Klebsiella Oxytoca, Clostridium Perfringens, and Candida Albicans. The clinical manifestations are similar to that of C. difficile infection. The diagnosis is distinguished by stool culture.
Non-infectious diarrhea	Post-infectious irritable bowel syndrome, inflammatory bowel disease, celiac disease and collagenous colitis can mimic C. difficile infection. The presence of fever and leukocytosis is suggestive of C. difficile or other infectious etiology.
Collagenous colitis:	Is a chronic inflammatory disease of the colon characterized by chronic, watery diarrhea. Diagnosis requires colonoscopy with biopsy.
Celiac disease	Is a small bowel disease associated with dietary gluten exposure; symptoms include chronic or recurrent diarrhea, malabsorption, weight loss, and abdominal distension or bloating. Diagnosis is made via serology and/or biopsy.

General management principles of CDI include cessation of the inciting antibiotic, as directed by physician, and implementation of infection control policies. Treatments for non-severe CDI include oral metronidazole, oral vancomycin and oral fidaxomicin. Diagnosis of C. Difficile infection is established via a positive stool test for C. Difficile toxins.

Guideline parameters for severe CDI include:

- White blood cell count of >15,000 cells/microL
- Serum albumin <3 g/dL, and/or
- Serum creatinine level ≥1.5 times the premorbid level
- Patient may or may not present with profuse diarrhea. Diarrhea may be associated with mucus or occult blood, but melena is rare.

See CDI Clinical Management Algorithm (Appendix 1) in (BD-00-07-40084) for more details.

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Practice Guideline

Assessment considerations:	
Systemic Involvement	Complete a full set of Vital signs (BP, Temp, HR, RR, O_2 Sat) Monitor for persistent fever, temp >38 C.
Symptoms of volume depletion	Thirst, tachycardia, decreased skin turgor, orthostatic hypotension, decreased urine output, low blood pressure, dry mucous membrane, new onset of confusion &/delirium, lethargy.
GI symptoms	Assess for duration, frequency, and characteristics of stools. (i.e. foul smelling, watery, bloody/mucous thread). • Watery, large volume bowel movement associated with abdominal cramping, bloating and gas usually indicative of **small bowel origin.** • Frequent regular, small volume and painful bowel movement is usually indicative of **large bowel origin.** Fever, bloody/mucoid stool, presence of red cells and inflammatory cells are common. • Bloody acute diarrhea reflects usually bacterial cause, such as E-coli, Shigella, Campylobacter &Salmonella; and non-infectious etiologies such as irritable bowel disease or ischemic colitis. • Syndromes that begin with diarrhea but progress to fever and systemic complaints, such as headache and muscle aches, should raise the possibility of other etiologies. Assess for presence of abdominal discomfort /quality of pain. (i.e. Bloating, distention; location, intensity, duration of pain.) Assess for nausea, anorexia and hyperactive bowel sounds.
Abnormal Blood work	Monitor for: • Electrolyte imbalance from fluid lost • Leukocytosis: WBC > 15,000 cells/microL • Serum Albumin < 3 g/dL • Elevated lactate

Previous Health Histories that can attribute to the cause of diarrhea	• Recent hospitalization or antibiotic use. Other family members with same/similar symptoms • New initiation of enteral feeding. • Pre-existing GI disorders – i.e. Crohn's, Irritable bowel syndrome, inflammatory bowel disease, Celiac disease, chronic pancreatitis, hyperthyroidism, diabetes, Addison's disease. • Recent international travel • Recent food intake. Assess for food intolerance/allergies • Laxative use. Assess for constipation overflow • Receiving bowel prep pending diagnostic imaging. • Comorbidities: cardiac disease, Immunosuppressed. Radiation therapy, treatment for malignancy, history of transplantation, or advanced HIV infection.

Interventions:

- Obtain stool specimen type as indicated by history (liquid stool only).
- Place patient on contact precautions.
- Notify Infection Control/Charge Nurse re: isolation
- Obtain IV access if patient showing signs of dehydration
- Bloodwork for CBC, electrolytes and creatinine clearance.

Potential Problems	Possible Interventions / Considerations
Infection Control Practice & Prevention	• Place patient on "GI plus Contact" precautions until diarrhea resolved and/or infection ruled out. • Notify Infection Control/Charge Nurse re: isolation (See Infection Prevention & Control for more information)
Fluid replenishment related to volume depletion due to frequent watery diarrheas	• Consider need for rehydration via oral rehydration therapy (ORT) or IV therapy. • Assess for need for vascular access • Take caution in patient with swallowing impairment affecting oral intake, especially in geriatric population, and patient with fluid balance impairment in severe heart failure or renal insufficiency population.
Skin integrity related to increase bowel movement.	Consider dimethicone protectant cream PRN Frequent pad change if patient incontinent
Risk for Falls related to increase urgency	Implement fall prevention strategies as necessary. (i.e. Commode at bedside, de-clutter bedside to ensure access to bathroom)
Dietary intolerance	Consider special diet consistency in geriatric population. Request swallowing assessment and dietician recommendation as appropriate.

Documentation

- As per site documentation practices.
- NIA Documentation (in the 'Orders' section of the client chart) – should be in accordance with health authority NIA policies:
  - Policy: Nurse Independent Activities (NIA) and Nurse Initiated Protocols (NIP) (BCD-11-11-40001)

References

The Provincial Infection control Network of British Columbia (PICNet) www.picnet.ca.

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Appendix A: Definitions

Diarrhea	Is defined as the passage of loose or watery stools, typically at least three times in a 24 hour period. It reflects increased water content of the stool, either due to impaired water absorption and/or active water secretion by the bowel.
Clostridium difficile	Is a toxin-producing bacteria. Approximately 5% of the population normally carries C. difficile in their bowel without symptoms of infection. It is one of the most common hospital-acquired infections commonly associated with antibiotic usage, (either while on the antibiotics, or up to 3 weeks later.) The antibiotics alter the normal bacterial population of the bowel and allow the C. difficile to multiply. The toxins secreted by the C. difficile triggers bowel inflammation causing the bowel to leak fluid resulting in watery diarrhea. C. difficile infection has also been associated with other medications, such as chemotherapeutic agents and proton pump inhibitors. The symptoms may include: watery diarrhea (may be mild to profuse); a distinct smell (commonly described as a “barnyard smell” may be present); sometimes blood may be present; fever, loss of appetite, nausea, abdominal pain and tenderness, cramping, and high white blood cell count. C. Difficile may present as fever and/or abdominal distention with no diarrhea.
Acute Diarrhea	14 days or fewer in duration
Persistent Diarrhea	More than 14 but fewer than 30 days in duration
Chronic Diarrhea	More than 30 days in duration