# Abdominal Pain (Acute Non-Traumatic): Management (Adult 17 years and older)

## Site Applicability

All VCH and PHC Emergency Departments and Urgent Care Centres
Urgent and Primary Care Centers (UPCC)

## Practice Level

| Profession | Setting(s) | Basic Skill | Advanced Skill *(requiring additional education)* |
|---|---|---|---|
| RN | Emergency & Urgent Care | With advanced education where the following are core competencies and expectations of the role:<br>• Oxygen to treat Hypoxia<br>• Venipuncture to establish IV access (start an IV (min. 20 gauge) if stable, 2 x 18 if unstable)<br>• Venipuncture to collect blood samples | **Nurse Independent Activity:**<br>• The following NIA have been approved for use as noted in the site applicability above. These medications/treatments can be administered to independently treat:<br>○ **VCH:** Urinary Retention, Nursing Management of Acute and Chronic (Acute & Pediatrics)<br>○ **PHC:** Urinary Catheter: Management for the Prevention of UTI<br><br>**Nurse Initiated Protocol:**<br>• The following NIPs have been agreed on by VCH & PHC for nurses to initiate/ requisition and/or perform:<br>○ Urine-dip (send for urinalysis if positive and/or consider review with Physician/NP)<br>○ Urine-dip pregnancy (VCH) or serum HCG (**PHC only**)<br>○ 12 lead ECG and lactate (for patients 50 years of age and older)<br>○ Capillary blood glucose<br>○ Bloodwork (CBC, differential, electrolytes, coagulation studies, lipase, LFTs, HIV). If patient is less than or equal to 50 years of age and female, request serum hCG.<br>○ Advise and keep patient NPO |

## Registered Nurse Decision Support Tool: Treatment of Abdominal Pain in the ED/UCC

Abdominal discomfort can be a sign/symptom of many underlying physical conditions.
If Temp greater than 38.5°C or recent surgery, contact physician/NP and refer to Sepsis guidelines.

### Signs and Symptoms

(Consider other health **issues** or medications that may be contributing)

- Pain quality, location, abdominal distention/rigidity, bowel sounds, nausea/vomiting, breath odor
- Bowel movement history
- Pain when voiding, urgency, frequency
- Possibility of pregnancy
- ↑↓ Temp, Pulse, RR, BP, $SpO_2$, skin appearance, diaphoresis
- Consider previous similar episode of pain/symptoms
- Sleep loss because of pain
- Medication history, alcohol/substance use
- Abdominal pain associated with signs of shock is considered a medical emergency

- ✓ Place patient in appropriate care space based on triage assessment
- ✓ Initiate complete abdominal assessment and pain history
- ✓ Initiate oxygen via nasal prongs or mask if $O_2$ saturations are equal to or less than 94%, or as specified for individual patients
- ✓ Start an IV (min. 20 gauge) if stable, 2 x 18 if unstable and keep patient NPO
- ✓ As appropriate for patient care,
  - perform urine-dip (send for U/A if positive and/or consider review with Physician/NP),
  - perform urine-dip pregnancy (VCH) and if patient is less than or equal to 50 years of age, request serum hCG
  - 12 lead ECG and lactate for patients over the age of 50
  - capillary blood glucose
  - bloodwork (CBC, differential, electrolytes, coagulation studies, lipase, LFTs, HIV)
  - Advise and keep patient NPO
- ✓ Refer to guideline for mild to moderate pain in Adult in ED/UCC
- ✓ Should pain not resolve, contact physician/NP immediately

## Goal

- To expedite the initiation of basic investigations, treatment and the initiation of analgesia for new onset abdominal pain patients.
- To alleviate significant delays in the treatment of patients presenting with abdominal pain.

## Policy Statement

- This document does not reflect the ongoing management of persistent pain or treatment of moderate to severe pain. Consultation with a physician or nurse practitioner (NP) involved in the client's care is required.
- The use of NIA/NIP is supported within VCH/PHC and is defined:
  - Policy: Nurse Independent Activities (NIA) and Nurse-Initiated Protocols (NIP)

  Education includes: LearningHub NIA Course
- Physician/NP orders override the use of NIA

## Need to Know

- Abdominal discomfort alone or in combination with other signs and symptoms can be indicative of many conditions. Appendix A provides a list of conditions which may be associated with abdominal pain but is not limited to these.
- If patient meets 'Sepsis Criteria' refer to site specific Sepsis Protocol.

  **VCH:**
  - VA: VCH.VA.PPO.555
  - Coastal: VCH.CO.3030
  - RH: VCH.RD.RH.0075

  **PHC:** See ED Sepsis Protocol
- Place patient in an appropriate care space to enable a thorough history and physical exam.
- Serum hCG should be requested for female patients within the reproductive age (under or equal to the age of 50) in addition to a urine hCG test, to confirm patient pregnancy status prior to undergoing an abdominal CT. False negatives have been identified due to the hook effect. False positives have been identified when performing an urine hCG prior to missing menstruation or diseases associated with excretion of hCG into the urine (e.g. colon or cervical cancer)

## Protocol

**All patients aged 17 or older with acute non-traumatic abdominal pain**

1. Obtain a complete set of Vital Signs (Blood Pressure, Temp, Heart Rate, Respiratory Rate, Oxygen Saturation).
   - If vitals are unstable, or if the patient has a history of syncope, place patient on the cardiac monitor and inform the physician/NP immediately.
2. Perform a complete abdominal assessment on the patient (see table below).
3. If patient rates pain as moderate to severe, consult the physician/NP for analgesia orders.
4. If patient is nauseous and/or vomiting, consult physician/NP for anti-emetic orders.
5. Consider urinary retention and perform a bladder scan if available.
6. Consider the need for "Contact Precautions".
7. Instruct patient about the importance of and method for communicating further changes or episodes of abdominal pain.

### Complete Abdominal Assessment

| **Assessment for Decision Making:** See Algorithm | |
|---|---|
| **Allergies:** | **Note type and reaction** |
| **Neurological:** | • Change in level of consciousness, mental status, presence of confusion, assess for delirium or dementia |
| **CVS:** | • Full set of vital signs (Temp, BP, HR, RR, $O_2$ sat if less than 94% consider $O_2$)<br>• Skin appearance-color, diaphoresis; perform glucometer |
| **GI:** | • Pain assessment – Onset/other symptoms, provoke or palliate, quality, region or radiate, severity, timing or treatment, understanding and values<br>• Nausea and/or vomiting<br>• Bowel movement history<br>• Appetite<br>• Abdominal distention/rigidity<br>• Bowel Sounds<br>• Breath Odor |
| **GU:** | • Dysuria, hematuria, urinary frequency, urgency<br>• Discharge |
| **Gyne:** | • Last Menstrual Period<br>• Possibility of pregnancy<br>• Pelvic/vaginal bleeding/discharge/pain<br>• Para/gravida |
| **History:** | • Similar episodes of pain and symptoms<br>• Note any tests already done elsewhere for same complaint<br>• Medical/surgical history<br>• Medications<br>• Alcohol/Substance use/Smoking |
| **Interventions:** See Algorithm<br>• Diagnostic Point of Care tests.<br>• Consultation with physician/NP re: Analgesia (Pain Management: Acute mild to moderate (Adult 17 years and older). | |
| **Precautions/Special Considerations**<br>• Consider that patients may present with abdominal pain that is caused by a source outside the abdomen. For example, Myocardial Infarction, diabetic ketoacidosis, and Abdominal Aortic Aneurysm. See Appendix A.<br>• Abdominal pain associated with signs of shock is considered a medical emergency.<br>• If patient meets 'Sepsis Criteria' refer to site specific Sepsis Protocol and inform the ED/UCC physician/NP.<br>• The cause of abdominal pain in the elderly differs substantially from those seen in younger patients. Symptoms can be more subtle, less specific, and are more likely to be life-threatening. Consider patients age, medical history, presentation and situate in most appropriate care space. | |

## Expected Patient/Client/Resident Outcomes

To minimize patient discomfort and assist in identifying cause of abdominal pain.

## Patient/Client/Resident Education

- Explain the treatments being provided, including rationale and possible side effects.
- Provide patient/family with verbal and/or written discharge instructions.

## Documentation

- Document initial and on-going nursing assessments
- NIA Documentation (in the 'Orders' section of the client chart) – should be in accordance with health authority NIA/NIP :Policy:
  - Policy: Nurse Independent Activities (NIA) and Nurse-Initiated Protocols (NIP)
- Interventions/treatments performed and patients response to treatment
- Any medications given (time, dose, route) and patient's response
- Pain Scale documentation
- Discharge teaching/instructions provided

## Related Documents

- **VCH:** Urinary Retention, Nursing Management of Acute and Chronic (Acute & Pediatrics)
- **PHC:** Urinary Catheter: Management for the Prevention of UTI

## References

Betz, D. and Fane, K. Human Chorionic Gonadotropin- StatPearls. NCBI. 30 August 2020. https://www.ncbi.nlm.nih.gov/books/NBK532950/

Abdullah, M., & Firmansyah, M. (2012). Diagnostic approach and management of acute abdominal pain. Acta Medica Indonesiana, 44(4), 344-350

Barrett-Walters, Billie Jean. "Renal and Genitourinary Emergencies" *Emergency Nursing Principles and Practice.* 5th edition. Chapter 37

Gallaher, Jamie E. "Acute abdominal pain" *Emergency Medicine.A comprehensive study guide.* 6th edition. Tintinalli, Judith E., Kelen, Gabor D., Stapczynski, J. Stephen. Chapter 32

Hartree, N Dr. "Abdominal Aortic Aneurysm" Patient UK (www.patient.co.uk) Document ID: 12122, Document version: 2, Updated May 2009

Jenkins, Jon L. Braen, Richard G. (editors) "Abdominal Pain" "Constipation & Diarrhea" *Manual of Emergency Medicine*. Lippincott Williams & Wilkins. Fourth Addition. Chapters 26 & 27

Koren, Zeb. Kunz Howard, Patricia. "Respiratory Emergencies" *Emergency Nursing Principles and Practice.* 5th edition. Chapter 32

Newberry, Lorene. "Gastrointestinal Emergencies" *Emergency Nursing Principles and Practice*. 5th edition. Chapter 36

Rhoads, Jacqueline. "Gastrointestinal Disorders" *Advanced Health Assessment & Diagnostic Reasoning*. Lippincott Williams & Wilkins. Chapter 11

Stone, Keith C., Humphries, Roger L. "Abdominal Pain" *CURRENT Diagnosis and Treatment: Emergency Medicine*. 6th edition. Chapter 13

Vancouver Coastal Health PCIS lab order entry

Willacy, Hayley Dr. "Aortic Dissection" Patient UK (www.patient.co.uk) Document ID: 1815, Document version: 22, Updated June 2009

Willacy, Hayley Dr. "Ruptured Aortic Aneurysm" Patient UK (www.patient.co.uk) Document ID: 2742, Document version: 22, Updated October 2009

## Developed by

CPD Developer Lead(s):
- Director, Regional Emergency/Trauma Services VCH/PHC
- Regional Medical Director for Emergency Services VCH/PHC
- Regional Lead – Emergency and Trauma Services, VCH
- PCC/Educator, Urgent Care Centre, UBCH

Other members:
- Regional Emergency Services Committee (RESC)
- Clinical Educator, Emergency, VGH
- Clinical Educator, Emergency, RH
- Clinical Educator, Emergency, RH
- Clinical educator for Emergency, LGH
- Acute Services Manager, Emergency, PRGH
- Clinical Educator for Emergency, SH
- Clinical Educator for Emergency, SGH
- Nurse Educator, Emergency, MSJ
- Nurse Educator, Emergency, SPH

## Reviewed by

Health Authority Medication Advisory Council (HAMAC)

## Endorsed by

VCH: *(Regional SharePoint 2nd Reading)*
- Health Authority Profession Specific Advisory Council Chairs (HAPSAC)
- Health Authority & Area Specific Interprofessional Advisory Council Chairs (HAIAC)
- Operations Directors
- Professional Practice Directors

PHC: Professional Practice Standards Committee

UPCC (Endorsed November 12, 2020):
- Director, Professional Practice, Nursing, Professional Practice, VCH
- Manager, Vancouver UPCC, Vancouver Fairview UPCC, VCH
- COS, Registered Nurse, Primary Care, VCH
- Project Manager, Primary Health Care Network, VCH

## Final Sign-off & Approved for Posting by

VP Professional Practice and Chief Clinical Information Officer, VCH

Professional Practice Standards Committee, PHC

## Date of Approval/Review/Revision

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## Appendix A: Abdominal Pain Acute Non-Traumatic

**Abdominal Aortic Aneurysm (AAA)** – a dilation of part of the aorta that's within the abdomen

- Often asymptomatic unless it becomes large enough to put pressure on nearby structures. If symptoms occur, likely mild abdominal and/or back pain or groin pain.
- Ruptured AAA - severe lumbar pain of recent onset may indicate impeding rupture. Sudden severe pain in abdomen, back or groin associated with syncope, shock or collapse.
- Aortic Dissection – starts with a tear in the intima of the aortic lining. The tear allows a column of blood under pressure to enter the aortic wall and creates a false lumen which can extend a variable distance.
    - sudden onset of severe pain of the chest, back or abdomen classically described as ripping, tearing, sharp or stabbing
    - difference in blood pressure in limbs on the right and left side of the body
    - history of hypertension is common

**Appendicitis**

- Classic presentation – onset of epigastric or periumbilical pain, nausea, anorexia and 1 to 2 episodes of vomiting. Within 2 to 12 hours, pain shifts to the RLQ described as a steady ache aggravated by walking or coughing. General fatigue and low grade fever common. Atypical presentation is common.

**Cholecystitis** – typically occurs when a gallstone becomes impacted in the cystic duct, producing obstruction and subsequent inflammation.

- RUQ or epigastric pain often precipitated by or following ingestion of a large or fatty meal. Often radiates to right subscapular area. Commonly associated with nausea and vomiting – vomiting often associated with symptomatic relief. May have low grade fever.

**Diverticulitis**

- Intermittent, cramps in lower abdominal, pain often relieved with BM. Low grade fever common.

**Ectopic pregnancy**

- RLQ or LLQ pain, often abrupt onset and associated with vaginal bleeding or spotting. Late or missed period. Syncope or symptoms suggestive of postural hypotension suggest ectopic rupture.

**Gastroenteritis** – may be caused by virus, bacterial or protozoan.

- Diarrhea, vomiting, and abdominal cramping.

**Inflammatory bowel disease**

- Crohn's and ulcerative colitis. Moderate diffuse abdominal tenderness with mild to severe bloody diarrhea.

**Intestinal Obstruction** – may occur as a result of mechanical blockage of the intestinal lumen, may originate extrinsically or intrinsically or may occur as a result of impaired intestinal neuromuscular function resulting in decreased or absent motility.

- Abdominal pain may be either diffuse or poorly localized to the general vicinity of the obstruction. May be mild or severe, may occur in waves associated with peristalsis, and is often described as cramps. May be associated with nausea and vomiting. May have abdominal distention and failure to pass flatus or feces.

**Ovarian cyst**

- Often asymptomatic but may cause low abdominal or pelvic pain which may be intermittent, severe, sudden and sharp. Feeling of low abdominal or pelvic fullness or pressure. Pelvic pain with intercourse.

**Pancreatitis** – often associated with several provocative factors including alcohol use and cholelithiasis.

- Constant epigastric pain improves with sitting forward and made worse by lying supine. May radiate toward back and associated with nausea and vomiting. May present with a fever, tachycardia and palour.

**Pelvic Inflammatory Disease (PID)** – infection of the reproductive organs and their supporting structures.

- Severe lower quadrant cramping or aching, usually bilateral with fever.

**Peptic ulcer disease**
- Gnawing epigastric discomfort, occasionally radiating to the back and relieved by eating. Nausea with occasional vomiting.

**Peritonitis** – Common complication of peritoneal dialysis
- Frequent symptoms include: abdominal pain, rebound tenderness, fever, nausea or vomiting, cloudy peritoneal effluent, hypotension.

**Renal colic**
- Severe unilateral flank and/or abdominal pain radiating to the groin. Associated with nausea and vomiting. Gross or microscopic hematuria. May be diaphoretic and restless.

**Urinary Retention** – Is the inability to voluntarily pass urine more common in men as a result of benign prostatic hyperplasia.
- Severe discomfort and pain, enlarged lower abdomen, an urgent need to urinate without being able to.

**Urinary tract infection**
- Cystitis – lower pelvic pressure or discomfort, painful urination, frequent urination of small amounts, urgency and foul smelling and cloudy urine.
- Acute pyelonephritis – prior or recent cystitis. Complaints of back pain, fever, headache, nausea and vomiting.

**Constipation**
- Few bowel movements, abdomen distention, nausea or vomiting.

**Diabetic Ketoacidosis** – Possible causes include delayed gastric emptying and ileus induced by the metabolic acidosis and associated electrolyte abnormalities.
- Nausea, vomiting, abdominal pain.

**Incarcerated hernia**
- Heaviness or dull discomfort in the groin, bulge in the groin, pain on palpation, febrile, erythema of the groin skin, nausea and vomiting.

**Ischemic bowel**
- Abdominal pain out of proportion to the physical exam, abdominal distention, absent bowel sounds

**Ischemic cardiac pain/myocardial infarction**
- Pain to the chest which may radiate to the upper abdomen, nausea, burning sensation in the chest and upper abdomen (similar to heartburn)

**Pneumonia**
- Cough, fever, fever and/or chills, chest wall pain, increase heart rate, feeling weak and tired, nausea and vomiting, diarrhea

**Sickle cell crisis**
- Pain to back, chest, extremities, and abdomen

**Splenic rupture**
- Left-sided abdominal pain, fever, nausea or vomiting

**Testicular torsion**
- Sudden, severe pain to the scrotum, scrotum edema, abdominal pain, nausea and vomiting, painful urination, fever

**NOTE: List may not be all inclusive of all potential diagnosis**