12.3: Gastrointestinal and Genitourinary Assessment

The gastrointestinal (GI) system is responsible for the ingestion of food and the absorption of nutrients. Additionally, the GI and genitourinary (GU) systems are responsible for the elimination of waste products. Therefore, during assessment of these systems, the nurse collects subjective and objective data regarding the underlying structures of the abdomen, as well as the normal functioning of the GI and GU systems.

Subjective Assessment

A focused gastrointestinal and genitourinary subjective assessment collects data about the signs and symptoms of GI and GU diseases, including any digestive or nutritional issues, relevant medical or family history of GI and GU disease, and any current treatment for related issues. Table 12.3a outlines interview questions used to explore medical and surgical history, symptoms related to the gastrointestinal and genitourinary systems, and associated medications. Information gained from the interview process is used to tailor the subsequent physical assessment and create a plan for patient care and education.

Table 12.3a Interview Questions for Subjective Assessment of GI and GU Systems

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever been diagnosed with a gastrointestinal (GI), kidney, or bladder condition?</td>
<td>Please describe the conditions and treatments.</td>
</tr>
</tbody>
</table>
Have you ever had abdominal surgery? Please describe the surgery and if you experienced any complications.

Are you currently taking any medications, herbs, or supplements? Please describe.

Are there any associated symptoms with the pain such as fever, nausea, vomiting, or change in bowel pattern?

Are you having bloody stools (hematochezia); dark, tarry stools (melena); abdominal distention; or vomiting of blood (hematemesis)?

When did the pain start to occur? (Onset)

Where is the pain? (Location)

When it occurs, how long does the pain last? (Duration)

Can you describe what the pain feels like? (Characteristics)

What brings on the pain? (Aggravating factors)

What relieves the pain? (Alleviating factors)

Does the pain radiate anywhere? (Radiation)

What have you used to treat the pain? (Treatment)

What effect has the pain had on you? (Effects)

How severe is the pain from 0-10 when it occurs? (Severity)

Please describe.

Have you had any issues with nausea, vomiting, food intolerance, heartburn, ulcers, change in appetite, or weight?

What treatment did you use for these symptoms?

What is your typical diet in a 24-hour period?
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have any difficulty swallowing food or liquids (dysphagia)?</td>
<td>Please describe.</td>
</tr>
<tr>
<td>Have you ever been diagnosed with a stroke or transient ischemic attack (TIA)?</td>
<td>Have you ever been diagnosed with a stroke or transient ischemic attack (TIA)?</td>
</tr>
<tr>
<td>Have there been any changes in pattern or consistency of your stool?</td>
<td>Have there been any changes in pattern or consistency of your stool?</td>
</tr>
<tr>
<td>Are you passing any gas?</td>
<td>Are you passing any gas?</td>
</tr>
<tr>
<td>Please describe.</td>
<td>Please describe.</td>
</tr>
<tr>
<td>How long have you had these issues?</td>
<td>How long have you had these issues?</td>
</tr>
<tr>
<td>What treatment did you use for these symptoms?</td>
<td>What treatment did you use for these symptoms?</td>
</tr>
<tr>
<td>If constipation:</td>
<td>If constipation:</td>
</tr>
<tr>
<td>• Has constipation been a problem for you throughout your life?</td>
<td>• Has constipation been a problem for you throughout your life?</td>
</tr>
<tr>
<td>• How frequently do you usually have a bowel movement?</td>
<td>• How frequently do you usually have a bowel movement?</td>
</tr>
<tr>
<td>If diarrhea:</td>
<td>If diarrhea:</td>
</tr>
<tr>
<td>• Are your stools watery or is there some form to them?</td>
<td>• Are your stools watery or is there some form to them?</td>
</tr>
<tr>
<td>• How many episodes of diarrhea have you had in the past 24 hours?</td>
<td>• How many episodes of diarrhea have you had in the past 24 hours?</td>
</tr>
<tr>
<td>Do you experience any pain or discomfort with urination (dysuria)?</td>
<td>Please describe.</td>
</tr>
<tr>
<td>If you have discomfort while urinating, is the discomfort internal or external?</td>
<td>If you have discomfort while urinating, is the discomfort internal or external?</td>
</tr>
<tr>
<td>Do you use any treatment for these symptoms?</td>
<td>Do you use any treatment for these symptoms?</td>
</tr>
<tr>
<td>Please describe.</td>
<td>Please describe.</td>
</tr>
<tr>
<td>Do you experience frequent urination (urinary frequency)?</td>
<td>Does the frequency occur during daytime or nighttime hours?</td>
</tr>
<tr>
<td>Do you ever experience a strong urge to urinate that makes it difficult to reach the bathroom in time (urinary urgency)?</td>
<td>Does this strong urge ever result in a leakage of urine? Does the urge come and go or is it continuous?</td>
</tr>
</tbody>
</table>
Do you have any leakage of urine when you cough, sneeze, or jump (urinary incontinence)?

Do you have difficulty starting the flow of urine?

Gastrointestinal

Pain is the most common complaint related to abdominal problems and can be attributed to multiple underlying etiologies. Because of the potential variability of contributing factors, a careful and thorough assessment of this chief complaint should occur. Additional associated questions include asking if bloody stools (hematochezia); dark, tarry stools (melena); bloating (abdominal distention); or vomiting of blood (hematemesis) are occurring.

Nausea, vomiting, diarrhea, and constipation are common issues experienced by hospitalized patients due to adverse effects of medications or medical procedures. Read more details about commonly occurring gastrointestinal conditions in the “Elimination” chapter in Open RN Nursing Fundamentals. It is important to ask a hospitalized patient daily about the date of their last bowel movement and flatus so that a bowel management program can be initiated if necessary. If a patient is experiencing diarrhea, it is important to assess and monitor for signs of dehydration or electrolyte imbalances. Dehydration can be indicated by dry skin, dry mucous membranes, or sunken eyes. These symptoms may require contacting the health care provider for further treatment. Read additional information about fluid and electrolyte imbalances in the “Fluids and Electrolytes” chapter in Open RN Nursing Fundamentals.

Additional specialized assessments of GI system function can include examination of the oropharynx and esophagus. For example, patients who have experienced a cerebrovascular accident (CVA), also called a “stroke,” may experience difficulty swallowing (dysphagia). The nurse is often the first to notice these difficulties when swallowing pills, liquid, or food and can advocate for treatment to prevent complications, such as unintended weight loss or aspiration pneumonia.[4]

Genitourinary

The nursing assessment of the genitourinary system generally focuses on bladder function. Ask about urinary symptoms, including dysuria, urinary frequency, or urinary urgency. Dysuria is any discomfort associated with urination and often signifies a urinary tract infection. Patients with dysuria commonly experience burning, stinging, or itching sensation. In elderly patients, changes in mental status may be the presenting symptom of a urinary tract infection. In women with dysuria, asking whether the discomfort is internal or external is important because vaginal inflammation can also cause dysuria as urine passes by the inflamed labia.

Abnormally frequent urination (e.g., every hour or two) is termed urinary frequency. In older adults, urinary frequency often occurs at night and is termed nocturia. Frequency of normal urination varies considerably from individual to individual depending on personality traits, bladder capacity, or drinking habits. It can also be a symptom of a urinary tract infection, pregnancy in females, or prostate enlargement in males.

Urinary urgency is an abrupt, strong, and often overwhelming need to urinate. Urgency often causes urinary
incontinence, a leakage of urine. When patients experience urinary urgency, the desire to urinate may be constant with only a few milliliters of urine eliminated with each voiding. \[5\] Read additional information about commonly occurring genitourinary system alterations in the "Elimination" chapter in Open RN Nursing Fundamentals.

Life Span Considerations

Infants

Eating and elimination patterns of infants require special consideration based on the stage of development.

- Ask parents about feeding habits. Is the baby being breastfed or formula fed? If formula fed, how does the child tolerate the formula?
- Note that the expected abdominal contour of an infant is called protuberant, which means bulging.
- Assess the umbilical cord; it should dry and fall off on its own within two weeks of life.
- Observe for respiratory movement in the abdomen of the infant.

Children

The expected abdominal contour of a child is protuberant until about the age of 4. Children often cannot provide more information than "my stomach hurts"; they may have symptoms of decreased school attendance due to abdominal discomfort.

Older Adults

Constipation may be more common in older adults due to decreased physical mobility and oral intake. Urinary urgency, urinary frequency, urinary retention, nocturia, and urinary incontinence are also common concerns for older adults.

Objective Assessment

Physical examination of the abdomen includes inspection, auscultation, palpation, and percussion. Note that the order of physical assessment differs for the abdominal system compared to other systems. Palpation should occur after the auscultation of bowel sounds so that accurate, undisturbed bowel sounds can be assessed. The abdomen is roughly divided into four quadrants: right upper, right lower, left upper, and left lower (see Figure 12.3\[6\]). When assessing the abdomen, consider the organs located in the quadrant you are examining.
In preparation for the physical assessment, the nurse should create an environment in which the patient will be comfortable. Encourage the patient to empty their bladder prior to the assessment. Warm the room and stethoscope to decrease tensing during assessment.

**Inspection**

The abdomen is inspected by positioning the patient supine on an examining table or bed. The head and knees should be supported with small pillows or folded sheets for comfort and to relax the abdominal wall musculature. The patient’s arms should be at their side and not folded behind the head, as this tenses the abdominal wall. Ensure the patient is covered adequately to maintain privacy, while still exposing the abdomen as needed for a thorough assessment. Visually examine the abdomen for overall shape, masses, skin abnormalities, and any abnormal movements.

- Observe the general contour and symmetry of the entire abdominal wall. The contour of the abdomen is often described as flat, rounded, *scaphoid* (sunken), or protuberant (convex or bulging).
- Assess for *distention*. Generalized distention of the abdomen can be caused by obesity, bowel distention from gas or liquid, or fluid buildup.
- Assess for masses or bulges, which may indicate structural deformities like hernias or related to disorders in...
abdominal organs.

- Assess the patient’s skin for uniformity of color, integrity, scarring, or striae. Striae are white or silvery elongated marks that occur when the skin stretches, especially during pregnancy or excessive weight gain.
- Note the shape of the umbilicus; it should be inverted and midline.
- Carefully note any scars, and correlate these scars with the patient’s recollection of previous surgeries or injury.
- Document any abnormal movement or pulsations. Visible intestinal peristalsis can be caused by intestinal obstruction. Pulsations may be seen in the epigastric area in patients who are especially thin, but otherwise should not be observed. [7][8]

### Ausculation

Auscultation, or the listening, of the abdomen, follows inspection for more accurate assessment of bowel sounds. Use a warmed stethoscope to assess the frequency and characteristics of the patient’s bowel sounds, which are also referred to as peristaltic murmurs.

Begin your assessment by gently placing the diaphragm of your stethoscope on the skin in the right lower quadrant (RLQ), as bowel sounds are consistently heard in that area. Bowel sounds are generally high-pitched, gurgling sounds that are heard irregularly. Move your stethoscope to the next quadrant in a clockwise motion around the abdominal wall.

It is not recommended to count abdominal sounds because the activity of normal bowel sounds may cycle with peak-to-peak periods as long as 50 to 60 minutes. [9] The majority of peristaltic murmurs are produced by the stomach, with the remainder from the large intestine and a small contribution from the small intestine. Because the conduction of peristaltic murmur is heard throughout all parts of the abdomen, the source of peristaltic murmur is not always at the site where it is heard. If the conduction of peristaltic sounds is good, auscultation at a single location is considered adequate. [10]

**Hyperactive bowel sounds** may indicate bowel obstruction or gastroenteritis. Sometimes you may be able to hear a patient’s bowel sounds without a stethoscope, often described as “stomach growling” or **borborygmus**. This is a common example of hyperactive sounds. **Hypoactive bowel sounds** may be present with constipation, after abdominal surgery, peritonitis, or paralytic ileus. As you auscultate the abdomen, you should not hear vascular sounds. If heard, this finding should be reported to the health care provider. [11][12]

### Palpation

Palpation, or touching, of the abdomen involves using the flat of the hand and fingers (not the fingertips) to detect palpable organs, abnormal masses, or tenderness [13] (see Figure 12.4 [14]). When palpating the abdomen of a patient reporting abdominal pain, the nurse should palpate that area last. Light palpation is primarily used by bedside nurses to assess for musculature, abnormal masses, and tenderness. Deep palpation is a technique used by advanced practice clinicians to assess for enlarged organs. Lightly palpate the abdomen by pressing into the skin about 1 centimeter beginning in the RLQ. Continue to move around the abdomen in a clockwise manner.

Palpate the bladder for distention. Note the patient response to palpation, such as pain, guarding, rigidity, or rebound tenderness. **Guarding** refers to voluntary contraction of the abdominal wall musculature, usually the result of fear,
anxiety, or the touch of cold hands. **Rigidity** refers to involuntary contraction of the abdominal musculature in response to peritoneal inflammation, a reflex the patient cannot control.\(^{[15]}\) **Rebound tenderness** is another sign of peritoneal inflammation or peritonitis. To elicit rebound tenderness, the clinician maintains pressure over an area of tenderness and then withdraws the hand abruptly. If the patient winces with pain upon withdrawal of the hand, the test is positive.\(^{[16],[17],[18]}\)

Note: If the patient has a Foley catheter in place, additional assessments are included in the “Facilitation of Elimination” chapter.

![Figure 12.4 Light Palpation of the Abdomen](image)

### Percussion

You may observe advanced practice nurses and other health care providers percussing the abdomen to obtain additional data. Percussing can be used to assess the liver and spleen or to determine if costovertebral angle (CVA) tenderness is present, which is related to inflammation of the kidney.

- Encourage the patient to empty their bladder prior to palpation.
- When palpating the abdomen, ask the patient to bend their knees when lying in a supine position to enhance relaxation of abdominal muscles.

See Table 12.3b for a comparison of expected versus unexpected findings when assessing the abdomen.
Table 12.3b Expected Versus Unexpected Gastrointestinal and Genitourinary Assessment Findings

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Expected Findings</th>
<th>Unexpected Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection</td>
<td>Symmetry of shape and color</td>
<td>Asymmetry</td>
</tr>
<tr>
<td></td>
<td>Flat or rounded contour (protuberant in children until age 4)</td>
<td>Distension</td>
</tr>
<tr>
<td></td>
<td>No visible lesions</td>
<td>Scars</td>
</tr>
<tr>
<td></td>
<td>Intact skin</td>
<td>Wounds</td>
</tr>
<tr>
<td></td>
<td>Colostomy</td>
<td>Skin breakdown</td>
</tr>
<tr>
<td></td>
<td>Presence of normoactive bowel sounds</td>
<td>Pulsations</td>
</tr>
<tr>
<td>Auscultation</td>
<td>Presence of normoactive bowel sounds</td>
<td>Hyperactive bowel sounds</td>
</tr>
<tr>
<td></td>
<td>Absent bowel sounds</td>
<td>Absent bowel sounds</td>
</tr>
<tr>
<td>Palpation</td>
<td>Absence of pain or tenderness</td>
<td>Pain on palpation</td>
</tr>
<tr>
<td></td>
<td>Absence of masses</td>
<td>Guarding</td>
</tr>
<tr>
<td></td>
<td>Clear, pale yellow urine</td>
<td>Dysuria</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>Absence of pain, urgency, frequency, or retention</td>
<td>Urinary frequency</td>
</tr>
<tr>
<td></td>
<td>Dark or bloody urine, foul odor, or sediment present</td>
<td>Urinary urgency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urinary retention</td>
</tr>
</tbody>
</table>

(Document and notify the provider of any new findings*)
**CRITICAL CONDITIONS to report immediately**

- New or worsening melena
- Bloody stools
- Hematemesis
- Signs of dehydration associated with diarrhea and vomiting, such as <30mL urine/hour

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