

DST-502 GI-GU Assessment: Pediatric

Nurses with Remote Nursing Certified Practice designation (RN(C)s)¹ are able to manage the following genitourinary condition:

Lower Urinary Tract Infection (UTI) in children **2 years of age and older**.

The following assessment must be completed and documented. As a complete genitourinary exam includes a gastrointestinal exam, these two examinations have been combined.

ASSESSMENT

History of Present Illness and Review of Systems

General

The following characteristics of each symptom should be elicited and explored:

- Onset (sudden or gradual)
- Location
- Duration, chronology
- Characteristics/quality of symptom
- Associated symptoms
- Precipitating and aggravating factors
- Relieving factors
- Timing, frequency, and duration
- Current situation (improving or deteriorating)
- Previous diagnosis of similar episodes
- Previous treatments and efficacy
- Effects on daily activities

Cardinal Signs and Symptoms

In addition to the general characteristics outlined above, additional characteristics of specific symptoms should be elicited as follows:

Abdominal Pain (Appendix 1)

- Quality – crampy or constant, sharp or stabbing
- Radiation
- Timing – related to eating
- Severity
- Consider GU location indicators – flank, suprapubic, genital, groin or low back pain and costo-vertebral angle (CVA) tenderness

Nausea, Vomiting or Regurgitation

- Frequency, amount, timing
- Presence of bile
- Hematemesis
- Force

¹ RN(C) is an [authorized title](#) recommended by CRNBC that refers to CRNBC-certified RNs, and is used throughout this Decision Support Tool (DST).

- Color
- Relationship to food intake, i.e., solids or liquids

Dysphagia

- Solids or liquids
- Site where food gets stuck
- Food is regurgitated

Bowel Habits

- Last bowel movement
- Frequency, colour and consistency of stool
- Presence of mucous, blood or melena
- Pain before, during or after defecation
- Sense of incomplete emptying after bowel movement
- Use of laxatives
- Belching, bloating and flatulence
- Change in bowel habits

Urinary Symptoms

- Enuresis (bed wetting)
- New onset incontinence
- Frequency, urgency, quantity
- Dysuria and its timing during voiding (at beginning or end, throughout)
- Change in colour and odour of urine
- Haematuria
- Presence of stones or sediment in the urine
- Toilet training problems

Jaundice

- Scleral icterus
- Tea-coloured urine
- Clay-coloured bowel movements
- Pruritis
- History of hepatitis A, hepatitis B or hepatitis C

GU – Female

- Where appropriate for females to r/o ectopic, pelvic inflammatory disease (PID) or pregnancy as the cause of symptoms:
- Last menstrual period, any change?
- Dyspareunia or post coital bleeding if sexually active
- Lesions, swelling or discoloration of external genitalia
- Urethral or vaginal discharge
- Sense of pelvic relaxation (pelvic organs feel as though they are falling down or out)

GU – Male

- Testicular pain or swelling

- Discharge from penis, itching
- Lesions, swelling or discoloration of external genitalia

Other Associated Symptoms

- Change in appetite
- Fever
- Malaise / activity level
- Headache
- Dehydration
- Usual nutrition and food habits: type of foods eaten, variety of foods in diet, quantity of food eaten, dietary balance, fiber content of diet
- Food and fluid intake since onset of illness
- Check bottle for content (sour milk)
- Breast feeding mothers (consider diet)
- Unusual weight loss or weight gain
- Skin (e.g., dry, pruritis, rash)
- Unexplained crying, holding of genitals
- Enlarged, painful nodes (axilla, groin)
- Plus the following symptoms associated with **nephritic syndrome** and **glomerulonephritis**:
 - Swelling of ankles and orbits
 - Headaches
 - Nosebleeds
 - Haematuria
 - Decreased urinary output

Medical History Specific to GI / GU Systems

- Allergies (seasonal as well as reactions)
- Medication recently or currently used (prescription, birth control pills (BCP), antibiotics (particularly clindamycin use within the past 2 months), steroids and over the counter (OTC))
- Herbal preparations
- Immunization status
- Birth and prenatal status if age appropriate (neonate, infant)
- Growth history, obtain measurements if appropriate
- Communicable diseases: measles, chickenpox (varicella), herpes simplex
- **Diseases – GI:**
 - Hiatus hernia
 - Documented *H. Pylori* or gastro esophageal reflux diseases (GERD)
 - Presence of hernia or masses
 - Irritable bowel syndrome (IBS) / inflammatory bowel disease (IBD)
 - Peptic ulcer disease (PUD)
 - Diverticulosis
 - Liver disease (hepatitis A, hepatitis B, hepatitis C)
 - Diabetes mellitus
 - Abdominal or GU surgery or procedures

- Diseases – GU:
 - Renal disease, cystitis, pyelonephritis, renal stones
 - Congenital structural abnormalities in the GU tract
 - Human papilloma virus (HPV), sexually transmitted infections (STIs), including human immunodeficiency virus (HIV)
 - Male: hydrocele, epididymitis, varicocele, hernia, undescended testis, spermatocele, testicular torsion
 - Female: pelvic inflammatory disease (PID)
 - Females (if appropriate):
 - Menstrual History – menarche, LMP, interval, regularity, duration, amount of flow, premenstrual symptoms (PMS), dysmenorrhea
 - Obstetrical History - gravida, term, para, abortion, live, stillbirth (GTPALS) complicated pregnancies and deliveries

OTHER

- Blood transfusion
- Immunocompromised

Family History Specific to GI / GU Systems

- Household contact with hepatitis A or hepatitis B
- Household contact with gastroenteritis / recent GI infections
- Food poisoning
- GERD, peptic ulcer disease (PUD)
- Gallbladder disease
- Metabolic disease (i.e., diabetes mellitus, porphyria)
- Renal disease (e.g., renal cancer, polycystic kidneys, renal stones)
- Urinary tract infections (UTIs)

Personal and Social History Specific to GI - GU Systems

- Substance use – alcohol, smoking, caffeine, street drugs, including injection drugs, steroids
- Dietary recall including foods avoided (and reasons for), fat intake, nitrate intake (e.g., smoked foods)
- Obesity, anorexia, bulimia, other eating disorders
- Travel to area where infectious GI conditions are endemic
- Body piercing or tattoos
- Stress at home or school, attendance issues
- Exposure to polluted drinking water
- Sanitation problems at home or in the community
- Personal hygiene, toileting habits, use of bubble bath, douches, tight-fitting underwear or other clothing
- If age appropriate, sexual history and practices, including risk behaviours and contraception (unprotected oral, anal or vaginal intercourse, multiple partners, sexual orientation, symptomatic partner)
- Sexual or physical abuse, inappropriate touch (children must be asked these questions with sensitivity and without the use of leading questions)
- Fear, embarrassment, anxiety
- Missing work, school or social functions because of GU symptoms (e.g., incontinence)

Occupational or School Environment

- Healthcare occupation
- Institutional environment

- Environmental exposure
- Chemical exposure

PHYSICAL ASSESSMENT

Vital Signs

- Temperature
- Pulse
- Respiratory rate
- SpO₂
- Blood pressure (BP)
- Weigh all children under 12 yrs of age for medication calculations

General

- Apparent state of health
- Appearance of comfort or distress
- Color
- Nutritional status
- Hydration
- Match between appearance and stated age

Inspection

- Abdominal size, shape, contour, symmetry, scars, dilatation of veins
- Any distension or asymmetry (in infancy, abdomen is typically protuberant; in early childhood the abdomen is still protuberant, but flattens when the child is lying down)
- Movement of abdominal wall with respiration
- Visible masses, hernias, pulsations, peristalsis
- Umbilical hernia of up to 2.5 cm may be present up to one year
- Diastasis recti may cause midline bulge (separation of rectus muscles) and usually disappears by early childhood
- Guarding and positioning for comfort (child's behavior can also give very good clues as to the severity of any abdominal pain)
- Ability to mobilize and gait

Auscultation

- Auscultation should be performed **BEFORE** percussion and palpation so as not to alter bowel sounds
- Note presence, character and frequency of bowel sounds
- Presence of bruits (renal, iliac or abdominal aortic)

Percussion

- General percussion in all four quadrants for normal tympany
- Delineate outline of liver; upper border is in the mid-clavicular line, between the fourth and sixth intercostal spaces; upper limit of liver span ranges from 8 cm at 5 years of age to 13 cm at puberty
- Determine spleen size
- Costo-vertebral angle (CVA) percussion for tenderness

Palpation

- Ideally, palpation is performed with the child lying supine, with hands by the sides and relaxed

- For some children, having them in their parents lap may be an acceptable alternate
- In reality, it must sometimes be done on the run
- Be sure your hands are warm
- The child's abdomen must be completely exposed
- Examine all four quadrants in succession
- If there is pain, start with the painless areas, and palpate the painful area last

Light Palpation

- Assess tenderness, guarding, superficial masses
- Observe for guarding and abdominal rigidity
- Watch the child's facial expression

Deep Palpation

- Assess for abdominal guarding, tenderness or rigid abdomen
- Feel for organs:
 - Liver – assess size, tenderness, smooth or irregular border, firmness or hardness
 - Spleen – assess for enlargement, tenderness, consistency
 - Kidney – assess for tenderness, enlargement
 - Bladder – assess for distension, tenderness
- Masses: location, size, shape, mobility, tenderness, movement with respiration, pulsation, hernias (midline, incisional, groin)
- Assess for rebound tenderness (pain that occurs upon suddenly releasing the hand after deep palpation), which indicates peritoneal irritation
- Assess for referred tenderness (pain that is felt in an area distant to the area being palpated), which can be a clue to the location of the underlying disease
- Inguinal lymph nodes: enlargement, tenderness
- Femoral pulses

Genitourinary System – Male

Inspection

- Penis, scrotum and pubic area: inflammation, discharge, lesions, swelling, asymmetry, changes in hair distribution, nits, warts, position of urethral opening
- Rectum: lesions, discharge, swelling, haemorrhoids
- Inguinal and femoral areas (for hernia)

Palpation

- Penis: tenderness, induration, nodules, lesions, foreskin (retractable by 3 yrs)
- Testes: size, position (undescended), tenderness, masses, swelling, warmth, hydrocele
 - Testes are usually descended by one year
- Superficial inguinal ring (for hernia)
- Cremasteric reflex

Genitourinary System – Female

- Child should be in supine frog-leg position for examination
- Spread labia by applying gentle traction toward the examiner and slightly laterally to visualize introitus

Note: Do not perform an internal vaginal examination in a child less than 14 years, prepubescent child or an adolescent who is not sexually active

Inspection

External genitalia: labia majora and labia minora: lesions, ulcerations, masses, induration, and areas of different color, hair distribution

Perineum: lesions, ulcerations, masses, induration, scars

Clitoris: size, lesions, ulcerations

Urethra: discharge, lesions, ulcerations, irritation

Bleeding (may indicate vaginitis or sexual abuse in a prepubescent girl)

Enlargement of vaginal orifice (may indicate sexual abuse)

If 14 years or older and sexually active, consider a vaginal and internal exam:

- Vagina: speculum exam – inflammation, atrophy, discharge, lesions, ulcerations, excoriation
- Cervix: speculum exam – position, colour, shape, size, consistency discharge, erosions, ulcerations
- Os: multipara or nullipara

Palpation

- Skene’s and Bartholin’s glands: masses, discharge, tenderness
- Cervix: cervical tenderness, bleeding after contact, consistency of cervical tissue
- Uterus: position, size, contour, consistency of uterine tissue, mobility on movement
- Adnexa: ovaries for tenderness, masses, consistency, contour, mobility, pain on movement (Chandelier sign)

Rectal Examination

- Anal patency (check this feature only in newborns)
- Referred pain
- For masses, haemorrhoids, anal fissures, sphincter tone, etc.
- For occult blood

Associated Systems

Cardiovascular and Respiratory Examination

- A cardiovascular and respiratory exam should also be performed

Integumentary

- Assess for skin lesions, rashes, polyarthralgias of systemic gonorrhoea and hydration status

Eyes, ears, nose, throat

- Assess for pharyngitis and conjunctivitis (chlamydial infection, gonorrhoea)
- Lymph nodes (auricular, tonsillar, submandibular, supraclavicular, infraclavicular)

SYMPTOMS REQUIRING URGENT REFERRAL

The first step is to identify those presentations that require urgent referral

The following GI signs and symptoms require immediate referral to a physician or nurse practitioner:

- Severe dehydration
- Recurrent fever
- Uncontrolled vomiting

- Hematemesis
- Frank rectal bleeding or perianal fissures or ulcers
- Melena
- Hematochezia
- Immunocompromised clients (HIV, diabetes, client taking steroids)
- Jaundice
- Ascites
- Distended abdomen
- Rigid painful abdomen (also consider PID, ectopic pregnancy)
- Abdominal bruit or pulsating masses
- Organomegaly
- Tachycardia and lung crackles along with abdominal pain (may be referred from the lungs in pneumonia)
- Localized abdominal pain
- Altered peripheral pulse
- Unequal BP left to right (difference of approximately 30 mm Hg is indicator of aortic aneurysm)
- Joint edema, erythema, warmth

The following GU signs and symptoms require immediate referral to a physician or nurse practitioner:

- Bleeding from the urethra, male or female
- Urinary retention
- Urethral discharge
- Severe GU pain (consider PID or ectopic pregnancy)
- Scrotal swelling
- Erectile dysfunction (priapism)
- Systemic symptoms (sepsis)
- Incontinence (new onset)
- Recent urologic/renal surgery
- Treatment failure after 3 days
- Known anatomical abnormality
- **All children suspected of sexual assault must be referred to a physician or nurse practitioner**

DIAGNOSTIC TESTS

- The certified practice nurse may consider the following diagnostic tests to support decision making:
- Stool for occult blood or fecal immunochemical test (FIT)
- Stool for Ova and Parasites (O&P), Culture and Sensitivity (C&S)
- Hemoglobin
- Pregnancy test (urine)
- Electrocardiogram (ECG)
- Urinalysis – dipstick, R&M, C&S
- C&S – urethral or vaginal discharge
- Random blood glucose
- STI testing as per the [STI Assessment DST](#)
- Pap smear

REFERENCES

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

AMN Healthcare Education Services. (2014). [Focused gastrointestinal assessment](#). AMN Healthcare.

Ball, J. W., Dains, J. E., Flynn, J. A., Solomon, B. S., & Stewart, R. W. (Eds.). (2015). *Seidel's guide to physical examination* (8th ed.). St. Louis, MO: Elsevier.

BC Cancer Agency. (2012). [What is the Fecal Immunochemical Test \(FIT\)?](#)

Chen, Y. A., & Tran, C. (Eds.). (2011). *The Toronto notes 2011: Comprehensive medical reference and review for the Medical Council of Canada Qualifying Exam Part 1 and the United States Medical Licensing Exam Step 2* (27th ed.). Toronto, ON: Toronto Notes for Medical Students.

Estes, M. E. Z. (2014). *Health assessment and physical examination* (5th ed.). Clifton Park, NY: Cengage Learning.

Jarvis, C. (2014). *Physical examination and health assessment* (2nd Canadian ed.). Toronto, ON: Elsevier Canada.

Porter, R. S., & Kaplan, J. L. (Eds.). (2011). *The Merck Manual of Diagnosis and Therapy* (19th ed.). Whitehouse Station, NJ: Merck & Co., Inc.

Sawyer, S. S. (2012). *Pediatric physical examination and health assessment*. Sudbury, MA: Jones & Bartlett Learning.

Stephen, T. C., Skillen, D. L., Day, R. A., & Bickley L. S. (2010). *Canadian Bates' guide to health assessment for nurses*. Philadelphia, PA: Lippincott, Williams & Wilkins.

APPENDIX 1

Assessment of Severity of Dehydration in Children

Finding	Mild (3-5 percent)	Moderate (6-9 percent)	Severe (≥10 percent)
Pulse	Full, normal rate	Rapid	Rapid and weak
Systolic pressure	Normal	Normal to low	Shock
Respirations	Normal	Deep, rate may be increased	Deep, tachypnea
Oral mucosa	Tacky or slightly dry	Dry	Parched
Anterior fontanelle	Normal	Sunken	Markedly sunken
Eyes	Normal	Sunken	Markedly sunken
Skin turgor	Normal	Reduced	Tenting
Skin	Normal	Cool	Cool, mottled, acrocyanosis
Urine output	Normal or mildly reduced	Markedly reduced	Anuria
Systemic signs	Increased thirst	Listlessness, irritability	Grunting, lethargy, coma
Capillary refill	Normal less than 3 seconds	Normal to ^	^ greater than 3 seconds

Source: Adapted from Toronto Notes 2011