

BCCDC Certified Practice Decision Support Tool: Uncomplicated Lower Urinary Tract Infection (UTI)

The BCCDC decision support tools (DST) aim to provide more equitable, inclusive, and affirming care for all people, particularly for sexually diverse, transgender, Two-Spirit and non-binary people. While anatomy and site-specific testing language are used throughout this document, nurses should always strive to foster safer conversations and gender-affirming care by using an individual's chosen terminology when providing STI assessment and management.

Scope

Registered Nurses with **Reproductive Health – Sexually Transmitted Infections** Certified Practice designation (RN[C]) are authorized to manage, diagnose, and treat individuals with uncomplicated lower UTI in sexually active people with vulvar/vaginal anatomy¹.

Etiology

Bacterial infection of the bladder, also known as cystitis, is caused by bacteria multiplying in urine². A lower urinary tract infection (UTI) occurs in the urethra and the bladder, and is a common infection in young, sexually active people².

Uncomplicated lower UTI is an acute infection of the bladder in an otherwise healthy person³.

Epidemiology

Uncomplicated lower UTIs are very common in young sexually active individuals with vaginal/vulvar anatomy¹.

Risk Factors ^{2,6}

- Anatomical (e.g., shorter urethra)
- Foreign body (e.g., catheterization)
- Previous UTI
- Sexual activity, especially recent new sexual partner
- Genito-urinary tract anomalies – congenital, urethral stricture, neurogenic bladder, tumor
- Diaphragm or spermicide use
- Urinary instrumentation (e.g., catheterization) – refer to physician or NP
- Diabetes mellitus

- Renal or urethral calculi
- Immunocompromised (e.g., HIV infection that is not virally suppressed, uncontrolled diabetes mellitus)
- Pregnancy
- Trauma
- Strictures

Clinical Presentation ^{2,4,5}

- Urinary frequency or urgency
- Vaginal/vulvar irritation
- Dysuria
- Suprapubic pain or discomfort
- Hematuria
- Mild dehydration

In the absence of vaginal symptoms (e.g., pruritus or discharge), the above reported symptoms are the most predictive indicator of lower UTI.

Physical Assessment ^{7,8,11}

- Suprapubic tenderness: may be mild to moderate
- Flank pain: **if present consult or refer – suggests upper UTI**
- Hydration status

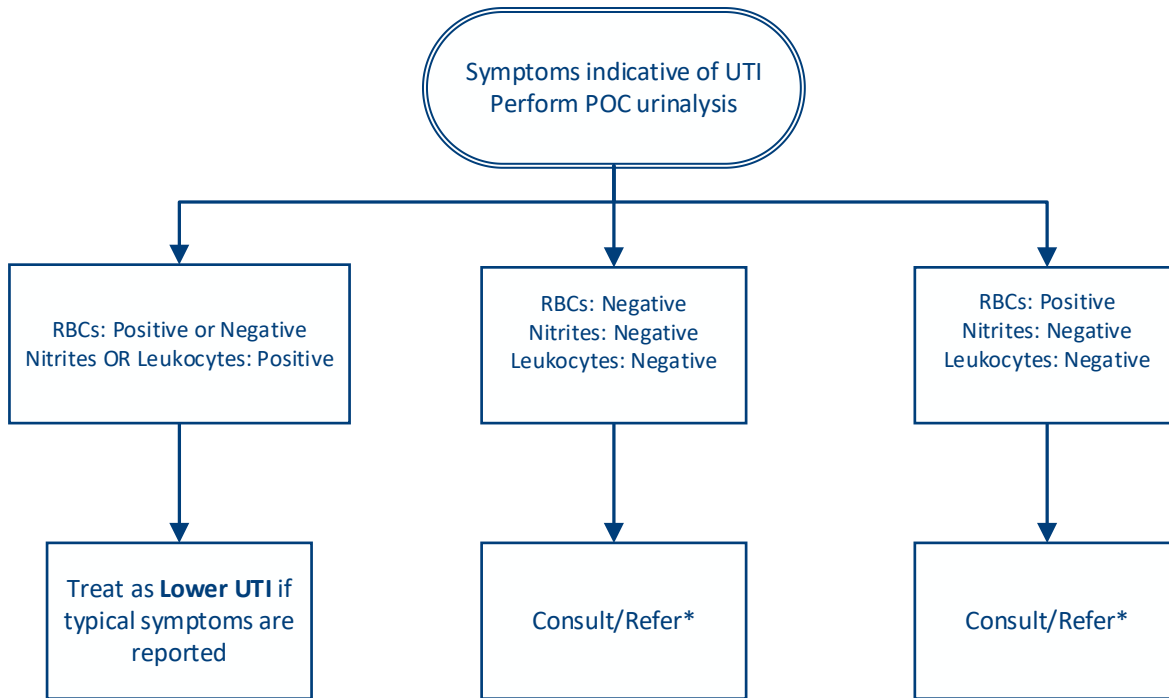
Diagnostic and Screening Tests

Reported symptoms that align with those outlined in the *Clinical Presentation* section above are the most predictive indicator of lower UTI, particularly in the absence of vaginal symptoms (e.g., pruritus or discharge). The following tests are available to inform a diagnosis^{2,6}:

- Point of Care (POC) Urinalysis† test for:
 - Nitrites, leukocytes (most predictive of lower UTI)
 - Red blood cells (RBCs)

†Point of care testing includes dipstick urine test strips and point-of-care urine analyzers.

Point of care is most suggestive for UTI when positive for either leukocytes or nitrites. However, negative results for both leukocytes and nitrites do not rule out infection when the clinical presentation is strongly suggestive of UTI.



- Urine culture & sensitivity (C&S) and complete urinalysis are generally not required when managing uncomplicated lower UTI
- Offer full screening, and consider pregnancy test if indicated

*A RN(C) can order a urine C&S and/or complete urinalysis to support clinical assessment and diagnosis. It must be accompanied by a consultation/referral to a physician or nurse practitioner. These scenarios may include:

- The second presentation of an uncomplicated UTI within a one-year time frame
- Evidence of an upper UTI is present (i.e., presentation with fever, chills, rigor, or flank pain)
- Atypical urinary symptoms are present such as severe urgency, new or worsening incontinence and/or absence of nitrates and leukocytes which may indicate another diagnosis other than UTI

Management

Diagnosis & Clinical Evaluation

May treat as lower urinary tract infection if:

- Frequency, urgency, or dysuria are present¹, AND
- Urine dipstick test is positive for leukocytes and/or nitrites⁶

Consultation and/or Referral

Consult with/refer to a physician (MD) or nurse practitioner (NP) in the following scenarios:

- Pregnant or breast/chest feeding individuals for treatment
- Under the age of 14 years
- Symptoms of lower UTI with negative results for nitrites and leukocytes
- Symptoms suggestive of an upper urinary tract infection, including some or all of the following:
 - Flank pain, severe back or abdominal pain
 - Chills, fever > 38°C, rigor
 - Nausea or vomiting
- Recurrent lower UTI; the second episode of lower UTI within one month or more than three episodes in one year
- Recent urinary tract instrumentation or the presence of indwelling catheter, stents, or nephrostomy tubes
- History of urologic or renal anomaly, impairment, surgery, transplant, or kidney stones
- Chronic health concerns: uncontrolled diabetes, neurogenic bladder, renal disease, long-term catheterization, spinal cord injury, immunocompromised
- Symptoms of lower UTI for seven days or longer
- Hospital Acquired Infection

Treatment

Treatment	Notes
<p>First Choice</p> <p>Nitrofurantoin (monohydrate/macrocrystal formulation - equivalent to MacroBID®) 100 mg orally</p>	<p>General^{2,3,9,10}:</p> <p>1. Nitrofurantoin demonstrates less resistance to E. coli and E. Faecalis than trimethoprim/sulfamethoxazole and is recommended as first choice for treatment of lower UTI.</p>

Treatment	Notes
twice a day for 5 days OR Nitrofurantoin (macrocrystal formulation – equivalent to Macrochantin) 50-100 mg orally four times a day for 5 days OR Fosfomycin 3 g orally in a single dose	2. Fosfomycin should be reserved for when adherence to a 5-day treatment course is a barrier. Note it may not be tolerated as well as other agents due to gastrointestinal disturbance. 3. See BCCDC STI Medication Handouts for further medication reconciliation and information. Allergy and Administration^{2,3,9,10}: 4. DO NOT USE nitrofurantoin in either formulation if individual is elderly, there is a history of renal impairment, or allergy to nitrofurantoin or dantrolene. 5. DO NOT USE trimethoprim or sulfamethoxazole if there is a history of allergy to sulfa drugs. 6. Consult physician or NP if unable to use first or second choice treatment recommendations.
Alternate Trimethoprim 160mg/sulfamethoxazole 800mg tab PO BID for 3 days	

Monitoring and Follow-up

If fever develops, or symptoms do not begin to resolve in the 48 – 72 hours following the onset of treatment, advise to return for re-assessment. Consult/refer to physician or nurse practitioner (NP).

Partner Notification

- **Reportable:** No
- **Trace-back period:** N/A
- **Recommended partner follow-up:** not required unless they are experiencing symptoms

Potential Complications ^{2,6}

- Ascending infection: pyelonephritis
- Chronic UTI
- Interstitial cystitis

Additional Education ^{2, 6}

- Review appropriate use of medications (dosage, side effects, and need for re-treatment if dosage not completed, or symptoms do not resolve)
- Seek care if fever develops or symptoms do not improve in 48 – 72 hours following onset of treatment
- Potential causes of lower UTI include having a new sexual partner and/or recent intercourse, and the use of spermicides
- Measures that may help to reduce uropathogens or irritants from entering the urethra include:
 - Routine cleaning with warm water
 - Using mild and non-irritant bath products
 - Voiding before and after intercourse
 - Changing barrier methods (e.g., gloves, condoms, dental dams (or cleaning hands/toys/genitals between anal and vaginal play
 - Cleaning sex toys between use and using condoms if sharing sex toys
 - Maintaining fluid intake at 8-10 glasses per day
 - Avoiding douching and commercial ‘vaginal/vulvar cleaning products’
 - Wiping from front-to-back after voiding and/or bowel movement
- [Sexually Transmitted & Blood-Borne Infections: Standard Education](#)

References

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