

## DST-1012 Uncomplicated Lower UTI

### DEFINITION

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

Uncomplicated lower UTI is an acute infection of the bladder in an otherwise healthy person. RN(C)s<sup>1</sup> are limited to the treatment of uncomplicated lower UTI in sexually active people with vaginas.

See *Consultation and/or Referral* section for specific information regarding consultation with and referral to a physician or nurse practitioner (NP).

### POTENTIAL CAUSES

Bacterial:

- *Escherichia coli* (*E. coli*)
- *Enterococcus Faecalis*
- *Staphylococcus saprophyticus*
- *Staphylococcus aureus*
- other enterobacteriaceae (e.g., *Proteus mirabilis*, *Klebsiella pneumoniae*)

### PREDISPOSING RISK FACTORS

- 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)
- pregnancy
- trauma
- strictures

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<sup>1</sup> Note: RN(C) is an [authorized title](#) recommended by BCCNP that refers to BCCNP-certified RNs, and is used throughout this Decision Support Tool (DST).

## TYPICAL FINDINGS

### Sexual Health History

- urinary frequency or urgency
- vaginal irritation
- dysuria
- suprapubic pain or discomfort
- hematuria
- mild dehydration

### Physical Assessment

- suprapubic tenderness – may be mild to moderate
- flank pain – if present consult or refer – suggests upper UTI
- fever, rigor, chills – if present consult or refer – suggests upper UTI
- hydration status

## DIAGNOSTIC TESTS

- urinalysis:
  - dipstick test for:
    - nitrites, leukocytes (most predictive of lower UTI)
    - blood, protein
  - consider microscopic urinalysis: WBC, RBC, bacteria

**Note:** While positive dipstick test for nitrites and leukocytes are the most predictive of lower UTI; positive findings for blood and protein, in the absence of positive results for nitrites and leukocytes, may also indicate lower UTI. Consult with a physician or NP for clients with symptoms of lower UTI with negative results for nitrites and leukocytes.

- urine culture & sensitivity (C&S) is generally not a required test when managing uncomplicated lower UTI – consider a urine C&S if:
  - this is the second presentation of a UTI within a one-year time-frame
  - evidence of an upper UTI; i.e., the client presents with fever, chills, rigor, or flank pain (refer or consult)
  - dipstick test is negative and symptoms are indicative of a likely UTI
- offer full STI screening
- consider pregnancy test if indicated

## CLINICAL EVALUATION/CLINICAL JUDGMENT

May treat as lower urinary tract infection if:

- frequency, urgency or dysuria are present

### **AND**

- urine dipstick test is positive for leukocytes and/or nitrites

## MANAGEMENT AND INTERVENTIONS

### Goals of Treatment

- alleviate symptoms
- prevent complications and ascending infection
- treat infection

## TREATMENT OF CHOICE

Treatment	Notes
<b>First Choice</b>	<p><b>General:</b></p> <ol style="list-style-type: none"> <li>1. Nitrofurantoin demonstrates less resistance to E. coli and E. Faecalis than trimethoprim/sulphamethoxazole, and is recommended as first choice for treatment of Lower UTI.</li> <li>2. See BCCDC STI Medication Handouts for further medication reconciliation and client information.</li> </ol> <p><b>Allergy and Administration:</b></p> <ol style="list-style-type: none"> <li>3. DO NOT USE nitrofurantoin if there is a history of renal impairment or allergy to nitrofurantoin or dantrolene.</li> <li>4. DO NOT USE trimethoprim or sulphamethoxazole if there is a history of allergy to sulpha drugs.</li> <li>5. Consult physician or NP if the client is unable to use first or second choice treatment recommendations.</li> <li>6. If serious allergic reaction develops including difficulty breathing and/or severe itchiness, have the client inform clinic staff immediately. If symptoms develop after leaving the clinic, advise the client to seek immediate emergency care.</li> </ol>
nitrofurantoin 100 mg PO BID for 5 days	
<b>Second Choice</b>	
trimethoprim 160 mg/sulphamethoxazole 800 mg tab PO BID for 3 days	

## PREGNANT OR BREAST-/CHEST-FEEDING CLIENTS

Refer all pregnant or breast-/chest-feeding clients to a physician or NP for treatment.

## PARTNER COUNSELLING AND REFERRAL

Partner follow-up is not required.

## MONITORING AND FOLLOW-UP

If symptoms do not begin to resolve in 48-72 hours or if symptoms persist despite treatment, the client should return to be re-assessed by a physician or NP.

## POTENTIAL COMPLICATIONS

- ascending infection - pyelonephritis
- chronic UTI
- interstitial cystitis

## CLIENT EDUCATION

Counsel client regarding:

- the appropriate use of medications (dosage, side effects, and need for re-treatment if dosage not completed, or symptoms do not resolve).
- returning to the clinic if fever develops or symptoms do not improve in 48-72 hours.
- the potential causes of lower UTI; having a new sexual partner and/or recent intercourse, and the use of spermicides.
- behavioral measures that may help to reduce uropathogens or irritants from entering the urethra including:
  - routine cleaning with warm water
  - using mild and non-irritant bath products, especially for bubble baths
  - voiding before and after intercourse
  - condom use during 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 cleaning products'
  - wiping from front-to-back after voiding

## CONSULTATION AND/OR REFERRAL

Consult with or refer to a physician or NP in the following situations:

- who are pregnant or breast-/chest-feeding
- under the age of 14 years
- for clients with symptoms of lower UTI with negative results for nitrites and leukocytes
- who have symptoms suggestive of an upper urinary tract infection, including some or all of the following:
  - flank pain, severe back or abdominal pain
  - chills, fever  $>38^{\circ}\text{C}$ , rigor
  - nausea or vomiting
- with recurrent lower UTI; the second episode of lower UTI within one month or more than 3 episodes in one year
- recent urinary tract instrumentation or the presence of indwelling catheter, stents or nephrostomy tubes
- with a history of urologic or renal anomaly, impairment, surgery, transplant, or kidney stones
- with chronic health concerns – uncontrolled diabetes, neurogenic bladder, renal disease, long-term catheterization, spinal cord injury, immunocompromised
- who have had symptoms of lower UTI for 7 days or longer
- with hospital-acquired infection

## DOCUMENTATION

- uncomplicated lower UTI is not reportable
- as per agency policy

## 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.

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