

ABCs for Diagnosing Urinary Tract Infection in Continuing Care

Resident Name: _____ Date/Time: _____
Nurse: _____ MD/NP: _____

Diagnosis of Urinary Tract Infection(UTI) in Continuing Care residents requires clinical signs and symptoms of UTI and a positive culture.

Assessment: Criteria indicating Clinical Signs and Symptoms of UTI (What to look for)

Resident without indwelling catheter

One of the following:

- Acute dysuria (*pain on urination*)
OR acute pain, swelling or tenderness of testes, epididymis or prostate
- Fever¹ or Leukocytosis² plus at least 1 of the symptoms listed below
- At least 2 or more of the symptoms listed below (new or worsening increase)
 - Urgency (*urgent need to urinate*)
 - Frequency (*frequent need to urinate*)
 - Urinary incontinence
 - Suprapubic pain (*above pubic bone*)
 - Gross hematuria (*visible blood in urine*)
 - Costovertebral angle (*central low back*) pain or tenderness

Mental status changes alone are not specific enough to identify symptomatic urinary tract infection. See reverse side for other causes

Resident with indwelling catheter

At least 1 of the symptom groups below:

- Fever¹,
OR shaking chills (*rigors*)
OR new onset hypotension with no alternative site of infection
- Leukocytosis² with no alternative diagnosis and either – an acute change in *mental status*³
OR – an *acute functional decline*⁴
- New onset suprapubic pain (*above pubic bone*)
OR costovertebral angle (*central low back*) pain or tenderness
- Purulent discharge from catheter site
OR acute pain, swelling or tenderness of the testes, epididymis or prostate

Blood pressure _____ Pulse _____ Temperature _____ Respirations _____

UTI CRITERIA FOR SIGNS OR SYMPTOMS MET? Yes (go to Bacteria) No (See Care Plan option 1)

¹Fever = single oral > 37.8°; or repeated oral > 37.2° or rectal > 37.5°; or an increase in temp. > 1.1° over resident's baseline temperature

²Leukocytosis = Blood test showing neutrophilia > 14,000 leukocytes/mm³; or Left shift . 6% bands or ≥1,500 bands/mm³

³Acute change in mental status - All 4 criteria must be present: (1) Acute (new) onset; (2) Fluctuating course; (3) Inattention; (4) Either disorganized thinking or altered level of consciousness.

⁴Acute Functional decline - A 3 point increase in the MDS scoring of activities of daily living for the following tasks:

(1) Bed mobility; (2) Transfer; (3) Locomotion within LTC facility; (4) Dressing; (5) Toilet use; (6) Personal hygiene; (7) Eating

Bacteria: A Positive Urine for Culture & Sensitivity will confirm diagnosis and treatment plan

- Notify MD/NP with assessment information and request an order for urine culture and sensitivity (C&S).
- Collect urine by clean void or midstream if possible, or by in-and-out catheter or from a freshly applied condom catheter.
- For residents with an indwelling catheter ≥ 14 days, change catheter and send urine obtained from new catheter.

Urine Culture and Sensitivity Results:

Negative urine culture:

Positive clean catch/midstream or condom specimen: ≥10⁷ CFU/L with ≤ 2 organisms

in-and-out catheter specimen: 1 organism - any amount of growth; 2 organisms ≥ 10⁷ CFU/L

indwelling catheter specimen: ≥ 10⁷ CFU/L with ≤ 2 organisms (only if catheter is new or < 14 days since insertion)

Care Plan Options: **1. Criteria not met** **2. Criteria met**

1. Criteria not met for UTI symptoms →

- If there is a change in mental status, review possible causes from listing below:
- constipation
 - pain
 - dehydration
 - hypoxia
 - urinary retention
 - infections such as pneumonia
 - hypo or hyperglycemia
 - medication or dose change
 - environmental triggers

- Push fluids for 24 hours unless on fluid restriction then monitor fluid intake
- Monitor vital signs and symptoms for 72 hours; watch closely for a change or progression of symptoms
- Review for alternative diagnosis:
 - Respiratory - Shortness of breath, cough, chest pain, sputum (phlegm) production
 - Gastrointestinal - Nausea/vomiting, new abdominal pain, new onset diarrhea
 - Skin/soft tissue - New redness, warmth, swelling, purulent drainage (pus)
- Re-evaluate if criteria for symptomatic UTI develop

IF AT ANY POINT,
 symptoms progress or if resident appears clinically
 unstable (e.g., fever >38.9°, heart rate > 100,
 RR > 30, BP < 90 systolic, resident
 unable to eat or drink,
 review these changes with MD/NP

2. Criteria met for UTI symptoms →

- Prior to contacting MD/NP for treatment options prepare to review:
 - Advanced care directives limiting treatment (antibiotics?)
 - Recent antibiotics in last 3 months No Yes
 If Yes, specify _____
 - Medication allergies No Yes
 - Resident on warfarin No Yes
 - Creatinine clearance values _____
- Monitor signs and symptoms for evidence of improvement
- Monitor fluid intake and increase if indicated
- Confirm organism susceptibility to antibiotic once urine culture results known

Additional notes: _____

References
 College of Physicians and Surgeons of Saskatchewan Quality Assurance Program, "Procedures/Guideline for the Microbiology Laboratory" (2010)
 Guideline for the Prevention and Treatment of Urinary Tract Infections (UTIs) in Continuing Care Settings (2013)
 Scottish Antimicrobial Prescribing Group: Decision aid for diagnosis and management of suspected urinary tract infection (UTI) in older people (May 2013)
 Surveillance Definitions for Infection in Long-Term Care Facilities: Revisiting the McGeer Criteria (2012)