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
- OR Fever\(^1\) or Leukocytosis\(^2\) plus at least 1 of the symptoms listed below
- OR At least 2 or more of the symptoms listed below (new or worsening increase)
  - Urgency (urgent need to urinate)
  - Frequency (frequency 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:

- Fever\(^1\),
  - OR shaking chills (rigors)
  - OR new onset hypotension with no alternative site of infection
- Leukocytosis\(^2\) 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)

\(^1\)Fever = single oral > 37.8\(^\circ\); or repeated oral > 37.2\(^\circ\) or rectal > 37.5\(^\circ\); or an increase in temp. > 1.1\(^\circ\) over resident’s baseline temperature

\(^2\)Leukocytosis = Blood test showing neutrophilia > 14,000 leukocytes/mm\(^3\); or Left shift. 6% bands or ≥1,500 bands/mm\(^3\)

\(^3\)Acute 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.

\(^4\)Acute 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:

Positive □ clean catch/midstream or condom specimen: ≥10\(^7\) CFU/L with ≤ 2 organisms
  □ in-and-out catheter specimen: 1 organism - any amount of growth; 2 organisms ≥ 10\(^7\) CFU/L
  □ indwelling catheter specimen: ≥ 10\(^7\) CFU/L with ≤ 2 organisms (only if catheter is new or < 14 days since insertion)

Negative urine culture: □
Care Plan Options:  

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

- 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

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
    - If Yes, specify
  - Medication allergies
  - Resident on warfarin
  - 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)