Care of the Resident with a Suspected Urinary Tract Infection in Long-term Care

10.3.12G

Guidelines are recommended actions allowing for professional judgement

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Purpose:	Care for residents who may be at risk of developing a urinary tract infection (UTI) due to chronic illness, age related changes and environmental factors. Asymptomatic bacteriuria is highly prevalent and diagnosis of a UTI must be based on clinical findings. Clinical manifestations of UTI in this population may be non-specific, ambiguous and subject to interpretation.
Scope:	• RN, RPN, LPN • Physician, Nurse Practitioner • Long-term Care Island wide
Outcomes:	• Signs and symptoms of a suspected UTI are accurately assessed and communicated to the physician in a timely manner. • The resident is monitored by the nurse to ensure that treatment is effective. • The physician is notified in a timely manner when treatment is ineffective.

1.0 Guideline

Clinical assessment must occur **before** microscopic assessment and diagnosis can proceed.

Refer to Urinary Tract Infections Clinical Pathways.

CLINICAL ASSESSMENT with no catheter:

In the event of suspected Urinary Tract Infection (UTI):

- Acute Dysuria OR
- Temperature ≥ 38° C or 1.1° above baseline on two consecutive occasions (4-6 hours apart)

PLUS ONE (1) of the following:

- New or worsening urgency and/or frequency, incontinence
- New flank or suprapubic pain/tenderness
- Hematuria

CLINICAL ASSESSMENT with an indwelling urinary catheter:

In the event of a suspected Urinary Tract Infection (UTI):

Any one or more of the following:

- Temperature ≥ 38° C or 1.1° above baseline on two consecutive occasions (4- 6 hours apart)
- New flank or suprapubic pain or tenderness
- Rigors

MICROSCOPIC ASSESSMENT

- If sufficient clinical signs and symptoms are present indicating that the resident has a symptomatic UTI, notify the physician.
    - When notifying physician, it is helpful to have information about any previous UTI
- If physician orders both a urine specimen for R & M and a urine specimen for C & S, obtain a sterile specimen and send only one container but check both boxes (R & M and C &S) on the requisition.
- For residents who have an indwelling catheter that has been in place for longer than seven (7) days, change the catheter before obtaining the urine specimen (Elsevier-Mosby's Clinical Skills) and sending it to the Laboratory Services.

NOTE: Dipsticks should not be used in facilities to assess for a UTI due to the high prevalence of asymptomatic

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UTI. Dipsticks cannot differentiate between a symptomatic and an asymptomatic UTI.

INTERVENTIONS following diagnosis include:

- To treat the associated symptoms:
  - Offer sufficient fluids to ensure that the resident has access to a minimum 1200-1500 ml of fluids daily or calculate individual resident's need (25ml/kg/day)
  - Offer toilet regularly for residents with urgency and frequency
  - If pain is present, request an analgesic order for pain
  - If fever is present, request an order for Tylenol for fever
- Monitor during antibiotic use:
  - If symptoms are not improving within two (2) days, notify physician or nurse practitioner
- Follow Routine practices (e.g. hand washing)
- Asymptomatic UTI is not treated
- Educate resident/family about signs and symptoms of UTI and prevention strategies

Documentation

- *Complete the Daily Infection Prevention & Control Surveillance Tool for Long term Care Facilities https://intranet.viha.ca/departments/infection_prevention/Documents/forms_documents/ipc_ltc_surveillance_tool.pdf*
  - Complete the tool for symptomatic bacteriuria and not for asymptomatic bacteriuria. Submit as indicated at the bottom of the tool.
- Document signs and symptoms and interventions in the Resident's health record using focus word: Health Conditions. In Electronic Health Record, document in Interdisciplinary Plan of Care: LTC Bladder Function and in Interactive View (I &O): Adult System Assessment (genitourinary LTC)

2.0 Definitions

- **Asymptomatic bacteriuria:** The presence of bacteria in the urine without the signs or symptoms of infection.
- **Symptomatic bacteriuria:** The presence of bacteria in the urine accompanied by clinical signs and symptoms of infection.
- **Pyuria:** Refers to the presence of pus in the urine.
- **Routine Practices** (from Infection Prevention & Control: Reference Guide – Best Practice)
  - Routine practices play a key role in preventing the transmission of infectious disease and are to be used at all times with all patients/residents/clients.
  - Based on the assumption that all blood and certain body fluids (urine, feces, wound drainage, sputum) contain infectious organisms (bacteria, viruses or fungi), routine practices reduce exposure (both volume and frequency) of blood and body fluids to healthcare providers.
  - The key to implementing routine practices is to assess the risk of transmission of microorganisms before any interaction with patients/residents/clients.

3.0 References

- Bugs and Drugs. http://www.bugsanddrugs.org/Home/Index/bdpage11637B67B9754FBFBC475A559AE6EBF4

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- Alberta Health Services (2015). Diagnosis and Management of Urinary Tract Infection in Long Term Care Facilities, Clinical Practice Guideline
  http://www.topalbertadoctors.org/download/401/urinary_tract_infection_guideline.pdf

- VIHA Infection Prevention & Control Reference Guide – Best Practice (March 2014)

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Urinary Tract Infections Clinical Pathways

Resident Label

Typical Symptoms (1)
(No Indwelling Catheter)

Indications (check all that apply):
- ☐ Acute Dysuria

OR
- ☐ Temp >38C or 1.1 above baseline on 2 consecutive occasions

PLUS one or more of the following:
- ☐ New or increased urinary frequency, urgency, incontinence
- ☐ New flank or suprapubic pain or tenderness
- ☐ Hematuria

Date:_____Initial:_____

Typical Symptoms (1)
(Indwelling Catheter)

Indications (check all that apply):
- ☐ No other identifiable cause of infection

AND one more of the following:
- ☐ Temp >38C or 1.1 above baseline on 2 consecutive occasions
- ☐ New flank or suprapubic pain or tenderness
- ☐ Rigors

Date: _____Initial:_____

Medical status deteriorating rapidly

No → **Push fluids** for 24 hours unless on fluid restriction **(2)**
Date: ____Initial:_____

Communicate all the above information to the physician

Start prescribed treatment

Yes ← Typical symptoms continue

No → Consider alternate diagnosis

Orders obtained (3)
- ☐ Urine (C&S if indicated)

Specimen collected Date/Time____Initials _____

C &S results(4)

- ☐ **Not significant**
  Antibiotic stop if already initiate OR Antibiotic not initiated
- ☐ **Significant**
  Antibiotic therapy started Antibiotic:_____
  Dose_____ Duration_____
- ☐ **Contamination likely**

Date/Time_____Initials _____

Continue to monitor for 24 – 48 hours while on antibiotics.

Document clinical findings.

Review findings with health care team as needed
- ☐ Antibiotic is consistent with VIHA recommendations
- ☐ Organism is susceptible to the prescribed antibiotic

Infection Prevention & Control Program, Updated Sept 1, 2016

(1) PRACTICE POINT
- Diagnosis of UTI is based on clinical assessment not laboratory testing

Non-specific symptoms of a UTI may include:
- Worsening functional or mental status

(2) PRACTICE POINT
If foul smelling urine, PUSH FLUIDS FOR 24 HRS and then REASSESS:
- If typical symptoms develop, treat as for UTI
- If non-specific symptoms continue without development of typical symptoms, consider an alternate diagnosis
- If symptoms resolve, no further intervention is Required
- If status deteriorates, contact physician
- If unable to get oral intake to 1L /day notify charge RN

(3) PRACTICE POINT
- The role of urine C&S is to guide selection of antibiotic therapy not diagnose
- Urine should be collected BEFORE antibiotic therapy is initiated by either midstream or in & out catheter specimen
- If catheter has been in place ≥7 days, change catheter THEN collect specimen
- Urine specimens should be refrigerated until pick-up by lab

(4) PRACTICE POINT
- The presence of bacteria in the urine alone without signs of infection does not indicate a UTI
- Bacterial count $\geq 10^6$ cfu/ml is significant if signs and symptoms of a UTI present
- More than 3 organisms usually indicates contamination

NOTE: Repeat R&M (C&S) after antibiotic therapy is NOT necessary unless typical UTI signs and symptoms persists

Additional Information
Antibiotic therapy should not be initiated prior to receipt of C&S results unless medical status is deteriorating rapidly.

If necessary, selection of an antibiotic before C&S results should be based on local resistance patterns.
http://www.lifelabs.com/healthcare-providers/Pages/Antibiograms.aspx

Adapted from Alberta Health Services and do bugs need drugs

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