## UTI Program

**Guidance for the development of a policy and procedure for the management of urinary tract infections (UTIs) in non-catheterized residents**

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<td><strong>Purpose</strong></td>
<td>To provide guidance to long-term care home (LTCH) administrators, medical and nursing staff in the development of a policy and procedure to promote best practice for the assessment and management of UTIs in elderly residents without an indwelling catheter.</td>
<td>None</td>
<td>When there is consistent adherence to guidelines for the assessment and management of residents with UTIs, unnecessary antibiotic use can be minimized and outcomes for residents can improve.</td>
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<td><strong>Scope</strong></td>
<td>Applies to all health care workers who are involved in the collection of specimens and the identification, resident assessment, documentation and management of UTIs.</td>
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<td>Policy Statement/Guiding Principles</td>
<td>All staff will follow best practice guidelines for the assessment and management of UTIs.</td>
<td>There may be a need to review existing policies and procedures to identify practices that are misaligned with current recommendations (e.g., policies related to use of dipsticks or routine urine cultures [on admission and/or annual]). There may be a need to revisit procedures related to the communication of resident symptoms. This should be a collaborative process that focuses on documenting and communicating residents' symptoms before a urine culture is obtained.</td>
<td>There is no clinical benefit to identifying or treating bacteria in the urine in the elderly without the indicated signs and symptoms of a UTI.⁴⁵⁶ Overtreatment of asymptomatic bacteriuria (the presence of a significant count of bacteria in the urine without the signs or symptoms of a UTI) in LTCH residents is a serious concern. One-third of prescriptions for presumed UTIs in LTCH residents are for asymptomatic bacteriuria.³ Unnecessary use of antimicrobials can lead to adverse consequences, including the development of multi-drug resistance, drug-related adverse effects, harmful drug interactions and excessive cost.⁶ Antibiotic use is also associated with Clostridium difficile, an opportunistic bacterial infection that is a common cause of health care–associated (nosocomial) diarrhea in acute care and long-term care settings.⁵ The “Assessment Algorithm for Urinary Tract Infection in Medically Stable Non-catheterized Residents” can be used as a resource to align organizational policies and procedures with current best practice guidelines.</td>
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| Symptoms Indicative of a UTI | Health care workers should be familiar with the accepted definition of a UTI in non-catheterized residents. Residents should be assessed for UTI symptoms according to the accepted definition. | Obtain urine culture if the resident has acute dysuria, or two or more of the following criteria:  
- Fever (oral temperature greater than 37.9°C or 1.5°C above baseline on 2 consecutive occasions within 12 hours)  
- New flank pain or suprapubic pain or tenderness  
- New or increased urinary frequency/urgency  
- Gross hematuria  
**Note**: Acute onset of delirium may be used as one of the criteria for residents with *advanced dementia only* | Using accepted criteria decreases the inappropriate testing and treatment of UTIs. The “Assessment Algorithm for Urinary Tract Infection in Medically Stable Non-catheterized Residents” can be used as a resource to align organizational policies and procedures with current best practice guidelines. Recommendations listed here are supported by existing guidelines on the assessment and management of UTIs in LTCHs.¹⁻³,⁶⁻⁸ |
| Symptoms not Indicative of a UTI | In the absence of a minimum set of symptoms or signs of a UTI, urine should not be cultured and antimicrobials should not be prescribed¹⁻⁷. | Health care workers should be aware that the following are *not* criteria for a UTI:  
- Cloudy, milky or turbid urine  
- Malodorous urine  
- Change in urine colour  
- Falls  
**Note**: Behavioural changes without additional clinical symptoms of a UTI: worsening functional status or worsening mental status (e.g., new behavioural changes, increased | Using accepted criteria decreases the inappropriate testing and treatment of UTIs.  
Refer to “Causes of Delirium and Mental Status Changes”.  
With adequate hydration and in some cases increased mobility, symptoms thought to be due to a UTI often resolve.⁸  
Recommendations listed here are supported by existing guidelines on the assessment and management of UTIs.¹⁻³,⁶⁻⁸ |
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<td>confusion, acute delirium or agitation).</td>
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<td>If the resident has nonspecific symptoms alone (i.e., change in mental status) monitor and encourage increased fluid intake for the next 24 hours, unless resident has clinical contraindications. Assess for other causes of mental status changes.</td>
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**Laboratory Testing and Interpretation**

- Criteria for UTI should be met before sending a urine culture.
- When criteria are met, urine specimen should be sent for culture and susceptibility.
- Urine specimen should be collected only as a midstream specimen or via in/out catheter.
- Urine specimen should be collected before antibiotic treatment is started.
- A bacterial count greater than $10^8$ CFU/L with typical signs and symptoms is compatible with UTI.

- Dipsticks should not be used to diagnose a UTI.
- Do not repeat a urine culture after antibiotic therapy unless typical UTI signs and symptoms persist.
- Written procedures should consider the logistics and timing of specimens sent for analysis.
- Specimens should not be left at room temperature; this can lead to false positive results.
- Urine culture and susceptibility results should be checked and acted upon in a timely fashion. This includes selecting an antibiotic based on susceptibility results, changing antibiotics if necessary or stopping if the culture is negative.

A positive urine culture in the absence of symptoms does not indicate a UTI in the elderly. In LTCH residents, 15%–30% of men and 25%–50% of women normally have bacteria in their urine without symptoms and do not require antibiotic treatment.\(^1\)

Sending specimens only for symptomatic residents prevents unnecessary specimen collection and antibiotic prescribing.

Refer to “Collecting a Mid-stream Urine Specimen.”

Specimens need to be sent for culture and susceptibility to identify causative pathogen and select appropriate antibiotic therapy.

A positive urine dipstick for leukocyte esterase, blood or nitrite is **not** indicative of a UTI and is not helpful in UTI diagnosis.\(^1\)
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| Surveillance               | LTCHs are encouraged to monitor the number of urine specimens sent for culture and number of residents treated with antibiotics for a UTI. | There are currently no standardized guidelines for monitoring UTIs. The following are recommended:  
- The number of urine specimens sent for culture each month (may be obtained from the laboratory used by the LTCH)  
- The number of urine specimens sent for culture in residents not meeting UTI criteria  
- The number of residents treated each month for a UTI  
- The number of residents treated each month for a UTI not meeting UTI criteria  
- Surveillance data should be disseminated to the LTCH staff | Surveillance is the systematic, ongoing collection, collation and analysis of data with timely dissemination of information to those who require this information in order to take action.¹⁹  
Refer to “Urinary Tract Infection Program: Process Surveillance Form.”                                                                                                                                                                                                                      |
| Documentation              | The rationale for sending a urine culture should be documented in the resident’s record, including the resident’s symptoms that prompted the collection of a urine culture. Communication with prescribers (physicians and nurse practitioners) should be documented. | Include resident signs and symptoms (reason) for specimen collection on all laboratory requisitions.  
LTCHs are encouraged to develop a specific UTI documentation form or identify a specific area to document this information in the patient’s chart. | Documentation (paper or electronic) is also to be used to record the resident’s progress, communicate with other care providers and reflect the nursing care provided.¹⁰                                                                                                                                                         |
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<td>Staff must document the date, time and method of specimen collection in the resident’s record. Urine culture and susceptibility results must be placed in the resident record and the actions taken in response to the test results documented (i.e., no antibiotic required, antibiotic started or continued, changed or stopped). Antibiotics given to residents should be recorded in the medication administration record.</td>
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<td>Treatment</td>
<td>The physician or nurse practitioner should address antibiotic therapy based on the following:</td>
<td>Renal function in the elderly is often decreased; this needs to be considered when selecting the appropriate antibiotic and dose. A recent calculated creatinine clearance based on a serum creatinine measurement within the previous 3 months is required for the appropriate dosing of antibiotics, especially given that renal function is commonly decreased in the elderly.</td>
<td>The “Assessment Algorithm for Urinary Tract Infection in Medically Stable Non-catheterized Residents” can be used as a resource to align organizational policies and procedures with current best practice guidelines. Attention to the appropriate use of antibiotics (antimicrobial stewardship) improves resident outcomes while decreasing the risk of adverse effects and incidence of antimicrobial resistant organisms.</td>
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Guidance for the development of a policy and procedure for the management of UTIs

References


Additional Sources


Contact

This resource is part of Public Health Ontario’s UTI Program.

For more information please visit www.publichealthontario.ca/UTI or email ipac@oahpp.ca.