

Urinary Tract Infection (UTI) Program

Sample Policy and Procedure for Assessment and Management of UTIs in Non-Catheterized Residents

This resource can be used for development of policy and procedures related to assessment and management of UTIs.

This resource is part of Public Health Ontario's [UTI Program](#). For more information, please visit www.publichealthontario.ca/UTI or email UTI@oahpp.ca.

Policy

To promote best practice for the assessment and management of urinary tract infections (UTIs) in elderly residents without an indwelling urinary catheter, according to the evidence-based literature. Obtain urine cultures only when residents have the indicated clinical signs and symptoms of a UTI.

1. Obtain and store urine for culture properly.
2. Prescribe antibiotics only when specified criteria have been met, and reassess when urine culture and susceptibility results have been received.
3. Do not use dipsticks to diagnose a UTI.
4. Discontinue routine annual urine screening and screening at admission if residents do not have indicated clinical signs and symptoms of a UTI.

Scope

All staff will follow best practice guidelines for the assessment and management of UTIs. This applies to all health care workers who are involved in the assessment and documentation of residents' clinical status, collection of specimens, prescribing of antibiotics and management of UTIs.

Guiding Principle

In the absence of a minimum set of symptoms or signs of a UTI, urine should not be cultured and antimicrobials should not be prescribed. 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.

Procedure

1. Obtain urine cultures only when a resident has the indicated clinical signs and symptoms of a UTI. *[Insert facility policy on who can order and collect specimens.]* The clinical signs and symptoms are:

- Acute dysuria and/or
- Two or more of the following:
 - Fever (oral temperature greater than 37.9 C or 1.5C above baseline on 2 occasions within 12 hours)
 - New flank pain or suprapubic pain or tenderness
 - New or increased urinary frequency/urgency
 - Gross hematuria

Encourage and monitor increased fluid intake for the next 24 hours, unless the resident has clinical contraindications and monitor for clinical changes. Discuss with physician or nurse practitioner.

See Public Health Ontario's [Assessment Algorithm for Urinary Tract Infection in Medically Stable Non-catheterized Residents](#)

2. Assess residents for UTI only when the indicated clinical signs and symptoms of a UTI are present (see above). Routine cultures should not be done on admission or as part of annual screening.

3. Document the resident's symptoms and clinical status in their chart or record as per facility policy.

See Public Health Ontario's [Assessment Algorithm for Urinary Tract Infection in Medically Stable Non-catheterized Residents](#)

4. Do not use dipsticks to diagnose a UTI. The use of dipsticks as a screening tool for UTIs is **not** recommended.

See Public Health Ontario's [Evidence to Support Discontinuing the Use of Dipsticks to Diagnose a Urinary Tract Infection in Residents of Long-Term Care Homes](#) for a summary of the literature and recommendations related to the use of dipsticks.

5. Obtain urine cultures properly. Collect urine specimen only via midstream or in and out catheter. Collect before antibiotic treatment is started.

See Public Health Ontario's [Collecting a Mid-stream Urine Specimen](#).

6. Store urine cultures properly. Keep the urine sample refrigerated and submit it to the laboratory within 24 hours of collection.

See Public Health Ontario's [Collecting a Mid-stream Urine Specimen](#)

7. Wait for the results of the urine culture. Inform the most responsible physician/nurse practitioner about the results of the urine culture when available. A bacterial count greater than or equal to 10^8 CFU/L with typical signs and symptoms compatible with UTI is considered significant. The presence of more than two organisms is not significant and indicates probable contamination.

See Public Health Ontario's [How to Interpret a Urine Culture Report](#)

8. The most responsible physician or nurse practitioner should reassess antimicrobial treatment need(s) based on the culture report.

Sources

- Nicolle LE, Bradley S, Colgan R, Rice JC, Schaeffer A, Hooton TM; Infectious Diseases Society of America; American Society of Nephrology; American Geriatric Society. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. *Clin Infect Dis*. 2005;40:643–54. Available from: <https://academic.oup.com/cid/article/40/5/643/363229>
- Zalmanovici TA, Lador A, Sauerbrun-Cutler MT, Leibovici L. Antibiotics for asymptomatic bacteriuria. *Cochrane Database Syst Rev* 2015;4:CD009534.
- Loeb M, Brazil K, Lohfeld L, McGeer A, Simor A, Stevenson K, et al. Effect of a multifaceted intervention on number of antimicrobial prescriptions for suspected urinary tract infections in residents of nursing homes: cluster randomised controlled trial. *BMJ*. 2005;24;331(7518):669. Available from: <http://www.bmj.com/content/331/7518/669.long>
- Centers for Disease Control and Prevention. The core elements of antibiotic stewardship for nursing homes [Internet]. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2015 [cited 2016 Mar 21]. Available from: <http://www.cdc.gov/longtermcare/pdfs/core-elements-antibiotic-stewardship.pdf>
- Chopra T, Goldstein EJC. *Clostridium difficile* infection in long-term care facilities: a call to action for antimicrobial stewardship. *Clin Infect Dis*. 2015;60 Suppl 2:S72–6.
- Nicolle LE; SHEA Long-Term-Care-Committee. Urinary tract infections in long-term-care facilities. *Infect Control Hosp Epidemiol*. 2001;22(3):167–75.
- D’Agata E, Loeb MB, Mitchell SL. Challenges assessing nursing home residents with advanced dementia for suspected urinary tract infections. *J Am Geriatr Soc*. 2013;61(1):62–6. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3545416/>
- Nace DA, Drinka PJ, Crnich CJ. Clinical uncertainties in the approach to long term care residents with possible urinary tract infection. *J Am Med Dir Assoc*. 2014;15 (2):e133–9.
- Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. Best practices for surveillance of health care-associated infections in patient and resident populations. 3rd ed [Internet]. Toronto, ON: Queen’s Printer for Ontario; 2014 [cited 2016 Mar 21]. Available from: http://www.publichealthontario.ca/en/eRepository/Surveillance_3-3_ENGLISH_2011-10-28%20FINAL.pdf
- College of Nurses of Ontario. Practice standard documentation, revised 2008. [Internet]. Toronto, ON: College of Nurses of Ontario; 2009 [cited 2019 Oct 23]. Available from: http://www.cno.org/globalassets/docs/prac/41001_documentation.pdf

- European Confederation of Laboratory Medicine. European urinalysis guidelines. *Scand J Clin Lab Invest.* 2000;23:1:1-86.
- Al Majid F, Buba F. The predictive and discriminant values of urine nitrites in urinary tract infection. *Biomed Res.* 2010;21(3):297–9. Available from: <http://www.biomedres.info/biomedical-research/the-predictive-and-discriminant-values-of-urine-nitrites-in-urinary-tract-infection.html>
- Little P, Turner S, Rumsby K, Jones R, Warner G, Moore M, et al. Validating the prediction of lower urinary tract infection in primary care: sensitivity and specificity of urinary dipsticks and clinical scores in women. *Br J Gen Pract.* 2010;60(576):495–500. Available from: <http://bjgp.org/content/60/576/495.long>
- St John A, Boyd JC, Lowes AJ, Price CP. The use of urinary dipstick tests to exclude urinary tract infection. *Am J Clin Pathol.* 2006;126:428–36. Available from: <http://ajcp.oxfordjournals.org/content/ajcpath/126/3/428.full.pdf>
- Sundvall PD, Gunnarsson RK. Evaluation of dipstick analysis among elderly residents to detect bacteriuria: a cross-sectional study in 32 nursing homes. *BMC Geriatr.* 2009;9:32. Available from: <http://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-9-32>
- Genao L, Buhr GT. Urinary tract infections in older adults residing in long-term care facilities. *Ann Longterm Care* 2012;20(4):33–8. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3573848/>
- Juthani-Mehta M, Tinetti M, Perrelli E, Towle V, Quagliarello V. Role of dipstick testing in the evaluation of urinary tract infection in nursing home residents. *Infect Control Hosp Epidemiol.* 2007;28(7):889–91.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Urinary tract infection (UTI) program: coaching for beliefs and consequences. Toronto, ON: Queen's Printer for Ontario; 2019.

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication.

The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use.

This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

Publication History

Published: August 2016

1st Revision: November 2019

Public Health Ontario acknowledges the financial support of the Ontario Government.

