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Choosing Wisely Canada™

CSLTCM | Canadian Society for Long-Term Care Medicine

CANADIAN NURSES ASSOCIATION®

Are you using antibiotics wisely?

Up to **50%** of older adults in long-term care (LTC) have bacteria in their urine but do not have a urinary tract infection (UTI). Unnecessary antibiotic use in older adults with asymptomatic bacteriuria can be harmful and lead to serious complications.

Health professionals working in LTC are key partners in the battle against antimicrobial resistance—an emerging public health threat. The below practice change statements will help you optimize your antibiotic prescribing.

The following key practice changes have been identified and are intended to reduce unnecessary antibiotic use for asymptomatic bacteriuria in LTC. They are not a substitute for timely individual clinical assessment and management and do not apply to the acutely unwell resident with suspected sepsis.

	Process of Care	Practice Change Recommendations
1.	**New admission/periodic health examinations/new referrals in ltc**	Don't perform screening urinalysis/urine dipstick and/or urine culture and sensitivity for residents on admission, during periodic health examinations, or prior to new specialist referrals.
2.	**Use of urine dipstick or urinalysis**	Don't perform urine dipstick/urinalysis to diagnose a UTI.
3.	**Assessment of resident with change in health status (e.g. change in urine odour or colour, change in behaviour, fever, etc.)**	Don't assume a UTI is the cause of any change in health status, including behaviours, until alternate explanations are excluded, such as volume depletion, constipation, skin breakdown, medication side effects, and other sources of infection. Don't send a urine culture unless the change noted is accompanied by minimum criteria for a UTI (specific for residents with and without catheters). Do perform a clinical assessment to identify alternate causes for change in health status including examination of the perineal skin. Do complete a comprehensive delirium workup, if clinically indicated, which may include a urine culture (See Practice Change Recommendation #5). Do encourage increased fluid intake if urine is concentrated or malodorous. Do document and reassess.
4.	**Substitute Decision Maker/ family request to submit a urine culture or treat a UTI**	Don't collect a urine culture upon request without first seeking to understand and address resident/substitute decision maker/family concerns. Provide a differential diagnosis and a rationale for the investigations that will help identify the etiology of the symptoms.

Minimum criteria are found in the box on the next page. →

5.	**Management of resident with clinical criteria for a UTI**	Don't order a urine culture unless **minimum criteria** for a UTI are present.
6.	**Management of resident with positive urine culture**	Don't prescribe antibiotics unless **minimum criteria** for a UTI are met.
7.	**Selecting antibiotic and duration for a resident with clinical criteria for a UTI**	Don't treat a UTI for excessive durations. (See table below.)
8.	**Follow-up assessment of resident with clinical criteria for a UTI**	Don't forget to reassess the need for antimicrobial therapy within 3 days of starting antibiotics to check antibiotic sensitivity results and that the resident is improving. Antibiotic therapy should be stopped if result of the urine culture collected before antibiotics is negative.
9.	**Resident transferred to the Emergency Department**	Don't routinely screen residents from LTC homes with a urinalysis/urine dipstick unless **minimum criteria** for a UTI are present. Look for alternate explanations for change in clinical status. Refer to Practice Change Recommendation #3.

Duration of Therapy Depends on UTI Syndrome	
UTI Syndrome	**Duration of Therapy**
Uncomplicated cystitis	3–5 days depending on antibiotic chosen
Complicated cystitis (male resident, catheterized resident, urological abnormalities)	7 days
Acute pyelonephritis	7 days

MINIMUM CRITERIA FOR UTI (MODIFIED LOEB CRITERIA[1,2])

In a non-catheterized resident:

- Acute dysuria or 2 or more of the following:
  - fever [> 37.9°C (100°F) or a 1.5° C (2.4°F) increase above baseline on at least two occasions over the last 12 hours]
  - new or worsening urgency
  - frequency
  - suprapubic pain
  - gross hematuria
  - flank pain
  - urinary incontinence

In a catheterized resident:

- Any one of the following after alternate explanations have been excluded:
  - fever [> 37.9°C (100°F) or a 1.5° C (2.4°F) increase above baseline on at least two occasions over the last 12 hours]
  - flank pain
  - shaking chills
  - new onset delirium

[1] Note that these are clinical criteria validated for diagnosis for a UTI and differ from criteria that are used for surveillance.
[2] Note that confusion alone is not symptom of UTI in non-catheterized resident.

To learn more about the campaign or access tools and resources, please visit: **www.choosingwiselycanada.org/antibiotics-LTC**.