

## Bacteriuria

This guideline outlines the management of bacteriuria in the elderly and for long term care residents. This information was prepared by the Academic Detailing Services, Continuing Medical Education at Dalhousie University and the Palliative and Therapeutic Harmonization (PATH) Program.

Research concludes:

- Asymptomatic bacteriuria is common in long term care: men 15% – 30%; women 25% – 50%.
- Screening for asymptomatic bacteriuria is not recommended, even in the elderly.
- Asymptomatic bacteriuria **should not** be treated with antibiotics. Pyuria accompanying asymptomatic bacteriuria is **not** an indication for antimicrobial treatment.
  - Pyuria indicates inflammation in the genitourinary tract, but does not differentiate symptomatic from asymptomatic UTI.
  - Positive urine cultures are virtually always associated with pyuria (>90%) and neither is sufficient for a diagnosis or treatment of UTI.
- An individual with a chronic **indwelling catheter** will always have bacteriuria, but antibiotic treatment is only warranted if the person is symptomatic.
- Changes in the character of the urine such as odor, color, or turbidity are associated with bacteriuria, but are not a reliable predictor of UTI and are usually attributed to other diagnoses such as incontinence or dehydration.
- Acute symptoms may be difficult to recognize because of impaired communication, dementia, or comorbid illnesses.

## Recommendations

When should bacteriuria be treated? Recommendations from different sources vary somewhat. However, they all differentiate between patients with and without an indwelling catheter.

In a patient **with an indwelling catheter**, the presence of a least one of the following is an indication for treatment:

- New costovertebral angle tenderness

- Fever
- Unexplained delirium
- Rigors with or without identified cause

In a patient **without an indwelling catheter**, patients must have **acute** signs and symptoms:

- Dysuria alone OR
- Unexplained delirium OR
- Fever AND at least one of the following
  - New or worsening urgency, frequency, or urinary incontinence
  - Suprapubic pain
  - Costovertebral angle tenderness
  - Gross hematuria

To rule in or rule out UTI and to help select an antibiotic, a urine specimen for culture should **always** be obtained before initiating antibiotics.

Choice of antibiotic therapy is similar to that of uncomplicated UTI in women, but the duration of therapy is longer for the elderly and individuals in LTC. In the elderly, treatment duration is usually **7 days** (10 – 14 days in the presence of fever or more severe systemic symptoms).

- **Nitrofurantoin** is contraindicated in **renal impairment** ( $\text{CrCl} < 60 \text{ mL/min}$ ) and resistance is higher in LTC population than in other settings (21% vs 6 to 8%).
- Long term use has been associated with pulmonary fibrosis.

## References

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