

Asymptomatic Bacteriuria in Long-Term Care

What is asymptomatic bacteriuria?

- Asymptomatic bacteriuria (ASB) is the presence of bacteria in the urine without any signs or symptoms of infection.

Isn't urine supposed to be sterile?

- Even though bacteria are not normally present in the urinary tract, bacteria can live in the bladder without causing disease.

What causes asymptomatic bacteriuria?

ASB is very common and is considered a harmless condition among long-term care facility (LTCF) residents. Several factors contribute to ASB, including:

- Indwelling urinary catheter
- Increased age
- Increased number of medical conditions
- Increased number of medications
- Decreased ability to perform independent activities of daily living
- Decreased mental status
- Decreased bladder emptying
- Dehydration and poor fluid intake
- Residence in a long-term care facility

How should ASB be managed?

Caregivers

- Regular, careful hand hygiene
- Glove use by care providers before and after assistance with toileting, bathing and when there is potential for contact with blood or bodily fluids

Resident care:

- Frequent resident toileting opportunities
- Good peri-care (wiping front-to-back)
- Appropriate fluid intake, as determined by resident's healthcare provider
- Catheter use only when medically necessary

Can antibiotics help in ASB management?

Current recommendations do not support routine screening for or treatment of ASB in LTCF residents. Studies describing the effect of antibiotic treatment for ASB among LTCF residents have shown:

- No effect on:
 - Risk for disease or death
 - Symptoms of chronic incontinence
 - Future episodes of urinary tract infection (UTI)
- Negative effects on LTCF residents:
 - Increased drug side effects
 - Increased super bugs (bacteria resistant to antibiotics)
 - Increased cost of medication and healthcare

Screening and treatment of ASB is appropriate for LTCF residents under specific circumstances, as described by the *Infectious Diseases Society of America Guidelines for the Diagnosis and Treatment of Asymptomatic Bacteriuria in Adults* (<http://cid.oxfordjournals.org/content/40/5/643.full.pdf+html>)

Bacteriuria without clinical symptoms of a UTI should not be treated with antibiotics

Is asymptomatic bacteriuria the same as a UTI?

No. Even though bacteria in the urine is common to both UTI and ASB, what makes them different is that a UTI causes specific resident symptoms. Nursing plays an important role in helping providers decide whether a UTI is present by carefully assessing, documenting, and communicating residents' symptoms.

What signs and symptoms of UTI should be present in LTCF residents for initiation of antibiotics?

Resident WITHOUT indwelling catheter

Acute dysuria (pain with urination)

Note: Dysuria alone is an indication to start antibiotics without any other symptoms

OR

Fever: >37.9°C (100°F) or a 1.5°C (2.4°F) increase above baseline temperature

PLUS at least one of the following symptoms:

- New or worsening:
 - Urgency
 - Frequency
 - Suprapubic pain
 - Costovertebral angle tenderness
 - Urinary incontinence
 - Gross hematuria

Resident WITH indwelling catheter

Presence of at least one of the following symptoms:

- Fever: >37.9°C (100°F) or a 1.5°C (2.4°F) increase above baseline temperature
- New costovertebral angle (CVA) tenderness
- Rigors (shaking chills)
- New onset of delirium

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If a resident experiences falls, mental status changes, or other non-specific declines in status, does the resident have a UTI?

- Falls, mental status changes, and other changes require evaluation, but are not symptoms specific to UTI. Current guidelines do not link these symptoms to a UTI that needs antibiotic treatment.

Does foul-smelling urine mean that a resident has a UTI?

- A resident's urine can smell foul for several reasons, including dehydration, diet, medication, or when certain bacteria are present. Foul-smelling urine without clinical symptoms of a UTI does not require antibiotics.

If a resident has pyuria (WBCs / pus in the urine) does it mean he or she has a UTI?

- Pyuria is an immune response to bacteria present in urine. The presence of pyuria alone does not mean that the resident has a UTI.
- Pyuria without clinical symptoms should not be treated with antibiotics, according to current guidelines.

If a resident needs antibiotics, does it matter if urine is collected before or after antibiotics are started?

- Collect a urine specimen prior to giving antibiotics in order to ensure an accurate test result.
- Urinalysis (UA) or UC should be performed on residents with clinical signs or symptoms of a UTI.

References:

Loeb et al. Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term Care Facilities: Results of a Consensus Conference. *Inf Control Hosp Epi*. 2001

Material adapted from the Massachusetts Coalition for the Prevention of Medical Errors and the Minnesota Antibiotic Resistance Collaborative