

Treating Asymptomatic Bacteriuria: All harm, No Benefit

High Prevalence of Asymptomatic Bacteriuria

- The bladder is normally colonized in many elderly people
- A positive urinalysis or culture in the absence of symptoms reveals **colonization not infection**
- Treatment of asymptomatic bacteriuria is **not recommended**

Prevalence of asymptomatic bacteriuria in seniors over 70:

- in long term care **50%**
- in the community **19%**

It's Hard to Ignore A Positive Test

Habitual Testing + Prevalent Colonization = Unnecessary prescriptions & missing the real diagnosis

Unnecessary Use of Antibiotics Can Harm You

- Interactions between drugs
- Renal & other complications
- Drug allergies
- **C. difficile** infection
- Nausea and vomiting
- **Increased number of bacteria that are resistant to antibiotics**



Myth

Positive urine culture and abnormal urinalysis (positive nitrates or leukocytes, increased white blood cells or pyuria) always indicates a urinary tract infection and requires antibiotics.

Positive urine culture in resident with chronic indwelling catheter always indicates a urinary tract infection and requires antibiotics.

Elderly residents often have urinary tract infection with no symptoms except a change in mental status or delirium.

In an elderly population, urinary tract infections often present with nonspecific symptoms (e.g., falls, functional decline).

Cloudy or malodorous urine is always diagnostic of a urinary tract infection.

Fact

Positive urine culture and abnormal urinalysis in a resident without symptoms is consistent with asymptomatic bacteriuria – that is, colonization – not infection. Treatment with antibiotics is not indicated.

A chronic indwelling catheter is associated with bacteriuria 100% of the time. There is no need to treat unless the resident has symptoms of a UTI.

- A change in mental status or delirium is a non-specific symptom and may accompany a change in conditions such as dehydration, constipation, adverse drug effect, pneumonia, urinary retention, metabolic problems, head trauma, environmental changes or sensory deprivation.
- Mental status change requires an exploration of alternative causes and may not require antibiotics for UTI unless there are more specific signs or symptoms that point to that diagnosis.

Nonspecific symptoms can be seen in many conditions such as dehydration or adverse drug effect. Diagnosing and treating UTIs based on these nonlocalizing symptoms not only results in inappropriate antibiotic use, it also completely misses the real diagnosis.

These changes may be seen in asymptomatic bacteriuria. Other causes can include dehydration, certain medications and diet.

Using Unnecessary Antibiotics breeds resistance in your residents and in the community.

Infections Caused by Resistant Bacteria are more complicated to treat and may eventually lead to untreatable infections.

Do Not Test. Do Not Treat Asymptomatic Bacteriuria

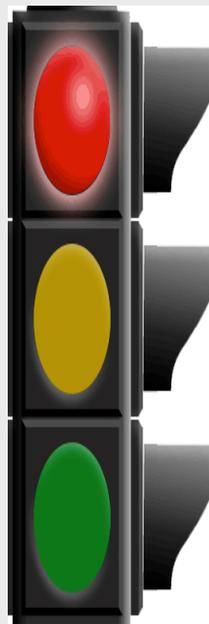
Criteria for Urine Testing

Resident without indwelling catheter

- ❑ One of the following:
 - Acute dysuria alone or pain, swelling or tenderness of testes, epididymis or prostate
 - Fever or leukocytosis plus at least one new or increased urinary symptom below
 - If no fever at least two new or increased urinary symptoms which include:
 - Urgency → Frequency
 - Suprapubic pain → Gross hematuria
 - Costovertebral angle pain or tenderness
 - New or increased incontinence

Resident with indwelling catheter

- ❑ At least one of the following symptoms below (new or increased)
 - Fever or rigors (shaking chills)
 - New onset hypotension with no other infection site
 - Leukocytosis with no other infection & either an acute change in mental status or functional decline
 - Suprapubic pain or costovertebral angle (CVA) pain or tenderness
 - Purulent discharge from catheter site
 - Pain swelling or tenderness of testes, epididymis or prostate



No symptoms of UTI

- Do not test urine
- Do not treat even if a "routine" urine test is positive but no symptoms are present.

Weakness, delirium or fever without a focus

- Individualize care
- Be mindful of the prevalence of asymptomatic bacteriuria
- Seek other causes

Specific UTI symptoms

- Test or treat as usual

Challenges	Strategies for practice changes
The resident's family wants a urine test and antibiotic treatment when there are no real symptoms and may only be asymptomatic bacteriuria.	<ul style="list-style-type: none"> • Educate the family about the prevalence of asymptomatic bacteriuria and tell them you do not suspect UTI on clinical grounds. • Emphasize the dangers of antibiotic overuse.
We've always ordered urine cultures for nonspecific problems in residents with dementia.	<ul style="list-style-type: none"> • There are many potential causes for nonspecific changes in the resident's status and thorough evaluation is needed. • Residents in continuing care settings have positive urine cultures, even when they are well.
It is okay to give an antibiotic even if it may not be needed. Better safe than sorry.	<ul style="list-style-type: none"> • Antibiotics can cause adverse drug reactions, <i>C. difficile</i> infection, and promote the emergence of multi-drug resistant organisms. They should not be administered unless clinically indicated.
It is hard to ignore a positive urine test, even when done for no clearly apparent reason.	<ul style="list-style-type: none"> • Treatment decisions should not be based on test results alone. • Evaluate the resident clinically and consider a period of observation.

Additional Resources:

Guidelines for the Prevention and Treatment of Urinary Tract Infections (UTIs) in Continuing Care Settings (2013)
 Surveillance Definitions of Infection in Long-Term Care Facilities: Revisiting the McGeer Criteria (2012)