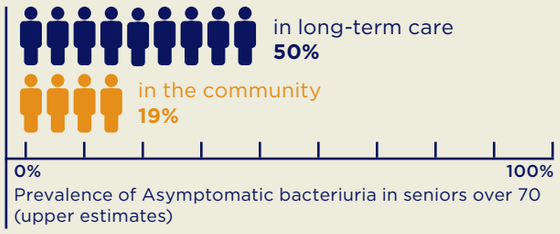
Mass. Infection Prevention Partnership
Prepared for Massachusetts long term care facilities

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, which is the presence of bacteria without infection**
- Treatment of asymptomatic bacteriuria is **not recommended**



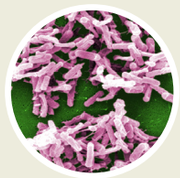
Prevalence of Asymptomatic bacteriuria in seniors over 70 (upper estimates)

IT'S HARD TO IGNORE A POSITIVE TEST

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

UNNECESSARY TREATMENT WITH ANTIBIOTICS HARMS PATIENTS

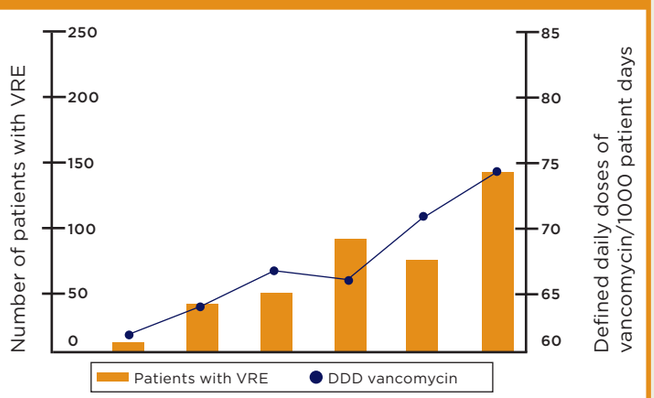
- Drug-drug interactions
- Renal & other complications
- Increase of multi-drug resistant bacteria
- *C. difficile* infection
- Nausea and vomiting
- Drug allergies



Myth	Fact
Cloudy or malodorous urine is always diagnostic of a urinary tract infection.	• These changes may be seen in asymptomatic bacteriuria. Other causes can include dehydration, certain medications and diet.
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 and abnormal urinalysis in a resident without symptoms is consistent with asymptomatic bacteriuria – that is, colonization – not infection. Treatment with antibiotics is not indicated.
Positive urine culture in resident with chronic indwelling catheter always indicates a urinary tract infection and requires antibiotics.	• 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.
Elderly residents often have a urinary tract infection with no symptoms except a change in mental status or delirium, or other nonspecific symptoms such as falls.	• Urinary tract infection is much less likely without specific symptoms. Non-specific symptoms, such as a change in mental status, delirium, fatigue, or a fall may be due to a variety of causes, including: *pain, depression, constipation, dehydration, poor sleep, or medication side effects*. • It is important to consider a range of possible causes to prevent missing the real diagnosis.
A follow-up urine culture is indicated to confirm successful treatment of UTI.	• Even when a UTI is successfully treated, a urine culture may still be positive due to asymptomatic bacteriuria.

Dangers of Unnecessary Antibiotics

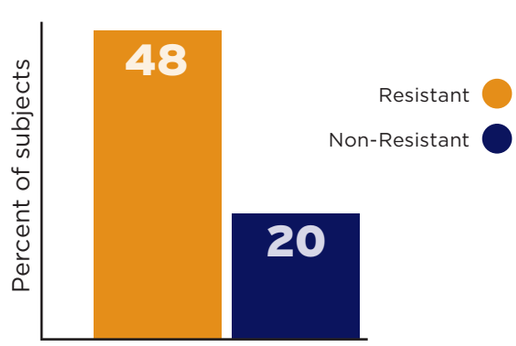
Using Antibiotics Breeds Resistance in Your Patients and the Community



(JID 1999; 179:163)

Infection with Resistant Bacteria Increases Risk of Death

Antibiotic-resistant vs. non-resistant *Klebsiella* bacteria



(ICHE 2008;29:1009-1106)

Additional copies available at **http://macoalition.org/evaluation-and-treatment-uti-in-elderly.shtml**

Consensus is Growing:

Don't Test*, Don't Treat** without specific signs and symptoms![1]

Criteria for Urine Testing

Resident without indwelling catheter

- ☐ **Acute dysuria alone OR**
- ☐ **Fever + at least one of the symptoms below (new or increased) OR**
- ☐ **If no fever, at least two of the symptoms below (new or increased)**
  - ☐ Gross hematuria
  - ☐ Urinary incontinence
  - ☐ Urgency
  - ☐ Suprapubic pain
  - ☐ Costovertebral angle tenderness
  - ☐ Frequency

Resident with indwelling catheter

- ☐ **At least one of the symptoms below (new or increased)**
  - ☐ Fever
  - ☐ Pelvic discomfort
  - ☐ Flank pain (back, side pain)
  - ☐ Malaise or lethargy no other cause
  - ☐ Costovertebral angle (CVA) tenderness
  - ☐ Rigors (shaking chills)
  - ☐ Delirium
  - ☐ Acute hematuria

No symptoms of UTI
- › Do not test urine
- › Do not treat if a urine test was done by someone else or for "routine"

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

* **The American Medical Directors Association recommends: "Don't obtain a urine culture unless there are clear signs and symptoms that localize to the urinary tract."**

** **The American Geriatric Society recommends: "Don't use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present."**

Challenges	Strategies for Practice Change
The resident's family wants a urine test and antibiotic treatment in the setting of asymptomatic bacteriuria.	• 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.	• There are many potential causes for nonspecific changes in status and thorough evaluation is needed. • Residents in long-term care frequently 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.	• Antibiotics can cause adverse drug reactions, *C. difficile* 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.	• Treatment decisions should not be made based on test results alone. • Evaluate the resident clinically and consider a period of observation for development of specific signs or symptoms of a UTI.

References: [1] CID 2010;50:625-663; CID 2009;48:149-171; ICHE 2001;22:120-124 CID 2005;40:643-54
http://www.choosingwisely.org/doctor-patient-lists/amda-dedicated-to-long-term-care-medicine/
http://www.choosingwisely.org/doctor-patient-lists/american-geriatrics-society/

Massachusetts Infection Prevention Partnership

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Additional copies available: macoalition.org/uti-elderly-tools