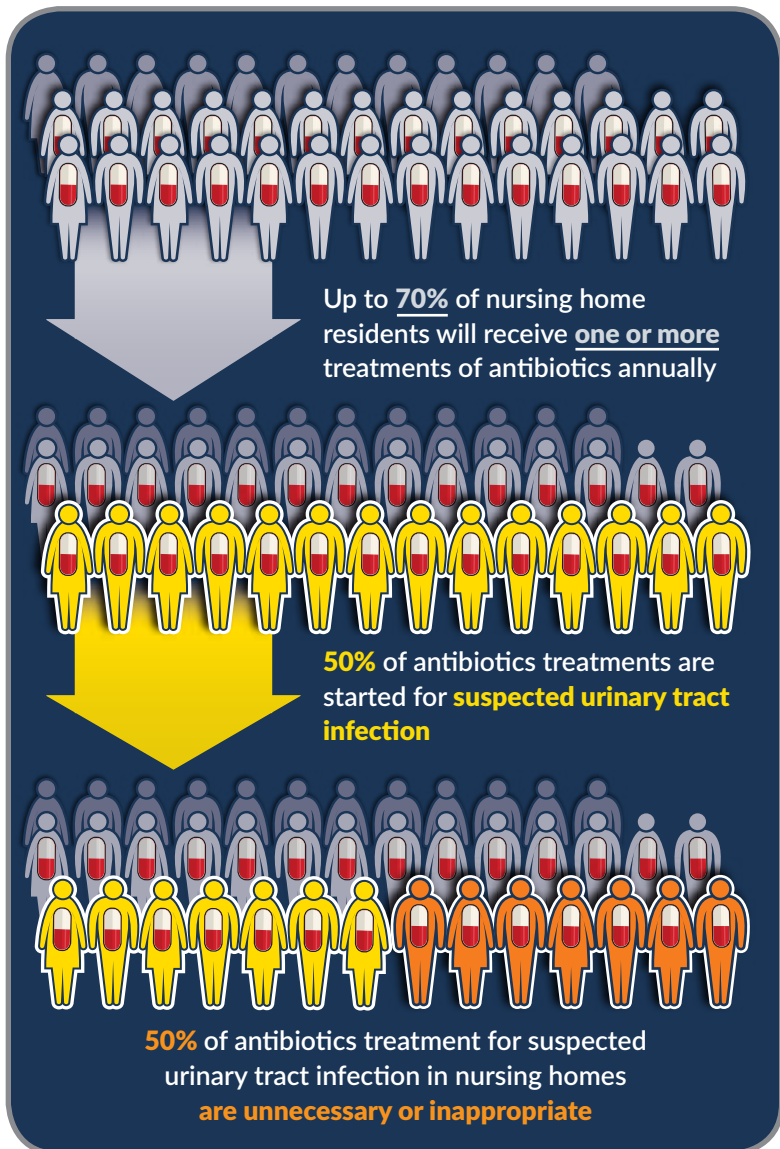


IMPROVING THE MANAGEMENT OF SUSPECTED URINARY TRACT INFECTIONS (UTI) IN NURSING HOMES

ANTIBIOTIC USE IN NURSING HOMES



POTENTIAL HARMS OF ANTIBIOTIC USE IN NURSING HOMES

INDIVIDUAL LEVEL

- 20% of adverse drug events are caused by antibiotics and are one of the most common reasons for transfer to the Emergency Department
- 12% of residents treated for Urinary Tract Infection develop *C. difficile* infection
- Antibiotics promote resident colonization with multi-drug resistant organisms (MDROs) and are associated with a higher risk of future infection by these pathogens

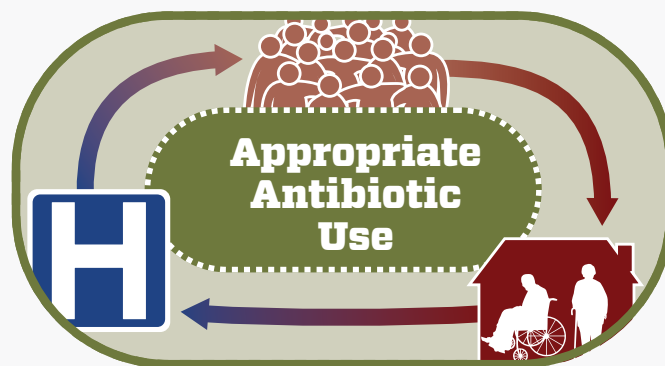


FACILITY LEVEL

- Residents in nursing homes with higher antibiotic use have a **24% increased risk** of antibiotic-related harms
- Antibiotic use accounted for **1/3 of all survey penalties** in WI nursing homes for inappropriate medication

COMMUNITY LEVEL

- 50% of residents transferred to hospitals are colonized with *C. difficile* or other antibiotic-resistant bacteria
- Inappropriate use of antibiotics in nursing homes promotes increased antibiotic resistance in communities



COMMON MYTHS AND FACTS ABOUT SUSPECTED UTI

MYTH

FACT

Cloudy or smelly urine should raise a concern for UTI.

These changes can also be seen with dehydration, some foods or medications.

Falls, behavior changes and other non-specific symptoms should raise a concern for UTI.

While UTI can be associated with non-specific symptoms, other more specific findings are almost always present (i.e., fever, lower abdominal pain). When residents present with isolated non-specific symptoms, the appropriate management is to actively monitor and delay treatment for UTI while investigating other causes.

An abnormal urinalysis and/or positive culture always means a UTI.

UTI is diagnosed on the basis of clinical symptoms. A positive urinalysis and/or urine culture in a resident without symptoms is consistent with asymptomatic bacteriuria which should not be treated.

A follow-up urine culture is indicated to confirm successful treatment of UTI.

Residents who have been treated for a UTI can still have positive cultures.

WHEN AND WHEN NOT TO TEST

NO SYMPTOMS OF UTI

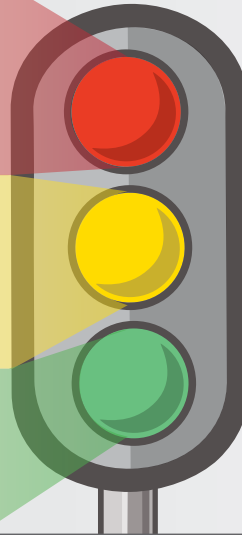
- Don't test or culture urine
- Don't treat with antibiotics if the resident doesn't have localizing signs/symptoms or warning signs
- Don't treat with antibiotics even if urine culture is positive

ISOLATED NON-LOCALIZING SIGNS/SYMPTOMS

- Initiate active monitoring
- Don't test or treat with antibiotics
- Consider testing and treatment with antibiotics if resident develops localizing urinary signs and symptoms

LOCALIZING SIGNS/SYMPTOMS

- Test if symptoms are severe or not resolving during observation
- Consider need for immediate antibiotic therapy and/or transfer to higher level of care if warning signs are present



ACTIVE MONITORING

- Active monitoring is a treatment strategy that nursing homes can employ to carefully observe/assess residents with isolated non-localizing signs/symptoms, while avoiding unnecessary urine culture testing and antibiotics.
- This typically entails placing the resident on the 24-hour board, checking vitals every shift, encouraging fluid intake, and contacting the provider if localizing signs/symptoms or warning signs develop.

NON-LOCALIZING SIGNS/SYMPTOMS

- Behavior changes
- Functional decline
- Mental status change
- Falls
- Restlessness
- Fatigue
- "Not being her-himself"

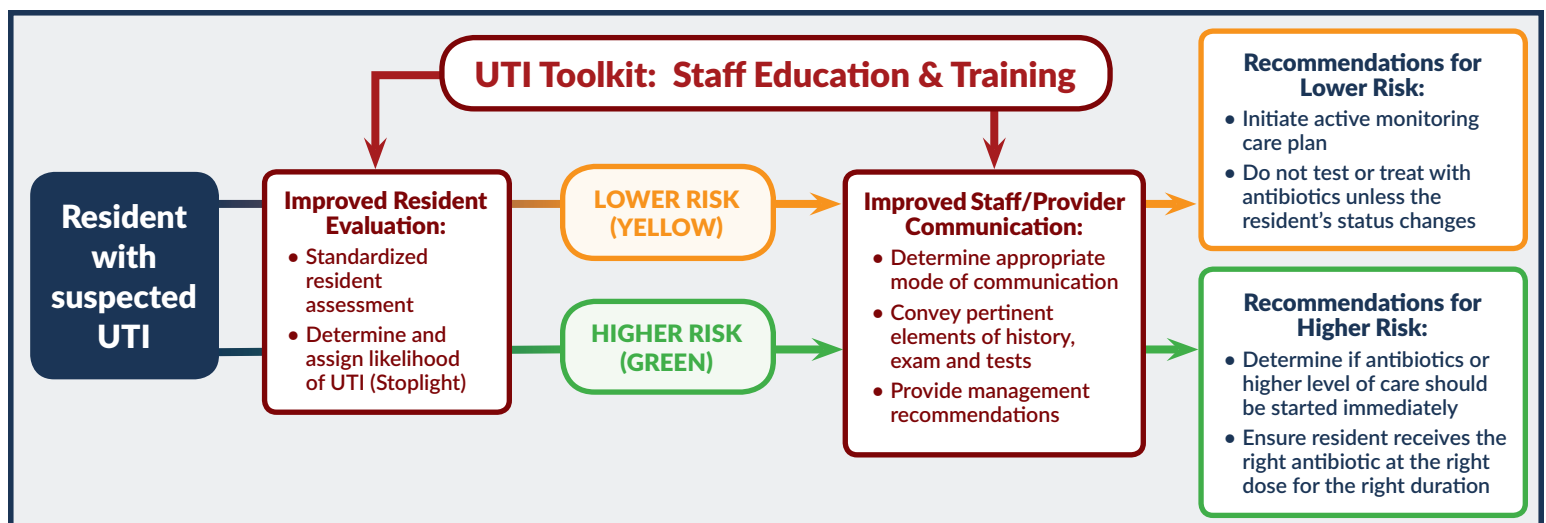
LOCALIZING URINARY SIGNS/SYMPTOMS

- Acute dysuria
- New or worsening urgency
- New or worsening incontinence
- Gross hematuria
- Suprapubic pain
- Costovertebral angle pain
- New scrotal/prostate pain
- Urethral purulence

WARNING SIGNS

- Fever
- Clear-cut delirium (altered level of consciousness, disorganized thinking, psychomotor retardation)
- Rigors (shaking chills)
- Hemodynamic instability (hypotension)
- Tachycardia

IMPACT OF USING A UTI TOOLKIT ON RESIDENT CARE OUTCOMES



EXPECTED OUTCOMES TO IMPROVE RESIDENT CARE

FOR LOW-RISK RESIDENTS

- Decreased number of urine tests
- Decreased number of antibiotic treatments

FOR HIGH-RISK RESIDENTS

- Decreased use of broad-spectrum antibiotics (especially fluoroquinolones)
- Decreased number of antibiotic treatment courses exceeding 7 days