

## UTI Resources Chart

Source	Article / Guideline / Position Paper	Overview / Criteria
American Medical Directors Association (AMDA)	Common Infections in the Long-Term Care Setting, 2004	<p>This guideline is intended for the members of the interdisciplinary team in long-term care facilities, including the medical director, director of nursing, physicians, nursing staff, consultant pharmacists, and other professionals such as therapists, social workers, dietitians, and nursing assistants who care for residents of long-term care facilities.</p> <ul style="list-style-type: none"> <li>• Treatment of asymptomatic bacteriuria with antibiotics is not clinically beneficial or cost effective and may be associated with the development of antibiotic-resistant strains of uropathogens.</li> <li>• A positive urine culture alone is of limited value in identifying whether a patient’s symptoms are caused by a urinary tract infection.</li> <li>• Treatment with antibiotics is appropriate when the practitioner determines on the basis of an evaluation that the most likely cause of the patient’s symptoms is a bacterial infection.</li> <li>• Ensure that information about the use of antibiotics for symptomatic infections is included in the patient’s record as part of the treatment plan.</li> </ul>
American Medical Directors Association (AMDA)	Urinary Incontinence,	<p>This guideline is intended for the members of the interdisciplinary team in long-term care facilities, including the medical director, director of nursing, physicians, nursing staff, consultant pharmacists, and other professionals such as therapists, social workers, dietitians, and nursing assistants who care for residents of long-term care facilities.</p> <p>Management of urinary tract infections and bacteriuria.</p> <ul style="list-style-type: none"> <li>• The presence of bacteriuria without symptoms, whether or not pyuria is present, generally does not merit treatment, especially in patients who have indwelling urinary catheters. (p. 8)</li> <li>• Provide appropriate treatment for patients with symptoms of a UTI or urosepsis (bacteria in the bloodstream, probably from a urinary source, with signs of sepsis). (p. 8)</li> </ul> <p>Published criteria for a symptomatic urinary tract infection typically differentiate between the catheterized and non-catheterized patient.</p> <ul style="list-style-type: none"> <li>• In patients who do not have an indwelling catheter, at least three of the following criteria must be met for a symptomatic UTI to be suspected: <ul style="list-style-type: none"> <li>○ Fever (&gt;38°C) or chills</li> <li>○ New or increased burning pain on urination</li> <li>○ New flank or suprapubic pain or tenderness</li> <li>○ Changes in character of urine</li> <li>○ Worsening mental function</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"> <li>• In patients who have an indwelling catheter, at least two of the following criteria must be met:               <ul style="list-style-type: none"> <li>○ Fever (&gt;38°C) or chills</li> <li>○ New flank or suprapubic pain or tenderness</li> <li>○ Changes in character of urine</li> <li>○ Worsening mental function</li> </ul> </li> </ul> <p>Continued bacteriuria without residual symptoms does not warrant repeat or continued antibiotic therapy. (p.9)</p> <p>Recurrent UTIs (two or more within 6 months) in a noncatherized patient may warrant additional evaluation (e.g., check for abnormal PVR urine volume, referral to a urologist, periurethral abscess, strictures, bladder calculi, polyps or tumors)</p>
Centers for Disease Control and Prevention (CDC)	CDC Campaign to Prevent Antimicrobial Resistance in Healthcare Settings	<p>12 Steps to Prevent Antimicrobial Resistance Among Long-term Care Residents  <a href="http://www.cdc.gov/drugresistance/healthcare/lc/12steps_ltc.htm">http://www.cdc.gov/drugresistance/healthcare/lc/12steps_ltc.htm</a></p> <p>Prevent Infection</p> <p>Step 3 – Get the unnecessary devices out</p> <ul style="list-style-type: none"> <li>• Remove catheters and other devices when no longer needed</li> </ul> <p>Diagnose and Treat Infection Effectively</p> <p>Step 4 – Use established criteria for diagnosis of infection</p> <p>Use Antimicrobials Wisely</p> <p>Step 7 – Treat infection, not colonization or contamination</p> <ul style="list-style-type: none"> <li>• <b>Do not treat asymptomatic bacteriuria</b></li> </ul>
Infectious Disease Society of America (IDSA)	Guideline for the Diagnosis and Treatment of Asymptomatic Bacteriuria in Adults, 2005	<p>Recommendations</p> <p>The diagnosis of asymptomatic bacteriuria should be based on results of a urine specimen collected in a manner that minimizes contamination.</p> <ul style="list-style-type: none"> <li>• For asymptomatic women, bacteriuria is defined as 2 consecutive voided urine specimens with isolation of the same bacterial strain in quantitative counts <math>\geq 10^5</math> cfu/mL.</li> <li>• A single clean catch voided urine specimen with 1 bacterial species isolated in a quantitative count <math>\geq 10^5</math> cfu/mL identifies bacteriuria in men</li> <li>• A single catheterized urine specimen with 1 bacterial species isolated in a quantitative count <math>\geq 10^2</math> cfu/mL</li> </ul> <p>Pyuria accompanying asymptomatic bacteriuria is not an indication for antimicrobial treatment. Screening for and treatment of asymptomatic bacteriuria in elderly institutionalized residents of long term care facilities is not recommended.</p>

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<p>Infectious Disease Society of America (IDSA)</p> <p>Continued Infectious Disease Society of America (IDSA)</p>	<p>Clinical Practice Guidelines for Evaluation of Fever and Infection in Older Adult Residents of Long-Term Care Facilities: 2008 Update</p> <p>Continued Clinical Practice Guidelines for Evaluation of Fever and Infection in Older Adult Residents of Long-Term Care Facilities: 2008 Update</p>	<p>Recommendations Advance directives for residents should be reviewed prior to any interventions; if not prohibited by such directives; initial diagnostic tests for suspected infection can be performed in the LTCF if resources are available and if studies can be done in a timely manner. Fever is defined as:</p> <ol style="list-style-type: none"> <li>1. A single oral temperature &gt;100°F (&gt;37.8°C); or</li> <li>2. repeated oral temperatures &gt;99°F (&gt;37.2°C) or rectal temperatures &gt;99.5°F (37.5°C); or</li> <li>3. An increase in temperature of &gt;2°F (&gt;1.1°C) over the baseline temperature</li> </ol> <p><b>Urinalysis and urine cultures should not be performed for asymptomatic residents.</b></p> <p>Urinalysis and Urine Cultures</p> <ul style="list-style-type: none"> <li>• Diagnostic laboratory evaluation of suspected UTIs in noncatheterized patients should be reserved for those with acute onset of UTI associated with signs and symptoms (e.g., fever, dysuria, gross hematuria, new or worsening urinary incontinence, and/or suspected bacteremia.)</li> <li>• In residents with long-term indwelling urethral catheters, evaluation is indicated if there is: <ul style="list-style-type: none"> <li>○ Suspected urosepsis (i.e., fever &gt; 100.3° F or 38° C</li> <li>○ Shaking chills</li> <li>○ Hypotension, and</li> <li>○ Delirium,) especially in a setting of recent catheter obstruction or change</li> </ul> </li> <li>• The minimum laboratory evaluation for suspected UTI should include a urinalysis for determination of leukocyte esterase and nitrite level by use of a dipstick and a microscopic examination for WBCs. <ul style="list-style-type: none"> <li>○ If pyuria or a positive leukocyte esterase test is present, only then should the laboratory set up urine specimens for culture and antimicrobial susceptibility testing.</li> </ul> </li> </ul>
<p>Society for Healthcare Epidemiology of America (SHEA)</p>	<p>Antimicrobial Use in Long-Term Care Facilities, 1996</p>	<p>This position paper outlines the concerns regarding and adverse consequences of inappropriate antimicrobial use in long-term-care facilities and recommends approaches to promote the rational use and to limit potential adverse effects of antimicrobials in this high-risk setting.</p> <ul style="list-style-type: none"> <li>• The most important adverse outcome of inappropriate antimicrobial use in LTCFs is the promotion of antimicrobial resistance in this high-risk population and the increased opportunities for transmission of resistant organisms to other patients.</li> </ul> <p>Urinary Tract Infection</p> <ul style="list-style-type: none"> <li>• Many treatment courses are given, inappropriately, for asymptomatic bacteriuria.</li> </ul>

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		<p>The minimal workup of patients with signs and symptoms suggestive of UTI should include a urinalysis and urine culture; <b>urine cultures should not be collected from asymptomatic patients.</b></p>
<p>Society for Healthcare Epidemiology of America (SHEA)</p>	<p>Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term-Care Facilities: Results of A Consensus Conference, 2001</p>	<p>This article describes the establishment of minimum criteria for the initiation of antibiotics in residents of LTCFs. Criteria for initiating antibiotics for skin and soft-tissue infections, respiratory infections, urinary infections, and fever where the focus of infection is unknown were developed.</p> <ul style="list-style-type: none"> <li>• The use of antibiotics frequently is empirical, that is, initiated in the absence of microbiology results or even in the absence of a definitive diagnosis of infection.</li> </ul> <p>Urinary Tract Infections</p> <ul style="list-style-type: none"> <li>• Resident without an indwelling catheter, minimum criteria include:             <ul style="list-style-type: none"> <li>○ Acute dysuria alone or</li> <li>○ Fever (&gt;37.9° C (100° F) or 1.5° C (2.4° F) increase above baseline temperature) and <u>at least one</u> of the following                 <ul style="list-style-type: none"> <li>▪ New or worsening urgency</li> <li>▪ Frequency</li> <li>▪ Suprapubic pain</li> <li>▪ Gross Hematuria</li> <li>▪ Costovertebral angle tenderness, or</li> <li>▪ Urinary incontinence</li> </ul> </li> </ul> </li> <li>• For residents who have a chronic indwelling catheter (either a Foley or suprapubic ), minimum criteria for initiating antibiotics include the presence of <u>at least one</u> of the following:             <ul style="list-style-type: none"> <li>○ Fever (&gt;37.9° C (100° F) or 1.5° C (2.4° F) increase above baseline temperature)</li> <li>○ New costovertebral angle tenderness or</li> <li>○ Rigors (Shaking chills) with or without identified cause, or</li> <li>○ New onset of delirium</li> </ul> </li> <li>• A urine culture should always be obtained to rule out urinary tract infection</li> <li>• Urine cultures will assist in antimicrobial selection.</li> <li>• Initiating empirical antibiotic therapy may potentially relieve symptoms of acute dysuria.</li> <li>• For urinary symptoms other than dysuria, such as urgency, frequency, or incontinence, the results of urine culture should be obtained prior to initiating antibiotics.</li> <li>• <b><u>Asymptomatic bacteriuria should not be treated with antibiotics</u></b></li> </ul>

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<p>Society for Healthcare Epidemiology of America (SHEA)</p>	<p>Urinary Tract Infections in Long-Term-Care Facilities, 2001</p>	<p>Scope of Position Paper</p> <ul style="list-style-type: none"> <li>• Relevant to elderly populations residing in nursing homes.</li> </ul> <p>Clinical Impact of UTI</p> <ul style="list-style-type: none"> <li>• UTI is the most common reason for antimicrobial prescriptions in LTCFs, being responsible for initiation of 20-60% of systemic antimicrobial courses.</li> </ul> <p>Diagnosis of UTI</p> <ul style="list-style-type: none"> <li>• Diagnostic accuracy compromised by difficulties in communication, multiple comorbid illnesses with associated chronic symptoms and clinical presentations that are possibly infectious but without clear localizing findings.</li> <li>• Diagnosis should be made cautiously based on nonspecific systems, especially if the patient is afebrile.</li> <li>• An unpleasant urinary odor should not be interpreted as symptomatic UTI, and alternate interventions such as improved incontinence management, should be instituted rather than antimicrobial therapy.</li> </ul> <p>Urine Culture</p> <ul style="list-style-type: none"> <li>• For asymptomatic individuals, at least two sequential specimens with the same organism(s) growing at <math>\geq 10^5</math> CFU/mL are diagnostic of bacteriuria.</li> <li>• For symptomatic infections, a quantitative count of <math>\geq 10^5</math> CFU/ml is diagnostic.</li> <li>• For a catheterized specimen, <math>\geq 10^3</math> CFU/mL of a single predominant pathogen is sufficient for the microbiological diagnosis of UTI.</li> </ul> <p>Pyuria</p> <ul style="list-style-type: none"> <li>• Pyuria is the presence of increased leukocytes in the urine. It is virtually a universal accompaniment of symptomatic UTI</li> <li>• In the elderly LTC resident, 90% of individuals with asymptomatic infection will also have pyuria presumably due to other causes of genital, bladder, prostatic or renal inflammation.</li> <li>• Thus, pyuria is an expected accompaniment of bacteriuria, whether symptomatic or asymptomatic.</li> <li>• The absence of pyuria is useful in excluding UTI, but the presence of pyuria is not sufficient for a diagnosis of UTI.</li> </ul> <p>Treatment of UTI</p> <ul style="list-style-type: none"> <li>• Prospective randomized clinical trials of treatment of UTI in both male and female long-term care residents repeatedly have documented no benefits of antimicrobial treatment.</li> <li>• Subjects who receive antimicrobial therapy for asymptomatic bacteriuria have:             <ul style="list-style-type: none"> <li>○ an increased frequency of adverse effects from antimicrobial therapy</li> <li>○ increased reinfection with resistant organisms, and</li> <li>○ increased cost of therapy</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"><li>• Thus, antibiotics are not indicated for the treatment of asymptomatic UTI in residents of LTCFs.</li></ul>