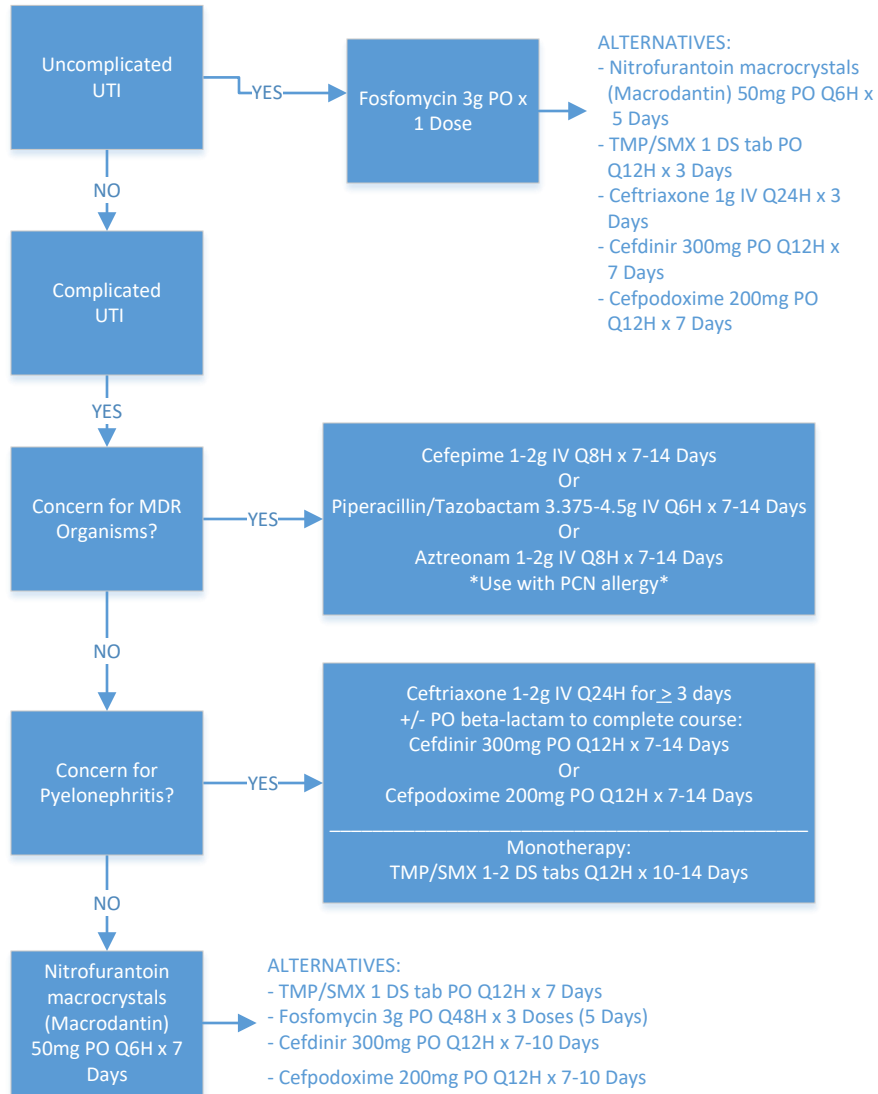


# Urinary Tract Infection Treatment Guideline



### Additional Considerations:

- All antibiotics listed must be adjusted for renal impairment except linezolid, nitrofurantoin, Fosfomycin and ceftriaxone.
- Fosfomycin is highly reliably active against Enterococcus faecalis, E. coli, Citrobacter, Klebsiella and Proteus.
- Promptly adjust empiric antibiotics to culture specific coverage
- In MDR or recurrent UTI, consider extending coverage time and/or repeat urine culture.

Complicated UTI	Uncomplicated UTI	Risk Factors for MDR Organisms
<ul style="list-style-type: none"> <li>• Male Sex</li> <li>• Female &gt; 50 years old</li> <li>• Diabetes</li> <li>• Pregnancy</li> <li>• Symptoms = 7 days prior to seeking treatment</li> <li>• Hospital acquired infection</li> <li>• ESRD or ARF</li> <li>• Renal replacement therapy</li> <li>• Urinary tract obstruction</li> <li>• Presence of an indwelling urethral catheter, stent, nephrostomy tube or urinary diversion</li> <li>• Recent urinary tract instrumentation</li> <li>• Functional or anatomic abnormality of the urinary tract</li> <li>• Renal transplantation</li> <li>• Immunosuppression</li> </ul>	<ul style="list-style-type: none"> <li>• Female Sex</li> <li>• Pre-menopausal</li> <li>• Not pregnant</li> <li>• No urinary catheter or straight catheterization</li> </ul>	<ul style="list-style-type: none"> <li>• Residence in a long-term care facility</li> <li>• Recent receipt of broad spectrum antibiotics within past 90 days (including fluoroquinolones)</li> <li>• History of recurrent UTIs</li> <li>• History of having an MDR urinary pathogen</li> <li>• Nosocomial UTI</li> </ul>

### Culture-Specific Considerations

Based on either patient history with known susceptibilities or current cultures with known susceptibilities.

Culture Result or History	Antibiotic
<b>ESBL <i>Pseudomonas</i></b>	Meropenem 1g IV q8h
<b>ESBL <i>Enterobacterales</i></b>	Uncomplicated cystitis: <ul style="list-style-type: none"> <li>• Nitrofurantoin 50mg PO q6h</li> <li>• Bactrim 1-2 DS tabs PO q12h</li> </ul> Complicated cystitis/Pyelonephritis: <ul style="list-style-type: none"> <li>• Ertapenem 1g IV q24h*</li> </ul>
<b><i>AmpC</i> producing organism</b>	Cefepime 1-2g IV q8h
Including <i>Enterobacter cloacae</i> , <i>Klebsiella aerogenes</i> (formerly <i>Enterobacter aerogenes</i> ), <i>Citrobacter freundii</i>	
<b><i>Enterococcus faecalis</i></b>	Ampicillin 2g IV q4h OR Piperacillin/tazobactam 3.375g IV q6h OR Vancomycin (pharmacy to dose)
NOT susceptible to cephalosporins	
<b><i>Enterococcus faecium</i> (VRE)</b>	Linezolid 600mg PO q12h
NOT susceptible to cephalosporins	

\*consider de-escalation to PO therapy after 1-3 days of IV therapy

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