

## URINARY TRACT INFECTIONS & BACTERIURIA (Elderly/Rest Homes) INVESTIGATION/ MANAGEMENT GUIDELINES -TARANAKI

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PROBLEM	ACTION	IMPLEMENTATION
<b>ACUTE UTI (SUSPECTED)</b> (NB: Do not test urine if nil or minor symptoms (especially if catheter in situ) Do not treat just for abnormal urine result, or minor symptoms)		
<b>Uncomplicated acute UTI</b> (dysuria, frequency, urgency, suprapubic discomfort)	<b>Optional - urine dipstick / M/C –</b> (sterile catch - <i>box 4</i> ). Discuss GP	<b>Treat (<i>box 5</i>)</b> (stop antibiotic if no pyuria or neg. culture)
<b>Complicated UTI</b> (complicated UT symptoms ( <i>box 1</i> ) +/- above symptoms) <i>Especially if:</i> • <b>Fever</b> -persisting >37.9 and/or • Major unexplained decline in clinical status	• <b>Dipstick urine</b> (sterile catch - <i>box 4</i> ) • Notify/consult GP • <b>Urine M/C if dipstick positive</b> (sterile MSU/CSU collection – refrigerate specimen – <i>box 4</i> )	<b>Treat (<i>box 5</i>)</b> If dipstick negative Consider starting antibiotic if clinical concern pending lab result (stop antibiotic if no pyuria or neg. culture) Search for and treat alternative cause (espec. if dipstick neg)
<b>Fever with 2 or more signs of non-UT infection (<i>box 2</i>)</b>	• No MSU required • Notify/consult GP	Investigate and treat alternative infection
• <b>Urinary catheter</b> <i>and</i> • New costovertebral (renal) tenderness, rigors or delirium	• Dipstick urine. Consult GP. • <b>Urine M/C if dipstick positive</b> • Consider catheter change	Treat ( <i>box 5</i> ) if urine positive ( <i>box 3</i> ) Consider treating UTI pending result (stop antibiotic if no pyuria or neg. culture)
<b>Asymptomatic bacteriuria</b> = <b>Positive urine exam (<i>box 3</i>)</b> without dysuria, fever or UT symptoms*( <i>above &amp; box 1</i> )	• <b>No UTI treatment required</b> <b>NB</b> Bacteriuria does <b>not</b> imply UTI ( <i>see box 3</i> )	Treatment does more harm than good (eg antibiotic resistance, drug interactions) ( <i>antibiotics are only indicated for urinary tract procedures or surgery eg TURP</i> )
<b>‘Smelly’/ discoloured urine</b> without other symptoms	• Ensure hydration • No dipstick or urine test necessary	No referral or investigation required
<b>PROPHYLAXIS</b> (NB Weigh up risks versus benefits of long-term antibiotics)		
Frequent symptomatic UTI's (especially if catheter)	Consult GP Consider prophylaxis	Trimethoprim 150mg (1/2 tablet) daily Consider urine acidification. ♀: Consider oestrogen pessary/cream twice weekly

### **\*BOX 1: Complicated urinary tract symptoms**

Flank pain, new urinary incontinence, gross haematuria, especially if fever, chills.

### **BOX 2: Signs of non-urinary infection**

**Resp:** increased SOB, cough, sputum, new pleuritic pain  
**Gastro-intestinal:** nausea /vomiting, new abdominal pain, diarrhoea  
**Skin/subcut:** new inflammation or purulent drainage

### **BOX 3: Lab Definitions of abnormal urine** (sterile collection only (*box 2*)):

**Bacteriuria:** >100 x10<sup>6</sup> litre (x 2 for women, x1 men)  
**Pyuria:** >100 x10<sup>6</sup> wbc /litre  
**Dipstick:** positive leucocytes  
(*inaccurate*) positive nitrites (many false negatives)

(25-50% women & 15-40% men in rest homes have asymptomatic bacteriuria, even more have pyuria)

### **BOX 4: Sterile Urine Collection:**

- Wash hands
- Separate labia (or retract prepuce)
- Stand or squat over toilet or bed-pan
- Discard first few ml, catch next part (approx. 20ml) in sterile container, discard remainder
- Transfer urine into labelled specimen pot
- Refrigerate if possible, get to lab as soon as possible (cold specimen: <24 hours, non-refrigerated spec: <1-2 hrs)

### **BOX 5: Antibiotics for acute UTI:**

**Duration:** uncomplicated UTI 3 days, complicated 7 days  
*NB: reduce antibiotic dose or avoid in renal failure*

**First line:** Trimethoprim 300mg daily

**Second line:** Norfloxacin 400mg bd  
Nitrofurantoin 50mg qid (avoid if GFR<50ml/m)  
Augmentin (not recommended) 500mg tds

**REFS:** Laboratory Investigation of UTI (BPAC 2006) Loeb et al (2005) (trial of suspected UTI in nursing homes) BMJ 331: 669-72  
Gray & Malone-Lee. Review: urinary tract infection in elderly people. Age & Ageing July 1995  
Benton et al (2006) Asymptomatic bacteriuria in the Nursing Home. Ann Long term Care 14, 17-22

**Guideline approved by TDBH Guidelines group & Dr L.Taylor (A,T & R).** Prepared by Dr K Carey-Smith GP Liaison