

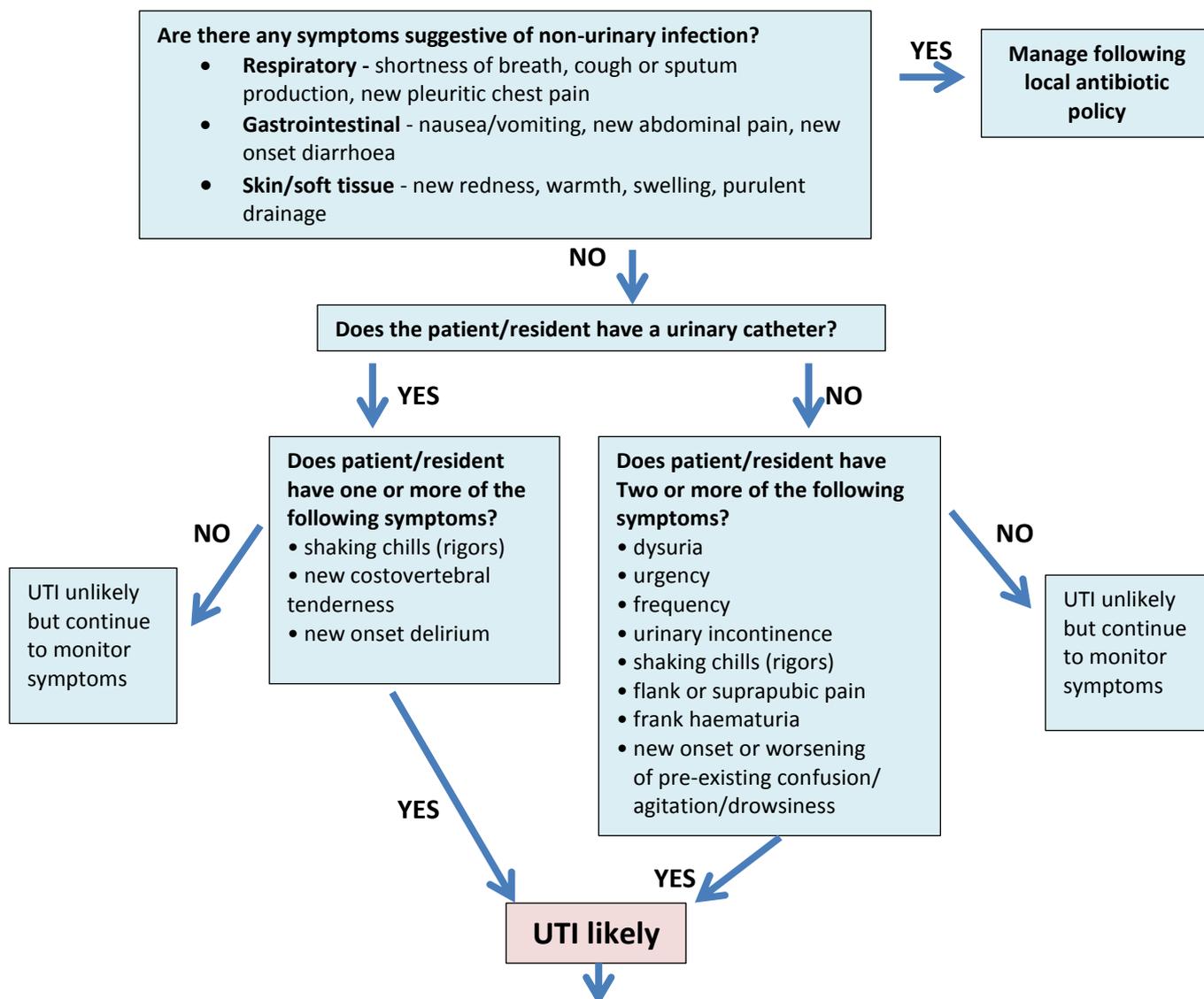
# Good Practice Guidance for GPs: Management of UTIs for elderly patients residing in care homes



## DIAGNOSIS<sup>1,2</sup>

In elderly patients (over 65 years of age), diagnosis should be based on a full clinical assessment, including vital signs. Please request care staff to complete the **Management of UTIs for elderly patients residing in care homes form (U1)**.

Below is a decision aid<sup>3</sup> to guide management of patients/residents with fever defined as temperature  $>37.9^{\circ}\text{C}$  or  $1.5^{\circ}\text{C}$  increase above baseline occurring on at least two occasions in last 12 hours. Hypothermia (low temperature of  $<36^{\circ}\text{C}$ ) may also indicate infection, especially those with comorbidities. Be alert to non-specific symptoms of infection such as abdominal pain, alteration of behaviour or loss of diabetes control.



- Assess if retention or sub-acute retention of urine is likely (e.g. blocked catheter or distended bladder)
- DO NOT use dipstick test in diagnosis of UTI in older people  $>65\text{YRS}$
- Obtain a sample for urine culture and send to Microbiology
- Start antibiotic therapy following local policy or as advised by Microbiology
- If patient has a urinary catheter, remove and replace it. Consider the ongoing need for a long term catheter in consultation with specialists
- Consider use of analgesia (paracetamol or ibuprofen) to relieve pain
- Consider admission to hospital if patient has fever with chills or new onset hypotension (low blood pressure)
- Review response to treatment daily and if no improvement of symptoms or deterioration, consider admission to hospital or an increased level of care.

### Urine culture for men and women >65 yrs<sup>1</sup>:

- **Do not send urine for culture in asymptomatic elderly.**
- Only send urine for culture if two or more signs of infection, especially dysuria, fever >38°C, or new incontinence.
- Do not treat asymptomatic bacteriuria in the elderly as it is very common.
- Treating does not reduce mortality or prevent symptomatic episodes, but does increase side-effects and antibiotic resistance.

### Urine culture in women and men with catheters<sup>1</sup>:

- **Do not treat asymptomatic bacteriuria in those with indwelling catheters, as bacteriuria is very common, and antibiotics increase side-effects and antibiotic resistance.**
- Treatment does not reduce mortality or prevent symptomatic episodes, but does increase side-effects and antibiotic resistance.
- Only send urine for culture in catheterised patients if features of systemic infection are present. However, always:
  - exclude other sources of infection
  - check that the catheter drains correctly and is not blocked
  - consider need for continued catheterisation
  - if the catheter has been in place for more than seven days, consider changing it before/when starting antibiotic treatment
- Do not give antibiotic prophylaxis for catheter changes unless history of symptomatic UTIs due to catheter change
- Do not prescribe antibiotic prophylaxis to adults with long-term indwelling catheters to prevent UTIs unless there is a history of recurrent or severe UTIs.

### PRESCRIBING INFORMATION<sup>4,5</sup>

Broad spectrum antibiotics (e.g. co-amoxiclav, quinolones and cephalosporins) should be avoided as they increase the risk of Clostridium difficile infection, MRSA and resistant UTIs. Guidance from the Health Protection Agency (HPA) suggests considering narrow spectrum antibiotics such as nitrofurantoin or trimethoprim as first line treatments.

Resistance is increasing to all of the antibiotics used to treat UTI and there is no clear first choice alternative to trimethoprim or nitrofurantoin. Infections due to multi-resistant organisms including extended spectrum beta-lactamase (ESBL) E. coli are increasing. Susceptibility results are essential to guide treatment.

### Treatment choices<sup>3,4,6,7</sup>

#### First line: **NON-CATHETERISED PATIENTS**

##### For women

**Nitrofurantoin** 100mg m/r bd for 3 days or

**Nitrofurantoin** 50mg qds for 3 days

**OR**

**Trimethoprim** 200mg bd for 3 days

##### For men

**Nitrofurantoin** 100mg m/r bd for 7 days or

**Nitrofurantoin** 50mg qds for 7 days

**OR**

**Trimethoprim** 200mg bd for 7 days

#### Second line:

Perform culture in all treatment failures.

Amoxicillin resistance is common; only use if susceptible.

Community multi-resistant Extended-spectrum Beta-lactamase (ESBL) E. coli are increasing: consider nitrofurantoin (or fosfomycin 3g stat on advice of microbiologist).

**First line for both men and women  : CATHETER ASSOCIATED UTIs**

**Nitrofurantoin** 100mg m/r bd for 7 days or **Nitrofurantoin** 50mg qds for 7 days

**OR**

**Trimethoprim** 200mg bd for 7 days

PHE guidance on the treatment of uncomplicated UTIs in the community **recommends Nitrofurantoin as the preferred first-line therapy<sup>8</sup> because of higher levels of Trimethoprim resistance.**

**Cautions:**

- **Avoid nitrofurantoin if eGFR<45ml/min** - may be used with caution if eGFR 30–44 mL/ min as a short-course only (3 to 7 days), to treat uncomplicated lower urinary-tract infection caused by suspected or proven multidrug resistant bacteria and only if potential benefit outweighs risk.
- **Do not recommend cranberry products or urine alkalinizing agents** - the activity of nitrofurantoin is reduced with increasing pH; avoid alkalinising agents e.g. potassium citrate.
- Trimethoprim resistance has been reported after exposure to Trimethoprim within last 6 months or after multiple courses.

**Remember:**

- **Adults with a urinary tract infection that do not respond to initial antibiotic treatment** should have a MSU test to see if other antibiotics should be tried.
- Men who have symptoms of an upper urinary tract infection should be referred for urological investigation.

**REFERENCES**

<sup>1</sup> PHE, Diagnosis of urinary tract infections (UTIs), (accessed June 2017). [[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/619772/Urinary\\_tract\\_infection\\_UTI\\_guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/619772/Urinary_tract_infection_UTI_guidance.pdf)]

<sup>2</sup> NICE Quality Standard [QS90], June 2015. [<https://www.nice.org.uk/guidance/qs90/chapter/Quality-statement-1-Diagnosing-urinary-tract-infections-in-adults-aged-65-years-and-over>]

<sup>3</sup> SIGN 88 • Management of suspected bacterial urinary tract infection in adults, July 2012. [<http://www.sign.ac.uk/assets/sign88.pdf>]

<sup>4</sup> BNF (accessed June 2017). [<https://bnf.nice.org.uk/>]

<sup>5</sup> Berkshire East Antibiotic Guidelines, 2014. [<http://www.windsorascotmaidenheadccg.nhs.uk/wp-content/uploads/2013/09/Antibiotic-Guidelines-Berkshire-East-Primary-Care.pdf>]

<sup>6</sup> Clinical Knowledge Summaries – management of UTI in men (accessed July 2017). [<https://cks.nice.org.uk/urinary-tract-infection-lower-men>]

<sup>7</sup> Clinical Knowledge Summaries – management of UTI in women (accessed July 2017). [<https://cks.nice.org.uk/urinary-tract-infection-lower-women>]

<sup>8</sup> PHE, English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report, Oct 2016. [[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/575626/ESPAUR\\_Report\\_2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/575626/ESPAUR_Report_2016.pdf)]