NHS Tees, Esk and Wear Valleys NHS Foundation Trust
NHS North Durham Clinical Commissioning Group
NHS South Tees Clinical Commissioning Group
NHS Hartlepool and Stockton-on-Tees Clinical Commissioning Group

# Guidance for the prevention and early recognition of urinary tract infection (UTI) in care home residents

Key:

- Care Home
- SPA/ District Nurse/ Community Nurse/ GP
- GP/ Nurse Prescriber
- Secondary care

## PREVENTION

**UTI PREVENTATIVE TOOLS**

- Dehydration urine colour charts
- Fluid matrix/weight chart
- Fluid balance chart
- Bristol Stool Chart
- Top-tips chart

**ESTABLISH WHAT'S NORMAL FOR THE RESIDENTS**

Good communication with the resident and/or family to enable the carers to recognise a change early

- Bowel habit
- Continence / incontinence
- Behaviour

**Know your residents**:

- who wears a hearing aid
- who wears dentures
- who has swallowing difficulties and may take longer to eat and drink
- who will need assistance to eat and drink
- who needs help to the toilet

**HIGH STANDARDS OF CARE**

- Nutrition
- Hydration
- Hygiene
- Toilet habits
- Sleeping pattern
- Mobilisation

## RECOGNITION AND APPROPRIATE REFERRAL

**RESIDENT COMPLAINS OF OR CARERS RECOGNISE ANY OF THE FOLLOWING:**

- Feeling hot
- Look flushed or starts shaking
- Burning/ pain while passing urine
- Passing urine more often
- New onset of incontinence
- Smelly urine
- Visible blood in the urine
- Vomiting
- Drop in blood sugar if diabetic
- Discomfort in the upper back or abdomen and sides

***Other signs and symptoms to look out for*** *(UTIs can cause a sudden change in behaviour)*

- Excited, restless or aggressive
- Repeat a particular action over and over
- Not eating or drinking
- Difficulty paying attention
- Not able to make decisions
- Not recognising people
- Not able to have a conversation
- Appear removed from the situation and withdrawn
- Sleepy

**IF ANY SIGNS OF SEPSIS OR RED FLAGS, DIAL 999 IMMEDIATELY**

**Red flag symptoms include:**

- Resident has collapsed or can't wake resident
- Unable to feel a pulse at the wrist
- Breathing very fast (more than one breath every 2 seconds)
- Has blue lips
- Has new red or purple rash all over, or mottled skin
- Hasn't passed urine in last 18 hours
- Recent chemotherapy (within last 6 weeks)

Consider individual resident advanced plans where applicable.

**IF CARERS ARE TRAINED**

Record and document:

- Temperature
- Pulse
- Respiratory rate
- Blood pressure
- Oxygen saturations (NEWS Score)

***This must not delay contacting the SPA for clinical advice***

**DO NOT DIPSTICK**

*Dipstick testing of urine is unreliable and a poor indicator of infection in many older care home residents because they already have background bacteria in their urine.*

**Hartlepool and Stockton:** Contact the Single Point of Access (SPA) Mon-Fri 8-22.00 & WE & BH 8-20.00

**South Tees:** Contact 111 or CHESS 01642 939512 8am -6pm

Clinical triage conducted, referring the resident to appropriate clinician (Community Matron/ District Nurse/ Rapid Response Nurse/ OOH)

Clinician makes diagnosis **based on clinical assessment**

**DO NOT DIAGNOSE BASED ON DIPSTICK ALONE**

*Up to 50% of nursing home population and 90% of patients with long term catheters have a positive dipstick with NO UTI present due to asymptomatic bacteriuria.*

*Adults aged 65 years and over must have a full clinical assessment before a diagnosis of a UTI is made*

*A full clinical assessment should be a face-to-face review of the person's medical history, physical examination, assessment of pulse, blood pressure, temperature and recording of symptoms (NICE)*

**Referral to secondary care**

Community Matron/ GP arranges admission for the resident to hospital

**Suspected UTI – management in primary care**

Clinicians refer to UTI treatment guideline for information on primary care management and prescribing recommendations

**Clinician deems no further investigation/ treatment necessary**

Continued promotion of preventative measures by Care Home

Version 3 (28/02/2018) Approved June 2017 Review June 2019

Ref: NICE Guidance - Urinary Tract Infections in Adults/QS90 published 11 June 2015

Thanks to the Co Durham and Darlington CCG infection prevention team for sharing their UTI guidance

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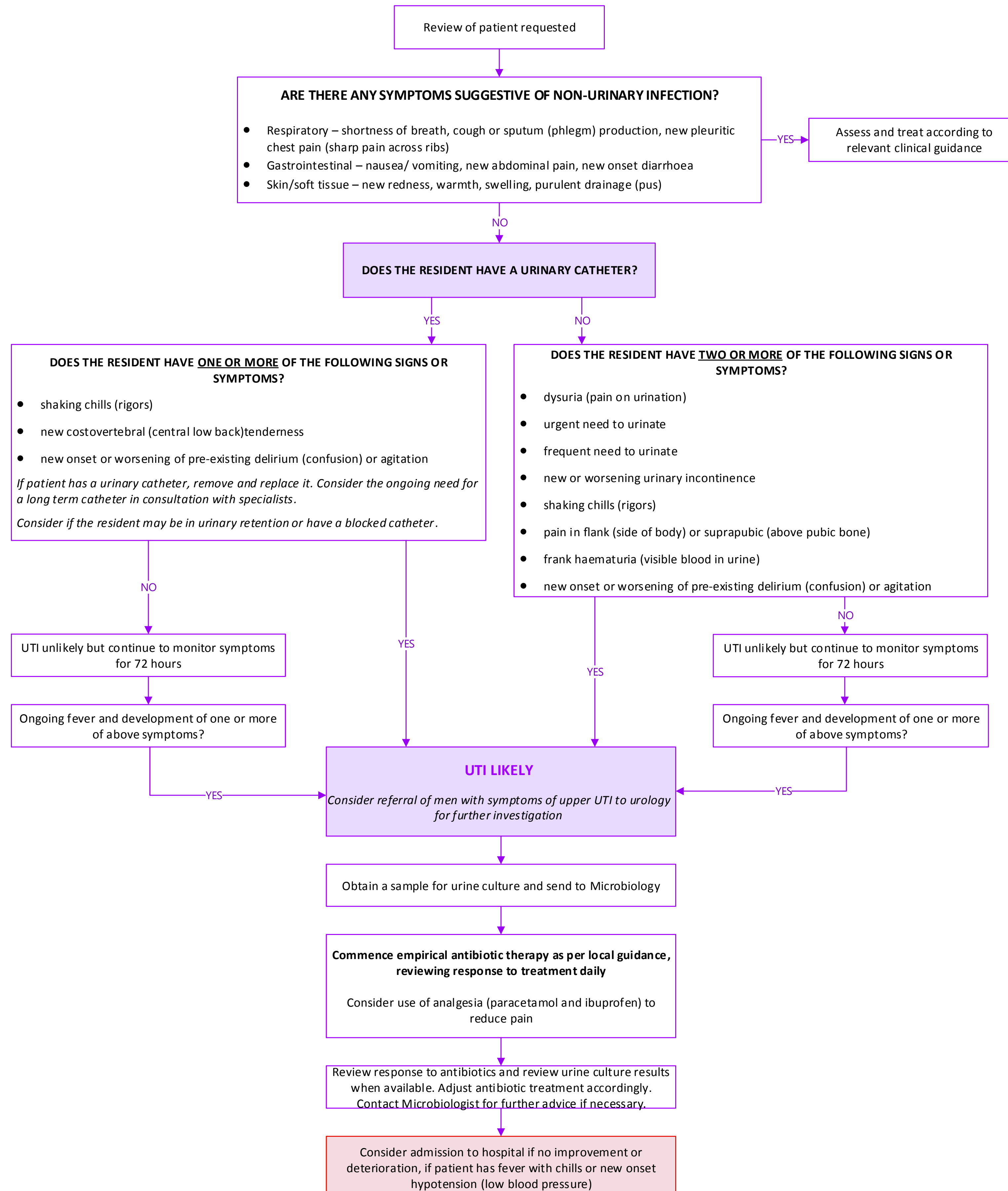
# Guidance for the diagnosis and management of urinary tract infections (UTI) in care home residents for healthcare professionals




## Antibiotic treatment of UTIs

(from North East and Cumbria antimicrobial prescribing guideline for primary care April 2017)

### All patients first line antibiotic:

**Nitrofurantoin** *50mg QDS or 100mg BD (modified release) for 3 days in women/ 7 days in men**

*nitrofurantoin is contra-indicated in patients with eGFR <45ml/min. If no alternative treatment is available short courses of nitrofurantoin may be used in caution in patients with eGFR 30-44ml/min.

### Alternative treatments if nitrofurantoin contraindicated:

**If low risk of resistance**:** **Trimethoprim** *200mg BD for 3 days in women/ 7 days in men*

**If high risk of resistance** or GFR <45mls/min:** **Pivmecillinam** *400mg stat, then 200mg TDS for 3 days in women/ 7 days in men*

****Low risk of resistance**: younger women with acute UTI and no resistance risks.
**Risk factors for increased resistance include:** care home resident, recurrent UTI (2 in 6 months; ≥3 in 12 months), hospitalisation for >7 days in last 6 months, unresolving urinary symptoms, recent travel to a country with increased resistance, previous UTI resistant to trimethoprim, cephalosporins or quinolones.

**If risk of resistance**: send urine for culture and susceptibilities and always safety net

### If first line options unsuitable:

**If high risk of resistance, poor renal function and penicillin allergic:** **Fosfomycin** *3g stat in women; in men follow up with second dose 3 days later (unlicensed)*

**If organism susceptible:** **Amoxicillin** *500mg TDS for 3 days in women/ 7 days in men*

N.B. if sensitivities known then use the lowest risk options; nitrofurantoin, trimethoprim or amoxicillin etc. in preference to cefalexin or ciprofloxacin

## Good practice points

### Urine culture

- Older people often have asymptomatic bacteriuria (no symptoms but bacteria in urine) which does not indicate infection.
- Do not send catheter specimens of urine (CSU) unless patient has signs and symptoms of infection as CSU samples will almost always have bacteriuria
- Review urine culture results to check organism is sensitive to antibiotic prescribed and change to an alternative antibiotic if necessary
- Interpretation of urine culture results – high epithelial cell count or heavy mixed growth may indicate contamination. Ensure correct sampling process is followed and take repeat urine sample if clinically indicated.
- Be alert to UTI due to resistant organisms such as Extended Spectrum Beta-Lactamase *E.coli* (ESBL). Microbiology will provide advice on treatment options. In patients with a previous ESBL UTI discuss with Microbiology the potential treatment options should the patient become asymptomatic again.
- Do not send urine samples for post-antibiotic checks or clearance of infection.

### Antibiotic therapy

- Older people are vulnerable to infection, particularly *C.diff* infection, therefore use of broad spectrum antibiotics should be avoided if possible.
- First choice antibiotics for uncomplicated lower UTI in non-catheterised patients is nitrofurantoin, as indicated above.
- In men, if there is a suspicion of acute prostatitis (suggested by fever and pain at the base of the penis, around the anus, just above the pubic bone and/or in the lower back) a 28 day course of ciprofloxacin or ofloxacin is recommended. Trimethoprim may be used if the organism is sensitive.
- In catheterised patients with symptoms of UTI, a seven day course of antibiotics is recommended in both men and women. The catheter should be removed then replaced if necessary.
- Second choice antibiotics should always be guided by urine culture and history of antibiotic use.

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