Flowchart for men and women over 65 years with suspected UTI

**Urinary signs/symptoms, abnormal temperature, non-specific signs of infection**

Yes

**Do not perform urine dipsticks**

*Diagnosis of urinary tract infections: quick reference tool for primary care*

**Diagnosis of urinary tract infections: quick reference tool for primary care**

- Dipsticks become more unreliable with increasing age over 65 years. Up to half of older adults, and most with a urinary catheter, will have bacteria present in the bladder/urine without an infection. This “asymptomatic bacteriuria” is not harmful, and although it causes a positive urine dipstick, antibiotics are not beneficial and may cause harm.

**THINK SEPSIS - check for signs/symptoms using local or national tool**

- Such as NICE, RCGP or NEWS2.**

**CHECK for signs/symptoms of pyelonephritis**

- Kidney pain/tenderness in back, under ribs
- New/different myalgia, flu-like illness
- Nausea/vomiting
- Shaking chills (rigors)
- OR temp over 37.9°C or 36°C or below

**CHECK ALL FOR NEW signs/symptoms of UTI**

- New onset dysuria alone
- OR two or more:
  - Temperature 1.5°C above patient’s normal twice in the last 12 hours
  - New frequency or urgency
  - New incontinence
  - New or worsening delirium/debility
  - New suprapubic pain
  - Visible haematuria

**If fever and delirium/debility only:** consider other causes before treating for UTI (*see box below*)

**If urinary catheter:** also check for catheter blockage AND consider catheter removal or replacement

- Consider Genitourinary Syndrome of Menopause (vulvovaginal atrophy), urethritis, sexually transmitted infections, and prostatitis.

**Consider sepsis OR pyelonephritis**

- If urinary catheter: consider changing or removing before starting antibiotics
- Send urine for culture
- Immediately start antibiotic/management for upper UTI/sepsis using NICE/PHE guideline on pyelonephritis: antimicrobial prescribing or local/national guidelines for sepsis, and considering resistance risk:
- Ref er if signs/symptoms of serious illness or condition:

**UTI LIKELY:** share self-care and safety-netting advice using TARGET UTI leaflet

- Always send urine culture if feasible before starting antibiotics, as greater resistance in older adults
- If mild symptoms consider back-up antibiotics in women without catheters and low risk of complications
- Offer immediate antibiotics using NICE/PHE guideline on lower UTI: antimicrobial prescribing
- Review antibiotic choice and culture result

**If indwelling urinary catheter for over 7 days**

- Consider changing (if possible remove) catheter as soon as possible (before giving antibiotic) and send MSU or urine from new catheter for culture

**CHECK for other causes of delirium if relevant (PINCH ME)**

- P: Pain
- I: other Infection
- N: poor Nutrition
- C: Constipation
- H: poor Hydration

**CHECK ALL for other localised symptoms/signs**

- Two or more symptoms or signs of:
  - Respiratory tract infection
  - Gastrointestinal tract infection
  - Skin and soft tissue infection

**Advis e “watchful waiting” with further investigation for other causes**

**Consider other local/national resources for delirium management**

- Give safety-netting advice about consulting if:
  - Worsening symptoms
  - Signs of pyelonephritis
  - Any symptom/sign of sepsis

**Follow local diagnostic and treatment guidance**

**If worsening signs or symptoms consider:**

- Admission or start/change antibiotic

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Key:

- Suspected sepsis alert
- UTI symptom
- Action advised
- Other advice

Table summary of flowchart for those over 65 years with suspected UTI

**Men and women over 65 years may present with:**
- localised signs or symptoms of a UTI including new onset dysuria; incontinence; urgency
- temperature: 38°C or above; 36°C or below; 1.5°C above normal twice in the last 12 hours
- non-specific signs of infection: for example delirium; loss of diabetic control

**Do not perform urine dipstick as they become more unreliable with increasing age over 65 years**
- up to half of older adults in long term care facilities, and most of those who have had a urinary catheter for over 30 days, will have bacteria present in the bladder/urine without an infection
- this so called asymptomatic bacteriuria is not harmful, and although it causes a positive urine dipstick, antibiotics are not beneficial

**Use symptoms and signs to determine the most appropriate management**

First think sepsis: check for signs using local or national tool such as NICE, RCGP or NEWS2

Exclude pyelonephritis checking for any 1 sign:
- kidney pain/tenderness in back, under ribs
- new/different myalgia, or flu-like symptoms
- nausea/vomiting
- shaking chills (rigors) or temp over 37.9°C or 36°C or below

If signs of sepsis or pyelonephritis (if no kidney pain rule out other localised infection *see symptoms of other infection box below*):
- if urinary catheter for more than 7 days: consider changing or removing as soon as possible and before starting antibiotics
- send urine for culture
- assess antibiotic resistance risk and immediately start antibiotic for upper UTI/sepsis using NICE/PHE guideline on pyelonephritis: antimicrobial prescribing or local/national guidelines for sepsis
- refer if signs or symptoms of serious illness or condition

Then check all for NEW URINARY symptoms/signs
- NEW onset dysuria alone
- OR 2 or more new:
  - temperature: 1.5°C above normal twice in the last 12 hours
  - new frequency or urgency
  - new incontinence
  - new or worsening delirium/debility
  - new suprapubic pain
  - visible haematuria
- If fever and delirium/debility only: consider other infections before treating for UTI

Consider: Genitourinary Syndrome of Menopause (vulvovaginal atrophy) as can present with dysuria. Also consider risk of urethritis, prostatitis or STI

Check all for 2 or more signs or symptoms suggesting other infection
- respiratory tract infection: shortness of breath; cough or sputum production; new pleuritic chest pain
- gastrointestinal tract infection: nausea/vomiting; new abdominal pain; new onset diarrhoea
- skin and soft tissue infection: new redness; warmth

Follow diagnostic and treatment guidance if infection suspected

Check all for other causes of DELIRIUM (PINCH ME) and manage as needed

Share self-care and safety-netting advice using TARGET UTI leaflet for older adults

Safety-netting advice
- worsening symptoms
- signs of pyelonephritis
- signs/symptoms of sepsis

Self-care advice
- drink enough fluids to avoid feeling thirsty and to keep urine pale
- taking paracetamol regularly up to 4 times daily for relief of pain or fever
- ways of preventing further episodes of UTI

Please refer to the information and reference tables in joint NICE/PHE guidance: NICE guidelines on UTI (lower): antimicrobial prescribing or NICE guidelines on pyelonephritis (acute): antimicrobial prescribing