

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

Yes

Do not perform urine dipsticks

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.

All

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** temperature over 37.9°C **or** 36°C or below

Rule out other cause* (see box below)

Yes

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
- refer if signs/symptoms of serious illness or condition

No

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

Yes

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

No

Check for other causes of delirium if relevant (PINCH ME)

- P:** Pain
- I:** other Infection
- N:** poor Nutrition
- C:** Constipation
- H:** poor Hydration
- M:** other Medication
- E:** Environment change

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

Yes

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

Yes

Follow local diagnostic and treatment guidance

No

Advise 'watchful waiting' with further investigation for other causes

All

If worsening signs or symptoms consider: admission or start/change antibiotic

All

Key: Suspected sepsis alert UTI symptom Action advised Other advice

UTI=urinary tract infection; RCGP=Royal College of General Practitioners; NEWS2=National Early Warning Score 2; PHE=Public Health England; RBC=Red blood cells; TARGET=Treat Antibiotics Responsibly, Guidance, Education, Tools; MSU=mid-stream urine; NICE=National Institute for Health and Care Excellence