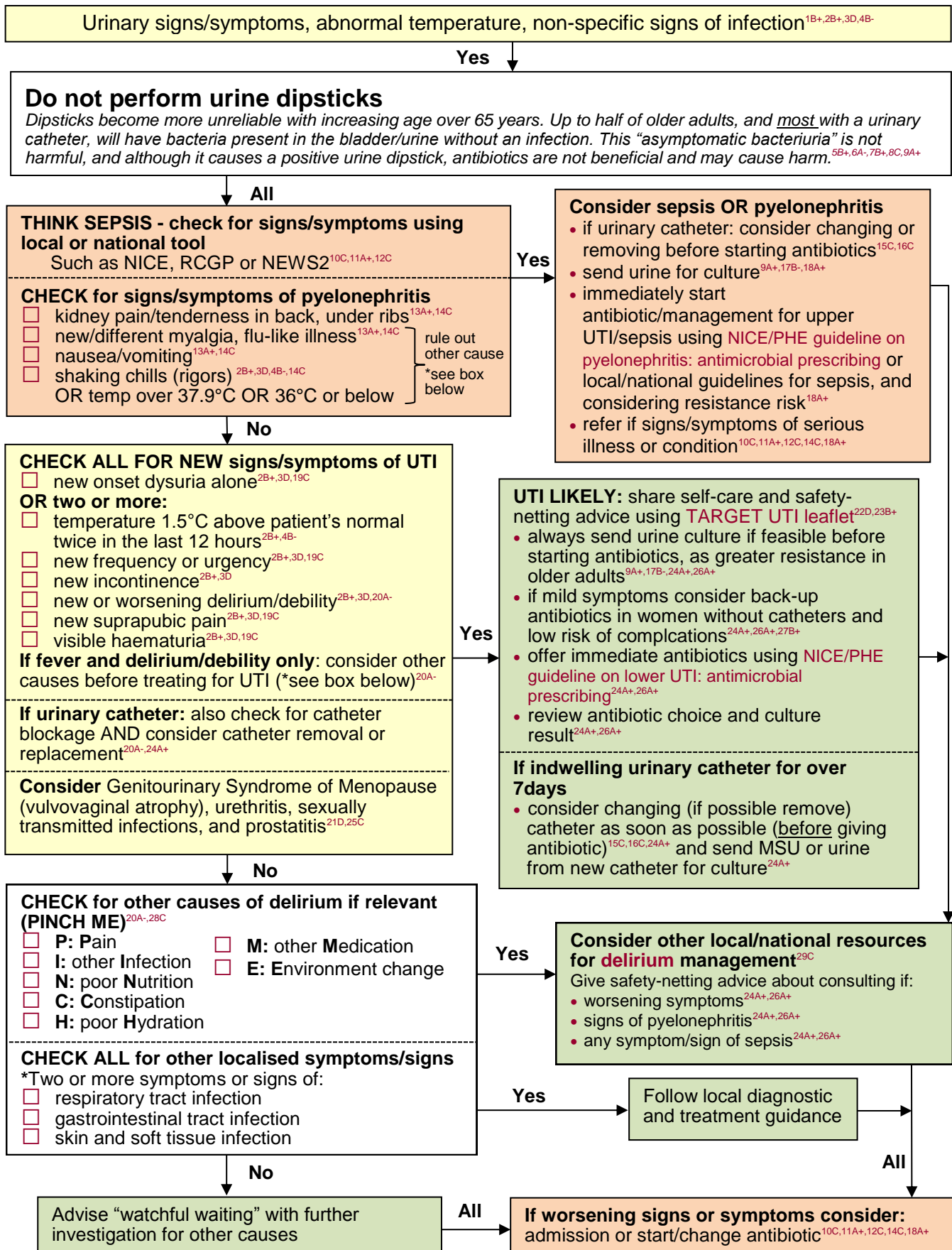


Flowchart for men and women over 65 years with suspected UTI



Key:	Suspected sepsis alert	UTI symptom	Action advised	Other advice
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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^{1B+}
- temperature: 38°C or above; 36°C or below; 1.5°C above normal twice in the last 12 hours^{2B+,3D,4B-}
- non-specific signs of infection: for example delirium; loss of diabetic control^{2B+,3D,4B-,20A-,30D,31D}

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^{8C}
- this so called asymptomatic bacteriuria is not harmful, and although it causes a positive urine dipstick, antibiotics are not beneficial^{5B+,6A-,7B+,8C, 9A+}

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^{10C,11A+,12C}

Exclude pyelonephritis checking for any 1 sign:

- kidney pain/tenderness in back, under ribs^{13A+,14C}
- new/different myalgia, or flu-like symptoms^{1B+,14C}
- nausea/vomiting^{1B+,14C}
- shaking chills (rigors) or temp over 37.9°C or 36°C or below^{2B,3D,4B,14C}

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^{15C,16C}
- send urine for culture^{9A+,17B-,18A+}
- 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^{18A+}
- refer if signs or symptoms of serious illness or condition^{10C,11A+,12C,14C,18A+}

Then check all for **NEW URINARY symptoms/signs**

- NEW onset dysuria alone^{2B,3D,19C}
- OR 2 or more new:
 - temperature: 1.5°C above normal twice in the last 12 hours^{2B+,4B-}
 - new frequency or urgency^{2B+,3D,19C}
 - new incontinence^{2B+,3D}
 - new or worsening delirium/debility^{2B+,3D,20A-}
 - new suprapubic pain^{2B+,3D,19C}
 - visible haematuria^{2B+,3D,19C}

If fever and delirium/debility only: consider other infections before treating for UTI^{20A-}

If urinary symptoms suggest UTI:

- always send urine culture if feasible, as greater resistance in older adults^{9A+,17B-,24A+}
- if mild symptoms consider back-up antibiotics in women without catheters and low risk of complications^{24A+,25A+,26B+}
- consider immediate antibiotics for lower UTI^{24A+,25A+}
- for antibiotic choice use **NICE/PHE guideline on lower UTI: antimicrobial prescribing**, and consider antibiotic resistance risk using patient history^{24A+,25A+}

If indwelling URINARY CATHETER for over 7 days:

- check for catheter blockage AND consider catheter removal^{20A-}
- if treating for a UTI consider changing or removal as soon as possible and before giving antibiotic^{15C,16C,24A+}
- send sample from mid-stream urine or urine from new catheter^{24A+}

Consider: Genitourinary Syndrome of Menopause (vulvovaginal atrophy) as can present with dysuria.^{21D}
Also consider risk of urethritis, prostatitis or STI^{13A+}

Check all for 2 or more signs or symptoms suggesting **other** infection^{20A-}

- respiratory tract infection: shortness of breath; cough or sputum production; new pleuritic chest pain^{3D}
- gastrointestinal tract infection: nausea/vomiting; new abdominal pain; new onset diarrhoea^{32C,33C}
- skin and soft tissue infection: new redness; warmth^{3D}

Follow diagnostic and treatment guidance if infection suspected

Check all for other causes of **DELIRIUM (PINCH ME)** and manage as needed^{20A-,27C}

- | | | |
|--|---|--|
| <input type="checkbox"/> P: Pain | <input type="checkbox"/> M: other Medication | <ul style="list-style-type: none"> • using PINCH ME can help identify other potential underlying causes of delirium superimposed on dementia. It can be used in different clinical settings^{28C} • consider other local/national resources for delirium management^{29C} • Advise watchful waiting, with further investigation if needed |
| <input type="checkbox"/> I: other Infection | <input type="checkbox"/> E: Environment | |
| <input type="checkbox"/> N: poor Nutrition | change | |
| <input type="checkbox"/> C: Constipation | | |
| <input type="checkbox"/> H: poor Hydration | | |

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

Safety-netting advice

- worsening symptoms^{24A+,25A+}
- signs of pyelonephritis^{24A+,25A+}
- signs/symptoms of sepsis^{24A+,25A+}

Self-care advice

- drink enough fluids to avoid feeling thirsty and to keep urine pale^{25D,34C,35C}
- taking paracetamol regularly up to 4 times daily for relief of pain or fever^{22D,23B+}
- 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**