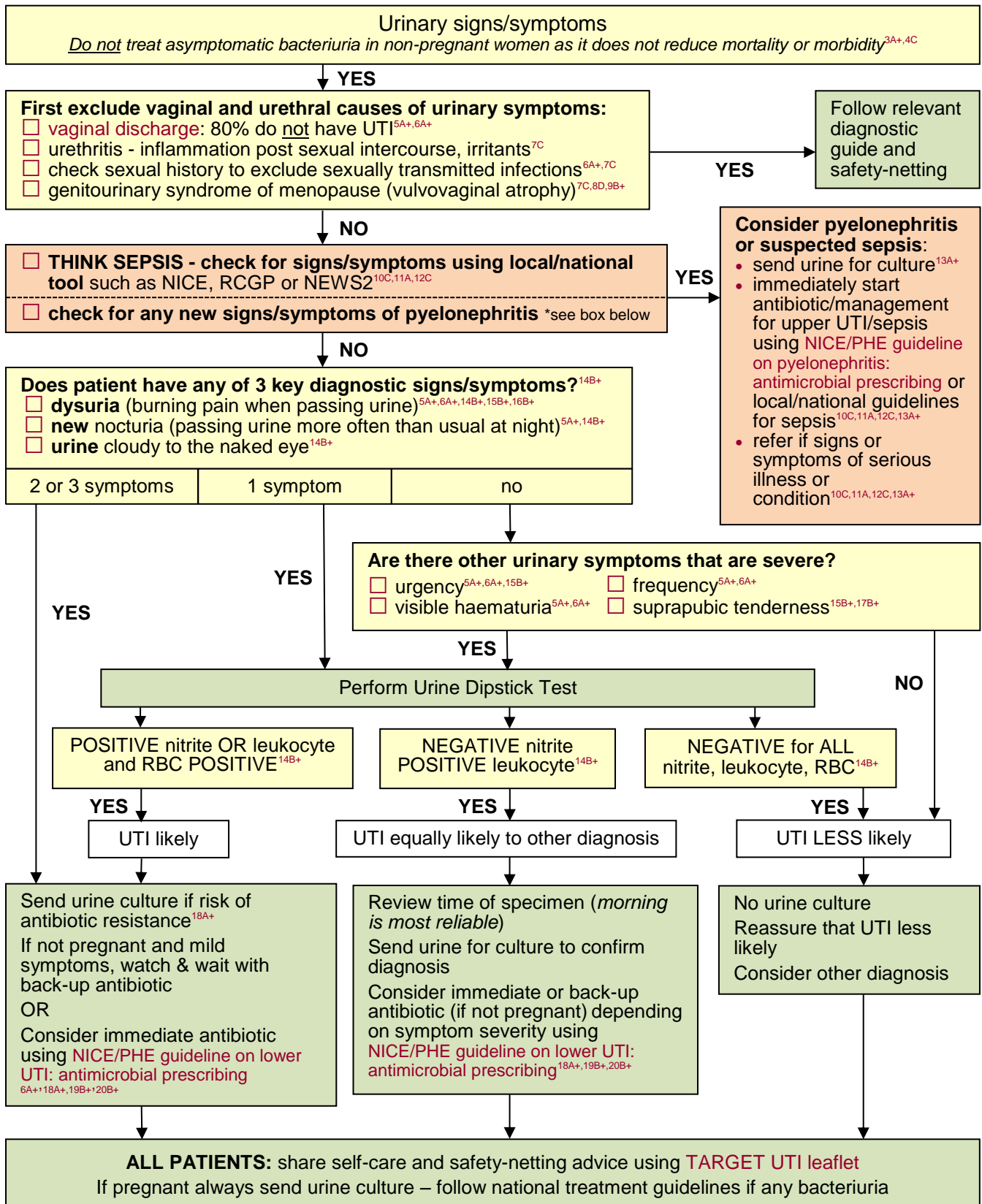


Flowchart for women (under 65 years) with suspected UTI

This guide excludes patients with recurrent UTI (2 episodes in last 6 months, or 3 episodes in last 12 months)^{1D,2D}



***Signs of pyelonephritis:**^{21C}

- kidney pain/tenderness in back under ribs
- new/different myalgia, flu like illness
- shaking chills (rigors) or temperature 37.9°C or above
- nausea/vomiting

Key:

Suspected sepsis alert	UTI symptom	Action advised	Other advice
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Table summary of diagnostic points for women under 65 years

Using symptoms and dipsticks to help diagnose UTI: 5A+,6A+,14B+,15B+,16B+,17B+ no individual or combination are completely reliable in diagnosing UTI, thus severity of symptoms and safety-netting are important in all

First exclude other genitourinary causes of urinary symptoms

- 75-80% with vaginal discharge will not have UTI^{15A+,6A+}
- in sexually active check sexual history for STIs for example chlamydia and gonorrhoea^{6A+,7C}
- urethritis - urinary symptoms may be due to urethral inflammation post sexual intercourse, irritants, or STIs^{7C}
- genitourinary symptoms of menopause/atrophic vaginitis/vaginal atrophy^{7C,8D,9B+}

In all, check for new signs of pyelonephritis, systemic infection, or risk of suspected sepsis ^{10C,11A,12C,13A+,21C}

If pyelonephritis or suspected sepsis: send urine for culture to inform definitive treatment and immediately start antibiotic using **NICE/PHE guideline on pyelonephritis: antimicrobial prescribing** or local/national guidelines for sepsis; refer if signs or symptoms of serious illness or condition^{10C,11A,12C,13A+}

In women <65yrs use signs/symptoms of dysuria, new nocturia or cloudy urine to guide treatment ^{14B+}

- 2 or more** of these 3 signs/symptoms in general practice are likely to have a UTI: consider immediate antibiotic, or back-up if mild symptoms and woman is not pregnant^{14B+,18A+}
- 1 sign/symptom:** UTI possible as 68% will have a culture confirmed UTI ($\geq 10^6$ cfu/L) therefore use urine dipstick to increase diagnostic certainty^{14B+}
- none** of the 3: UTI less likely - use urine dipstick if other severe urinary symptoms (frequency, urgency, haematuria, suprapubic tenderness)^{14B+}

Dysuria, new nocturia or cloudy urine present ^{14B+}	% of GP patients with suspected UTI presenting with these sign/symptoms ^{14B+}	% with these symptoms who have culture confirmed UTI ($\geq 10^6$ cfu/L) ^{14B+}	Suggested management
All 3	29%	82%	Consider immediate antibiotic OR back-up if mild symptoms and not pregnant ^{18A+}
≥ 2	71%	74%	
1	25%	68%	Use urine dipstick to increase diagnostic certainty ^{14B+}
None	4%	not specified	Use urine dipstick if other severe urinary symptoms

For antibiotic choice: use NICE/PHE guideline on lower UTI: antimicrobial prescribing; check history to determine resistance risk ^{18A+}

Using urine dipsticks to predict UTI in women <65 years with only 0 or 1 of dysuria, new nocturia, cloudy urine increases the diagnostic certainty, and reduces unnecessary antibiotics ^{14B+}

- positive nitrite OR positive leukocyte and blood: UTI likely^{14B+} - offer empirical antibiotics for lower UTI OR if milder symptoms (and not pregnant) consider back-up antibiotic with self-care and safety-netting^{6A+,18A+,19B+,20B+}
- leukocyte positive but nitrite negative: UTI equally likely to other diagnosis^{14B+} - review time of specimen (morning is best); send urine for culture; use back-up (if not pregnant) or immediate antibiotic depending on symptom severity^{18A+,19B+,20B+}
- ALL nitrite, leukocyte and blood negative: UTI Less likely - consider other diagnosis; reassure; give self-care and safety-netting advice^{14B+}

If pregnant: always send urine culture; follow **NICE/PHE guideline on lower UTI: antimicrobial prescribing** if any bacteriuria

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

For all patients 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