Flowchart for women (under 65 years) with suspected UTI

Excludes women with recurrent UTI (2 episodes in last 6 months, or 3 episodes in last 12 months) or urinary catheter.

Urinary signs/symptoms
Do not treat asymptomatic bacteriuria in non-pregnant women as it does not reduce mortality or morbidity.

First exclude vaginal and urethral causes of urinary symptoms:
- vaginal discharge: 80% do not have UTI
- urethritis - inflammation post sexual intercourse, irritants
- check sexual history to exclude sexually transmitted infections
- genitourinary syndrome of menopause (vulvovaginal atrophy)

Follow relevant diagnostic guide and safety-netting

Consider pyelonephritis or suspected sepsis:
- send urine for culture
- immediately start antibiotic/management for upper UTI/sepsis
- refer if signs or symptoms of serious illness or condition

Does patient have any of 3 key diagnostic signs/symptoms? (4B+)
- dysuria (burning pain when passing urine)
- new nocturia (passing urine more often than usual at night)
- urine cloudy to the naked eye

Are there other urinary symptoms that are severe?
- urgency
- visible haematuria
- frequency
- suprapubic tenderness

Perform Urine Dipstick Test

POSITIVE nitrite OR leukocyte and RBC POSITIVE (4B+).

UTI likely
Send urine culture if risk of antibiotic resistance.
If not pregnant and mild symptoms, watch & wait with back-up antibiotic.
OR
Consider immediate antibiotic using NICE/PHE guideline on lower UTI: antimicrobial prescribing.

NEGATIVE nitrite POSITIVE leukocyte (4B+).

UTI equally likely to other diagnosis
Review time of specimen (morning is most reliable)
Send urine for culture to confirm diagnosis
Consider immediate or back-up antibiotic (if not pregnant) depending on symptom severity using NICE/PHE guideline on lower UTI: antimicrobial prescribing.

NEGATIVE for ALL nitrite, leukocyte, RBC (4B+).

UTI LESS likely
No urine culture
Reassure that UTI less likely
Consider other diagnosis

ALL PATIENTS: share self-care and safety-netting advice using TARGET UTI leaflet
If pregnant always send urine culture – follow national treatment guidelines if any bacteriuria.

*Signs of pyelonephritis:
- 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

### Table summary of diagnostic points for women under 65 years
Excludes women with recurrent UTI (2 episodes in last 6 months or 3 episodes in last 12 months) or urinary catheter

#### Using symptoms and dipsticks to help diagnose UTI

- **First exclude other genitourinary causes of urinary symptoms**
  - 7S to 80% with vaginal discharge will not have UTI
  - In sexually active check sexual history for STIs for example chlamydia and gonorrhoea
  - Genitourinary symptoms of menopause/atrophic vaginitis/vaginal atrophy
- **In all, check for new signs of pyelonephritis, systemic infection, or risk of suspected sepsis**

#### Suggested management

<table>
<thead>
<tr>
<th>Dysuria, new nocturia or cloudy urine present</th>
<th>% of GP patients with suspected UTI presenting with these signs/symptoms</th>
<th>% with these symptoms who have culture confirmed UTI</th>
<th>Suggested management</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 3</td>
<td>29%</td>
<td>82%</td>
<td>Consider immediate antibiotic OR back-up if mild symptoms and not pregnant</td>
</tr>
<tr>
<td>≥2</td>
<td>71%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>25%</td>
<td>68%</td>
<td>Use urine dipstick to increase diagnostic certainty</td>
</tr>
<tr>
<td>None</td>
<td>4%</td>
<td>not specified</td>
<td>Use urine dipstick if other severe urinary symptoms</td>
</tr>
</tbody>
</table>

- **For antibiotic choice:** use NICE/PHE guideline on lower UTI: antimicrobial prescribing; check history to determine resistance risk
- **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**
  - Positive nitrite OR positive leukocyte and blood: UTI likely - offer empirical antibiotics for lower UTI OR if milder symptoms (and not pregnant) consider back-up antibiotic with self-care and safety-netting
  - Leukocyte positive but nitrite negative: UTI equally likely to other diagnosis - review time of specimen (morning is best); send urine for culture; use back-up (if not pregnant) or immediate antibiotic depending on symptom severity
  - All nitrite, leukocyte and blood negative: UTI Less likely - consider other diagnosis; reassure; give self-care and safety-netting advice

- **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

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NICE guidelines on UTI (lower): antimicrobial prescribing or NICE guidelines on pyelonephritis (acute): antimicrobial prescribing