

Diagnosis and Management of Acute UTI in Children

For use by healthcare professionals only



Clinical Assessment/Management tool for Children

Primary and Community Care Settings

| History | Examination: check for - | Consider Complications and Alternative diagnoses | Red Flags |
|---|---|--|--|
| <ul style="list-style-type: none"> • Fever • Vomiting • Poor feeding • Lethargy • Irritability • Abdominal pain/loin pain • Dysuria • Urinary Frequency or urgency • Offensive smelling urine • Haematuria <p>See Child with Fever page to assess risk of serious illness</p> | <ul style="list-style-type: none"> • Abdominal tenderness • Loin tenderness (pyelonephritis) • Abdominal mass • Palpable bladder - urinary retention • Exclude balanitis or vulvovaginitis | <ul style="list-style-type: none"> • Sepsis +/- meningitis (more common in infant under 3 months of age) • Gastroenteritis • Constipation • Appendicitis • GI obstruction | <ul style="list-style-type: none"> • Child < 3 months • Unwell/septic appearance • Known renal disease • Congenital renal abnormality • Previous renal scarring • Vesico Ureteric Reflux • Abdominal Mass • Poor urine output |

Obtaining a Urine
 In children over 3 months of age who appear well, if unable to obtain urine sample at time of initial review, send home with advice to return with urine sample within 6 hours
 Where suspected UTI in infant under 3 months of age, refer to paediatrics same day (do not delay referral if unable to obtain urine sample)

Urine Dipstick
 • Children less than 3 months where there are concerns about UTI should be referred to paediatrics

| | 3 months to 3 years | >3 years |
|--|---|---|
| Do not start an antibiotic treatment Both leukocyte esterase and nitrite are negative | Do not start antibiotic treatment Do not send urine for culture unless <ul style="list-style-type: none"> • does not correlate with clinical symptoms • recurrent infection • failure to respond to treatment | Do not send urine for culture Do not start antibiotic treatment Consider alternative diagnosis |
| Leukocyte esterase or nitrite, or both are positive | Send a urine sample for culture Start antibiotic treatment | Send urine sample for culture Start antibiotic treatment |
| If leukocyte esterase is positive and nitrite is negative | Send a urine sample for culture Start antibiotic treatment | Send urine sample for culture Only start antibiotic treatment if clinical significant signs of UTI Consider alternative diagnosis |
| If leukocyte esterase is negative and nitrite is positive | Send a urine sample for culture Start antibiotic treatment | Ensure sample was tested promptly Send urine sample to the lab for culture Start antibiotic treatment |

| Green Features | Amber Features | Red Features |
|---|---|---|
| <ul style="list-style-type: none"> • Appears well • Age > 3 months • See also febrile child | <ul style="list-style-type: none"> • Haemodynamically stable • Signs of pyelonephritis (vomiting, fever, loin pain, rigors) • Age >3 months | <ul style="list-style-type: none"> • Age < 3 months • Unwell/septic appearance • Underlying renal disease • Not able to tolerate antibiotics |

| Management | Management | Management |
|---|---|---|
| <ul style="list-style-type: none"> • Send urine sample for culture as per guidelines above • Start antibiotic treatment: <ul style="list-style-type: none"> ◆ Trimethoprim as per BNFC ◆ Cefalexin as per BNFC ◆ Local Policy or as culture results determine • Simple advice <ul style="list-style-type: none"> ◆ Analgesia ◆ Plenty of fluids • Treat any constipation see constipation page • Agree with parents follow up for results | <ul style="list-style-type: none"> • Send urine sample for culture • Start antibiotic treatment for UTI: <ul style="list-style-type: none"> ◆ Trimethoprim as per BNFC ◆ Cefalexin as per BNFC ◆ Local Policy or as culture results determine • If pyelonephritis likely and systemically well treat with <ul style="list-style-type: none"> ◆ Co-amoxiclav as per BNFC ◆ Cefalexin as per BNFC ◆ Local Policy or as culture results determine 7 days treatment see Antimicrobial-Paediatric-Summary-UKPAS.pdf (uk-pas.co.uk) • Simple advice <ul style="list-style-type: none"> ◆ Analgesia ◆ Plenty of fluids • Safety net advice about when to return | <ul style="list-style-type: none"> • Send urine sample for culture • Send to local paediatric department for assessment |

For an overview of investigations/follow up after a UTI, please refer to the [Investigation and Management following a UTI pathway](#)