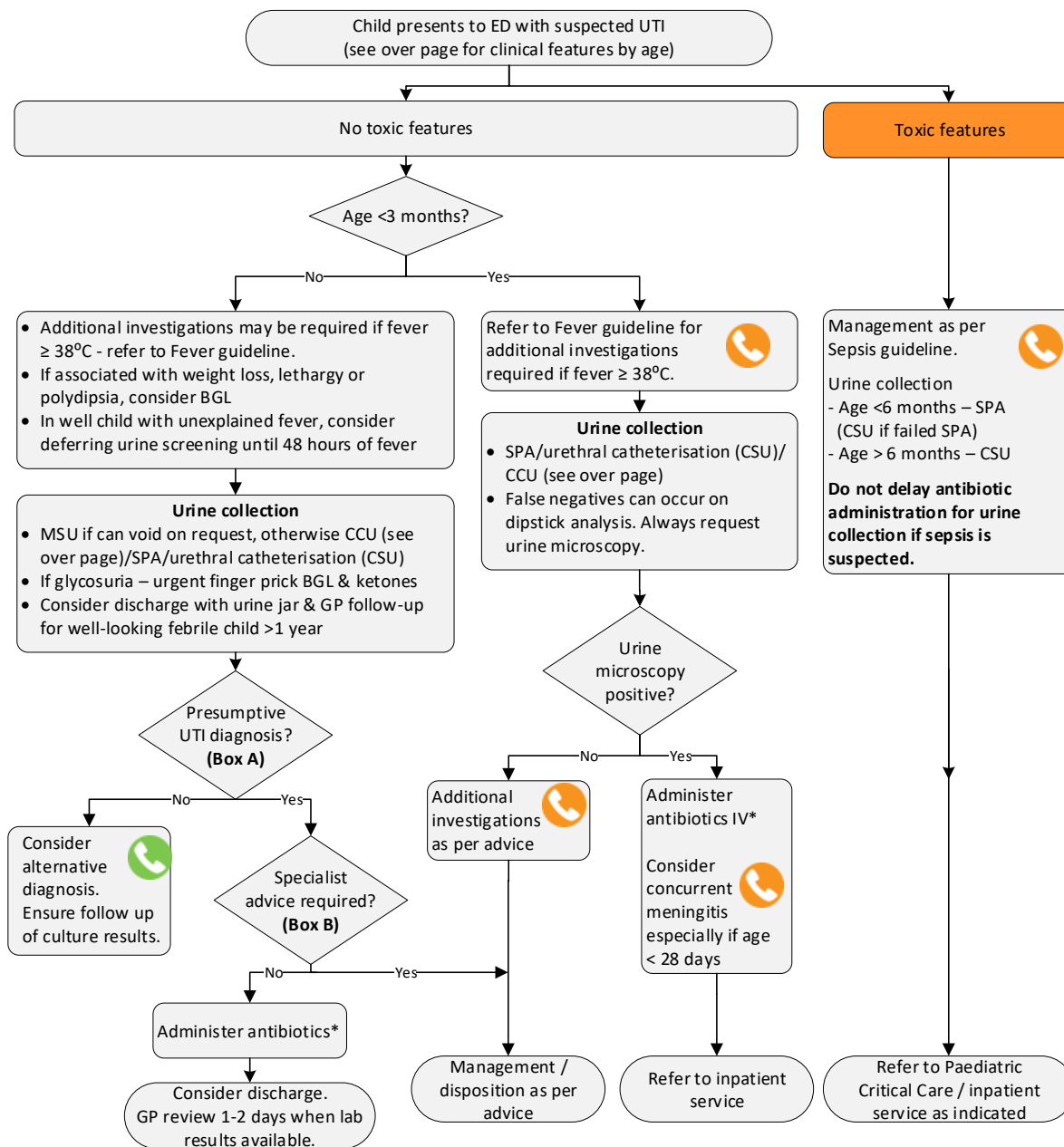


Urinary tract infection – Emergency management in children – Flowchart



Box A: Criteria for presumptive UTI diagnosis

- Both the leucocyte esterase and nitrite tests are positive on dipstick (in child aged over 3 months)

OR

- White cells and/or bacteria are seen on urine microscopy (in child of any age)

See over page for interpretation of dipstick testing

Box B: Children requiring specialist advice

Seek senior emergency / paediatric advice as per local practice if:

- Suspect pyelonephritis / peri-nephric abscess (consider bloods, USS)

Contact the child's general paediatrician as per local practice if:

- Known renal tract anomalies
- Catheter (due to potential for colonisation not infection)
- On prophylactic antibiotics (as influences antibiotic choice)

*Follow local empirical antibiotic guidelines if in Townsville, Cairns or Gold Coast HHSs else refer to CHQ Antibiocard. Oral route preferred in child ≥ 3 months if well.

Consider seeking senior emergency/paediatric advice as per local practices

Seek senior emergency/paediatric advice as per local practices

Clinical features of a UTI by age (listed in order of decreasing frequency)

Aged <3 months	Child aged ≥3 months and <3 years	Aged ≥3 years
Fever Vomiting Lethargy Irritability Poor feeding Failure to thrive Abdominal pain Jaundice Haematuria Offensive urine	Fever Abdominal pain Loin tenderness Vomiting Poor feeding Lethargy Irritability Haematuria Offensive urine Failure to thrive	Frequency Dysuria Dysfunctional voiding Changes to continence Abdominal pain Loin tenderness Fever Malaise Vomiting Haematuria Offensive urine Cloudy urine

Clean catch urine specimen

High false positive rate if poor collection technique.

The collector should be advised:

- to wash the child's perineum prior to collection with saline soaked gauze
- the inside of the clean/sterile container used for collection should not be contaminated by touching the collector's or the child's skin

Refer to [How to collect a clean urine specimen Factsheet](#)

Urine dipstick testing interpretation

Leucocytes	Nitrites	Send for M/C/S	Likelihood of UTI
Positive	Positive	Y	Likely
Negative	Positive	Y	Possible
Positive	Negative	Y	Possible
Negative	Negative	Only if age <3 months	Unlikely (unless aged <3 months)

Considerations

- Not all urinary organisms produce nitrites, so the absence of nitrites does not exclude UTI.
- Urine has to be present in the bladder for enough time for the reaction to occur – non-toilet trained child may have a false negative due to more frequent bladder emptying.
- White cells may come from other anatomically related areas e.g. appendicitis.
- The presence of blood or protein on dipstick testing is not a reliable marker of UTI.
- Dipstick analysis is less reliable in neonates and young infants with the risk of falsely negative testing.

For more information refer to [CHQ-GDL-60026 Urinary tract infection – Emergency management in children](#)

