

Fever Pathway

Clinical Assessment / Management Tool for Children



Management - Combined Acute and Primary Care

Patient presents with or has a history of fever Temp $\geq 38^{\circ}$

Do the symptoms and/or signs suggest an immediately life threatening (high risk) illness?

Yes

- Refer immediately to emergency care by 999
- Alert Paediatrician
- Stay with child whilst waiting and prepare documentation

No

Is the child older or younger than 3 months of age?

Younger

Older

Table 1

Clinical Findings	Green - low risk	Amber - intermediate risk	Red - high risk
Colour	• Normal colour of skin, lips and tongue	• Pallor reported by parent/carer	• Pale/mottled/ashen/blue
Activity	• Responds normally to social cues • Content / smiles • Stays awake or awakens quickly • Strong normal cry / not crying	• Reduced response to social cues • Wakes only with prolonged stimulation • Decreased activity • No smile • Poor feeding in infants	• No response to social cues • Unable to rouse or if roused does not stay awake • Weak, high pitched or continuous cry • Appears ill to a healthcare professional
Respiratory	• None of the amber or red symptoms or signs	• Nasal flaring • Tachypnoea: RR 40-50 if 1-5 years; RR 25-30 if 6-11 years; RR 20-25 if ≥ 12 years • Oxygen saturation $\leq 95\%$ in air • Crackles	• Grunting • Tachypnoea: RR >60 breaths/min if aged <12 months; RR >50 if 1-5 years; RR >30 if 6-11 years; RR >25 if ≥ 12 years • Moderate or severe chest indrawing
Circulation and Hydration	• Normal skin and eyes	• Tachycardia: HR > 160 beats/min if age < 1 yr; HR > 150 beats/min if age 1 - 2 years; HR > 140 beats/min if age 3 - 5 years; HR > 120 beats/min if 6-11 years; HR >100 beats/min if age >12 years • Dry mucous membranes • Reduced urine output • Central refill 2-3 seconds	• Reduced skin turgor • Capillary refill >3 seconds
Other	• None of the amber or red symptoms or signs	• Fever for ≥ 5 days • Swelling of a limb or joint • Non-weight bearing / not using an extremity • A new lump ≥ 2 cm • Age 3-6 months temp $\geq 39^{\circ}\text{C}$ (102.2°F) with no clear focus of infection • Additional parental/carer support required? • Recent return from malaria endemic area in preceding 3 months	• Bulging fontanelle • Neck stiffness • Focal seizures • Sustained tachycardia • Non-blanching rash • Focal neurological signs • Bile-stained vomiting • Age 0-3 months with axillary temp $\geq 38^{\circ}\text{C}$ (100.4°F) - note children under 1 month of age at highest risk of sepsis/ meningitis. If 1-3 months of age with fever within 48 hours of Men B vaccine and clinically well, consider safety netting • Limb pain

Green Action

Perform:

- Assess for focus of infection - If no focus in child under 5 years of age, consider clean catch urine specimen to evaluate for urinary tract infection.

Provide advice to send home

Provide the parent/carer with [fever](#) parent advice sheet and advise on signs, symptoms and changes - signpost the parent/carer where to go, should things change.

Amber Action

If no source of fever in child under 5 years of age, obtain clean catch urine specimen to evaluate for urinary tract infection. Seek advice/review from Paediatrician, particularly if clinical concern. Agree plan with parents.

Management Plan

If clear source of fever and child appears well:

- Provide the parent/carer with [fever](#) parent advice sheet and advise on signs, symptoms and changes - signpost the parent/carer where to go, should things change
- Arrange any required follow up or review
- Send any relevant documentation to the provider of follow up or review

Refer

Urgent Action

Refer immediately to emergency care – consider 999
[Alert Paediatrician](#)
Commence relevant treatment to stabilise child for transfer
Send relevant documentation

Hospital Emergency Department / Paediatric Unit

GMC Best Practice recommends: Record your findings (See "Good Medical Practice")



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Table 2

Age	Guide weight (kg)	RR At rest Breaths per minute 5 th - 95 th centile	HR Beats per minute 5 th -95 th centile	BP systolic		
				5 th centile	50 th centile	95 th centile
Birth	3.5	25-50	120-170	65-75	80-90	105
1 month	4	25-50	120-170	65-75	80-90	105
3 months	5	25-45	115-160	65-75	80-90	105
6 months	8	20-40	110-160	65-75	80-90	105
12 months	10	20-40	110-160	70-75	85-95	105
2 years	12	20-30	100-150	70-80	85-100	110
3 years	14	20-30	90-140	70-80	85-100	110
4 years	16	20-30	80-135	80-90	85-100	110
5 years	18	20-30	80-135	80-90	90-110	110-120
6 years	20	20-30	80-130	80-90	90-110	110-120
7 years	23	20-30	80-130	80-90	90-110	110-120
8 years	24	15-25	70-120	80-90	90-110	110-120
9 years	28	15-25	70-120	80-90	90-110	110-120
10 years	30	15-25	70-120	80-90	90-110	110-120
11 years	35	15-25	70-120	80-90	90-110	110-120
12 years	40	12-24	65-115	90-105	100-120	125-140
14 years	50	12-24	60-110	90-105	100-120	125-140
Adult	70	12-24	60-110	90-105	100-120	125-140

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Diagnoses to be considered	Symptoms and signs in conjunction with fever
Meningococcal septicaemia	<p>Non blanching rash (this may not be the first sign), particularly with one or more of the following:</p> <ul style="list-style-type: none"> •An ill-looking child •Lesions larger than 2mm in diameter (purpura)
Meningitis¹	<ul style="list-style-type: none"> •CRT ≥3 secs •Neck stiffness •Limb pain⁴ •Decreased level of consciousness •Convulsive status epilepticus •Cold extremities
Herpes simplex encephalitis	<ul style="list-style-type: none"> •Focal neurological signs •Focal seizures •Decreased level of consciousness
Pneumonia	<p>Tachypnoea, measured as:</p> <ul style="list-style-type: none"> •0 – 5 mths - RR >60 breaths/min •6 – 12 mths - RR >50 breaths/min •>12 mths - RR >40 breaths/min <ul style="list-style-type: none"> •Crackles in the chest •Nasal flaring •Chest recession •Cyanosis •Oxygen saturation ≤95%
Urinary tract infection (in children aged older than 3 months)²	<ul style="list-style-type: none"> •Vomiting •Abdominal pain or tenderness •Lethargy •Urinary frequency or dysuria •Irritability •Offensive urine, haematuria •Poor feeding
Septic arthritis/osteomyelitis	<ul style="list-style-type: none"> •Swelling of a limb or joint •Non-weight bearing •Not using an extremity
Kawasaki disease³	<p>Fever lasting longer than 5 days and at least 4 of the following:</p> <ul style="list-style-type: none"> •Bilateral conjunctival injection •Change in upper respiratory tract mucous membranes (e.g. injected pharynx, dry cracked lips or strawberry tongue) •Change in the peripheral extremities (e.g. oedema, erythema or desquamation) •Polymorphous rash •Cervical lymphadenopathy

1. Classical sign (neck stiffness, bulging fontanelle, high pitched cry) are often absent in infants with bacterial meningitis
2. Urinary tract infection should be considered in any child aged younger than 3 months with fever (See urinary tract infection in Children, NICE clinical guideline CG054, August 2007)
3. Note: in rare cases, incomplete / atypical Kawasaki disease may be diagnosed with fewer features.
4. Thompson MJ, Ninis N, Perera R, et al. Clinical recognition of meningococcal disease in children and adolescents. Lancet. 2006; 367 (9508): 397-403.

Glossary of Terms	
ABC	Airways, Breathing, Circulation
APLS	Advanced Paediatric Life Support
AVPU	Alert Voice Pain Unresponsive
B/P	Blood Pressure
CPD	Continuous Professional Development
CRT	Capillary Refill Time
ED	Hospital Emergency Department
GCS	Glasgow Coma Scale
HR	Heart Rate
MOI	Mechanism of Injury
PEWS	Paediatric Early Warning Score
RR	Respiratory Rate
WBC	White Blood Cell Count