

APPENDIX 1. Fever – the Traffic Light System

Traffic light system for identifying risk of serious illness*

	Green – low risk	Amber – intermediate risk	Red – high risk
Colour (of skin, lips or tongue)	Normal colour	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	- Not responding normally to social cues - No smile - Wakes only with prolonged stimulation - Decreased activity	- No response to social cues - Appears ill to a healthcare professional - Does not wake or if roused does not stay awake - Weak, high-pitched or continuous cry
Respiratory		- Nasal flaring - Tachypnoea: - RR >50 breaths/minute, age 6–12 months - RR >40 breaths/minute, age >12 months - Oxygen saturation ≤95% in air - Crackles in the chest	- Grunting - Tachypnoea: RR >60 breaths/minute - Moderate or severe chest indrawing
Circulation and hydration	- Normal skin and eyes - Moist mucous membranes	- Tachycardia: >160 beats/minute, age <12 months >150 beats/minute, age 12–24 months >140 beats/minute, age 2–5 years - CRT ≥3 seconds - Dry mucous membranes - Poor feeding in infants - Reduced urine output	Reduced skin turgor
Other	None of the amber or red symptoms or signs	- Age 3–6 months, temperature ≥39°C - Fever for ≥5 days - Rigors - Swelling of a limb or joint - Non-weight bearing limb/not using an extremity	- Age <3 months, temperature ≥38°C - Non-blanching rash - Bulging fontanelle - Neck stiffness - Status epilepticus - Focal neurological signs - Focal seizures
CRT, capillary refill time; RR, respiratory rate			
* This traffic light table should be used in conjunction with the recommendations in the guideline on investigations and initial management in children with fever. See http://guidance.nice.org.uk/CG160 (update of NICE clinical guideline 47).			

Normal Paediatric Vital Signs

Age	Pulse	Respirations	Systolic BP
<1 year	110-160	30-40	70-90
1-2 years	100-150	25-35	80-95
2-5 years	95-140	25-30	80-100
5-12 years	80-120	20-25	90-110
over 12 years	60-100	15-20	100-120

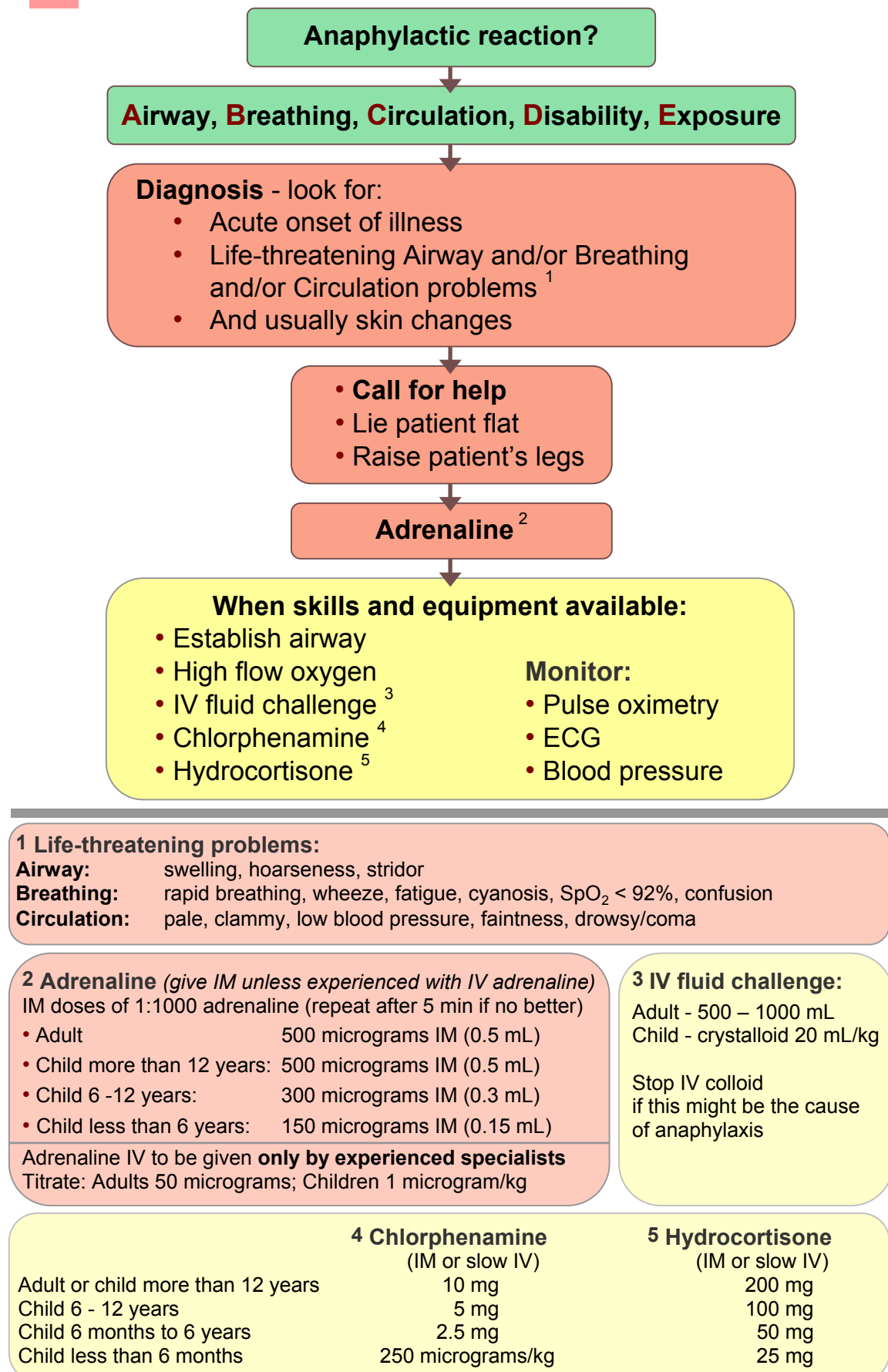


Figure 3. Anaphylaxis algorithm

High risk criteria

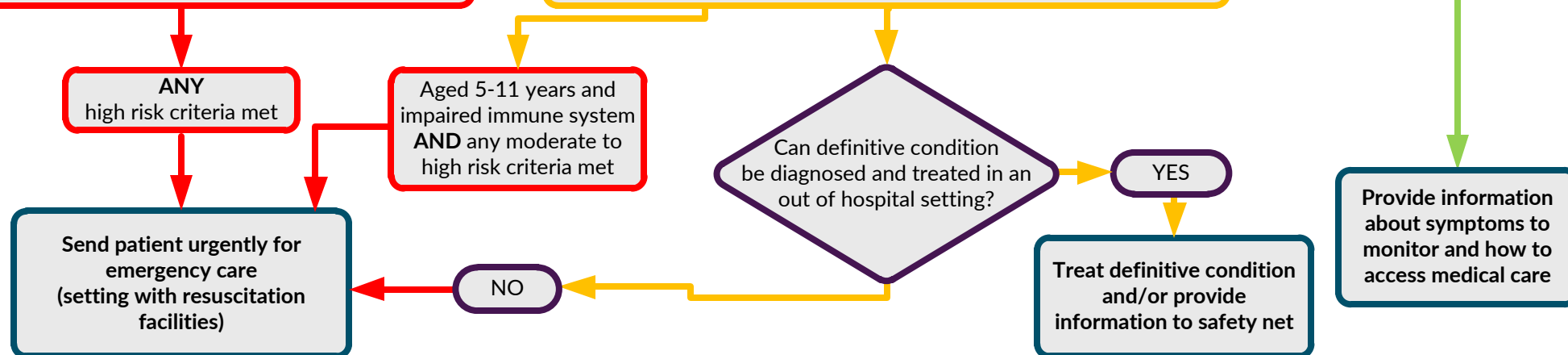
- Behaviour:
 - objective evidence of altered behaviour or mental state
 - appears ill to a healthcare professional
 - does not wake, or if roused does not stay awake
- Respiratory rate:
 - aged 5 years: 29 breaths per minute or more
 - aged 6–7 years: 27 breaths per minute or more
 - aged 8–11 years: 25 breaths per minute or more
 - oxygen saturation of less than 90% in air or increased oxygen requirement over baseline
- Heart rate:
 - aged 5 years: 130 beats per minute or more
 - aged 6–7 years: 120 beats per minute or more
 - aged 8–11 years: 115 beats per minute or more
- Mottled or ashen appearance
- Cyanosis of skin, lips or tongue
- Non-blanching rash of skin

Moderate to high risk criteria

- Behaviour:
 - not responding normally to social cues
 - decreased activity
 - parent or carer concern that child is behaving differently from usual
- Respiratory rate:
 - aged 5 years: 24–28 breaths per minute
 - aged 6–7 years: 24–26 breaths per minute
 - aged 8–11 years: 22–24 breaths per minute
 - oxygen saturation less than 92% in air or increased oxygen requirement over baseline
- Heart rate:
 - aged 5 years: 120–129 beats per minute
 - aged 6–7 years: 110–119 beats per minute
 - aged 8–11 years: 105–114 beats per minute
- Capillary refill time of 3 seconds or more
- Reduced urine output, or for catheterised patients passed less than 1 ml/kg of urine per hour
- Tympanic temperature less than 36°C
- Leg pain
- Cold hands or feet

Low risk criteria

- Normal behaviour
- No high risk or moderate to high risk criteria met



Appendix 4

Differential diagnoses to consider in children presenting with viral induced wheeze:

Pneumonia & other pulmonary infections, including mycoplasma & pertussis – listen for focal crackles, a productive cough, and these patients will usually have a fever, in addition to cough & tachypnoea. Consider viral, bacterial, chlamydial or mycoplasma pneumonia. This is a common alternative diagnosis for bronchiolitis.

Bronchiolitis presents with several days of upper respiratory tract symptoms, including fever, rhinorrhoea and coryza. These develop into wheeze, tachypnea, increased work of breathing, a moist cough and fevers. The increased work of breathing often leads to decreased oral intake, with or without dehydration.

Auscultation of the lungs may reveal a wheeze and transmitted upper airway sounds. A focal zone with decreased air entry or coarse crackles are more consistent with pneumonia. It is well described that a typical course of bronchiolitis lasts 7-10 days, with night 2-3 being the most severe. A cough may last for up to four weeks.

Meningitis should always be considered. Although it's hard to find case reports in the medical literature, unfortunately the lay press has many examples of this being mis-diagnosed.

Foreign body aspiration is characterised by rapid onset and failure of initial management. May have a low-grade fever. Have a high index of suspicion in young children. Aspiration pneumonia occurs if there is poor airway protection, including spastic cerebral palsy, or in any child having seizures or convulsions.

Croup usually has stridor rather than a wheeze, and with a similar gamut of causative organisms. Croup can present with a wheeze in a child with a history of bronchospasm.

Gastro-oesophageal reflux. 40-50% of infants with GORD present with wheeze or respiratory symptoms. There is also an association with chronic cough.

Asthma an acute exacerbation is less likely to have fevers, and will often have a personal history of atopy or allergy, or a family history of asthma. It would be rare to diagnose a child under two with asthma at a first presentation to hospital with a wheeze.

Chronic pulmonary disease. Chronic neonatal lung disease or prematurity predisposes the child to respiratory infections.

Mediastinal masses, tracheoesophageal fistula, and vascular rings are rarities but all primary care teams will have seen rarities like this – consider if recovery does not seem to occur, as expected.

Congenital heart disease & heart failure should be considered in any neonate presenting with increased work of breathing, with or without apnoeas. These patients will look unwell, with a constellation of symptoms including disproportionate tachycardia, poor perfusion with or without cyanosis, weak femoral pulses & murmurs.