



GIG
CYMRU
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Addysg a Gwella Iechyd
Cymru (AaGIC)
Health Education and
Improvement Wales (HEIW)

DENTAL POSTGRADUATE SECTION

MEDICAL EMERGENCIES IN THE DENTAL PRACTICE

FLOWCHARTS

ANAPHYLAXIS

Anaphylaxis

Anaphylaxis?

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure

Diagnosis – look for:

- Sudden onset of Airway and/or Breathing and/or Circulation problems¹
- And usually skin changes (e.g. itchy rash)

Call for HELP

Call resuscitation team or ambulance

- Remove trigger if possible (e.g. stop any infusion)
- Lie patient flat (with or without legs elevated)
 - A sitting position may make breathing easier
 - If pregnant, lie on left side



Inject at anterolateral aspect – middle third of the thigh



Give intramuscular (IM) adrenaline²

- Establish airway
- Give high flow oxygen
- Apply monitoring: pulse oximetry, ECG, blood pressure

If no response:

- Repeat IM adrenaline after 5 minutes
- IV fluid bolus³

If no improvement in Breathing or Circulation problems¹ despite TWO doses of IM adrenaline:

- Confirm resuscitation team or ambulance has been called
- Follow REFRACTORY ANAPHYLAXIS ALGORITHM

1. Life-threatening problems

Airway

Hoarse voice, stridor

Breathing

↑work of breathing, wheeze, fatigue, cyanosis, SpO₂ <94%

Circulation

Low blood pressure, signs of shock, confusion, reduced consciousness

2. Intramuscular (IM) adrenaline

Use adrenaline at 1 mg/mL (1:1000) concentration

Adult and child >12 years: 500 micrograms IM (0.5 mL)

Child 6–12 years: 300 micrograms IM (0.3 mL)

Child 6 months to 6 years: 150 micrograms IM (0.15 mL)

Child <6 months: 100–150 micrograms IM (0.1–0.15 mL)

The above doses are for IM injection **only**. Intravenous adrenaline for anaphylaxis to be given **only by experienced specialists** in an appropriate setting.

3. IV fluid challenge

Use crystalloid

Adults: 500–1000 mL

Children: 10 mL/kg

ASTHMA

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure



Diagnosis – Look for:

- Breathlessness
- Expiratory Wheeze
- History of Asthma



Severe Asthma

- Inability to complete sentences in one breath
- Respiratory rate >25 per/min
- Tachycardia heart rate >110 per/min



Life Threatening

- Cyanosis or respiratory rate <8 per minute
- Bradycardia heart rate <50 per/min
- Exhaustion, confusion, decreased conscious level



Call for HELP

Call colleagues, clinical staff and 999



Management

Encourage patient to sit upright.

Assist with Salbutamol Inhaler 100 micrograms/puff
(2-10 puffs repeated every 10-20 minutes if required)

Oxygen 15 litres per/min as required

Apply pulse oximetry (if available)

DRUGS: SALBUTOMAOL INHALER via SPACER DEVICE

CARDIAC EMERGENCIES

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure

Diagnosis – Look for:

- History of heart disease
- Pale and clammy
- Nausea and Vomiting
- Weak Pulse
- Drop in blood pressure
- Breathlessness
- Chest pain or discomfort



Call for HELP

Call colleagues, clinical staff and 999



Management

- Comfortable position (Sitting up if possible)

Known Angina

- Encourage patient to take prescribed GTN
- If no relief repeat GTN, if still no relief consider heart attack

Heart Attack

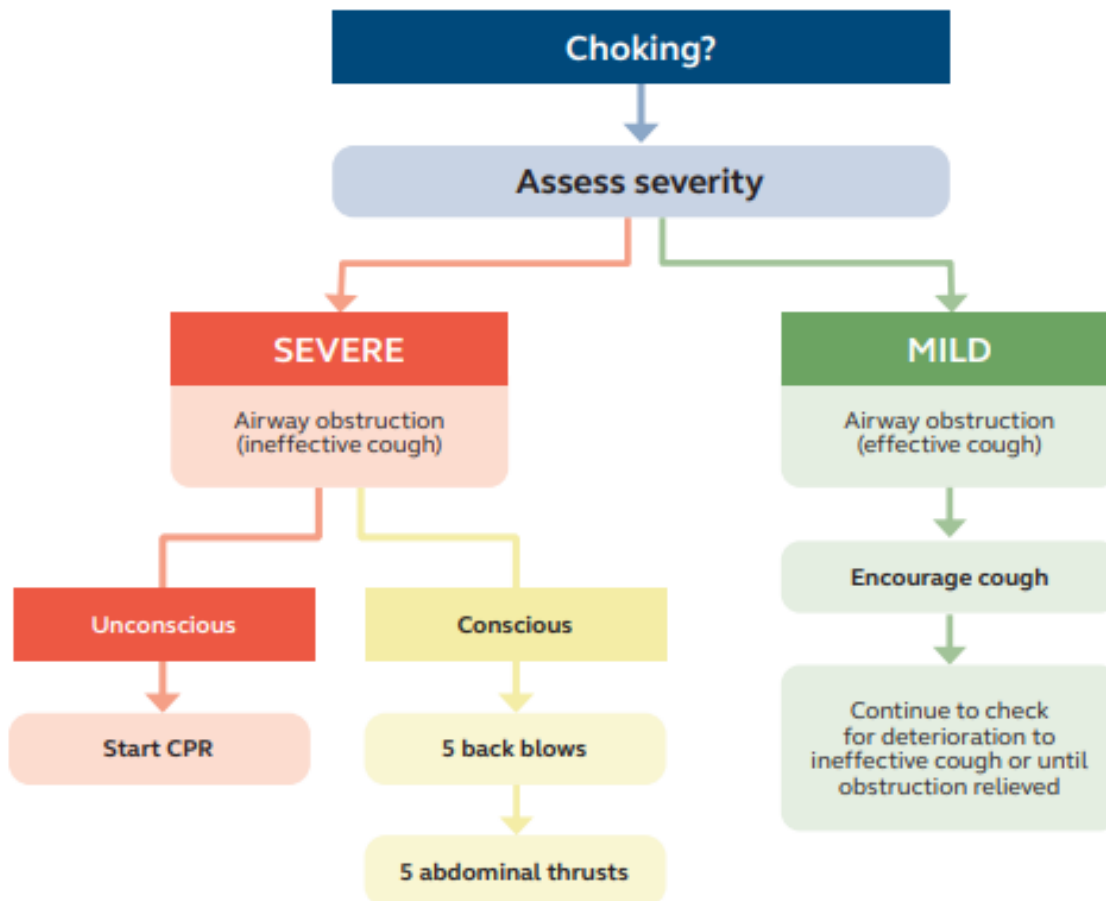
- **GTN Spray 1-2 (400 micrograms) sublingual.**
- Dispersible **Aspirin 300mg** “to be chewed” (Unless known allergy).
- High Flow Oxygen if cyanosed or reduced level of consciousness
- Apply pulse oximetry if available.

DRUGS: GTN SPRAY 400mcg and ASPIRIN 300mg (Dispersible)

ADULT CHOKING

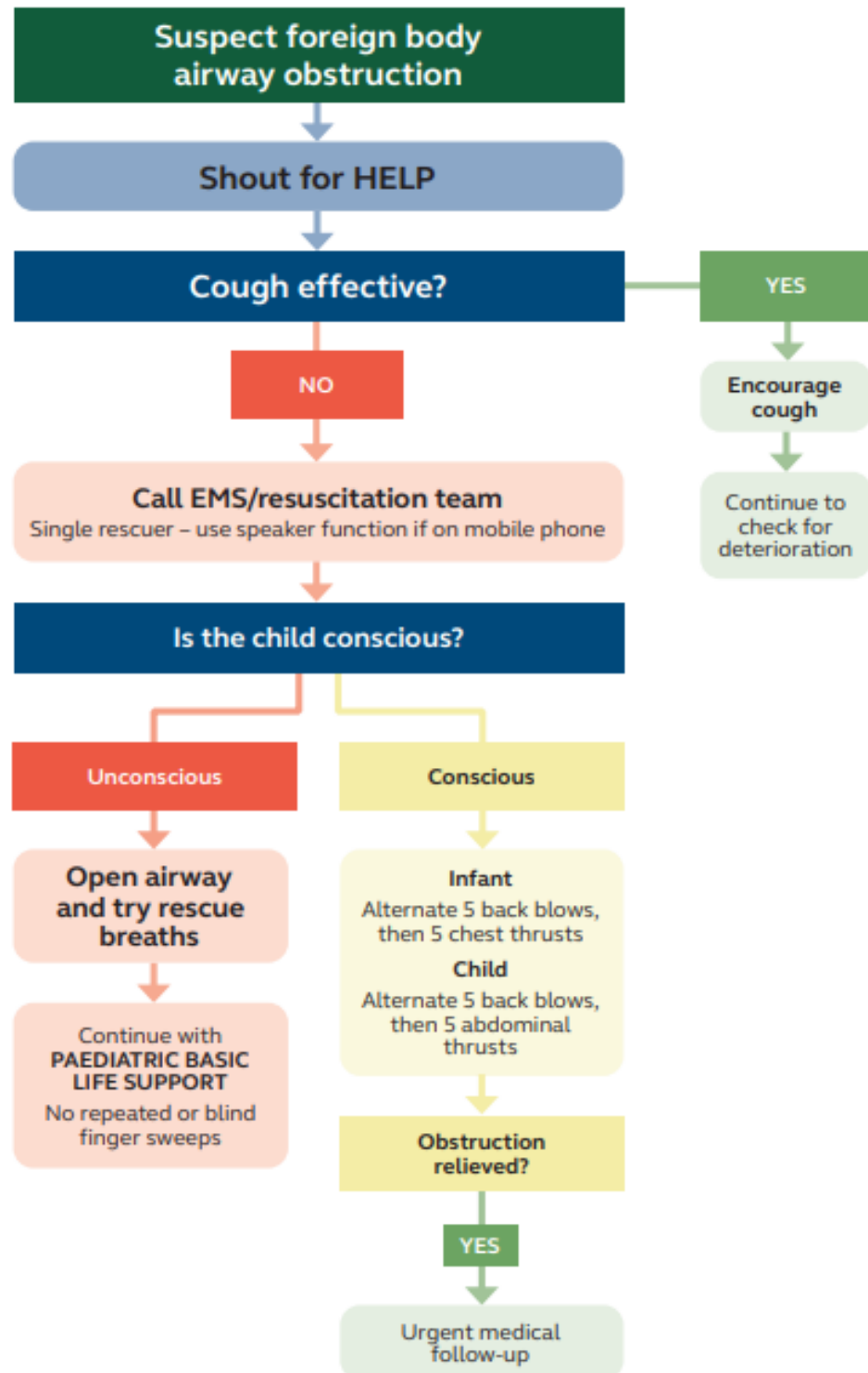


Adult choking



PAEDIATRIC CHOKING

Paediatric foreign body airway obstruction



EPILEPTIC SEIZURES

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure

Diagnosis – Look for:

- History of seizures
- Sudden loss of consciousness
- Rigid with jerking movements of limbs
- Cyanosis (Blue skin)
- Frothing from mouth
- Incontinence
- Noisy breathing



Call for HELP

Call colleagues and clinical staff



Management

- Protect patient from further injury
- Do not restrain or attempt to force anything into the mouth
- Record time of seizure
- Once seizure stops place in recovery position
- Follow patient treatment plan if available
- Give high flow oxygen if required
- Apply pulse oximetry if available



Prolonged Seizure (5 minutes or more) or repeated seizures (3 or more in one hour)

Midazolam Oromucosal Solution via the Buccal Route -

- **Adult and child 10 to 18 years: 10 mg**
- **Child 5 to 9 years: 7.5 mg**
- **Child 1 to 4 years: 5.0 mg**



Call 999

DRUGS: Midazolam Oromucosal Solution

HYPOGLYCAEMIA (LOW BLOOD SUGAR)

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure



Diagnosis – Look for:

- History of diabetes
- Shaking and Trembling
- Slurred speech and vagueness
- Sweating and pallor
- Blurred vision
- Tiredness/Lethargy
- Confusion/Aggression
- Stropy/Moody
- Unconsciousness

If able measure blood sugar to confirm diagnosis



Call for HELP

Call colleagues and clinical staff



Management

- Offer 15-20g quick acting carbohydrate (oral glucose)
4-5 glucose tabs or 1.5 - 2 tubes glucose 40% oral gel.

Repeat after 15 mins if required.

Impaired consciousness or unable to swallow safely

- Recovery position

Administer Glucagon -

- Adult/child (8 years and above): 1.0mg
- Child (<8 years): 0.5mg



Call 999 if required

DRUGS: Dextrose & Glucagon (Usually refrigerated)

SYNCOPE (FAINTING)

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure

Diagnosis – Look for:

- Patient feels faint / dizzy / lightheaded
- Loss of consciousness
- Slow pulse rate
- Pallor and sweating
- Nausea and vomiting
- May present with seizure like movements

Call for HELP

Call colleagues and clinical staff

Management

- Lay patient flat as soon as possible (*for pregnant patients use left lateral tilt*)
- Raise legs to improve venous return
- Loosen any tight clothing, especially around the neck
- Apply pulse oximetry if available

If delayed recovery, consider alternative diagnosis

Avoid raising patient too quickly to avoid syncope

Call 999 if required

DRUGS: None

STROKE

A = Airway **B** = Breathing **C** = Circulation **D** = Disability **E** = Exposure



Diagnosis – Look for:

FACE	Can the person smile? Has their face fallen on one side?
ARMS	Can the person raise both arms and keep them there?
SPEECH	Can the person speak clearly and understand what you say? Is their speech slurred?
TIME	If you see any of these signs call 999



Call for HELP

Call colleagues and clinical staff



Management

- Support respiration if required
- Keep patient comfortable and warm
- Continue to monitor ABCD
- High Flow Oxygen if cyanosed or reduced level of consciousness
- Apply pulse oximetry if available

Act **FAST** and call 999.



Facial
weakness



Arm
weakness



Speech
problems



Time
to call 999

DRUGS: None

SEPSIS

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Diagnosis – Look for:

(UK Sepsis Trust)

CHILDREN

A child may have sepsis if he or she:

- Is breathing very fast
- Has a 'fit' or convulsion
- Looks mottled, bluish, or pale
- Has a rash that does not fade when you press it
- Is very lethargic or difficult to wake
- Feels abnormally cold to touch

ADULTS

An adult may have sepsis if they show any of these signs:

- S**lurred speech or confusion
- E**xtrême shivering or muscle pain
- P**assing no urine (in a day)
- S**evere breathlessness
- I**t feels like you're going to die
- S**kin mottled or discoloured



Call for HELP

Call colleagues, clinical staff and 999



Management

- Keep patient comfortable and warm
- Continue to monitor ABCDE
- High Flow Oxygen if cyanosed
- Apply pulse oximetry if available

DRUGS: None