



**GIG**  
CYMRU  
**NHS**  
WALES

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

## **DENTAL POSTGRADUATE SECTION**

# **MEDICAL EMERGENCIES IN THE DENTAL PRACTICE**

*FLOWCHARTS*

\*\*These flowcharts were originally composed by the Resuscitation Department in Cwm Taf LHB and have been updated and ratified by the Dental Postgraduate, HEIW Resuscitation Officer Advisory Group, August 2019\*\*

# ANAPHYLAXIS

History suggests  
Anaphylactic reaction?

YES

NO

SIGNS and SYMPTOMS  
SUGGESTS  
Anaphylactic reaction?

Observe  
A.B.C.D.E Approach  
Oxygen  
999 if in doubt

YES

- \* ABCDE approach
- \* Call for help
- \* Lie patient flat
- \* Raise patient's legs  
(if breathing not impaired)

NO

999

For Severe reactions i.e collapsed, semi-conscious, or those with severe bronchospasm and widespread rash, adrenaline should be given INTRAMUSCULARLY (Upper outer arm or outer thigh)

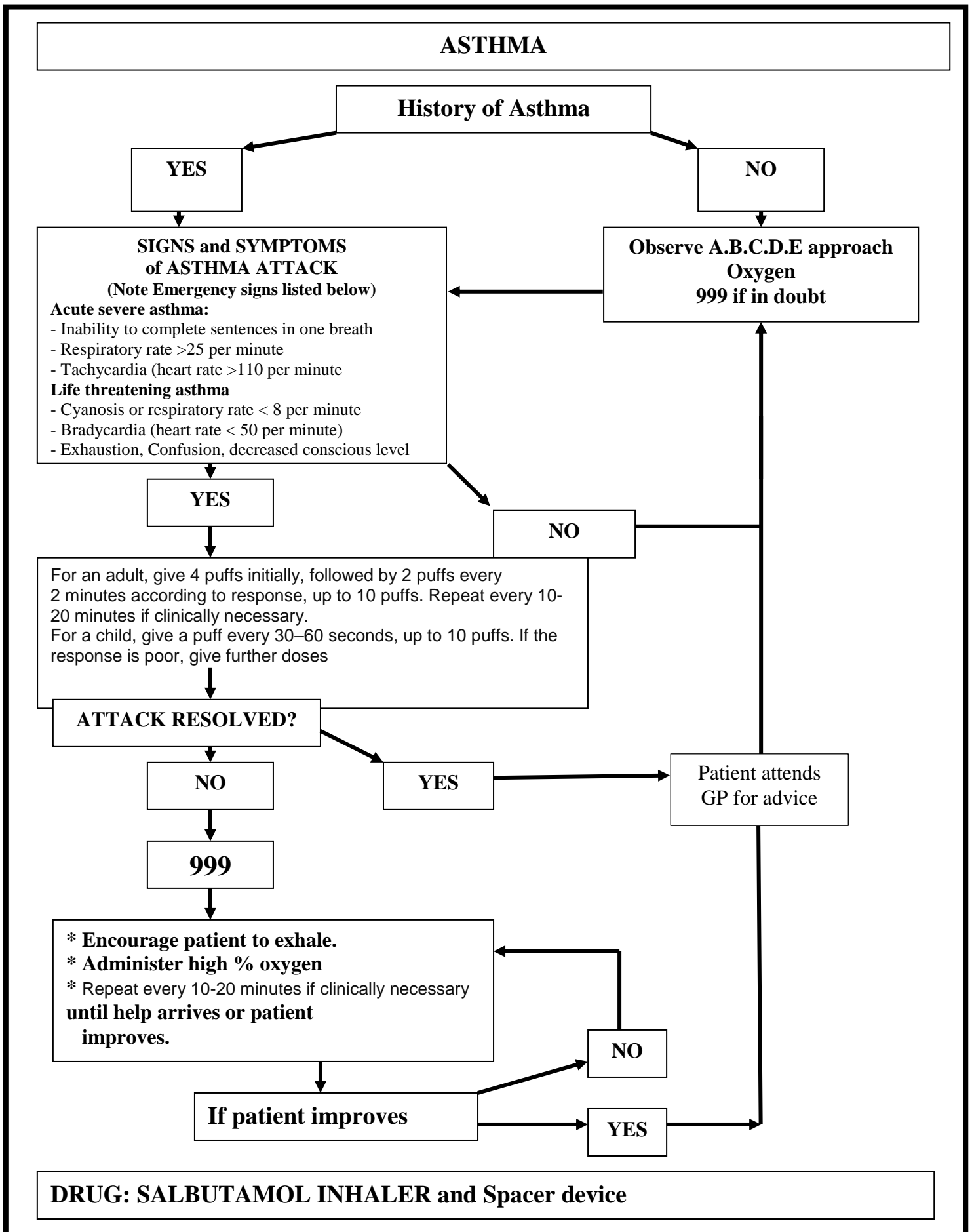
Epinephrine (adrenaline) 1:1.000 IM

Dose: Adult	500 micrograms IM (0.5ml)
Child more than 12 years	500 micrograms IM (0.5ml)
Child 6 – 12 years	300 micrograms IM (0.3ml)
Child less than 6 years	150 micrograms IM (0.15ml)

May be repeated at 5 minutes if required if there is no improvement in patient's conditions

If patient improves

**DRUG: ADRENALINE 1:1000 (1mg in 1 ml)**



# CARDIAC EMERGENCIES

## CARDIAC CHEST PAINS

YES

NO

PAIN RELIEVED BY REST  
or  
Patient administering their  
own medication

Observe A.B.C.D.E approach  
Oxygen  
999 if in doubt

YES

NO

999

- \* A.B.C.D.E Approach
- \* High % Oxygen
- \* GTN SPRAY 1 or 2 PUFF(s) UNDER THE TONGUE  
(if not already given)
- \* Aspirin 300mg "to be chewed" (Inform ambulance if Aspirin is given)

If pain not relieved or returns, Consider repeat GTN

PAIN RELIEVED

**WARNING: PREPARE FOR RESUSCITATION**

Get resuscitation equipment and AED prepared

**DRUG: GTN SPRAY – ASPIRIN 300mg**

## Cardiac Arrest (Urgent)

**Lay Patient Flat  
Responsive?  
Normal Breathing?  
Signs of Circulation?**

**NO**

**YES**

**Cardiac Arrest**

**Observe  
A.B.C.D.E Approach  
Oxygen  
999**

**Commence Chest Compressions  
Get Resuscitation Equipment and defibrillator  
Call 999**

When equipment arrives and sufficient staff is available  
commence CPR. Do not delay attaching Defibrillator

**Turn Defibrillator On!  
Follow Prompts!**

Ensure chest is:  
Dry – Remove excess hair  
Do not place pads on breast tissue – place under breast

**If shock advised – deliver shock safely – followed by CPR if no signs of  
life. Defibrillator will check patient every 2 minutes.**

**If no shock advised Commence CPR  
Defibrillator will check patient every 2 minutes**

**If at any time during CPR there are signs of life re-assess the patient**

**If sign of life present**

**Resuscitation Equipment and defibrillator**

# Choking

**Patient appears to be choking?**

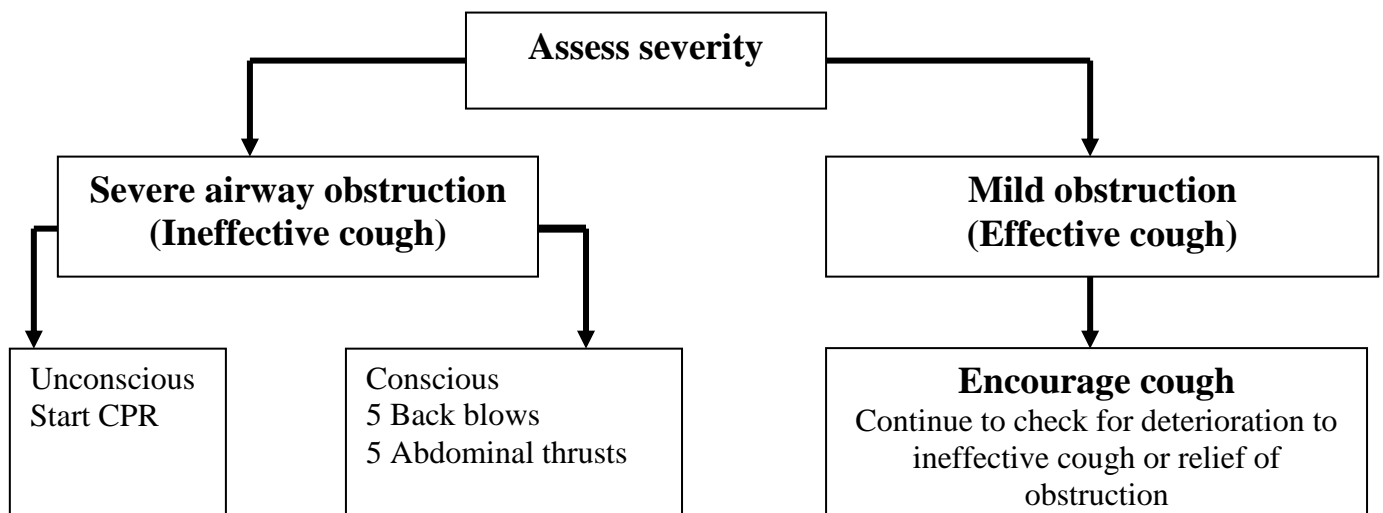
## SIGNS and SYMPTOMS

Patient may cough or splutter  
They may complain of difficulty breathing  
Breathing may become noisy with wheeze (usually aspiration) or stridor (usually upper airway obstruction)  
They may develop 'Paradoxical' Chest or abdominal movements  
They may become cyanosed and lose consciousness

**The treatment of the choking patient involves removing any visible foreign bodies from the mouth and Pharynx (Resuscitation Council (UK Guidelines))**

## Adult and child choking algorithm

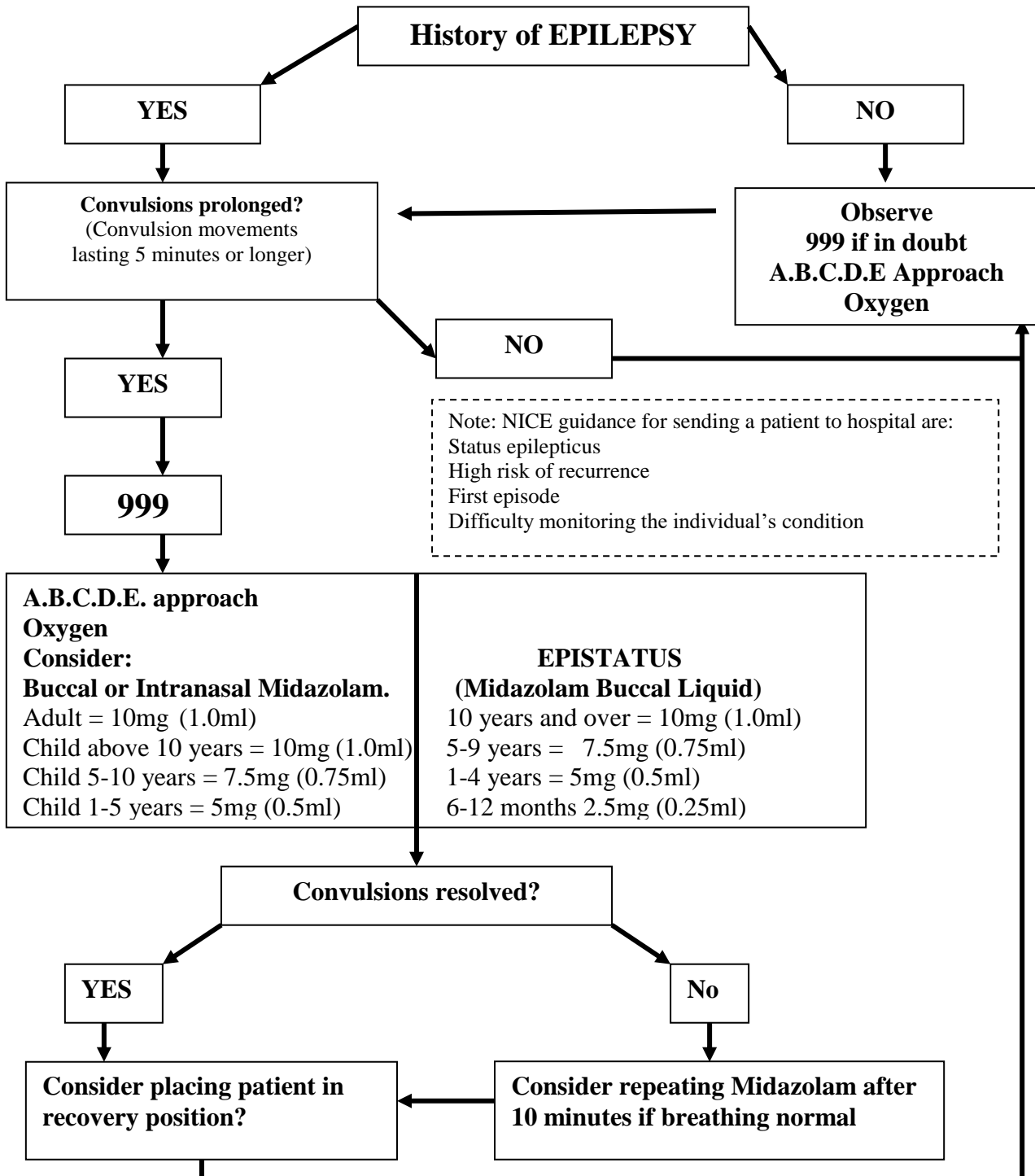
**This algorithm is suitable for use in children over the age of 1 year**



- in cases of aspiration allow the patient to cough vigorously
- Symptomatic treatment of wheeze with salbutamol may help (as for asthma)
- If any large pieces of foreign material have been aspirated, e.g., teeth or dental amalgam, the patient should be referred to hospital for a chest x-ray and possible removal
- Where the patient is symptomatic following aspiration they should be referred to hospital as an emergency

## CONVULSIONS (epileptic seizures)

**Note:** Clear the area – Protect the patient from injury – Do not place anything in the mouth or between the teeth.  
(Do not attempt to insert an oropharyngeal airway or other airway adjunct while the patient is actively fitting)



**Note:** Be prepared to assist with respirations if required – Consider Hypoglycaemia?

**DRUG:** Midazolam 10mg/ml or Epistatus Buccal Liquid 10mg/ml

# HYPOGLYCAEMIA (low blood sugar)

History of Diabetes

YES

NO

**SIGNS and SYMPTOMS  
Of HYPOGLYCAEMIA**  
(Blood Glucose < 4.0mmol per litre  
If monitoring available)

Observe A.B.C.D.E approach  
Oxygen  
999 if in doubt

YES

NO

**A.B.C.D.E approach**  
Consider oral glucose

If impaired consciousness or uncooperative or unable to swallow  
**Buccal Glucogel and/or Glucagon 1mg IM (0.5mg < 8years)**

**ATTACK RESOLVED**

YES

NO

**999**

**Consider: Repeat Glucogel gel.  
Recovery Position**  
(Repeat Blood Glucose If monitoring available)

**If patient improves**

**DRUG: Glucogel and/or Glucagon**



# Syncope (fainting)

## SIGNS and SYMPTOMS

Patient feels faint / dizzy / light headed  
Slow pulse rate  
Low blood pressure  
Pallor and sweating  
Nausea and vomiting  
Loss of consciousness

## Treatment

Lay the patient flat as soon as possible (*For pregnant patients also use left lateral tilt*)  
Raise their legs to improve venous return  
Loosen any tight clothing, especially around the neck  
Give Oxygen (15 litres per minute)

If any patient becomes unresponsive, always check for 'signs of life' and start CPR in the absence of signs of life or absence of normal breathing. (ignore occasional 'gasps')

## Other possible causes

- **Postural hypotension** can be a consequence of rising abruptly or of standing upright for too long. Several medical conditions, including pregnancy predispose patients to hypotension with the risk of syncope. The most common culprits are drugs used in the treatment of high blood pressure, especially the ACE inhibitors and angiotensin antagonists. When rising, patients should take their time. Treatment is the same as for a vasovagal attack.
- Under stressful circumstances, many anxious patients **hyperventilate**. This may give rise to feelings of light headedness or faintness but does not usually result in syncope. It may result in spasm of muscles around the face and of the hands. In most cases reassurance is all that is necessary.

# Stroke

## Assess

**Danger, Response, Airway, Breathing, Circulation, Disability**

**Retrieve patient clinical record if available**  
**Identify any known history of stroke/CVA**  
**Identify risk factors:** patient on warfarin/heparin, clotting disorders etc?

## SIGNS and SYMPTOMS

<b>FACE</b>	Can the person smile? Has their face fallen on one side?
<b>ARMS</b>	Can the person raise both arms and keep them there?
<b>SPEECH</b>	Can the person speak clearly and understand what you say? Is their speech slurred?
<b>TIME</b>	<b>IF YOU SEEN ANY OF THESE SIGNS RING 999</b>

Act **FAST** and call 999.



**Facial**  
weakness



**Arm**  
weakness



**Speech**  
problems



**Time**  
to call 999

### Treatment:

Call 999

- Administer high flow oxygen, if required (SATS <95%)
- Support respiration if required
- Keep patient comfortable and warm
- Continue to monitor ABCD

# Sepsis

## Sepsis can be especially hard to spot in:

- babies and young children
- people with dementia
- people with a learning disability
- people who have difficulty communicating

## Who's at risk?

Anyone can develop sepsis after an injury or minor infection, although some people are more vulnerable. People most at risk of sepsis include those:

With a medical condition or receiving medical treatment that weakens their immune system such as [chemotherapy](#) or long-term steroids

Who are already in hospital with a serious illness.

Who are very young or very old.

Who have just had surgery or who have wounds or injuries as a result of an accident.

## SEPSIS IN ADULTS IS A SERIOUS CONDITION

that can initially look like flu, gastroenteritis or a chest infection. Sepsis affects 150,000 people every year in the UK.

The UK Sepsis Trust registered charity number (England & Wales) 1158843

Seek medical help urgently if you develop any or one of the following:

**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

**JUST ASK**  
**"COULD IT BE SEPSIS?"**  
IT'S A SIMPLE QUESTION, BUT IT COULD SAVE A LIFE.