



EMERGENCY PROMPT CARDS

Version 3.0

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Prompt cards can be used by all members of the Emergency Department Team. If used correctly they will improve patient safety and reduce human factor errors.

If you have any feedback on the Prompt Cards or ideas for new cards please contact the Emergency Prompt Card Team at BSUH:

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Emergency Bleep List

Anaesthetics SHO	8235
Anaesthetics SpR	8224
Cardiology SpR	8850
Cardiothoracic SpR	8490
CEPOD Co-ordinator	8061
Critical Care Outreach	8495
ENT SHO	8619
ENT SpR	switchboard
General Surgery SHO	8614
General Surgery SpR	8613
ITU SpR	8413
Max Fax SHO	8787/switchboard
Max Fax SpR	switchboard
Medical Consultant	ext 3232
Medical SpR	8521
Medical SHO	8520
Neurosurgery SpR	Ext 62032
Orthopaedics SHO	8471
Orthopaedics SpR	8629
Obstetric SpR	8612
Radiographer	8364 / 8800
Radiology SpR	ext 7690
Renal SpR	8031
Site Manager	8284
Vascular Surgery SpR	8004/switchboard

EMERGENCY PROMPT CARDS

Trauma, Briefings and Transfers Section

Trauma/ASHICE briefing and preparation

Think **SPORT**:

Staffing – Introductions, sign in, name stickers and personal protective equipment

Patient details – pre-hospital information relayed to team

Organise – roles assigned including team leader, primary survey + ultrasound, IV access + bloods, medications (pre-draw analgesia, anti-emetics, tranexamic acid), liaison with relatives, scribe. Equipment checking (by relevant team members) and consideration of **code red** and/or specialist teams if not already present

Reception of patient – lookout posted outside, logistics of transfer, **immediate needs addressed**, SECamb/HEMS handover, prompt booking onto system by reception staff, blood forms printed, imaging requested

Treatments – identification of potential further procedures such as intubation/chest drain/catheter etc.

Box 1: Prepare Team members:

- Team Leader (ED Consultant)
- Anaesthetist & ODP
- Primary Assessment Doctor
- Nurse (2 if available)
- Procedures Doctor
- Scribe
- IV Access & Bloods
- Porter

Box 2: Prepare Equipment:

- Monitoring
- Intubation bag
- Ventilation bag
- Intubation drugs
- Difficult airway trolley
- Bag valve mask
- Oxygen
- Working suction
- Bougie
- IO gun
- USS Machine
- Yellow Scoop
- IV access and bloods tray
- Fluids
- LUCAS if required

Trauma Imaging and Interventional Radiology

Are there clinical signs or a mechanism of injury suggesting a possible solid organ or pelvic injury?

 **Obtain full CT Traumogram and radiologist report (RSCH Bleep 8800/PRH Bleep 6157)**

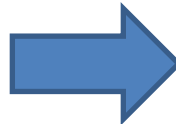
Is there CT evidence of:

- Hepatic, Renal or Splenic Injury with active arterial bleeding or significant haematoma?
- Pelvic Injury (without or without fractures) with active arterial bleeding or significant haematoma?
- Aortic Dissection or Transection?

 **Contact consultant interventional radiologist on call via switchboard and ensure immediate surgical review has been requested**

The decision to undertake embolisation will depend on:

- Grade and position of injury
- Patient stability and estimated blood loss
- Surgical opinion and potential alternative (especially in high grade injuries)



If a decision is made to embolise for haemorrhage control:

Refer to prompt cards 2 and 2a for preparation for transfer to the IR Suite (Theatre 6)

 **Seek anaesthetic support in all cases**

Pre-Transfer Checks – TO BE READ ALOUD TO TEAM:

1) SAFE for Transfer?

- Based on A.B.C.D.E. assessment in the last **5 minutes**?
- If intubated has patient had enough sedation +/- paralysis
- Are appropriate airway management skills present?

2) Get TRANSFER EQUIPMENT

- Green transfer bag, working suction, drugs, monitoring
- Set alarm limits
- Ventilator checked
- Adequate battery life for portable equipment?

3) ON OXYGEN?

- Do you have enough for transfer?
- Once on cylinder O₂, **REPLACE the FLOW METER TO THE WALL**

4) PLAN YOUR ROUTE – does someone need to go ahead to clear corridors/hold lifts?

5) DESTINATION ready? – (Inform ITU/HDU 15 minutes in advance)

- If for CT then contact Radiographer (bleep 8800) [PRH – 6157]
- If for X-ray then contact Radiographer (RSCH X-Ray ext 4242)
- Ensure you have enough staff to move/log roll patient
- Ensure IV cannula is sited and flushed for contrast.

6) If all team members are in agreement then commence transfer

PLEASE DO ARRIVAL CHECKS (P.T.O)

Document NOW!

Prompt Card 2

Arrival Checks:

1) Arrival at destination:

- Plug oxygen into the wall at the earliest opportunity
- If at CT then plug equipment into the wall and ensure monitoring is visible
- If at ITU/HDU then ensure team at bedside ready to receive; leave portable equipment on at first

2) Reassess Patient:

- Re-assess A.B.C.D.E including observations and capnography on portable monitor
- Ensure patient stable enough for scan
- Allow anaesthetist and nurse to establish ICU ventilation if this is destination

3) Staff: Do you have enough staff to log roll the patient for scan?

4) Moment of silence: Team introductions, clarify lead, verbal handover, roles assigned for transfer

5) Transfer of patient: ITU/HDU nurse to establish monitoring and doctor to review

PLEASE DO PRE-TRANSFER CHECKS IF RETURNING TO RESUS (P.T.O)

Initial management of severe burns

Airway – Suspect inhalational injury:



Respiratory Distress, Stridor, Wheeze, Voice Change, Deep Facial Burns, Sooty Sputum, Patient has been in an enclosed space, LOC at scene

 **Seek senior anaesthetic assessment for consideration of early intubation – 2222 and request anaesthetic support/PRH fast bleed – ETT must not be cut in this setting and NG to be placed early**

Breathing – Suspect carbon monoxide and cyanide inhalation: check baseline arterial gases, COHb and saturations, administer 100% Fio2

Circulation – Bilateral large bore IV access **away** from burnt tissue, Bloods (FBC, U&E, LFT, CRP, Amylase, CK, X-match, Drug/Tox as needed)

Disability – IV opiate analgesia titrated to pain

Exposure-

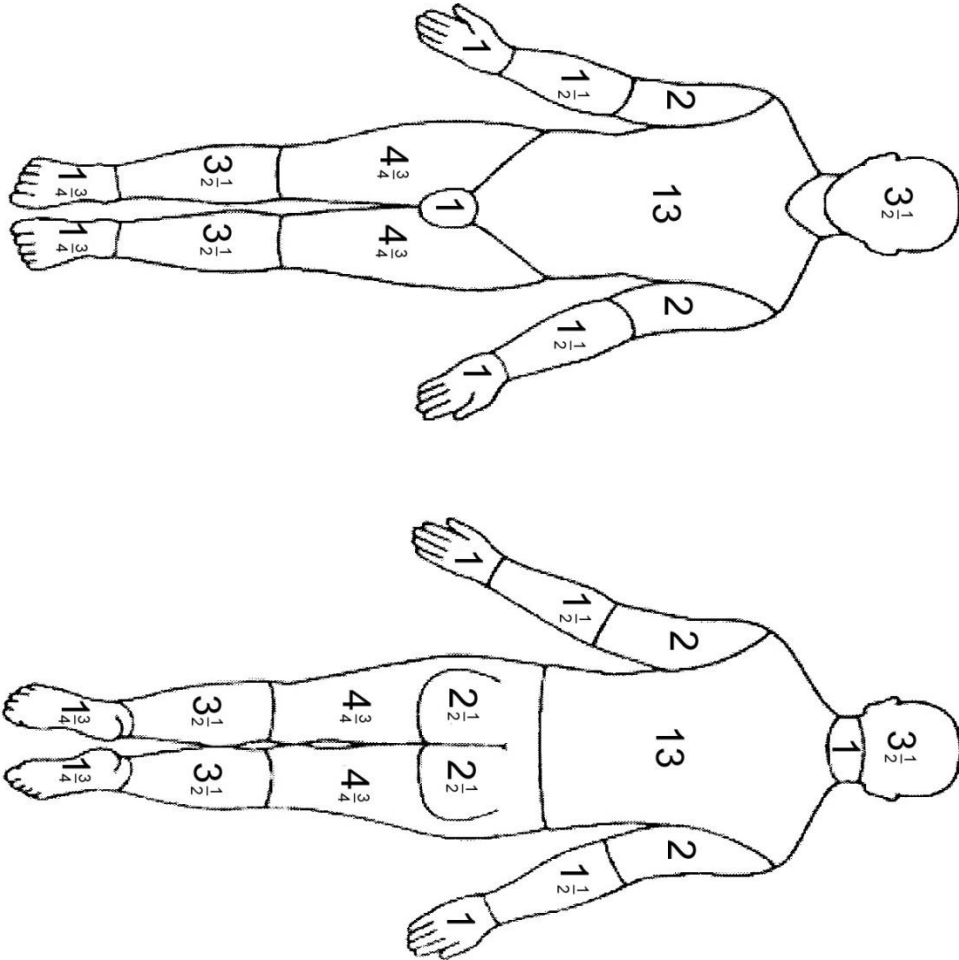
Remove non adherent clothing and hydrogel
Cool wounds rotationally – 20 minutes total
Assess % with Lund and Browder chart and depth
Cover with cling film (not face)

Refer with photos via www.trips.nhs.uk (camera in resus CD cupboard) and discuss on 01342 414440

Fluids:

- 4mls/kg/% burn
- Half over 8 hours
- Rest over 16 hours
- Warmed Hartmann's
- Catheterise
- Fluid balance chart

Burns estimations and considerations

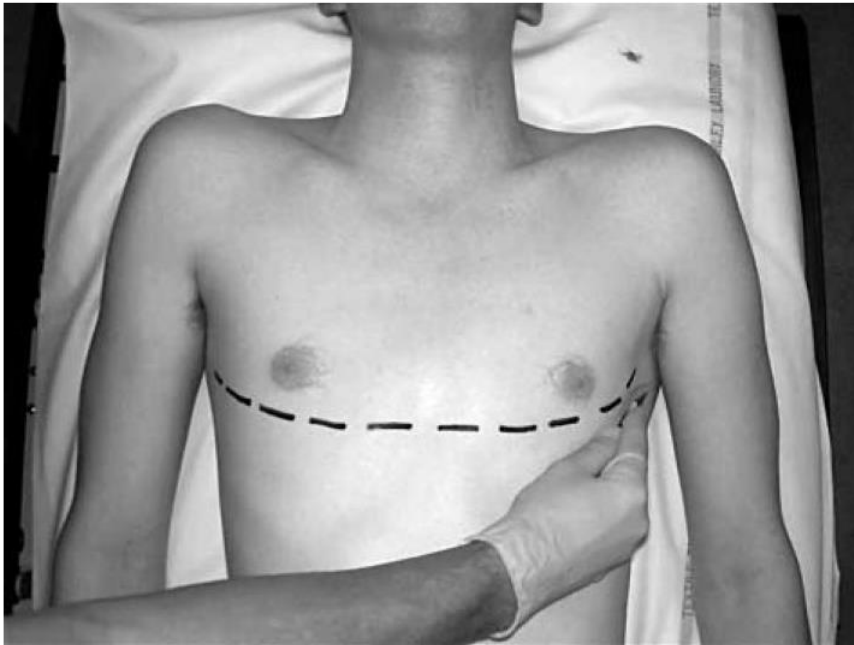


Have you considered?

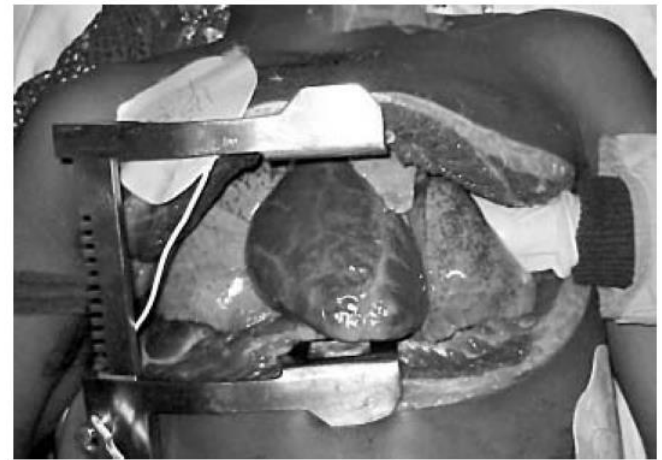
- NG Tube
- Escharotomy to chest/neck for circumferential burns
- Tetanus Booster
- NBM
- Safeguarding concerns

Thoracotomy in Trauma

- 1) Assign team member to call **Cardiothoracic Consultant** (switchboard) THEN fast bleep Cardiothoracic SpR (bleep 8490)
- 2) Request ED Thoracotomy Kit
- 3) **INDICATIONS:**
 - Penetrating injury to chest or epigastrium resulting in cardiac arrest
 - Non-head injury patient with significant haemorrhage below diaphragm for aortic control
- 4) **CONTRAINDICATIONS:**
 - Definitive loss of cardiac output for more than 10 minutes
 - Any patient with a cardiac output even if hypotensive
 - Blunt truncal trauma (except if potential tamponade seriously suspected)
- 5) Perform **bilateral thoracostomies** (4cm incision in 5th intercostal space in the mid axillary line). Use spencer wells to puncture pleura.
- 6) If this intervention relieves a tension pneumothorax and cardiac output returns STOP here
- 7) **Broad clamshell** incision in the 5th intercostal space joining 2 thoracostomies with extension past originals to improve access; breach sternum with Tuff Cut Scissors/Gigli Saw
- 8) With suction ready open chest. Open & evacuate pericardial sac.
- 9) Obtain **DIGITAL CONTROL OF BLEEDING** & consider:
 - Suture of cardiac wound (4-0 Prolene on a 26mm needle)
 - Packing/Foley Catheter
 - Clamping or pressure for other identified sites of bleeding



The clam shell incision.



Open chest. Rib spreaders in situ. Central heart. In this picture the pericardium has been displaced by internal cardiac massage and lies behind the heart. Gloved hand compressing the aorta.



EMERGENCY PROMPT CARDS

Medical Emergencies Section

SEPSIS – Management (within 1st hour)

1) Assess **ABCDE**

Involve Critical Care Outreach Nurses EARLY
(bleep 8495) if appropriate

- Altered mental state
 - Respiratory rate >20 breaths/min
 - Heart rate >90
 - Temperature, <36°C or >38°C
 - WCC >12x10⁹/l or <4x10⁹/l
 - Blood sugar >7.7mmol in absence of diabetes
- Beware of patients on medication which could mask physiological changes**
e.g Paracetamol, betablockers or steroids

2) Start **OXYGEN** (high flow: aim Sats >94%) [Caution in COPD]

3) Take bloods, including **blood cultures**, VBG/ABG

4) Give **STAT IV antibiotics** as per trust guidelines



If no clear focus Co-Amoxiclav 1.2g IV STAT & Gentamicin 5mg/kg IV STAT
If no clear focus & **Penicillin Allergic**: Vancomycin + Gentamicin

5) **FLUIDS**: Resuscitate if ↓BP (start with 20mls/kg Hartmann's)

6) Check serum **LACTATE**

7) Commence hourly fluid chart and catheterise patient

8) Refer to **ITU** if signs of **ORGAN DYSFUNCTION**

ITU SpR (RSCH 8413, PRH 6010)

For on-going sepsis management (P.T.O)



- SBP <90mmHg or MAP <70mmHg
That is unresponsive to fluid resuscitation
- Urine output <0.5mls/kg/hr for 2 hrs
That is unresponsive to fluid resuscitation
- New need for oxygen to maintain SpO₂ >90%
- NEWS >5 or 3 in one parameter
- Check venous bloods and ABG: FBC, U&E's, LFT's and clotting
 - Lactate >2 mmols
 - INR >1.5 or APTT >60 secs
 - Platelets <100 x 10⁹/l
 - Bilirubin >34 umol/l
 - Creatinine >177 umol/l

NOT RESPONDING to Initial Management in SEPSIS

Clarify person responsible for ongoing management + **DOCUMENT**

PROCEDURES:

- Arterial Line
- Central line

AIMS:

- CVP 8-12 mmHg
- MAP >65 mmHg
- Urine Output >0.5 ml/kg/hr
- ScvO₂ >70%

CONSIDER:

- 1) If persistent ↓BP despite adequate filling commence **Noradrenaline** to maintain MAP >65mmHg

‘STARTING Vasoactive Medications’ PROMPT CARD 35

- 2) Referral to ITU

Mild – K^+ 5.5-5.9mmol/L
Moderate – K^+ 6.0-6.4mmol/L
Severe – K^+ >6.5mmol/L

Treatment of Hyperkalaemia

1) Bloods (U&Es, Mg^{2+} , HCO_3^- , CK), ECG & ensure cardiac monitoring if $K^+ > 6$

2) CARDIOPROTECTION



10mL 10% Calcium Gluconate IV over 3 minutes if ECG changes and/or $K^+ \geq 6.5$

3) TEMPORARY REDUCTION OF K^+ : Insulin/Dextrose infusion (If $K^+ \geq 6.5$ - *it only reduces K^+ level for 4 hours*)



10 units of Actrapid Insulin in 50mL 50% dextrose IV over 15minutes

4) Give **Salbutamol (10mg as 5mg + 5mg) Nebulised** as adjuvant therapy (caution if IHD or tachycardic)

5) If $HCO_3^- < 22$ mmol/L and not fluid overloaded give 500ml Sodium Bicarbonate 1.26% IV over 1 hour

6) **Review medications** (avoid: e.g ACEi, ARB, K^+ -sparing diuretics & others)

7) BM every 30 minutes & **repeat K^+ level** at 1, 2, 4, 6 and 24 hours

8) **ITU SpR** (Bleep: RSCH 8413, PRH 6010), Renal SpR (bleep 8031) if refractory $\uparrow K^+$ or if associated acute kidney injury (defined as a 1.5 x rise in creatinine and/or < 0.5 mLs/KG/Hour urinary output)

MASSIVE Pulmonary Embolus (PE)

- 1) **COULD THIS BE** – ?Tension Pneumothorax or ?Cardiac Tamponade (bedside echo)
- 2) Does patient need immediate treatment before **CTPA**? **'TRANSFER' PROMPT CARD 2/2a**
- 3) **THROMBOLYSE:**



→ **ARREST/PERI-ARREST:** GIVE 50 mg IV BOLUS ALTEPLASE (arrest or peri-arrest), repeat after 15 minutes if no ROSC (Max 100mg)



→ **STABLE:** Alteplase (rTPA) 10mg IV over 1-2 mins, then 90 mg infusion over 2 hrs (Max dose 1.5mg/kg in patients < 65 kg)

- 4) If periarrest GET **LUCAS** from Cardiothoracic Unit, L7a (ext 7289 or 4467).
Following thrombolysis continue CPR for **60 minutes**.
- 5) **HEPARIN** – After 3 hours if APTT ratio <2.0 or if ROSC, start IV Heparin infusion - as per Standard IV heparin protocol (5000 Unit bolus IV over 5 minutes, then 16 units/kg/hr & 6 hour APTT Check) **Adjust as per Standard IV Heparin Protocol**.

DKA – Management in first 5 hours

1) **ABCDE, VBG, Blood Ketones** - senior review requested

2) Diagnostic criteria for DKA (all 3):

- Blood ketones > 3.0
- Capillary blood glucose over 11mmol/l or known DM
- HCO_3^- <15mmol/l AND/OR pH <7.30


3) IV fluids commenced : 1000ml of 0.9% Saline over 1st hour (as soon as K^+ result available start potassium replacement as below)

Fluid	Volume
0.9% sodium chloride 1L (pending lab K^+ value)	1000ml over 1st hour
0.9% sodium chloride 1L with potassium chloride	1000ml over next 2 hours
0.9% sodium chloride 1L with potassium chloride	1000ml over next 2 hours
0.9% sodium chloride 1L with potassium chloride	1000ml over next 4 hours
0.9% sodium chloride 1L with potassium chloride	1000ml over next 4 hours
0.9% sodium chloride 1L with potassium chloride	1000ml over next 6 hours
If urine output >50ml for three consecutive hours review fluid regimen. Re-assessment of cardiovascular status at 12 hours is mandatory if further fluid is required .	

4) **K^+ MEASURED** → potassium replacement as follows:

Over 5.5	Nil
3.5 – 5.5	40 mmol
Below 3.5	IMMEDIATE SENIOR REVIEW

5) Start **INSULIN**:



50 units ACTRAPID in 49.5ml 0.9% sodium chloride
RATE: administer 0.1 units/kg bodyweight / hour IV

If usually on **LANTUS, LEVEMIR** or **DEGLUDEC** to ensure patient continues to have usual dose at usual time subcutaneously while on iv insulin. **Ensure 10% Glucose is commenced at 125ml/hr once blood sugar is <14mmol/L**

6) Consider **ITU REVIEW** (SpR Bleep: RSCH 8413, PRH 6010) if any of:

- | | |
|----------------------------------|--------------------------|
| → Blood Ketones >6.0 mmol/L | → GCS <12 |
| → HCO_3^- <5 mmol/L | → O2 Sats <92% on air |
| → pH <7.1 | → Heart Rate <90 or >120 |
| → K^+ on admission <3.5 | → Systolic BP <90 mmHg |

Asthma - Life Threatening

1) ABCDE assessment. Needs senior ED and urgent ITU review if **Life Threatening Features**

- SpO₂ <92%
- PEF <33% best or predicted
- Silent Chest, Cyanosis, Poor Respiratory Effort
- Arrhythmia, Hypotension
- Exhaustion, ↓GCS

2) **IMMEDIATE MANAGEMENT:**

- Oxygen – target sats 94-98%
- Salbutamol 5mg + Ipratropium 0.5mg Nebs (oxygen driven)
- Prednisolone 40-50mg PO or Hydrocortisone 100mg IV

3) Patients with SpO₂ <92% or other features of life threatening asthma require an **ABG** to look for any *markers of severity?*

- Normal or raised PaCO₂ (>4.6kPa)
- Severe hypoxia (PaO₂ <8kPa)
- Acidosis

4) Repeat nebs and consider continuous nebulised salbutamol

5) Consider **IV Magnesium Sulphate 2g over 20 minutes** (consider with senior input)

6) Order portable CXR

UNEXPLAINED HYPOTENSION – Diagnostic Prompt

- 1) Initial Management:
- ENSURE ADEQUATE AIRWAY AND VENTILATION
 - OBTAIN LARGE BORE IV ACCESS
 - SEND A VBG
 - REQUEST PORTABLE CXR
 - DO ECG
 - START IV FLUIDS UNLESS CONTRAINDICATION
 - CALL SENIOR

! THINK !

2) COULD THIS BE A CARDIAC TAMPONADE

→ Examine and do ultrasound

3) COULD THIS BE A TENSION PNEUMOTHORAX

→ Examine and do ultrasound

→ If peri-arrest, consider bilateral thoracotomies

4) COULD THIS BE A RUPTURED AORTA OR INTRABDOMINAL BLEEDING?

→ Do Fast Scan for free fluid and measure Aorta. If greater than 4.5cm consider

AAA and consider CT. Any concerns → Vascular SpR on bleep 8004 (OOH – Switchboard)

5) COULD THIS BE RETROPERITONEAL BLEEDING?

6) CONSIDER PE – SEE MASSIVE PE RESUS PROMPT CARD

Management of **PROLONGED SEIZURES/STATUS EPILEPTICUS**

Status epilepticus is a **life-threatening medical emergency** defined as seizure lasting ≥ 5 minutes, or ≥ 2 seizures without return to consciousness, or ≥ 3 tonic-clonic seizures within 1 hour.

1) Check BM and treat if low

2) **1st Stage:** 0-10 minutes: → Manage airway & bleep anaesthetics if concerned (8235)

→ Give oxygen (15L/Min)

GET SENIOR HELP

→ IV access & bloods (incl. Na, B-HCG, alcohol, drug levels)

→ **LORAZEPAM 4mg IV Bolus AT 4-5 MINUTES**

(Alternative 10mg Diazepam PR if no IV Access)

 **If seizures resolve then make on-going plan for all circumstances (monitoring, therapy, infusions, causes etc)**

3) **After 10 minutes:** on-going seizure give 2nd dose of **4mg LORAZEPAM IV** unless signs of hypoxia/cyanosis

4) If already on Phenytoin/allergic – Contact ED Cons (4218) – Consider valproate or levetiracetam

3) **2nd Stage:** After 2 doses of Lorazepam: **ANTIEPILEPTIC DRUG THERAPY**

→ **Phenytoin 20mg/kg IV infusion** (on cardiac monitor)

P.T.O for more information on Drugs and Administration

5) **3rd Stage:** 30- 60 minutes:

→ Alert anaesthetics & ITU

→ Organise Imaging (CXR & CT Head)

Drug Administration Details:

Lorazepam injection <i>Stored in fridge</i>	Dose: 4mg Administration: IV bolus over a few seconds, preferably into a large vein. Can be diluted with equal volume NaCl 0.9% or WFI. Flush with NaCl 0.9%
Diazepam emulsion and injection 10mg in 2ml	Dose: 10mg Administration: Slow IV injection (10mg over 2 minutes) into a large vein. Flush with NaCl 0.9% or WFI
Phenytoin injection <i>If patient weight is unknown, make an educated guess of patient's weight (see guide table below).</i> <i>ECG monitor during phenytoin administration</i>	Dose: 20mg/kg Must not be faster than 50mg/min Administration: 1. Intravenous infusion: Dilute in sodium chloride 0.9% (max conc. 10mg/ml) and infuse into large vein at 50mg/min. Once diluted, ensure infusion given immediately. Flush before and after with normal saline. Observe regularly for white precipitate. Ideally use in-line filter 0.22 - 0.5 micron. 2. Slow IV injection: Give undiluted into a large vein using a syringe pump. Flush before and after with NaCl 0.9%
Sodium valproate infusion	Dose: 30mg/kg Episenta brand: 300mg in 3ml solution for injection. Epilim brand: Dilute 400mg powder with 4ml WFI provided. Administration: Dilute dose in 50 or 100ml NaCl 0.9% and give at 20mg/minute.
Levetiracetam infusion	Dose: 30mg/kg Administration: Dilute in at least 100ml NaCl 0.9% or Glucose 5% and give over 15 minutes.

Phenytoin infusion dosing guide: Guide based on patient's approximate weight:

Approx Pt Weight	< 70kg	70 - 90kg	>90 kg
Dose	1200mg	1600mg	2000mg
Phenytoin 250mg/5ml injection	24mls	32mls	40mls
Diluent volume	250mls NaCl 0.9%	250mls NaCl 0.9%	250mls NaCl 0.9%
Total volume (mls) Infusion rate (mls/min)	274mls over 24 minutes = 11.4 ml/min	282mls over 32 minutes = 8.8mls/min	290mls over 40 minutes = 7.25mls/min

ADRENAL INSUFFICIENCY / ADDISONIAN CRISIS EMERGENCY MANAGEMENT (adults only)

1) PATIENTS AT RISK:

- Pre-existing Addison's disease (primary adrenal insufficiency)
- Pituitary disease (secondary adrenal insufficiency)
- Patients on chronic steroid treatment e.g. ≥ 7.5 mg Pred OD (or equivalent doses of other steroids) for ≥ 3 weeks within the past 3 months

2) PRECIPITANTS → Infection, dehydration, vomiting, diarrhoea, major stress / trauma / surgery

3) CLINICAL FEATURES:

- Hypotension, dizziness, collapse, hypovolaemic shock in severe cases
- Fatigue, confusion / delirium, impaired level of consciousness
- Abdominal pain / cramps, nausea / vomiting, weight loss.

Diagnostic measures should never delay treatment and if adrenal crisis is suspected, treatment should be started WITHOUT DELAY

4) BIOCHEMICAL ABNORMALITIES: Closely Monitor for hypoglycaemia, hyponatraemia, hyperkalaemia and AKI

5) IMMEDIATE MANAGEMENT



- IV or IM HYDROCORTISONE 100mg STAT** (continued at 50mg QDS regularly)
- IV FLUIDS**, 0.9% Normal saline – first 1L over 1 hour, followed by further IV rehydration (usually 4-6 L over 24 hrs), monitor for fluid overload in the elderly or those with renal and cardiac impairment.
- Monitor the capillary blood glucose and treat any hypoglycaemia**

There are no adverse consequences of initiating life-saving hydrocortisone treatment and if the diagnosis is unclear it can be safely and formally established once the patient has clinically recovered.

CONTACT AN ENDOCRINOLOGIST for urgent review of the patient, advice on further doses of Hydrocortisone and other hormone replacement Rx & Please report all incidents of Addisonian crisis for patients with known adrenal insufficiency or hypopituitarism on the DATIX system.

Malignant Hypertension (BP \geq 180/120mmHg)

- Symptoms: Headache, Blurred vision, Confusion, Coma, **NONE AT ALL**
- Signs: Above BP measurement, Grade III/IV retinopathy, Retinal Haemorrhage/Exudates/Papilloedema
- **Consider causes:** Intracranial haemorrhage, aortic dissection, acute glomerulonephritis, phaeochromocytoma, renal artery stenosis, cocaine, eclampsia

**Send FBC, U&E's, Coag and Perform ECG
Contact Cardiology/Renal/HDU as required**

Acute Phase

**Target to reduce DBP to 100-110mmHg over 6 hrs
Maximum decrease 25% of baseline in 24 hrs**

- **Labetalol**
 - IV infusion at rate of 15-120mg/hr (titrate upwards until adequate response)
- **GTN**
 - IV infusion as per trust GTN infusion chart/protocol
- **Sodium nitroprusside**
 - IV infusion starting at rate of 0.3 μ g/kg/min, increasing by 0.5 μ g/kg/min every 5mins to 8.0 μ g/kg/min



**Prompt
Card 36**



Under specialist
guidance only;
unlicensed

Severe Pre-Eclampsia

Defined as a BP of $\geq 160/110$ alone or a BP $<160/110$ with 2 or more listed features



Immediately inform ED senior and obstetrics on call:
Bleep 8612 (RSCH) or Bleep 6036 (PRH)

Assess ABCDE, Send FBC/U&E'S/LFT's/Urate/INR/G+S, IV Access

Consider starting Labetalol unless there is a history of steroid dependent asthma or obstructive airways disease (**Nifedipine** is the alternative)

- 200mg Orally if able to tolerate with a repeat dose if needed 30-60 minutes later should BP remain ≥ 170 mmHg systolic
- Intravenous Labetalol is indicated if unable to tolerate PO medication or if there is no response to oral therapy

Recommended initial bolus: 20mg (4mls of a 100mg/20mL vial) with re-assessment at 5 minutes – Repeat if BP $\geq 170/110$ mmHg to a maximum of 200mg

See Prompt Card 36 for Labetalol Infusions

Features of severe pre-eclampsia:

- Severe Headache
- Blurred vision
- Vomiting
- Epigastric pain
- Clonus
- Papilloedema
- Tender liver edge
- Platelets <100
- Abnormal LFT's
- HELLP (Haemolytic anaemia, Elevated Liver enzymes, Low Platelets)



If these features are present and delivery is planned, give Magnesium Sulphate loading dose AND infusion (overleaf)

Eclamptic Seizures 

Dial 2222 and state obstetric emergency. A neonatal emergency is to also be declared if still pregnant.

- Administer high flow oxygen and maintain airway
- Place in the left lateral position
- Continuous BP and SpO2 monitoring
- **Commence Magnesium Immediately**
- **Commence Labetalol as necessary**
- Catheterise
- Investigations as per severe pre-eclampsia



- Fetal Monitoring
- Delivery Planning

Loading Dose	Maintenance Dose
4g MgSO ₄ (8mls of 50% solution)	10g MgSO ₄ (20mls)
Mixed with 12 ml water for injections	Mixed with 30mls water for injection to total volume 50ml
I.V. over 5 mins	Infusion to run at a rate of 5mls/hour (1g/hour)

EMERGENCY LAPAROTOMY RISK ASSESSMENT

IS THIS PATIENT HIGH RISK?

1. MORE THAN 2 SIRS CRITERIA + ORGAN DYSFUNCTION

RR>20

WCC <4 or >12

SYSTOLIC BP<90 DESPITE FLUID BOLUS

+

OR

Temp <36 or >38

HR >90

O2 NEEDED TO KEEP SP02 > 90%

2. LACTATE>2

3. NEWS>5

4. AGE>70 OR >50 + SIGNIFICANT COMORBIDITY

**IF ANY OF ABOVE APPLY - INFORM A&E CONSULTANT.
SENIOR SURGICAL REVIEW/DISCUSSION WITHIN 30 MINUTES .**

EMERGENCY LAPAROTOMY MANAGEMENT PLAN

IF PATIENT ASSESSED AS HIGH RISK

A&E TEAM -

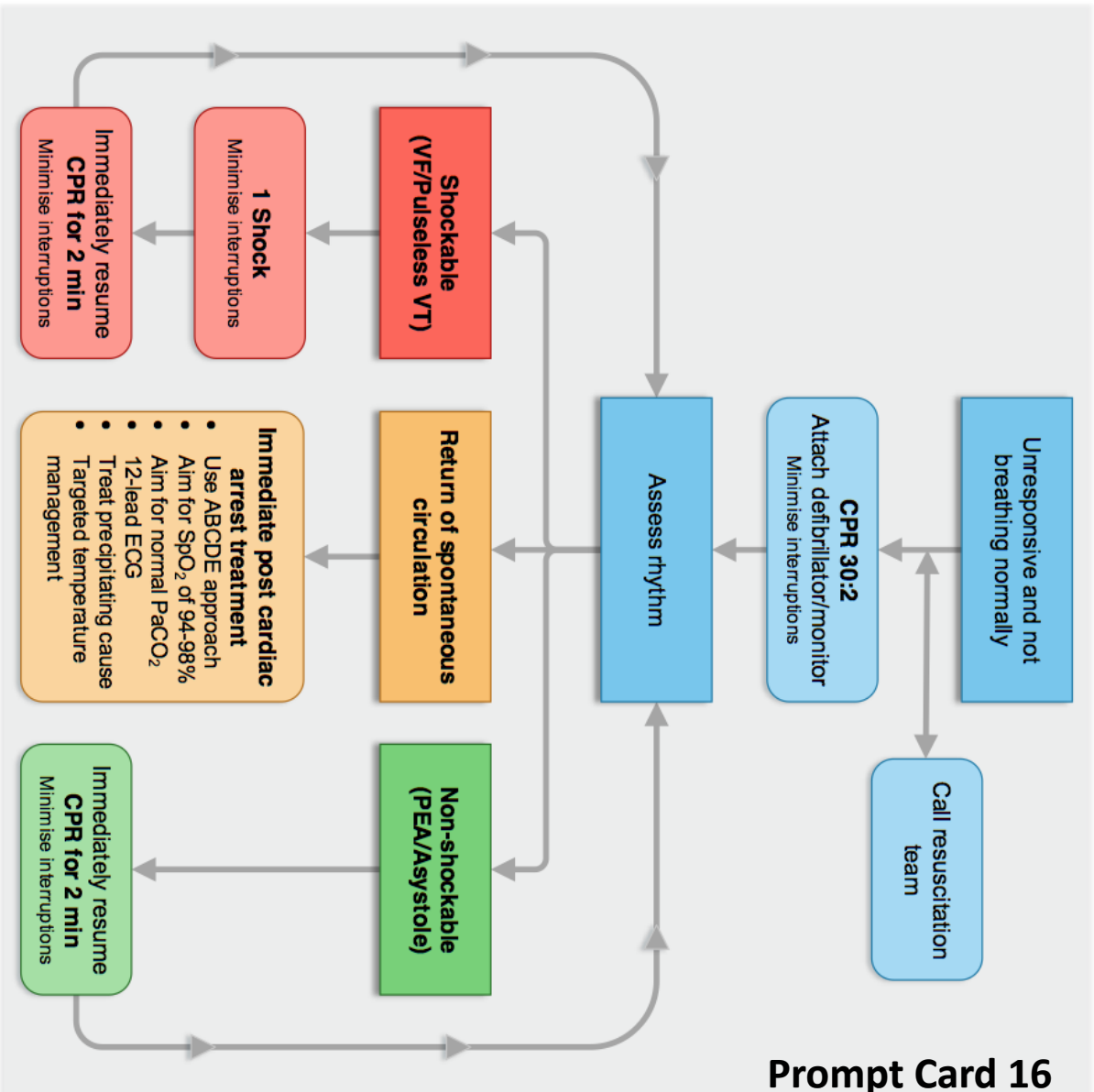
- 1. OXYGEN**
- 2. LARGE CANNULA + FLUID RESUSCITATION PLAN (WITH FLUID BALANCE CHART AND URINARY CATHETER)**
- 3. WITHIN 30 MINUTES - SENIOR SURGICAL REVIEW.**
- 4. FBC/U&E/LFT/CLOTTING/G&S X2/LACTATE - DON'T FORGET AMYLASE**
- 5. ANTIBIOTICS WITHIN 1 HOUR OF SEPSIS DIAGNOSIS**

SURGICAL TEAM -

- 6. CHECK 1- 5 HAVE BEEN COMPLETED. (ANTIBIOTICS?)**
- 7. WITHIN 2 HOURS - CT SCAN AND REPORT (STATE 'EMERGENCY LAPAROTOMY' ON FORM)**
- 8. INFORM ANAESTHETIST (BLEEP 8224) AND OUTREACH (BLEEP 8495 RSCH or PRH 6331)**
- 9. NEXT AVAILABLE SLOT ON EMERGENCY LIST (BLEEP 8061)**
- 10. P-POSSUM MORTALITY RISK MUST BE DOCUMENTED (www.riskprediction.org.uk)**

EMERGENCY PROMPT CARDS

Anaesthetics and Resuscitation Guidance



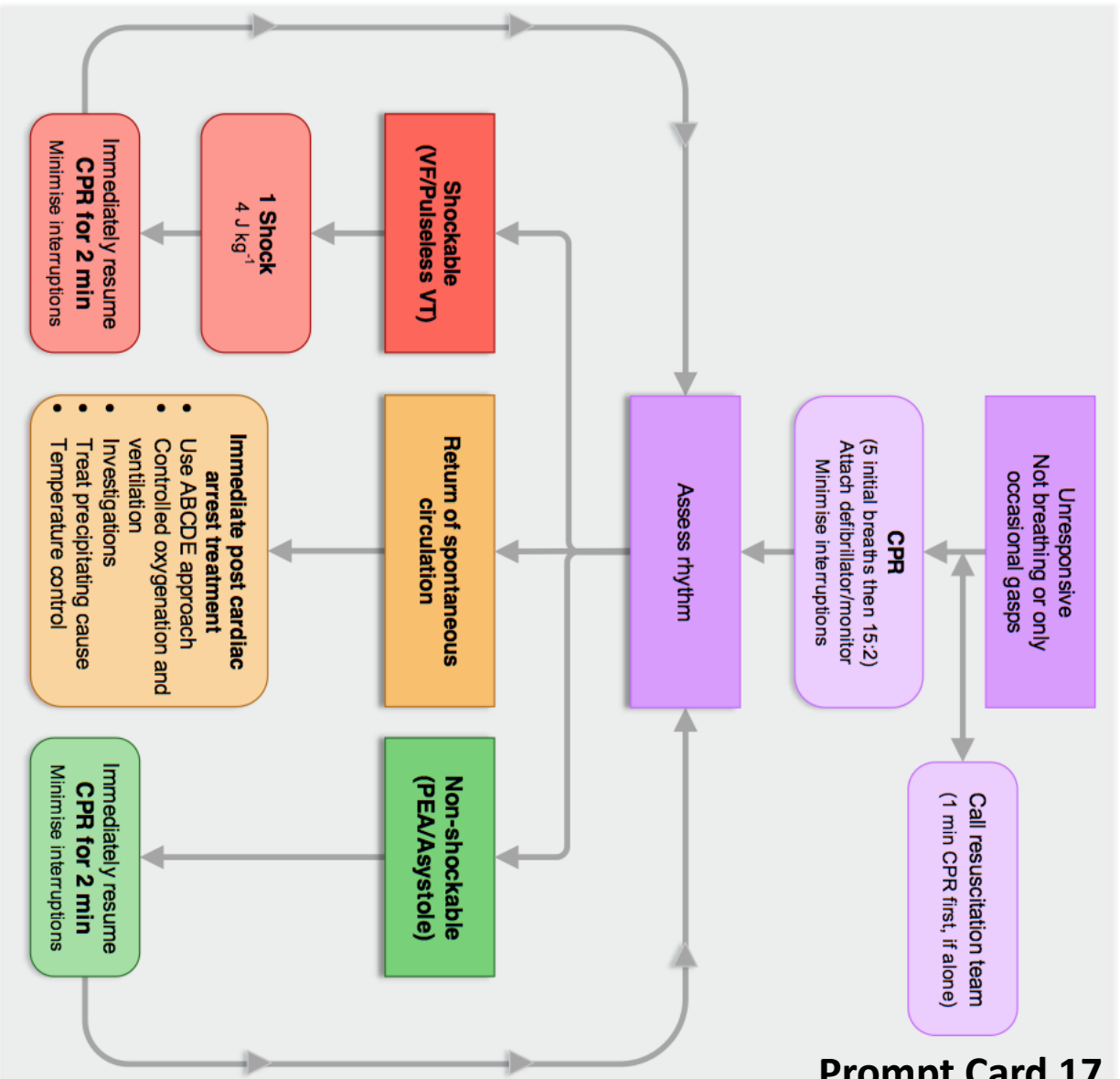
Prompt Card 16

- During CPR**
- Ensure high quality chest compressions
 - Minimise interruptions to compressions
 - Give oxygen
 - Use waveform capnography
 - Continuous compressions when advanced airway in place
 - Vascular access (intravenous or intraosseous)
 - Give adrenaline every 3-5 min
 - Give amiodarone after 3 shocks

- Treat Reversible Causes**
- Hypoxia
 - Hypovolaemia
 - Hypo-/hyperkalaemia/metabolic
 - Hypothermia
 - Thrombosis - coronary or pulmonary
 - Tension pneumothorax
 - Tamponade – cardiac
 - Toxins

- Consider**
- Ultrasound imaging
 - Mechanical chest compressions to facilitate transfer/treatment
 - Coronary angiography and percutaneous coronary intervention
 - Extracorporeal CPR

Document NOW!

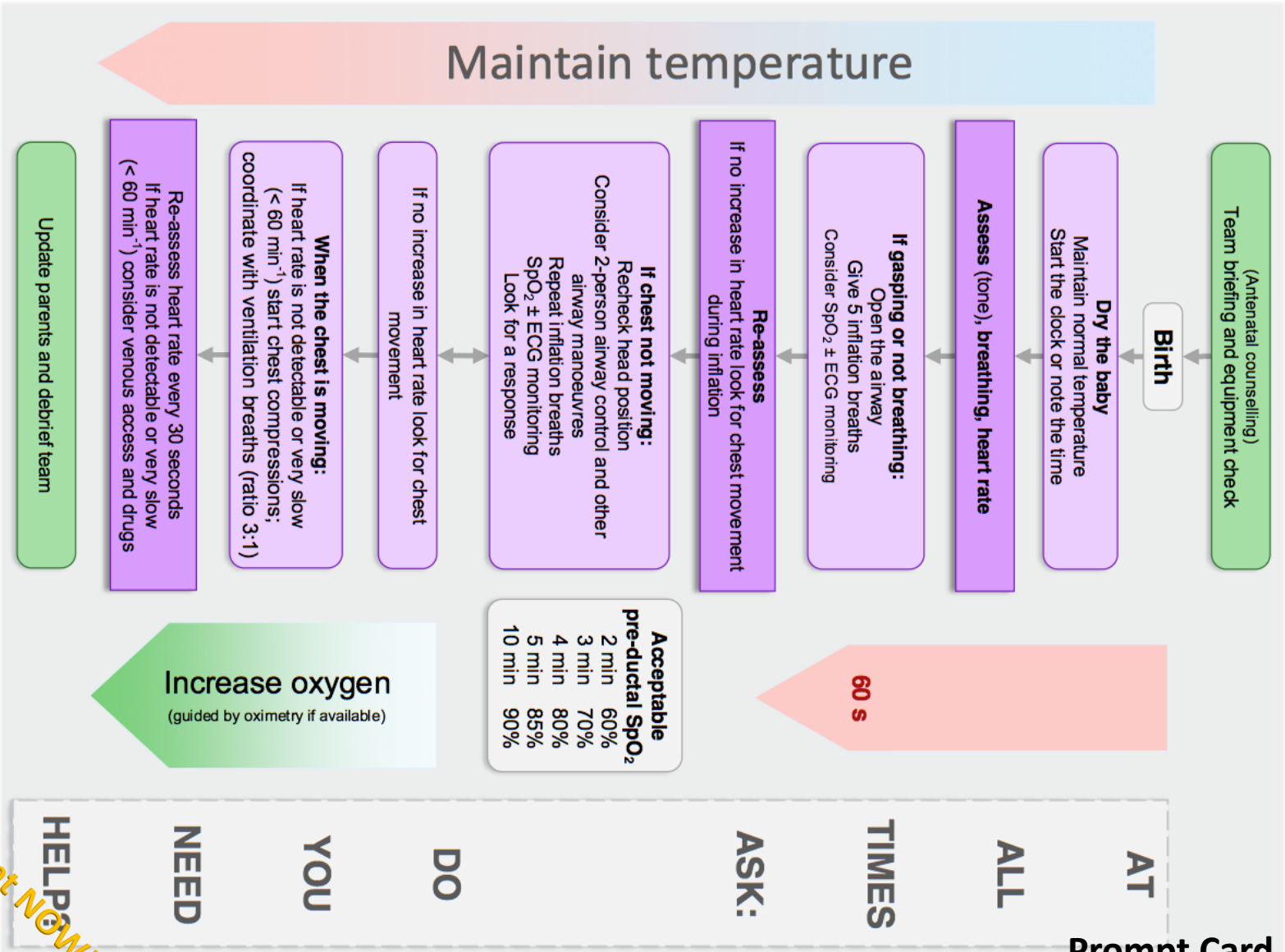


Prompt Card 17

- During CPR**
- Ensure high-quality CPR: rate, depth, recoil
 - Plan actions before interrupting CPR
 - Give oxygen
 - Vascular access (intravenous, intraosseous)
 - Give adrenaline every 3-5 min
 - Consider advanced airway and capnography
 - Continuous chest compressions when advanced airway in place
 - Correct reversible causes
 - Consider amiodarone after 3 and 5 shocks

- Reversible Causes**
- Hypoxia
 - Hypovolaemia
 - Hyper/hypokalaemia, metabolic
 - Hypothermia
 - Thrombosis (coronary or pulmonary)
 - Tension pneumothorax
 - Tamponade (cardiac)
 - Toxic/therapeutic disturbances








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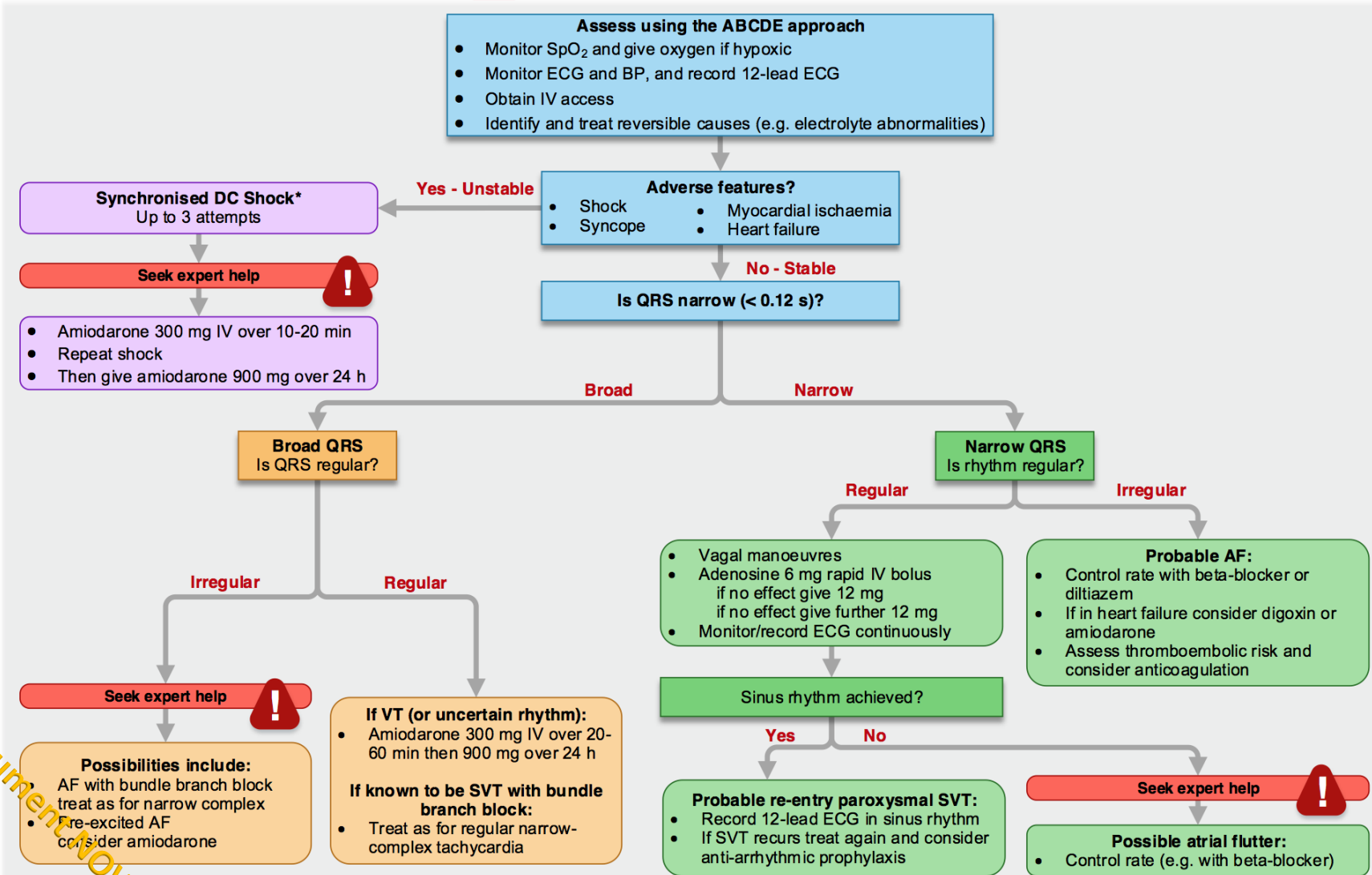
Document Now!

EMERGENCY DIRECT CURRENT CARIOVERSION (DCCV)

(See overleaf for algorithm)

1. Conscious patients require sedation or general anaesthesia
2. Attach defibrillation pads and 3 lead monitoring
3. Press  and observe sense markers 
4. If necessary, press  and select lead with most sense markers 
5. Press  **Narrow complex:** 100j, 200j, 360j
Broad complex: 150j, 200j, 360j
6. Remove oxygen, clear and press 
7. Press and hold  until the shock is delivered

Adult Tachycardia (with pulse) Algorithm








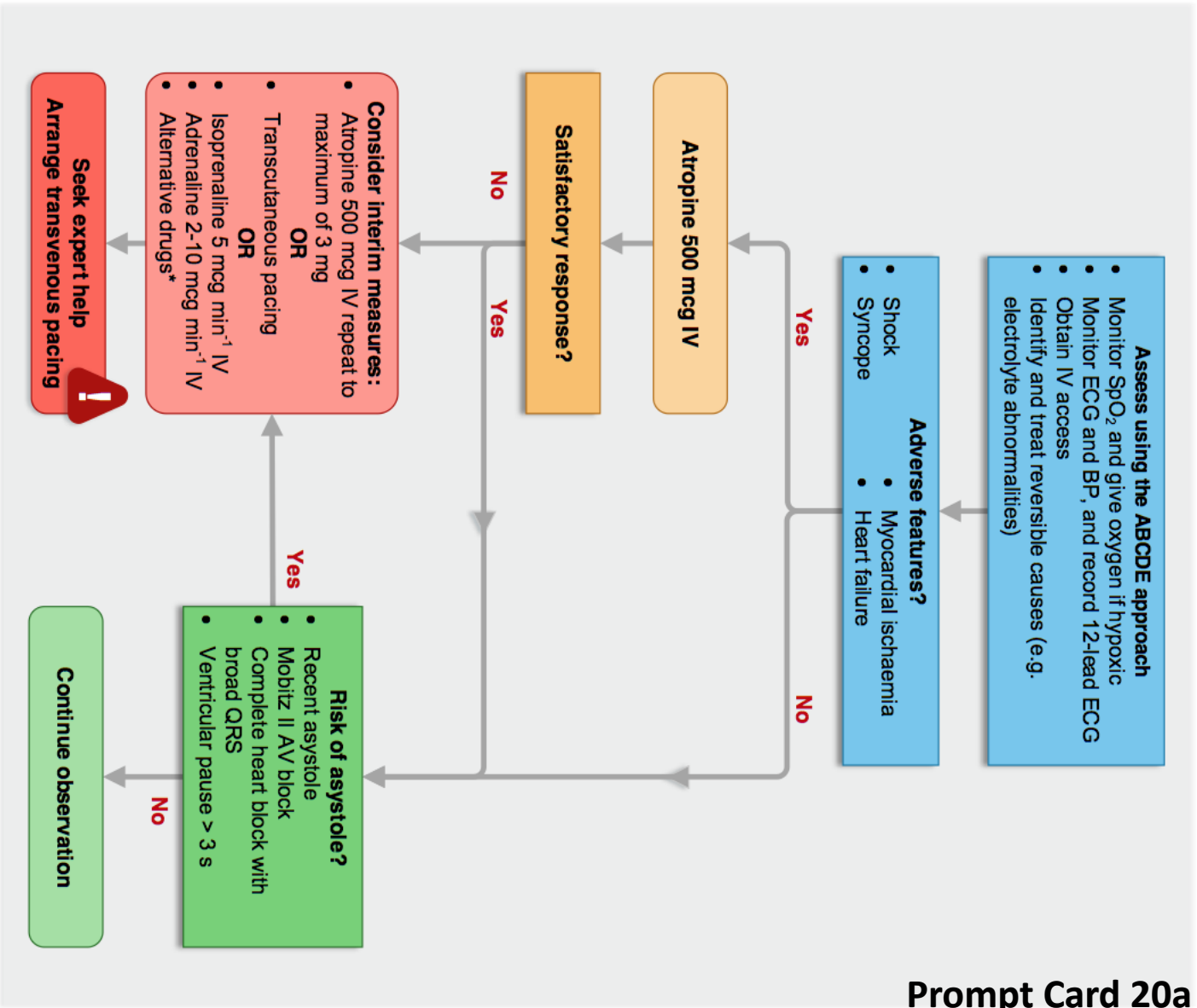
*Conscious patient to require sedation or general anaesthesia for cardioversion

Document Review!

EXTERNAL PACING

(See overleaf for algorithm)

1. Attach defibrillation pads and 3 lead monitoring
2. Press 
3. Press  to select desired rate
4. Press  to increase current until electrical capture
5. **Palpate central pulse** to confirm **mechanical capture**
6. If necessary, increase  until mechanical capture
7. To view intrinsic rhythm press **and hold**  (release to resume pacing)
8. Consider **sedation** or **analgesia** if patient uncomfortable



- * Alternatives Include:**
- Aminophylline
 - Dopamine
 - Glucagon (if bradycardia is caused by beta-blocker or calcium channel blocker)
 - Glycopyrrolate (may be used instead of atropine)

Document NOW!

Prompt Card 20a

ANAPHYLAXIS: (See Overleaf for Algorithm)

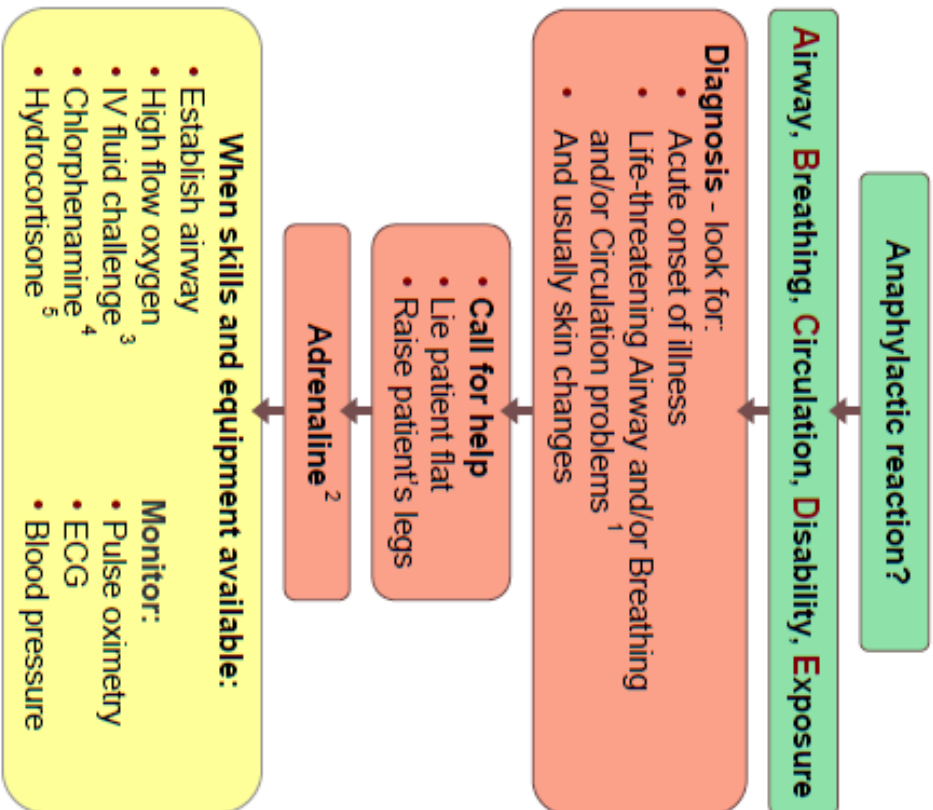
ABCDE

Confirm diagnosis of Anaphylaxis

Administer **intra muscular adrenaline 1:1000**

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

Repeat after 5 minutes if no better



1 Life-threatening problems:
Airway: swelling, hoarseness, stridor
Breathing: rapid breathing, wheeze, fatigue, cyanosis, SpO₂ < 92%, confusion
Circulation: pale, clammy, low blood pressure, faintness, drowsy/coma

2 Adrenaline (give IM unless experienced with IV adrenaline)
 IM doses of 1:1000 adrenaline (repeat after 5 min if no better)

- Adult 500 micrograms IM (0.5 mL)
- Child more than 12 years: 500 micrograms IM (0.5 mL)
- Child 6 -12 years: 300 micrograms IM (0.3 mL)
- Child less than 6 years: 150 micrograms IM (0.15 mL)

Adrenaline IV to be given only by experienced specialists
 Titrate: Adults 50 micrograms; Children 1 microgram/kg

3 IV fluid challenge:
 Adult - 500 – 1000 mL
 Child - crystalloid 20 mL/kg

Stop IV colloid if this might be the cause of anaphylaxis

4 Chlorphenamine (IM or slow IV)

Adult or child more than 12 years	10 mg
Child 6 - 12 years	5 mg
Child 6 months to 6 years	2.5 mg
Child less than 6 months	250 micrograms/kg

5 Hydrocortisone (IM or slow IV)

Adult	200 mg
Child	100 mg
Child 6 months to 6 years	50 mg
Child less than 6 months	25 mg

Anaphylaxis Algorithm

Document NOW!

EMERGENCY PROMPT CARDS

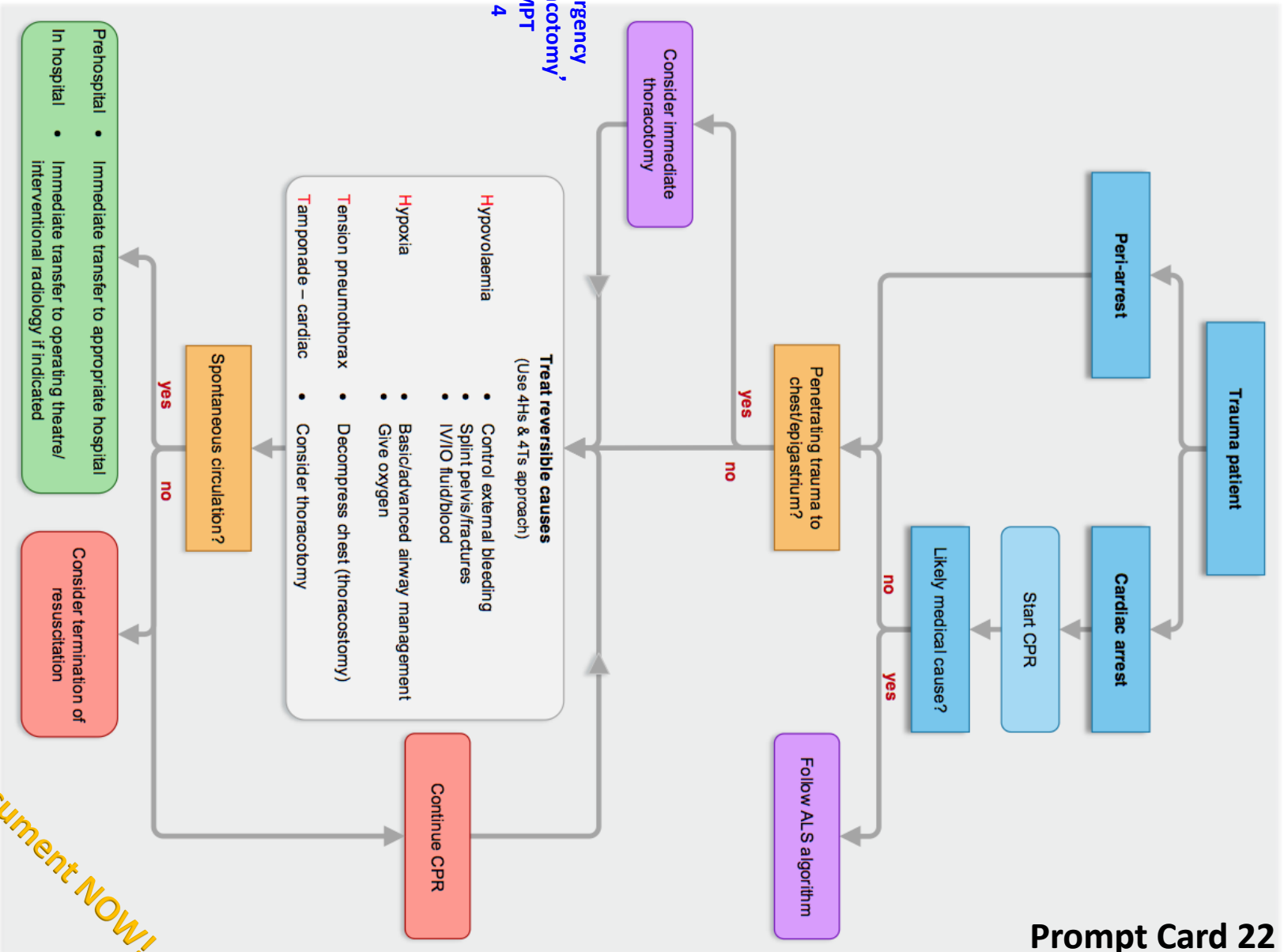


Resuscitation Council (UK)



Traumatic Cardiac Arrest Treatment Algorithm

Prompt Card 22

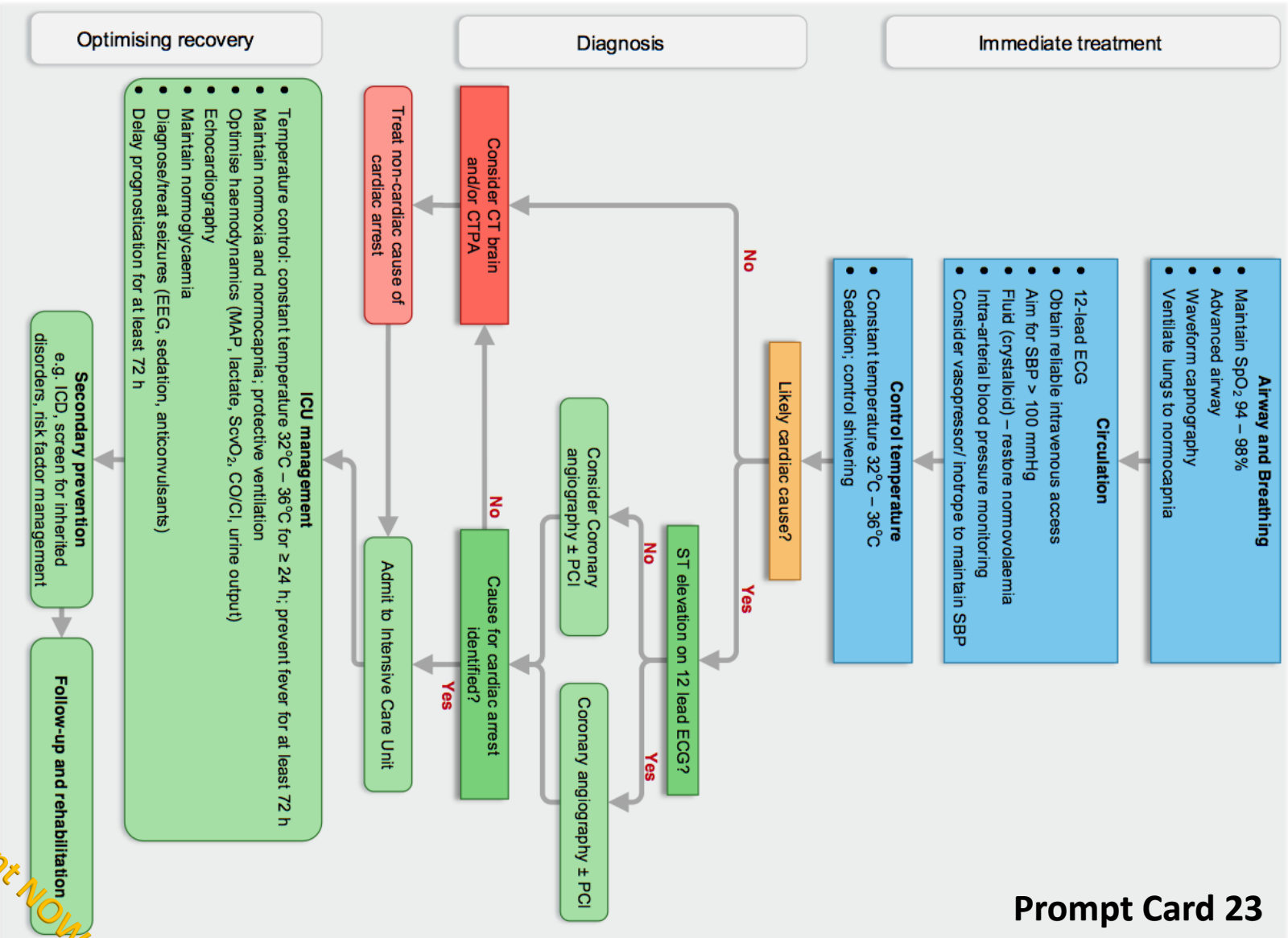


Document NOW!

Brighton and Sussex University Hospitals



NHS Trust



Prompt Card 23

Document NOW!

RSI (Rapid Sequence Induction) Checklist

If no Time Use EMERGENCY CHECKLIST (PTO)

1. Prepare Team and Patient

2. Prepare Equipment

3. Prepare for difficulty

Pre-oxygenate

- 100% O₂ applied
- Good facemask seal with CO₂ trace
- Consider high flow nasal oxygen (Optiflow in Theatres)

Has airway been assessed?

Do you need more help?

Is patient's position optimised?

- Consider ramped position
- Consider loosening collar with MILS (Manual In-Line Stabilisation) - remove front of collar

Is IV access patent with IV Fluids running?

Roles allocated?

Including:

- First Intubator
- Second Intubator
- Intubator's assistant
- Cricoid pressure
- Drugs
- MILS (if indicated)

Is all monitoring on?

Including capnography
Is the BP cycling every 3 minutes?

Is all equipment available and checked?

Including:

- Working suction
- 2 Endo Tracheal tubes
- 2 laryngoscopes
- Self-inflating bag/Water's Circuit/ Guedel/ NPA
- Bougie
- Supraglottic airway
- Difficult airway trolley
- CMAC/video-laryngoscope

Ventilator ready?

Are all drugs available?

Including: induction agent, NMJ blockers, vasopressors, long acting NMJ blocker, maintenance agent, infusion device for maintenance agent.

What is the plan for a difficult intubation?

DISCUSS:

- Plan A: RSI with tracheal intubation
- Plan B: Maintain O₂ – iGel insertion
- Plan C: Facemask Ventilation
- Plan D: Front of Neck – Scalpel Cricothyroidotomy

Have you access to the relevant equipment, including alternative airway?

YES

DO NOT START UNTIL AVAILABLE

Are there any specific complications anticipated?

YES

NO

DO YOU NEED MORE HELP?

SILENCE WHEN INTUBATING

RECORD ANY RSI OR SEDATION IN THE EMERGENCY DEPARTMENT @ BAMBOO.BSUH.NHS.UK

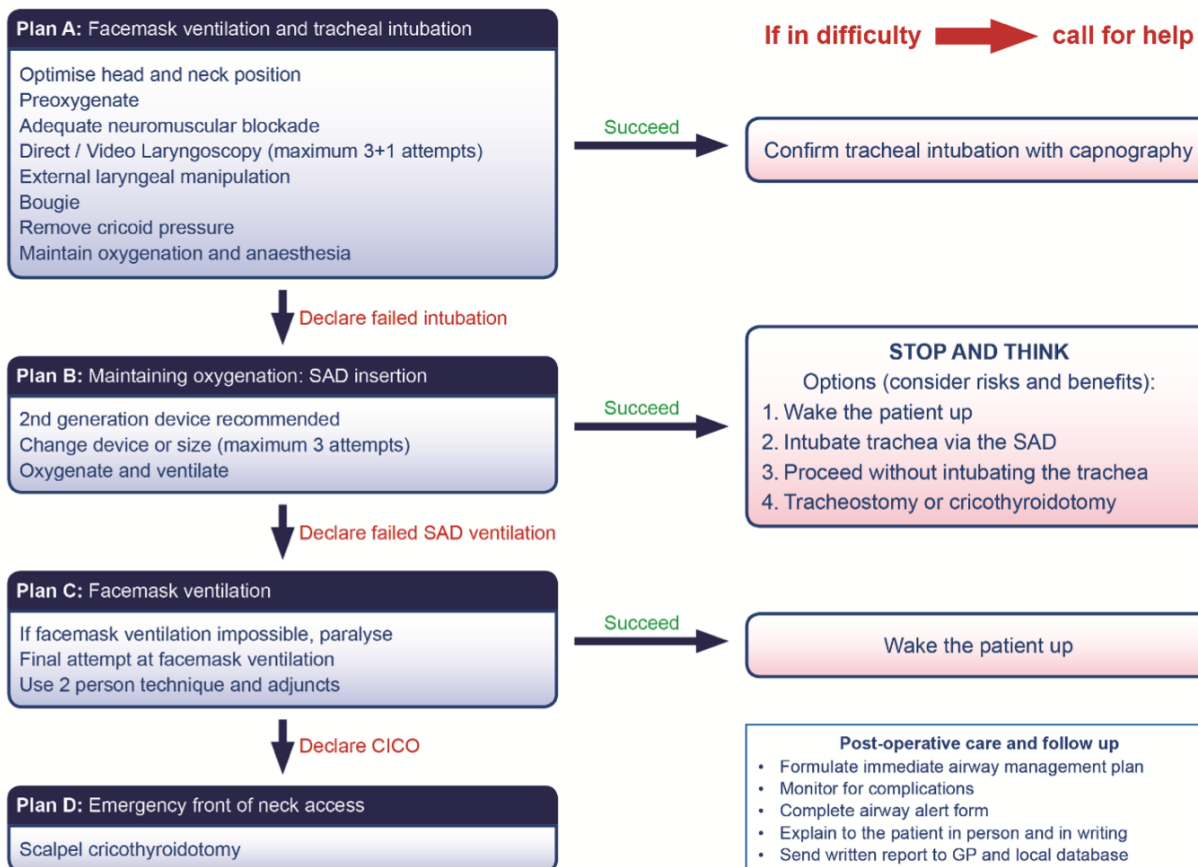
Emergency checklist for Rapid Sequence Induction

IF ARREST OR PERIARREST SITUATION WITH SATS DROPPING DESPITE OPTIMISATION:

1. Oxygen
2. IV access
3. Drugs
4. Laryngoscope
5. Suction
6. Bougie
7. Tube
8. Syringe
9. CO₂ Monitoring
10. Bag – Valve – Mask



Management of unanticipated difficult tracheal intubation in adults



This flowchart forms part of the DAS Guidelines for unanticipated difficult intubation in adults 2015 and should be used in conjunction with the text.

Sedation Checklist

1. Prepare Team and Patient

2. Prepare Equipment

3. Prepare for difficulty

Discus Procedure to be performed:

Consent obtained?

Allocate roles

- Doctor performing sedation
Name.....
- Nurse
Name.....
- Doctor performing procedure
Name.....

Is there a plan on how to get extra help if required?

Airway assessed?

Mallampati score (I-IV)

Fasting time? Food

Fasting time? Clear fluid

IF NBM less than 6 hours food, 2 hours clear fluids GET SENIOR ADVICE

Are the benefits of performing the procedure now in the ED, greater than the risks?

YES

Is all monitoring on?

- Including Capnography
- Is the BP cycling every 3 minutes?

Is all equipment available and checked?

- Self-inflating bag/Water's Circuit/ Guedel/NPA
- Working suction
- Two tracheal tubes
- Two laryngoscopes
- Bougie
- Supraglottic Airway
- Difficult airway trolley

Patent IV access with IV Fluids running?

100% Oxygen (unless contraindicated)?

Are drugs drawn up and labelled?

- sedation agent
- analgesia
-

Are emergency drugs available?

- Vasopressors
- Reversal agent
- NMJ blocker
- Induction agent

What is the plan for oversedation?

Reversal plus plan for

- Plan A: Bag Mask
- Plan B: Supraglottic Airway
- Plan C: e.g. Intubation
- Plan D: Difficult airway protocol

Have you access to the relevant equipment, including alternative airway?

Yes

DO NOT START UNTIL AVAILABLE

Are there any specific complications anticipated?

No Yes

If Yes, what are they?

Do you need more help now?

SILENCE DURING PROCEDURE

RECORD ANY RSI OR SEDATION IN THE EMERGENCY DEPARTMENT @ BAMBOO.BSUH.NHS.UK



**Failed intubation, failed oxygenation in
the paralysed, anaesthetised patient**

CALL FOR HELP

**Continue 100% O₂
Declare CICO**



Plan D: Emergency front of neck access

Continue to give oxygen via upper airway
Ensure neuromuscular blockade
Position patient to extend neck

Scalpel cricothyroidotomy

- Equipment:**
1. Scalpel (number 10 blade)
 2. Bougie
 3. Tube (cuffed 6.0mm ID)

Laryngeal handshake to identify cricothyroid membrane

Palpable cricothyroid membrane

Transverse stab incision through cricothyroid membrane
Turn blade through 90° (sharp edge caudally)
Slide coude tip of bougie along blade into trachea
Railroad lubricated 6.0mm cuffed tracheal tube into trachea
Ventilate, inflate cuff and confirm position with capnography
Secure tube

Impalpable cricothyroid membrane


Make an 8-10cm vertical skin incision, caudad to cephalad
Use blunt dissection with fingers of both hands to separate tissues
Identify and stabilise the larynx
Proceed with technique for palpable cricothyroid membrane as above


Post-operative care and follow up

- Postpone surgery unless immediately life threatening
- Urgent surgical review of cricothyroidotomy site
- Document and follow up as in main flow chart

Code Red – as determined by ED Consultant or HEMS/SECAmb

- 1) Assign **COMMUNICATOR** role to liaise with:
 - 1st → Transfusion lab (red phone/bleep 8286) – **KNOW** patient sex, age & estimated weight
 - 2nd → Theatres (CEPOD co-ordinator ext 4172, bleep 8061)
- 2) Brief **porter** they may need to go to lab with blood samples or before they are available. Ensure porter is sent to lab to collect **Pack A**
- 2) As soon as **PACK A** arrives:

 Give 4 units Cryoprecipitate *FIRST* & then 4 units of Group O Red Cells
- 4) <3 hours since injury → Ensure 1g **TRANEXAMIC ACID IV** has been given STAT & then start infusion

 1g Tranexamic Acid in sodium chloride 0.9% in 100mL over 8 hours
- 5) Avoid **Hypothermia** (<35°C) → warm fluids, cover patient, monitor core temp
- 6) Get **RAPID SURGICAL CONTROL**
- 7) Collect and use **PACK B** if required (6 units of type specific red cells, 4 FFP, 2 units cryo & 1 unit of platelets).
- 8) Consider Activated Factor VII when bleeding persists but Pack A & B are used

BSUH MASSIVE TRANSFUSION PROTOCOL can be found on ITU Intranet site



EMERGENCY PROMPT CARDS

Procedures Section

Central Venous Catheter (CVC) Insertion

- 1) Ensure patient is stable enough to use this prompt card.
- 2) Team brief and a plan for any difficulties. At this point ensure **consent** is obtained
Get **USS machine** and **CVC Equipment Box**.
- 3) Ensure monitoring & 100% Oxygen are on patient and working.
- 4) **Hat** and **mask** worn by operator. **HANDS WASHED**. **Sterile gloves and gown** worn.
- 5) **2% Chlorhexidine** is applied to skin area and allowed to dry. Drape to make **sterile working field**.
- 6) Sterile sheath and sterile gel used with ultrasound probe.
- 7) Unless contraindicated place central line in the **Right Internal Jugular**. If for inotrope administration put primed (with infusion) double swan lock on a dedicated line.
- 8) After insertion and **line is sutured in securely** ensure **sterile dressing** is applied (Tegaderm/Opsite)
- 9) Organise **portable chest x-ray** in resus (Bleep: RSCH 8364, PRH 6157) & Review for Pneumothorax and Line Position

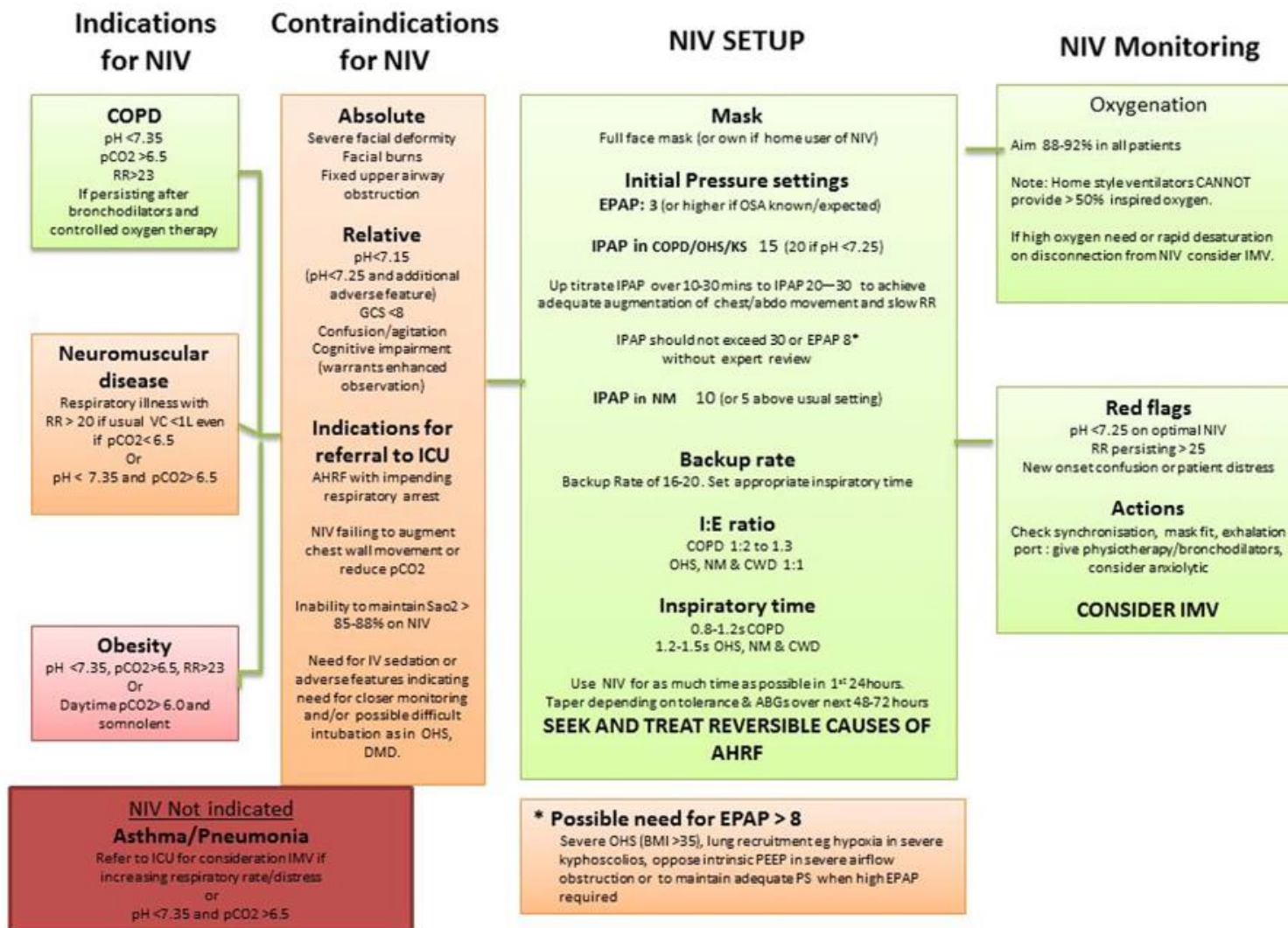


Figure 1 Summary for providing acute non-invasive ventilation.

NIV exclusion criteria

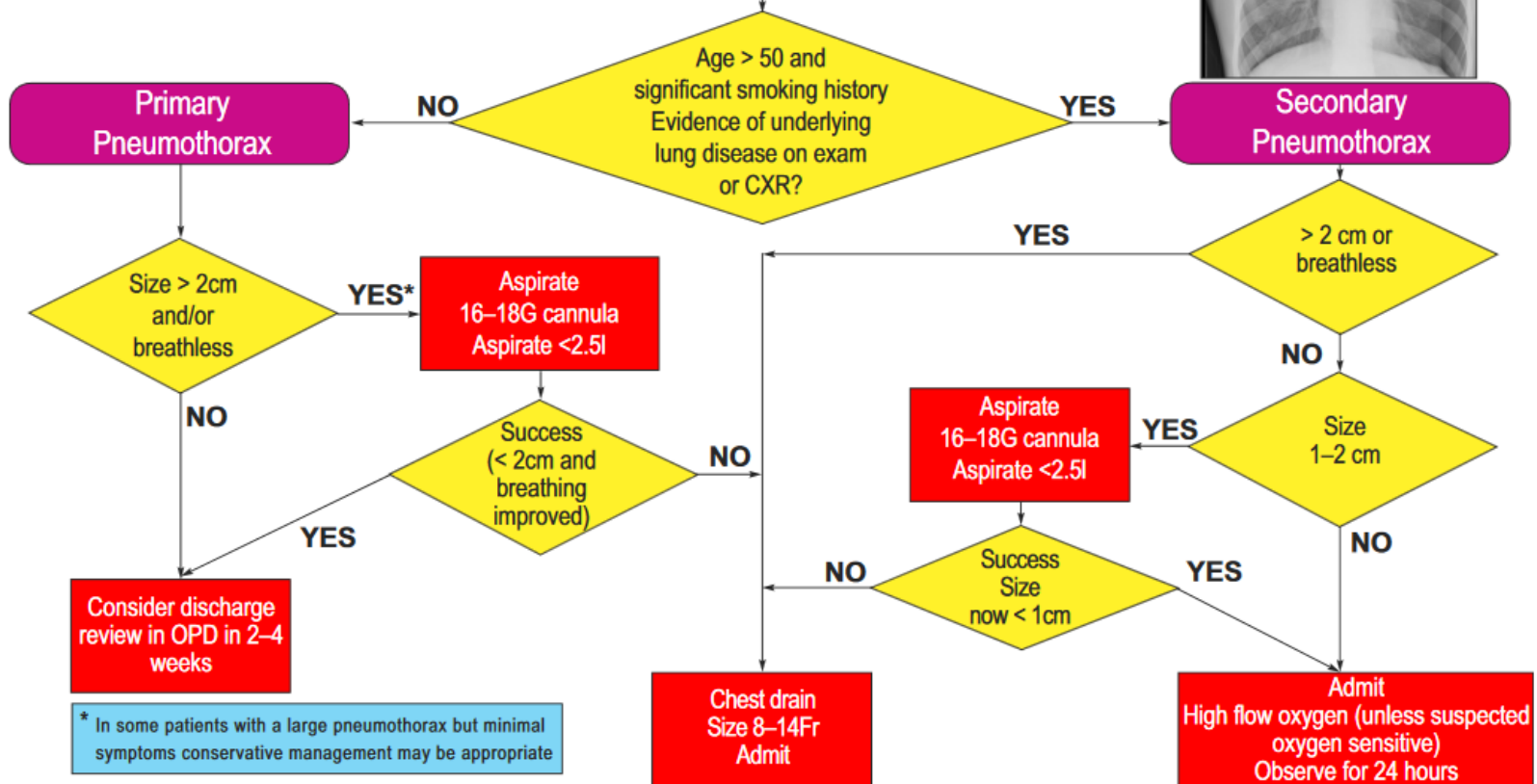
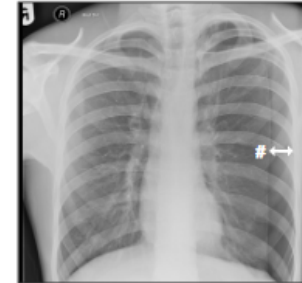
- Patient declines treatment
- Facial burns / trauma / recent facial or upper airway surgery
- Fixed upper airway obstruction
- Undrained pneumothorax
- Haemodynamically unstable requiring inotropes/pressors (unless in a critical care unit)
- Severe co-morbidity
- Inability to protect airway (relative contraindication)
- Copious respiratory secretions (relative contraindication)
- Upper gastrointestinal surgery (relative contraindication)
- Vomiting (relative contraindication as NG tube can be considered in these patients if intubation is not an option)
- Confusion / agitation (relative contraindication)
- Bowel obstruction (relative contraindication)



BTS Pleural Disease Guideline 2010
MANAGEMENT OF SPONTANEOUS PNEUMOTHORAX

Spontaneous Pneumothorax
If Bilateral/Haemodynamically unstable
proceed to chest drain

Measure the interpleural distance at the level of the hilum



* In some patients with a large pneumothorax but minimal symptoms conservative management may be appropriate

The BTS Pleural Disease Guideline is endorsed by: Royal College of Physicians, London; Royal College of Surgeons of England; Royal College of Physicians of Edinburgh; Royal College of Surgeons of Edinburgh; Royal College of Physicians and Surgeons of Glasgow; Royal College of Radiologists; Royal College of Anaesthetists; Royal College of Pathologists; College of Emergency Medicine; Society for Acute Medicine; Association for Clinical Biochemistry; British Society of Clinical Cytology.
BTS Guideline for Pleural Disease 2010 is published in Thorax Vol 65 Supplement 2 and is available online at: <http://www.brit-thoracic.org.uk/clinical-information/pleural-disease.aspx>

Organ Donation

1) Does your intubated/ventilated patient fit one of these **CLINICAL TRIGGERS?**

- Catastrophic brain injury with absence of >1 cranial nerve reflex and GCS <4 (not sedated)
- Planned withdrawal of life sustaining treatment in patient with life threatening or life limiting condition

2) Refer to ITU for consideration of ongoing management - brain stem death testing / donation after circulatory death (DCD) (ITU SpR bleep **8413**)

2) **DO NOT DISCUSS** potential of Organ Donation in ED with family

3) Contact Specialist Nurse Organ Donation on 07659 590 529 (24 hours a day)

4) Refer **all** patients <86 years of age regardless

5) Consider Tissue Donation in ALL patients that die in ED – call 08004320559

For more information see odt.nhs.uk



EMERGENCY PROMPT CARDS

Medications Section

Naloxone Usage & Infusion

1) Patient has **RR <10** & **IS an IVDU**:

- If IVDU = Give 100 micrograms Naloxone IV & Repeat doses every 2 mins until RR>10
- Aim RR>10 NOT GCS 15 as this could precipitate opioid withdrawal



Naloxone is given STAT with no dilution. It can be given IM if no IV access can be found BUT the effect is delayed

2) Do an **ABG** to rule respiratory acidosis due to CO₂ retention

3) Patient has **RR <10** & is **NOT an IVDU**:

- Not IVDU = Give 400 micrograms Naloxone IV dose (can repeat every 2 minutes)
- If no signs of improvement (↑RR, ↑GCS, ↑Pupil size) call ITU and consider other cause

4) Naloxone Infusion (for partial response and to maintain an increased RR)

- Starting dose = 60% of dose required to obtain increase in RR



Multiply the effective bolus dose by 6, and then add this quantity to 1000ml Normal Saline and infuse the solution at 100 ml/hr.

e.g. If 400microgram was the bolus, then 2400microgram is added to 1000ml Normal Saline. Infusion at 100ml/hr provides a dose of 240microgram/hr.

5) Slowly decrease infusion dose over the next 2-3 hours and stop the infusion if RR remains stable –

- **Dispense naloxone mini-jets to known IVDU's from Majors 2B cupboard upon discharge**

Aminophylline Infusion

- 1) Patient diagnosed with life threatening asthma or is a non-responder to nebulisers.

Aminophylline injection **should not be used** in patients hypersensitive to ethylenediamine or those allergic to the theophyllines, caffeine or theobromine.

- 2) Ensure Patient is on a Cardiac Monitor before giving Aminophylline

- 3) Loading Dose = 5mg/kg (usually 250-300mg)

(ONLY if not on oral Theophylline - Uniphyllin Continus, Nuelin, Slo-Phyllin, Phyllocontin Continus)
P.T.O. for Dosing and Infusion Rate Table



Add dose to 100ml of either 5% glucose or 0.9% sodium chloride and give by infusion over AT LEAST 20 minutes

- 4) Maintenance Infusion used in acute severe asthma or severe exac. of COPD.

Maintenance infusion = P.T.O for dosing table

P.T.O. for Dosing and Infusion Rate Table



Dilute to aminophylline 1mg in 1mL with sodium chloride 0.9% or glucose 5%

- 5) Levels: Blood sample should be taken 4-6 hours after starting treatment

- 6) Check **POTASSIUM** levels regularly whilst on aminophylline

Doses need to be calculated on the basis of **Ideal Body Weight**:
50KG (Male)/45 KG (Female) + 2.3KG for every INCH over 5 feet

Aminophylline Dosing and Infusion Rate table							
Dose Aminophylline	40kg	50kg	60kg	70kg	80kg	90kg	100kg
LOADING DOSE 5mg/kg over 20 minutes	200mg	250mg	300mg	350mg	400mg	450mg	500mg
Infusion Rate for MAINTENANCE DOSE							
Elderly or heart failure: 0.3mg/kg over 24hours	12mL/hr	15mL/hr	18mL/hr	21mL/hr	24mL/hr	27mL/hr	30mL/hr
Non-smoking adult: 0.5mg/kg over 24hours	20mL/hr	25mL/hr	30mL/hr	35mL/hr	40mL/hr	45mL/hr	50mL/hr
Smoking Adult: 0.7mg/kg over 24hours	28mL/hr	35mL/hr	42mL/hr	49mL/hr	56mL/hr	63mL/hr	70mL/hr

Monitor levels 18 hours after treatment. Aim for serum level 10-20mg/L. Do not adjust the dose/frequency if this first level is between 8-10mg/L. Take care with interacting medication e.g. erythromycin and clarithromycin, ciprofloxacin.

Detailed advice is available from the pharmacy department. If IV theophylline continues for more than 24 hours start monitoring levels – stop infusion for 20 minutes before taking levels

Salbutamol Infusion

- 1) Patient reviewed by **Senior SpR** or **Consultant**?
- 2) Clinical decision taken to start **IV Salbutamol** because other therapy is not working
- 3) **SALBUTAMOL IV** → 500 micrograms in 1ml



Dilute to 10ml with water for injections to give a concentration of 50microgram/ml and give 250 micrograms i.e. 5ml over 3-5 minutes,

- 4) **REPEAT** above 250 micrograms if required or **START INFUSION:**
→ 3 to 20 micrograms per minute in severe life threatening asthma



Add 5ml of the higher strength salbutamol 5mg in 5ml to 500ml of glucose 5% to give a concentration of 10 microgram/ml. Infuse at 0.3-2ml/min

- 5) Monitor for **TACHYCARDIA** and check **POTASSIUM** levels every 1-2 hours whilst on Salbutamol

Starting Vasoactive Medications (Inotropes/Vasopressors) (adults only)

- 1) ED Consultant or ITU SpR/Consultant asks for inotropes for use in resus
- 2) Do you have a **patent dedicated CENTRAL line lumen** for inotrope administration?
Does the patient have an Arterial Line? CVC Correctly sited? → '**CVC INSERTION**' **PROMPT CARD 24**
- 3) Ensure dedicated lumen is primed (with infusion) double swan lock connector
- 4) ALWAYS use dedicated **ALARIS PUMPS** (2 in ED resus)
- 5) Making up **VASOPRESSORS**: (*suggested starting rate is 5 ml/hour (400 mcg /hour)* titrated to target Mean Arterial Pressure)



Noradrenaline

4mg noradrenaline + 46mls 5% dextrose = total volume 50mls



Adrenaline

(1 in 1000) 4mg adrenaline + 46mls 5% dextrose = total volume 50mls

- 6) Bleep ITU SpR (RSCH 8413, PRH 3010) and **Critical Care Outreach Team** (RSCH 8495, PRH 6331) if they are not already present before starting the infusion
- 7) Critical Care Outreach can advise/help with **double pumping** vasopressors if there is an expected delay before ITU transfer. Outreach Bleep (8am-8pm): RSCH 8495, PRH 6331

Labetalol Infusion

Remove 90mLs from a
250mL bag of 5%
Glucose (160mLs)



Add 2 ampoules of
100mg/20mL Labetalol
(i.e 200mg = 40mLs)



This now gives 200mg
of Labetalol in 200mLs
of 5% Glucose

Commence at 15mg per
hour and titrate upwards
by 10-15mg every 30
minutes to achieve
parameters detailed on
hypertension prompt
card (**MAX: 120mg/hour**)

**Use in pregnancy differs;
see Pre-eclampsia
prompt card**

EMERGENCY PROMPT CARDS

Clinical Scores

HAS-BLED Score

Condition	Score
Hypertension ≥ 160 mmHg systolic	1
Abnormal	
- Renal function (Dialysis/Transplant/Cr ≥ 200 μ mol/L)	1
- Liver Function (Cirrhosis/Bilirubin $> x2$ normal/AST or ALT $> x3$ normal)	1
Stroke: prior history	1
Bleeding: prior major bleed or predisposition to bleeding	1
Labile INR: in therapeutic range $< 60\%$	1
Elderly > 65 years	1
Drugs	1
- Medication predisposing to bleeding (NSAID's, Anti-platelets)	
- Alcohol/Drugs	

Risk	Total Score
Low (1.1%)	0-1
Intermediate (1.9%)	2
High (4.9%)	≥ 3

Wells DVT Score (≥ 2 = DVT Likely)

Clinical Feature	Score
Active Cancer (treatment on going, within 6 months or palliative)	1
Paralysis, paresis or recent plaster immobilisation of the lower extremities	1
Recently bedridden for ≥ 3 days or major surgery within 12 weeks requiring general or regional anaesthesia	1
Localised tenderness along the distribution of the deep venous system	1
Entire leg swollen	1
Calf swelling ≥ 3 cm larger than asymptomatic side	1
Pitting oedema confined to the symptomatic leg	1
Collateral superficial veins (non varicose)	1
Previously documented DVT	1
An alternative diagnosis is at least as likely as DVT	-2

Wells PE Score (≥ 4 = PE Likely)

Clinical Feature	Score
Clinical DVT (leg swelling and pain on palpation of deep veins)	3
An alternative diagnosis is less likely than a PE	3
HR >100bpm	1.5
Immobilisation for ≥ 3 days or surgery in the previous 4 weeks	1.5
Previous DVT/PE	1.5
Haemoptysis	1
Active Cancer (treatment on going, within 6 months or palliative)	1

CHA₂DS₂-VASc Score (≥ 2 = Consider anticoagulation)

Condition	Score
Congestive Cardiac Failure	1
Hypertension: $\geq 140/90$ or known hypertension on medication	1
Age ≥ 75 years	2
Diabetes Mellitus	1
Stroke/TIA/VTE	2
Vascular Disease	1
Age 65-74 years	1
Sex Category: Female Sex	1

CURB 65 Score (Consider admission if ≥ 2)

Symptom	Score
Confusion (AMTS <8)	1
Urea > 7mmol/L	1
Respiratory Rate > 30	1
Blood Pressure (SBP < 90mmHg or DBP < 60mmHg)	1
Age \geq 65 years	1

Admission Blatchford Score

Admission Risk Marker	Parameter	Score
Blood Urea mmol/L	≥ 6.5 – 7.9	2
	8.0 – 9.9	3
	10.0 – 24.9	4
	≥ 25.0	6
Haemoglobin (men) g/dL	≥ 12-13	1
	10.0 – 11.9	3
	<10	6
Haemoglobin (women) g/dL	≥10 - 12	1
	<10	6

Admission Risk Marker	Parameter	Score
Systolic BP mmHg	100 - 109	1
	90 - 99	2
	< 90	3
Other Markers	HR > 100	1
	Melena	2
	Syncope	2
	Hepatic Disease	2
	Cardiac Failure	2

See intranet for management guidelines based on Blatchford Score

Modified Glasgow Score for Severity of Pancreatitis

Criteria	Score
PaO ₂ <8 kpa	1
Age >55 years	1
Neutrophils >15 x 10 ⁹ /L	1
Calcium <2 mmol/L	1
Raised Urea >16 mmol/L	1
Enzyme – LDH >600u/L	1
Albumin <32g/L	1
Sugar – Glucose >10 mmol/L	1

≥3 signifies severe disease and warrants a critical care referral