Northern Lincolnshire and Goole Hospitals NHS Foundation Trust actively seeks to promote equality of opportunity. The Trust seeks to ensure that no employee, service user, or member of the public is unlawfully discriminated against for any reason, including the “protected characteristics” as defined in the Equality Act 2010. These principles will be expected to be upheld by all who act on behalf of the Trust, with respect to all aspects of Equality.
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1.0 Introduction

1.1 Definition of Resuscitation

1.1.1 In-hospital resuscitation is traditionally seen as the recognition and management of cardiorespiratory arrest. Advances in resuscitation medicine, and widespread access to early defibrillation, have contributed to an increase in the number of people leaving hospital alive following VF/VT (shockable) cardiac arrest. The mortality associated with non-shockable in-hospital cardiac arrest, however, remains consistently high (Thompson et al., 2007). It is now well established that the common pattern of in-hospital cardiac arrest is a period of identifiable clinical deterioration culminating, after several hours or even days, in cardiorespiratory failure and non-shockable cardiac arrest. In light of this the definition of resuscitation has expanded in recent years to include the prevention of cardiac arrest. Cardiac arrest prevention focuses on the early recognition and treatment of conditions likely to culminate in cardiac arrest and the immediate care of patients following cardiac arrest.

1.1.2 With the exception of Resuscitation Decisions this policy addresses all aspects of resuscitation practice in relation to adults, children and newborns in a hospital setting. The Resuscitation Decisions policy is managed by the Medical Director (see section 8.0 below for intranet link to access this policy).

2.0 Resuscitation Policy: Purpose, Area (Scope), Duties and Monitoring Compliance and Effectiveness

2.0.1 The Trust is committed to providing prompt and high quality resuscitation care. This policy sets out the conditions required to meet this commitment.

2.1 Rationale

2.1.1 This policy has five main sections. The rationale for each section is broadly stated below:

- **Training** – Clinical staff will have access to evidence-based resuscitation training appropriate to their role. At any time, in any clinical area, there will be sufficient numbers of staff trained to commence optimal resuscitation

- **Resuscitation Teams** – All hospital staff will have rapid access to appropriate expert help in the form of senior clinicians and resuscitation teams

- **Resuscitation Equipment** – Clinical staff will have prompt access to serviceable resuscitation equipment and they will be familiar with that equipment’s routine maintenance and, where appropriate, operation

- **Recognition of the Patient at Risk** – Clinical staff should be competent in recognising the signs and symptoms of patient deterioration and will know how to intervene with the aim of preventing further deterioration and cardiac arrest

- **Resuscitation Decisions** – All resuscitation decisions should be made in the patient’s best interests, regardless of his or her mental capacity

- **Post Resuscitation Care** – Resuscitation care does not end with the return of spontaneous circulation but continues to include the safe transfer of patients to a definitive care setting
2.2 Area (Scope)

2.2.1 This policy applies to all clinical staff within the Trust, irrespective of grade.

2.3 Duties

2.3.1 This document is researched and written by the Trust Resuscitation Officers. It is designed to comply with the NHSLA Risk Management standards and the joint statement on resuscitation standards of the Royal College of Anaesthetists; Royal College of Physicians of London; Intensive Care Society & Resuscitation Council (UK). The Resuscitation Officers will be responsible for keeping this policy up to date with changes in local and national guidelines and recommendations and changes in Trust working practices.

2.3.2 It is the duty of all clinical staff, with the support of their clinical managers, to comply with this policy.

2.3.3 This policy’s first point of review and approval is the Trust Resuscitation Committee. Following approval of the Trust Resuscitation Committee final approval lies with the Governance Committee and the Medical Director.

2.4 Monitoring Compliance and Effectiveness

2.4.1 Monitoring compliance with the key areas of this policy is outlined below:

- Resuscitation Training:
  - Resuscitation training attendance will be monitored through the Oracle Learning Manager (OLM) component of the Electronic Staff Record (ESR) database for each member of clinical staff
  - Quarterly OLM reports will be returned to the Deputy Directors for Patient Services and the following branch leads for action:
    - Patient Service Managers for Family Services and Branch Governance Co-ordinator
    - Patient Service Managers for Surgery & Critical Care Services and Branch Governance Co-ordinator
    - Patient Service Managers for Medical Services and Branch Governance Co-ordinator
    - Patient Service Managers for Clinical Sciences and Branch Governance lead
    - Medical Director (doctors training reports only)
    - Trust Resuscitation Committee and the Governance Committee
  These reports will record:
    - The name of staff completing resuscitation training and the date training was undertaken
The name of staff that have electronically booked onto a training course but failed to attend

- Problems arising from clinical emergencies will be raised on a Cardiac Arrest Audit Form and standard Trust Incident Form (see 2.4 ii below). Urgent training will be arranged where appropriate and/or modifications made to existing training programmes

**Resuscitation Teams:**

- All emergency team calls on 2222 to be recorded by site switchboard. Information required includes date, time and source of call and which team was requested

- A Cardiac Arrest Audit Form should be raised by the Resuscitation Team leader and/or nurse in charge immediately following every cardiac arrest call

- Problems arising from clinical emergencies will be raised on a Cardiac Arrest Audit Form and standard Trust Incident Form. The completed cardiac arrest audit form should be sent to the site Senior Resuscitation Officer for action if required

- The completed Trust Incident form should be processed in accordance with Trust Policy and a copy of this form sent to the site Senior Resuscitation officer to allow early intervention/action if required

- A database of Cardiac Arrest Audit form data will be maintained by the Senior Resuscitation Officers

See Appendix A for Cardiac Arrest Audit Form.

**Resuscitation Equipment:**

- Resuscitation Officers will carry out a minimum of 10 audits per site per annum for DPOWH, 8 audits for SGH and 2 for GDH. Results of audits, with recommendations, will be fed back to the ward/unit manager, the Assistant Director of Nursing and the Governance lead for the Branch. The following standards will apply:

  - Are checks being carried out regularly by the appropriate grade of staff and signed for?
  
  - Are the defibrillator and mobile suction units in working order?
  
  - Does the equipment present comply with the Resuscitation Trolley Checklist and is there any superfluous equipment?
  
  - Is the trolley clean and dust free?
  
  - Results will be collated centrally by the Resuscitation Officer and fed back to the ward/unit manager and to the divisional governance team for action
All equipment problems reported to Resuscitation Officer directly or via the Arrest Audit form will be investigated and steps put in place to remedy within two working days of receiving the report.

See Appendix B for Resuscitation equipment Audit Form.

- **Patient at Risk Scores:**
  - It is the responsibility of the Trust Outreach team to audit compliance with the Patient at Risk (PARS) policy:
    - Outreach will collate and report on data from ad hoc audits
    - In addition PARS data will be collected as part of the Cardiac Arrest Form data.
    - All collated audit data on PARS will be reported to the Director of Nursing and Patient Services and the Medical Director
    - Monitoring and Compliance for the Modified Early Obstetric Warning System (MEOWS) is described in policy FSG101

- **Post Resuscitation Care:**
  - Post resuscitation care will be audited using the Cardiac Arrest audit proforma and the SGH/DPOWH Intensive Care units Global Cardiac Arrest monthly statistics

### 3.0 Resuscitation Committee – Terms of Reference

#### 3.1 Introduction

3.1.1 ‘Healthcare institutions should have, or be represented on, a resuscitation committee that meets regularly and whose purpose is to ensure clear leadership of the resuscitation service.’ (Resuscitation Council et al, 2004)

3.1.2 In order to comply with these recommendations and as part of the Trust’s governance/risk management arrangements the Trust has established a Resuscitation Committee.

#### 3.2 Status

3.2.1 The Resuscitation Committee is linked to the Trust’s Risk Management Group. A member of the Resuscitation Committee will attend all meetings of the Risk management group if an issue pertaining to resuscitation is tabled for discussion. The Risk Management Group will routinely receive the minutes of the Resuscitation Committee. There will also be close links between the Resuscitation Committee/Senior Resuscitation Officers and the Directorate of Governance and Quality Improvement in relation to resuscitation related risk issues.
3.3 Purpose

3.3.1 To assure both the Trust Risk Management Group and the Trust Board that there is clear leadership of the resuscitation service Trust-wide. The committee will also constitute an expert panel in the field of resuscitation for the purpose of guiding resuscitation practice and education and identifying, discussing and controlling the Trust’s risk exposure associated with resuscitation practice.

3.4 Terms of Reference

3.4.1 Ensuring the Trust adheres to national resuscitation guidelines and standards.

3.4.2 Defining the role and composition of the resuscitation team.

3.4.3 Defining the equipment required for resuscitation and supporting clinical managers with the procurement and maintenance of this equipment.

3.4.4 Defining the drugs required for resuscitation and working with the Pharmacy Department to ensure the appropriate drugs for arrest and peri-arrest situations are readily available.

3.4.5 Analysing and reporting on data generated by the resuscitation audit. Examining critical incidents relating to resuscitation and making recommendations.

3.4.6 Planning adequate provision of training in resuscitation, determining the level of resuscitation training required by individual staff groups, and ensuring that the level of mandatory training required by individual clinicians is available.

3.4.7 Advising the Medical Director on the development and review of the Resuscitation Decision Policy.

3.4.8 Developing and reviewing all other policies relating to resuscitation.

3.5 Membership:

- Consultant in Accident and Emergency or Anaesthetics or Cardiology (Chair)
- Consultant in Accident and Emergency (if not Chair)
- Consultant representing Goole and District Hospital
- Senior Resuscitation Officer (Deputy Chair)
- Pharmacist
- Consultant in Paediatric Medicine
- Consultant in Medicine
- Consultant Anaesthetist/Intensivist
- Senior Representative from Risk Management
- Assistant Director of Nursing
• Charge Nurse (Medicine)

• Charge Nurse (Paediatrics)

3.5.1 The permanent members of the Resuscitation Committee will represent their speciality/directorate Trust-wide and not just the hospital where they work. Staff will be invited to meetings from time to time where their individual expertise is required.

3.6 Procedural issues

3.6.1 Frequency of Meetings – Approximately every six months (around June and December). The committee will also be convened in response to extraordinary circumstance (e.g. introduction of new resuscitation guidelines).

3.6.2 Chairperson – Consultant in Anaesthetics or Accident and Emergency or Cardiology. In the absence of the nominated chairman the Senior Resuscitation Officer will chair the meeting.

3.6.3 Deputy Chairperson – One of the two Senior Resuscitation Officers will act as Deputy Chair.

3.6.4 Quorum – The Resuscitation Committee will be deemed to be quorate when there is 50% membership (including Chairperson or Deputy Chairperson).

3.6.5 Minutes of the Meeting – Minutes will be circulated with the agenda papers to all members in advance of each meeting, but no less than 5 working days before each meeting. Minutes will be circulated to the Trust Risk management group.

3.7 Review

3.7.1 These arrangements will be reviewed annually.

4.0 Resuscitation Training

4.1 Introduction

4.1.1 In order to provide prompt and high quality resuscitation care it is essential that clinical staff receive periodic resuscitation training. This section describes the types of training available and the Trust mandatory requirement for each clinical profession. It also specifies who is permitted to deliver resuscitation training. Resuscitation Training will be divided into the following categories:

• Mandatory – Clinical staff must attend training at the time intervals specified, irrespective of grade. At least 75% of clinical staff should have received mandatory resuscitation training in any 12 month period as determined by the OLM component of the ESR database

• Desirable – Clinical staff should attend in preference of mandatory minimum (all desirable courses meet mandatory requirement, but expand further on resuscitation care)

See Appendix C for a list of mandatory and desirable courses by profession.
4.2 Trust, Directorate & Unit/Ward Managerial Responsibility

4.2.1 The general duties and responsibilities of the Trust, Director of Human Resources, Medical Director, clinical staff management, Resuscitation Officers, clinical staff and OLM administrators are stated in section 6.0 of the Mandatory Training Policy and apply to resuscitation training (follow link).

Mandatory Training Policy (HRP021)

4.2.2 Directorate managers will provide sufficient time for clinical staff to attend mandatory resuscitation training.

4.2.3 All new clinical members of staff should receive mandatory resuscitation training within 3 months of starting with the Trust. In the case of new medical staff this training should be as soon after induction as possible.

4.2.4 Unit/ward/department managers will keep a record of mandatory resuscitation training departmental compliance. It is the unit/ward/department manager’s responsibility to ensure at least 75% of their staff has attended resuscitation training in any 12 month period. The Resuscitation Officer should be contacted if there is difficulty complying with this standard.

4.2.5 Resuscitation Officer whole time equivalent establishment should be sufficient to meet the Trust’s mandatory resuscitation training commitment.

4.3 Resuscitation Trainers

4.3.1 The Resuscitation Officers will meet most of the Trust’s resuscitation training needs. Designated trainers will be permitted to deliver basic life support training in their own speciality (i.e. basic adult, paediatric or newborn life support). Ideally designated trainers will be current Resuscitation Council Advanced Life Support instructors. Non-Resuscitation Council instructors are permitted to teach basic life support providing:

• That every 12 months designated trainers attend a combined mandatory update and ‘train the trainers’ day with the Resuscitation Officers

• Courses delivered by designated trainers comply with the Resuscitation Training Learning Objectives (see Appendix E)

4.4 Resuscitation Courses

4.4.1 The following statements do not apply to RC(UK) advanced courses, each of which have their own course regulations:

• All resuscitation training will comply with the guidelines of the Resuscitation Council (UK)

• The ratio of trainers to candidates will not exceed 1:10

• Courses will comprise a balance of theoretical and practical learning, with appropriate manikins/models and clinical equipment available in good working order

• Staff can access courses in three ways:
− Book via the intranet online system
− Block book courses directly with resuscitation officers
− For advanced courses contact course administrators:
  ▪ ALS and EPLS – SGH (81)5146
  ▪ NLS and ATLS – DPOWH (75)7969

• Staff should inform the Training and Development Department or the hospital Resuscitation Officer of intention to cancel resuscitation training at the earliest opportunity possible, to ensure a training place is not wasted.

• All attendances and non-attendances will be recorded on the OLM system.

4.5 Levels and frequency of training

4.5.1 Clinical staff should receive regular resuscitation training to a level appropriate for their expected clinical responsibilities (see Appendix C). It is the individual member of staff’s responsibility to ensure he/she attends mandatory resuscitation training every 12 months. If your professional group is not listed contact Resuscitation Officer to clarify the level of training you require:

• **Advanced Nurse Practitioners/Specialist Nurses** – Contact Resuscitation Officer to determine appropriate level of training. The responsibility for meeting mandatory resuscitation training standard remains with the individual practitioner/specialist.

• **Resuscitation Council (UK) Instructors** who are currently registered and actively teaching are exempt from mandatory resuscitation in the branch (adult, child or newborn) they instruct. *For example an ALS instructor does not need to attend mandatory adult resuscitation training.*

5.0 Resuscitation Teams

5.1 Introduction

5.1.1 To optimise the chance of survival of patients/staff/visitors suffering a clinical emergency, such as cardiac arrest, prompt access to teams of appropriately trained and experienced clinicians is essential. This section of the policy will detail the role, composition and alerting criteria of the following emergency teams:

• Adult Cardiac Arrest Team
• Paediatric Emergency Team
• Newborn Resuscitation Team
• Adult Trauma Team
• Paediatric Trauma Team
5.2 Area and Personnel

5.2.1 This policy applies to all areas of the Trust and to all staff as clinical emergencies can occur anywhere and to anyone.

5.3 Summoning an Emergency Team

5.3.1 Criterion for summoning an emergency team is listed below. These criteria are not exhaustive. Each situation requires prompt assessment using accepted assessment sequence, such as the ABCDE approach. A decision to call the team (or not) should be based on the condition of the patient and the skill, experience and resources of the clinicians present. If in doubt lengthy assessment must be avoided and an immediate call made.

| The number for activating emergency teams is 2222. |
| Switch board: “Which team do you require?” |
| Caller: State team required. |

If the emergency is in a car park, or area outside the main clinical building, call (9) 999 (or, if unable to get an external line, ask switch to dial 999) and 2222

For example: car parks, hospital roads, outlying buildings such as PGME and Butterwick House and any buildings not within the main clinical building on any of the three Trust sites.

5.4 Adult Cardiac Arrest Team

5.4.1 Minimal Personnel:
- Middle Grade/ST3 or above/SPR in medicine or medicine for the elderly
- On-call FY2 for medicine and/or elderly medicine
- On-call anaesthetist
- Resuscitation Officer (if available)

5.4.2 DPOWH Special arrangement – Family Services – For adult arrests in Family Services a member of staff should be sent across the covered walkway to the B floor entrance to let the adult cardiac arrest team in and to guide them back to the location of the arrest. Adult cardiac arrest team members unable to obtain swipe access to the family services building should wait at the B floor entrance to be let in and guided to the arrest.

5.4.3 Additional Personnel (where available):
- DPOWH only: Two A&E RNs to any adult cardiac arrest on the ground floor/hospital grounds, if staffing allows. Staff will take a defibrillator and basic emergency equipment and drugs to non-clinical areas.
• DPOWH only: A CCU RN to any adult cardiac arrest on the C floor or within family services, if staffing allows

• DPOWH only: Emergency Cardiac Nurse Practitioners will attend all adult cardiac arrests, if staffing allows

• GDH only: Member of staff from MIU, Site Bleep holder/coordinator

• SGH only: Member of staff from AE if in adjacent area and staffing allows; member of staff from CCU if staffing allows; Site Bleep holder/coordinator

5.4.4 Calling Criteria:

• >16 years of age and with any of the following:
  – Cardiorespiratory arrest (except where secondary to trauma, in which case the adult trauma team should be called)
  – Respiratory arrest
  – Anaphylaxis with features of angiodema and/or stridor and/or cardiovascular collapse
  – Massive, life threatening, GI bleed
  – Choking where BLS interventions are ineffective
  – Any other situation where the assessing clinician believes cardiorespiratory arrest is imminent

5.4.5 Role:

• Respond immediately to adult cardiac arrest calls. Lead attempts to resuscitate adults in respiratory/cardiorespiratory arrest, following current Resuscitation Council (UK) guidelines

• Stabilise patients in peri-arrest condition and liaise with appropriate clinicians for definitive care

• In the absence of the consultant/middle grade of the team caring for the patient, make a Do Not Attempt Resuscitate Order (DNAR) where appropriate (see section 9.0 below)

• Team leader will document team intervention following the event and, where a senior member of the patient’s team is not present, discuss outcome of resuscitation with the patient’s family

5.4.6 Resuscitation qualifications of team members:

• All members of the adult cardiac arrest team should ideally be current Resuscitation Council (UK) Advanced Life Support (ALS) providers. As an absolute minimum team members should have a current in-house Intermediate Life Support (ILS) certificate and be making arrangements to attend an ALS course
5.5 Paediatric Emergency Team

5.5.1 Minimal personnel:

- Second on-call: ST4/Staff Grade or associate specialist in paediatrics
- First on call: FY2 and FY1 in paediatrics
- First on-call anaesthetist
- Paediatric RN (if available)
- Resuscitation Officer (if available)
- DPOWH A&E RN if call on ground floor/hospital grounds

5.5.2 Calling Criteria:

- <16 years of age (except newborn):
  - Cardiorespiratory arrest (except where secondary to trauma, in which case the paediatric trauma should be called)
  - Respiratory arrest
  - Signs and symptoms of respiratory or/and circulatory failure
  - Suspected status epilepticus
  - In advance of arrival in hospital where paramedics/parents report child’s condition to be critical
  - Any other clinical situation where the assessing clinician requires immediate expert paediatric support

5.5.3 Role:

- Respond immediately to paediatric emergency calls. Lead attempts to resuscitate and stabilise infants/children in cardiac arrest or peri-arrest, following the European Resuscitation Council guidelines
- Liaise with appropriate clinicians/tertiary centres to arrange definitive care
- Support parents present during resuscitation
- In the absence of the consultant/middle grade of the team caring for the patient, make a Do Not Attempt Resuscitate Order (DNAR) where appropriate (see section 9.0 below)
- Team leader will document team intervention following the event and, where a senior member of the patient’s team is not present, discuss the outcome of resuscitation with the patient’s family
- Raise any child protection issues with the appropriate authorities
5.5.4 Resuscitation qualifications of team members:

- All members of the Paediatric Emergency Team should ideally be current Resuscitation Council (UK) European Paediatric Life Support (EPLS) providers or Advanced Paediatric Life Support Providers (APLS). If waiting to attend an EPLS/APLS course team members should have, as an absolute minimum, a current in-house Paediatric Intermediate Life Support (ILS) certificate.

5.6 Newborn Resuscitation Team

5.6.1 See the Trust Neonatal Resuscitation Policy for details of how to respond to a neonatal emergency (follow link).

Neonatal Resuscitation (FSG133)

5.7 Adult Trauma Team (Adult)

5.7.1 Minimal personnel:

- Consultant/Middle grade/ST3 or above/SPR in anaesthetics
- Consultant/Middle grade/ST3 or above/SPR in General Surgery
- Consultant/Middle grade/ST3 or above/SPR in Orthopaedics
- Consultant/Middle grade/ST3 or above/SPR in A&E
- A&E Nursing team
- On-call Operating Department Practitioner
- Resuscitation Officer (if available)

5.7.2 Calling Criteria:

- >16 years of age presenting with any of the following:
  - Potentially limb or life threatening burns and or blunt/penetrating injury
  - Any patient with severe head injury
  - Mechanism of trauma suggests risk of serious internal injury
  - In advance of arrival in A&E department where paramedics indicate victims injuries severe or mechanism of trauma implies high risk of internal injury
  - Cardiorespiratory arrest secondary to burns/trauma
  - Any other clinical situation where the assessing clinician requires immediate expert trauma support

5.7.3 Role:
• Respond immediately to adult trauma calls. Lead attempts to resuscitate and stabilise adults suffering major trauma and burns, following the guidelines of the American College of Surgeons and the European Resuscitation Committee

• Liaise with appropriate clinicians/tertiary centres to arrange definitive care

• Team leaders will document team intervention following the event and discuss course and outcome of resuscitation with the patient’s family

• Liaise with police and other authorities where appropriate

5.7.4 Resuscitation qualifications of team members:

• All members of the Trauma Team should ideally have a current American College of Surgeons Advanced Trauma Life Support certificate or Advanced Trauma Nursing Course. As a minimum the team leader will be a current ATLS provider

5.8 Paediatric Trauma Team

5.8.1 Minimal personnel:

• In addition to 5.7.1 (above) Consultant/Middle grade/ST4 or above/SPR in paediatrics

• Paediatric RN if available

5.8.2 Calling Criteria:

• <16 years of age presenting with any of the following:
  – As for 5.7.2 (above)

5.8.3 Role:

• In addition to 5.7.3 (above):
  – Raise any child protection issues with the appropriate authorities

5.8.4 Resuscitation qualifications of team members:

• In addition to 5.7.4 (above) the team leader and attending paediatrician should be a current Advanced Paediatric Life Support provider or European Paediatric Life Support provider
6.0 Resuscitation Equipment

6.1 Introduction

6.1.1 To optimise the chances of patient survival, with minimal long-term sequelae, for patients suffering cardiac arrest or peri-arrest, resuscitation equipment needs to be serviceable and rapidly available. In addition clinical staff requires regular training in how to test and use this equipment. Resuscitation equipment includes the following:

- Defibrillators and consumables
- Wall and portable suction
- Emergency trolleys and contents (including emergency drug boxes)

6.2 Responsibility for Resuscitation Equipment

6.2.1 It is the responsibility of department/ward managers (or shift leaders in the managers absence) to:

- Ensure the system for checking resuscitation equipment recommended by the Trust resuscitation officers is adhered to and missing or out of date consumables are replaced immediately
- Ensure resuscitation equipment is clean and ready for immediate use at all times

6.2.2 It is the responsibility of the hospital resuscitation officer to:

- Ensure departmental/ward managers have access to procedures for checking resuscitation equipment
- Recommend equipment that complies with Resuscitation Council (UK) guidelines and is standardised Trust-wide
- Ensure mandatory training courses include instruction, where appropriate, in the testing and use of resuscitation equipment
- Manage the procurement of defibrillators to ensure a standardised fleet of serviceable machines that comply with Resuscitation Council (UK) guidelines
- Liaise with the Medical Engineering department regarding routine maintenance, critical incidents involving equipment and procurement
- Advise clinical staff on all matters relating to resuscitation equipment

6.2.3 The Trust will provide recurrent funds to maintain resuscitation equipment stores at SGH and DPOWH. Stores will stock resuscitation consumables not commonly used in ward settings, ensuring these items are available for collection by ward staff all year round.
6.3 Routine Checking and Testing of Resuscitation Equipment

6.3.1 Resuscitation equipment can be checked and signed for by any of the following:

- Registered Nurse
- Registered Midwife
- Operating Department Practitioner
- Registered Professionals Allied to Medicine/Dentistry
- Advanced Health Care Assistant who has successfully completed HCA competency 5.1a ‘Clean and Check Crash Trolley’ (adult resuscitation trolleys only not paediatric)

6.3.2 Where a resuscitation trolley is shared by more than one area (e.g. two adjacent wards) the schedule of checks should be shared by both areas.

6.3.3 Missing/damaged/out of date equipment will be replaced immediately from the resuscitation store. If necessary stock can be borrowed from another clinical area. A list of recommended manufacturers and requisition codes can be downloaded from the Resuscitation Training intranet site or requested from the resuscitation officers. Please contact the resuscitation officers if an item cannot be located.

6.3.4 All resuscitation equipment in sterile packaging and/or with a manufacturer’s use-by date must be kept in its original packaging.

6.3.5 Resuscitation equipment will be checked using the appropriate form (See Appendix F), either:

- **Adult Resuscitation Trolley Checklist**
- or
- **Paediatric Resuscitation Trolley Checklist**
- or
- **Non-Acute Paediatric Trolley Checklist** *(This checklist is for areas seeing children for elective investigation/therapy, where aim in the event of an emergency will be stabilization and transfer to A&E or PHDU)*
- The contents of the emergency trolleys are based on recommendations of the Resuscitation Council (UK) and ratified by the Trust Resuscitation Committee
- Completed forms are to be kept in a loose leaf binder on the cardiac arrest trolley for audit purposes for 12 months (after this time they can be recycled)

6.3.6 To prevent delays during an emergency, overstocking and/or stocking of devices not listed on the checklist is not permitted.

6.3.7 All resuscitation equipment must be maintained clean and free of dust.
6.3.8 Areas using the WT/200 emergency trolley can seal the trolley with 11lb breaking strain seals (supplied by the resuscitation officers). The trolley checks can be completed at up to 7 day intervals, at the manager’s discretion, and immediately after use. All other trolleys should be checked daily unless the resuscitation officer agrees to weekly checks, following inspection of the trolley and its position. Weekly checks apply only to WT/200 emergency trolleys, not defibrillators and mobile suction units, which should be checked daily.

6.4 Defibrillators

6.4.1 The standard defibrillators for the Trust are:

- Zoll M Automated External Defibrillator (Bi-phasic) +/- transcutaneous cardiac pacing facility
- Zoll AED Plus Automated External defibrillator

6.4.2 Resuscitation Officers will advise on procurement of defibrillators and consumables.

6.4.3 The defibrillator will be checked daily using the appropriate Defibrillator Daily Check Procedure. This will ensure the defibrillator is checked in accordance with manufacturer’s recommendations and is serviceable for use.

6.4.4 Any faults to be reported to the Medical Engineering Department and resuscitation officer immediately.

6.4.5 The Medical Engineering Department will carry out a standard test on each defibrillator every six months and will replace the battery unit every 24 months.

6.4.6 Defibrillator internal clocks will be set to Greenwich Mean Time (GMT).

6.4.7 GDH: New defibrillator electrodes (pads), razors and ECG paper to be collected from the following areas:

- Goole and District hospital: Ward 5/6
- SGH and DPOWH staff can collect these items from the Resuscitation Stores

6.4.8 The Resuscitation Officer will ensure there is an adequate supply of defibrillator electrodes at all times.

6.5 Laryngoscopes

6.5.1 The recommended laryngoscope blades and handles are listed below:

- Adults:
  - Reusable adult laryngoscope handle
  - Size 3 single use Mackintosh laryngoscope blade
  - Size 4 single use Mackintosh laryngoscope blade
• **Children:**
  - *Single use* child laryngoscope handle
  - *Reusable* adult laryngoscope handle
  - *Single use* Miller blade sizes 1 and 2
  - *Single use* Mackintosh sizes 0, 1, 2, 3 and 4

6.5.2 Adult single use laryngoscope blades can be collected from the following locations:

- Goole and District hospital: Ward 5/6
- SGH and DPOWH staff can collect these items from the Resuscitation Stores

6.5.3 The Resuscitation Officer will ensure there is an adequate supply of adult laryngoscope blades at all times.

6.5.4 For Marshall single use paediatric laryngoscope handles and blades and reusable laryngoscope handles contact the Resuscitation Officer.

6.5.5 Laryngoscopes should be tested as part of the weekly or daily resuscitation equipment checks. The check should confirm the blade fits and the bulb illuminates when the blade is locked at 90 degrees to the handle.

6.5.6 The following procedure should be used to process laryngoscopes after clinical use:

- Single use laryngoscope blades and single use paediatric Marshall blades and handles should be disposed of in a sharp’s bin with a yellow lid. **Remove Batteries From Disposable Marshall Handles Before Disposal. Dispose Of Batteries According To Trust Policy**

- **Reusable** adult laryngoscope handles should be decontaminated using the following procedure:
  - Wear gloves
  - Remove batteries and replace the end cap
  - Wipe down with detergent and hot water being careful not to immerse the handle as ingress of water can cause damage
  - If visible contamination of body fluid decontaminate using a solution of Actichlor-Plus (combined detergent and hypochlorite product), correctly diluted according to product instructions, and rinse with water
  - Dry with a paper towel and blot out any moisture from the inside of the handle
  - When completely dry refit batteries, fit a new blade and test

6.5.7 Contact resuscitation officer if laryngoscope faulty.
6.6 Mobile and Wall Mounted Suction

6.6.1 All wall mounted and mobile suction is to use the VaxSax system of consumables. Assembly of wall mounted and mobile suction will comply with the Trust standard. This is described in the document:

- **Guide for Assembly and Testing the Vac Sax System:**
  - Mobile suction should be checked daily and wall-mounted suction checked each time a new patient is admitted to the bed

6.6.2 Clinical staff responsible for setting up and testing wall mounted and mobile suction will have completed the following self-assessed competency:

- **Wall Mounted and Mobile Suction – Self Assessment Part 1. Maintenance of VaxSax Suction System:**
  - This competency can be downloaded from the Resuscitation intranet site (documents) and will also be distributed to staff during mandatory resuscitation training

6.6.3 Resuscitation Officers will offer training to appropriate staff in assembly, testing and application of oro-pharyngeal suction with a yankeur sucker as part of mandatory resuscitation training. All registered clinical staff with a responsibility to operate suction equipment should complete the following self-assessed competency:

- **Wall Mounted and Mobile Suction – Self Assessment Part 2. Oro/oral-pharyngeal Suction in Adults Using a Yankeur Sucker**

6.6.4 Advanced Health Care Assistants (AHCAs) can be assessed by an NVQ assessor against the following competency:

- **13.3 Oral/oro-pharyngeal Suction in Adults using a Yankeur Sucker**

6.6.5 Endotracheal Suction:

- Staff nursing patients with tracheal tubes in situ require specialized training and support. The hospital Outreach Team or ITU Clinical Educators should be contacted for guidance on planning care of patients with tracheostomies. See also Tracheostomy Care Handbook, available as a download from the Nursing Directorate intranet site

6.6.6 Recommended Mobile Suction Unit:

- Oxylitre or Vaxsax mobile suction unit
  Contact hospital Resuscitation Officer or medical Engineering for advice before purchasing.

6.7 Recommended Emergency Trolley

6.7.1 Bristol Maid WT 200 +/- oxygen cylinder clamp
  Contact hospital Resuscitation Officer for advice before purchasing.
7.0 Patient at Risk – Recognition and Intervention

7.1 Introduction

7.1.1 Mortality in in-hospital cardiac arrest remains high (Thompson et al, 2007). Somewhere between 30 – 84% of in-hospital patients who suffer cardiac arrest show signs and symptoms of deterioration in the 24 hours leading to the event (Hillman KM et al, 2001; Andrews T, Waterman H, 2005). Studies have shown that the combination of failure to recognise the significance of physiological deterioration and a failure to seek appropriate expert help and commence early intervention result in increased rates of cardiac arrest and unanticipated intensive care admissions (Franklin C, Matthew J, 1994; Mcquillan et al, 1998; Smith et al, 2006).

7.1.2 The Trust is committed to optimising the care of acutely ill patients. To this end Patient at Risk Scoring (PARS) has been introduced for adult patients. PARS is an early warning tool which, when used alongside traditional physiological observations, is more sensitive than observations alone at detecting deteriorations in the patient’s condition. A PAR score of ≥3 triggers early intervention by ward/unit staff and, where indicated, an urgent call for senior clinical support. Increases in the PAR score suggest worsening deterioration in the patient’s condition. Prompt intervention, appropriate to the patient’s condition, may slow, halt or even reverse the course of deterioration.

7.1.3 Paediatrics and maternity - PARS equivalents:

- This section of the Resuscitation Policy deals predominantly with PARS, which is designed for use with adult patients. The paediatric and maternity wards have adopted equivalents, which are described briefly here

- Children – For children aged infancy to 16 the paediatric PARS equivalent, the Paediatric Early Warning Tool (PEW), is used. A PEW score should be recorded with every set of observations for acutely ill infants and children admitted to paediatric wards. Care should be taken to ensure the appropriate age based PEW observation sheet is used. There are four sheets, corresponding with the following age groups: Under 1 year, 1-4 years, 5-10 years and Over 10 years. The appropriate response to patients with deteriorating observation is detailed on the back of the PEW tool observation sheet (see fig 1)
7.1.4 Maternity - Maternity Services have produced an obstetrics form of PARS called the Modified Early Obstetric Warning System (MEOWS). MEOWS is dealt with in policy FSG101 (hyperlink)

7.2 Physiological Observations and PARS score

7.2.1 PARS score to be recorded at the same time as every set of physiological observations recorded on medical, surgical and specialist wards, regardless of how stable the patient may appear (See appendix G for recording of observations and PAR). PARS scores are not necessary in critical care areas such as ITU but it is useful to record a baseline PAR score on patients being transferred back to the wards.

7.2.2 Frequency of observations and PARS to be planned by the RN or doctor caring for the patient. This must be assessed with every set of observations and the frequency adjusted as appropriate.

7.2.3 Time, using 24 hour clock, and date should be recorded for each observation.
7.2.4 Physiological observations and PARS will be recorded by RN, RM and doctors. Senior and Advanced HCAs are permitted to record basic observations (i.e. Respiratory rate, pulse oximetry, heart rate, blood pressure, temperature and fluid balance) and PARS at the ward manager's discretion, providing they have successfully completed the appropriate NVQ competencies (see Appendix G). **Important that the person recording observations records PARs at the same time to ensure continuity.**

7.2.5 Staff will be competent in the use of equipment for measuring physiological observations. It is the ward/unit manager’s responsibility to ensure staff under their management can safely and accurately use equipment for measuring physiological parameters, such as:

- Pulse oximeter
- Automatic blood pressure and heart rate recorder
- Manual sphygmomanometer
- Thermometers (oral and tympanic)
- Hourly urinometers

7.2.6 All adverse findings, including rises in PARS, should be reported to the RN or RM in charge immediately.

7.2.7 All registered staff must exercise their own professional judgement when using PARS. Any decision that varies from the PARS guideline, for example not adding a score of 1 for a patient with chronic atrial fibrillation that occasionally reaches 105 bpm, should be documented and discussed with the team. If in doubt seek senior help.
7.3 Recording Physiological Observations and PARS

<table>
<thead>
<tr>
<th>Patient At Risk Score (PARS)</th>
<th>PAR Score To be completed as per Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Heart Rate</td>
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<tr>
<td>40 or less</td>
<td></td>
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<td>41 – 50</td>
<td></td>
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<td>51 – 100</td>
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<td>101 – 110</td>
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<td>111 – 129</td>
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<tr>
<td>130 or more</td>
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<tr>
<td>Respiratory Rate</td>
<td></td>
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<tr>
<td>8 or less</td>
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<td>9 – 14</td>
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<td>15 – 20</td>
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<td>21 - 29</td>
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<td>30 or more</td>
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<td>Temperature</td>
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<td>35 or less</td>
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<td>35.1 – 38.4</td>
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<tr>
<td>38.5 or more</td>
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<tr>
<td>Central Nervous System</td>
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<td>Alert</td>
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<tr>
<td>Voice</td>
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<td>Pain</td>
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<td>Systolic Blood Pressure</td>
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<td>101-199</td>
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<td>200 or more</td>
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<tr>
<td>Urine output (mls per hour)</td>
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<td>0</td>
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<td>1-19</td>
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<tr>
<td>20-29</td>
<td></td>
</tr>
<tr>
<td>30 or more</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2 PARS Score

7.3.1 Observations – The Royal Marsden Hospital Manual of Clinical Nursing Procedures – online edition (Royal Marsden, 2006) describes evidence based techniques for recording physiological observations safely and accurately and should be used as the gold standard for practice. This text is available as a download from the Nursing Professional Development Services intranet site. Observations should be recorded at a minimum of 12 hourly intervals, with frequency being increased as the patient’s condition dictates.

7.3.2 Patient at Risk Scoring – PARS score to be recorded with every set of physiological observations recorded on medical, surgical and specialist wards, regardless of how stable the patient may appear (see figure 2.) record PARS on the appropriate observation chart. The score is cumulative – the higher the total score the higher the risk of cardiorespiratory collapse and arrest. Any score of ≥3 should trigger immediate referral to the senior nurse (see section 7.4 below).

7.3.3 See Appendix F for guidance on recording physiological observations and PARS.
7.4 Response to high/rising PARS (≥ 3)

Figure 3 PAR Score Algorithm

7.4.1 With reference to Figure 3:

- Inform **Senior Nurse** of PARS ≥3 immediately. Senior Nurse to review patient immediately, re-assessing the patient using the **ABCDE approach** (see Appendix H) and intervening where competent. In addition senior nurse will summon appropriate help (see figure 2 above)

- Senior nurse has a number of options in response to a confirmed PARS of ≥3:
A member of the patient’s medical team should be informed. Initially this may be a junior member on a routine bleep. Clinical judgement, and/or a high PARS, may suggest that a quicker response, i.e. fast bleep on 2222, or more senior doctor, such as the middle-grade or even consultant, is more appropriate.

In addition:

- The Outreach Team (i.e. Day Support) should be informed immediately
- The Hospital at Night team should be contacted immediately for all patients with a score of ≥3 at night

- **Responsibility of Outreach team, doctor, hospital at night team when informed of patient with a Pars score >3:**
  - To clarify information given by referring RN/Dr. The SBAR communication tool can help focus the conversation on the key points of a referral (S-Situation; B-Background; A-Assessment; R-Recommendation)
  - To see the patient immediately or, if dealing with a more urgent referral, give clear instructions to the referring RN/Dr (again the SBAR can be useful for this purpose). Give an approximate time you will aim to see the patient and a simple plan should the patient’s condition deteriorate further
  - To assess the patient on the ward and make recommendations for further care, including supporting ward clinical staff with referrals to senior doctors, transfer to ITU/HDU/CCU, a care plan with actions in the event of further deterioration and support with critical care interventions on the ward (e.g. non-invasive ventilation)

- **The ABCDE approach (see Appendix F):**
  - It is essential that the Senior Nurse/Junior Doctor not only bleeps/fast bleeps the appropriate doctors/teams in response to a PARS of ≥3, but commences intervention too. This intervention should follow the ABCDE approach, which can be used by all levels of healthcare professional to stabilise the critically ill, establishing a platform for more definitive diagnosis and treatment. The ABCDE approach is taught as part of BLSD level resuscitation courses and above

### 7.5 Training in PARS and ABCDE

#### 7.5.1 PARS scoring and the ABCDE approach will be taught during the following resuscitation training courses:

- Basic Life Support and Defibrillation
- Adult Resuscitation Day
- Advanced Life Support Course
- Acute Life-Threatening Events, Recognition and Treatment (ALERT) Course
• High dependency course for RNs
• Clinical Skills course for HCAs

7.5.2 The ABCDE approach will be taught on the following paediatric courses:
• Paediatric Resuscitation Day
• European Paediatric Life Support Course

8.0 Resuscitation Decisions

8.1 The Trust’s Resuscitation Decisions Policy, and ‘Confirmation of a Do Not Resuscitate’ (DNR) Order form, developed and managed by the Medical Director’s Office, are available from the Trust Intranet via the following links:

Resuscitation Decisions (MDP001)
Confirmation of a ‘Do Not Resuscitate’ DNR Order (WQN 918)

9.0 Post Resuscitation Care

9.1 Introduction

9.1.1 Following resuscitation most patients will be clinically unstable and at high risk of further adverse events. The care they receive in this period will influence their final outcome. Post resuscitation care involves implementing a patient-centered care plan, where the priority is to restore normal cerebral and cardiac function. This process involves identifying the most suitable clinical setting for the patient and, where necessary, arranging safe transfer to a tertiary centre for specialist care.

9.1.2 A decision should be made about the patient’s resuscitation status following return of spontaneous circulation (ROSC). It is often the case that a patient who has a ROSC following cardiac arrest is not expected to survive. In such cases careful consideration should be given to making a Do Not Attempt Resuscitation (DNAR) order. The guidelines detailed in the Resuscitation Decisions (MDP001) policy apply fully (see section 8.0 of this policy). It should be remembered that our ability to predict final neurological outcome for patients remaining comatose following CPR remains very poor.

9.2 Cardiac arrest team and patient’s own team – responsibilities

9.2.1 Immediate care following return of spontaneous circulation (ROSC):

• Once ROSC has been achieved assess the patient using an ABCDE approach, managing any problems encountered and requesting senior/specialist help when required (e.g. anesthetist/intensivist, cardiologist and/or surgeon). As part of this assessment ensure arterial blood gas (including blood glucose), 12 lead ECG, blood pressure reading and a chest x-ray are recorded

• Patients with GCS <8 following ROSC should be considered for therapeutic hypothermia treatment in ITU (i.e. reducing core temperature to between 32 and 34 degrees Celsius for 12 – 24 hours to reduce cerebral injury). Liaise with anaesthetist/intensivist on call for ITU to discuss
• Arrange support for relatives and in the event that transfer is required ensure relatives understand why it may not be possible for them to travel with their loved ones

9.2.2 Transfer of patient:

• Unstable patients usually require a critical care setting following ROSC. In general spontaneously breathing post-arrest patients who can safely maintain their own airway can be nursed in a Coronary Care Unit (CCU), if the problem is cardiac in origin, or a High Dependency Unit (HDU). Patients requiring advanced airway management should be admitted to ITU

• Transfer of patients within the hospital or to another hospital requires careful planning. It is the responsibility of the resuscitation team leader to ensure risks associated with transfer of the critically ill patient are minimized:
  − Stabilize the patient as far as possible before transfer. This should include endotracheal intubation where appropriate, with sedation as required.
  − Liaise with members of receiving hospital or retrieval team if a child is to be retrieved to a tertiary paediatric centre:
    ▪ Operational Policies and Clinical Guidelines for Referral and Care of Critically Ill Children Within Yorkshire And The Humber
    ▪ Policy For Children & Young People Requiring High Dependency / Intensive Care
      Care of Children/Young Requiring High Dependency/Intensive Care (FSP001)
      − Liaise with the East Midlands Ambulance Service or Yorkshire Ambulance Service when transfer off site is required
      − Ensure appropriate portable equipment such as a defibrillator, monitoring (cardiac, SPO₂ and, where appropriate arterial pressure, glucose and CO₂), ventilators, bag-valve-mask resuscitator, mobile suction and oxygen with sufficient content for the whole journey are correctly connected and easily accessible
      − Ensure any medicines/fluids/blood is safely contained in appropriate transit containers and quickly available
      − Ensure appropriately qualified staff accompany the patient on transfer and remain with the person throughout the procedure or until another clinical team takes over
  • Care of the resuscitation team and audit:
− Ensure a Cardiac Arrest Audit form is completed (see appendix A), including outcome, DNAR status, transfer information and details of any problems encountered

− Feedback for the resuscitation team should be constructive and not based on fault/blame approach

− Consider the pastoral needs of all involved in the arrest. Ensure team members are aware they can discuss the arrest with the Hospital Resuscitation Officer or appropriate line manager at any time, even several days or weeks after the event. Where appropriate the team leader or team members can contact the Resuscitation Officer or appropriate line manager to arrange a team debrief

9.3 Unit/ward manager’s responsibilities

9.3.1 All areas seeing acutely/critically ill patients should ensure appropriate equipment for transfer is available. As a minimum wards should have:

- Zoll M defibrillator, defibrillator pads, three lead monitoring kit
- Portable oxygen with sufficient supply and oxygen delivery device (Bag valve mask and non-re-breathe oxygen mask)
- Mobile suction
- Oro pharyngeal airways

9.4 Trust Responsibility

9.4.1 Where transport of patients requires road, air or sea routes the hospital must ensure all members of staff are insured against personal injury.

9.4.2 All wards/units should be able to procure resuscitation equipment recommended by Trust Resuscitation Committee. This equipment can be used to arrange safe transfer of the patient within the hospital. Areas likely to transfer patients to other hospitals (particularly A&E/ECC and ITU and MIU in GDH) should have the appropriate equipment to support safe transfer without leaving the ward short of essential life saving equipment.

10.0 References


10.6 Resuscitation Council (UK). A Systematic Approach to the Acutely Ill Patient (adapted from the ALERT course). Resuscitation Council (UK) 2005.


11.0 Consultation

11.1 Version 1: As part of the consultation process the following people have provided specific feedback during the writing of the first edition of this policy:

- **On behalf of the Resuscitation Committee:**
  - **Guy Hageman** – Senior Resuscitation Officer, SGH
  - **Mr Mike Hockey** – Lead Consultant Accident & Emergency and Chair of the Resuscitation Committee
  - **Dr Pauline Adiotomre** – Consultant Paediatrician and Paediatric Representative on the Resuscitation Committee
  - **Katherine Bollington** – Clinical Governance coordinator for Children’s Services
  - **Diane Fixter** – Manager Coronary Care Unit DPOWH

- **On behalf of Directorate of Governance and Quality Improvement:**
• **Outreach:**
  - **Dr Ian McNeil** – Consultant Anaesthetist
  - **Yvonne Picking** – Outreach Sister

11.2 Version 2: Amendments to Version 1 of this policy have been sent to members of the Resuscitation Committee, Trust Governance and Trust Critical Care Outreach teams, with specific feedback from the following:

• **Guy Hageman** – Senior Resuscitation Officer, SGH
• **Jill Mill** – Trust Risk Manager
• **Paul Coates** – Clinical Governance Co-ordinator, Paediatrics
• **Dr Karen Dunderdale** – Assistant Director of Nursing

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The electronic master copy of this document is held by Document Control, Office of the Medical Director, NL&G NHS Foundation Trust.
Appendix A

AUDIT OF CARDIAC ARRESTS (2 sides)
Both sides to be completed by nurse and/or doctor in charge following arrest
Please return to hospital Resuscitation Officer

1. **DEMOGRAPHIC**
   
   Date: ____/____/____  Time: ____:____
   
   Hospital:  DPOW ☐  SGH ☐  Goole ☐  Location: _________________________________
   
   Patient PMI/A&E no.: __________  M / F (Circle)  Age: ____ years  DOB: __/__/____

2. **DEFIBRILLATION**
   
   Initial rhythm:  VF ☐  VT ☐  Asystole ☐  PEA ☐
   
   Initially respiratory arrest: _________________________________
   
   Time of 1st shock: ____:____
   
   Who administered 1st shock:  Nurse ☐  (Grade: ____ )  Doctor ☐  Other ☐ (Brief details): ______________
   
   Type of Defibrillator:  Manual ☐  (Pads ☐ or Paddles ☐ )  Automated External Defibrillator (AED) ☐
   
   Immediate cause of arrest (if known): _________________________________

3. **AIRWAY**
   
   Who managed airway initially:  Nurse ☐  (Grade: ____ )  Doctor ☐  ODP ☐  Other ☐ (Brief details): ________________
   
   Type of airways used:  Pocket mask ☐  Bag valve mask ☐  Laryngeal mask ☐
   
   Type of airway adjuncts used:  Oropharyngeal ☐  Nasopharyngeal ☐

4. **DRUGS**
   
   Drugs used:  Adrenaline 1 mg ☐  (No. used: ____ )  Atropine 3 mg ☐  Amiodarone 300 mg ☐
   
   Other ☐ (Brief details): _________________________________
   
   Number of loops of CPR: ______
3. **PERSONNEL**

Name and grade of person leading arrest: ________________________________________________

Name and grade of senior nurse: ______________________________________________________

Name and grade of anaesthetist: ______________________________________________________

Time anaesthetist arrived: _____:____

4. **OUTCOME**

Time Resuscitation stopped: _____:____

Reason stopped: Return of Circulation ☐ Death ☐ (Time of death: _____:____)

If patient survived: Is patient for resuscitation in event of further arrest?: Yes ☐ No ☐

Where was patient sent: ITU ☐ CCU ☐ HDU ☐ Other: __________

Name and grade of person filling in this form: __________________________________________

5. **PATIENT AT RISK SCORES**

Record previous PARS scores in the 24 hours leading up to the arrest call with time and date (start on left with most recent):

<table>
<thead>
<tr>
<th>Time/Date:</th>
<th>Time/Date:</th>
<th>Time/Date:</th>
<th>Time/Date:</th>
<th>Time/Date:</th>
<th>Time/Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARS:</td>
<td>PARS:</td>
<td>PARS:</td>
<td>PARS:</td>
<td>PARS:</td>
<td>PARS:</td>
</tr>
</tbody>
</table>

PARS not recorded in the previous 24 hours ☐

Record following details of any calls made for medical/outreach/hospital at night team in the 24 hours leading up to the arrest call (start at top with most recent):

<table>
<thead>
<tr>
<th>Grade/profession of person called</th>
<th>Time called from ward/unit</th>
<th>Time arrived on ward/unit</th>
<th>Brief description of interventions: (e.g. observe/fluids/ITU/HDU)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

*Please outline briefly any specific problems encountered with the arrest or alternatively contact the resuscitation officer on the number below*

Please return to:

DPOWH :- Steve Heath Resuscitation Officer DPOW  Ext 7149

SGH & Goole :- Guy Hageman Resuscitation Officer SGH and Goole  Ext 2384
## Appendix B

<table>
<thead>
<tr>
<th>Ward/Unit:</th>
<th>Date of Audit:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td><strong>Compliant</strong></td>
</tr>
<tr>
<td>1. Mobile suction and defibrillator in working order.</td>
<td></td>
</tr>
<tr>
<td>2. Mobile suction and defibrillator checks carried out daily by an appropriately qualified member of staff.</td>
<td></td>
</tr>
<tr>
<td>3. Resuscitation trolley checked daily (or weekly if a WT/200 sealed with 3lb breakable tie)</td>
<td></td>
</tr>
<tr>
<td>4. Resuscitation trolley contents to comply with the recommendations of the Resuscitation Committee, with no superfluous items or overstocking of recommended items.</td>
<td></td>
</tr>
<tr>
<td>5. All resuscitation equipment to be clean, dust free and within expiry date.</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations**

Name of Ward/Unit Manager this form returned to for action: ____________________________

Name of Governance Co-ordinator: ____________________________
## Mandatory and Desirable Resuscitation Training Needs Analysis

### Non-Medical Staff

<table>
<thead>
<tr>
<th>PROFESSIONAL GROUP</th>
<th>MINIMUM MANDATORY RESUSCITATION COURSE</th>
<th>DESIRABLE</th>
<th>RECERTIFICATION INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RNs (adult)</td>
<td>Adult Basic Life Support, Defibrillation and the Patient at Risk</td>
<td>Adult Resuscitation Day (recommended for shift leaders)</td>
<td>BLSD Valid for : 12 months  ARD Valid for : 12 Months</td>
</tr>
<tr>
<td>RNs (Child) working in A&amp;E/Paediatric HDU or paediatric critical care setting</td>
<td>Paediatric Resuscitation Day</td>
<td>Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS)provider</td>
<td>PRD Valid for : 12 months  EPLS Valid for : 4 years  APLS Valid for : 4 years</td>
</tr>
<tr>
<td>RNs on neonatal unit</td>
<td>Neonatal Basic Life Support</td>
<td>Current Newborn Life Support Provider (NLS)</td>
<td>NBLS Valid for: 12 months  NLS Valid for: 4 years</td>
</tr>
<tr>
<td>Advanced Neonatal Nurse Practitioners</td>
<td>Neonatal Basic Life Support Current Newborn Life Support Provider (NLS)</td>
<td></td>
<td>NBLS Valid for: 12 months  NLS Valid for: 4 years</td>
</tr>
<tr>
<td>RNs (Child) not working in A&amp;E/PHDU setting</td>
<td>Paediatric Basic Life Support</td>
<td>Paediatric Resuscitation Day</td>
<td>PBLS Valid for : 12 months  PILS Valid for : 12 months</td>
</tr>
<tr>
<td>RNs working in following specialities:</td>
<td>Adult Resuscitation Day</td>
<td>Current Advanced Life Support (ALS) Provider</td>
<td>Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------</td>
<td>-------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• A&amp;E*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Theatre recovery*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• CCU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• ITU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• MHDU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Interventional radiography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RNs (adult) working in the following specialities:</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>• GU Medicine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Occupational Health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwives</td>
<td>Adult Basic Life Support and Defibrillation Newborn Basic Life Support</td>
<td>Current Newborn Life Support Provider (NLS)</td>
<td>ABLS Valid for: 12 months</td>
</tr>
<tr>
<td>Labour Ward Coordinators</td>
<td>As for Midwives and Current Newborn Life Support Provider (NLS)</td>
<td></td>
<td>ABLS Valid for: 12 months</td>
</tr>
<tr>
<td>HCAs:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior and Advanced HCAs (adult) working on acute wards</td>
<td>Adult basic Life Support, Defibrillation or Adult Basic Life Support dependent on experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior and Advanced HCAs (adult) not working on acute wards and auxiliary nurses</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>HCAs (child)</td>
<td>Paediatric Basic Life Support</td>
<td>PBLs Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Professions Allied to Medicine:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Physiotherapists (adult)</td>
<td>Adult Basic Life Support and Defibrillation</td>
<td>BLSD Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Community Physiotherapists (adult)</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Chiropodists</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Phlebotomists</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Speech Therapists</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
<tr>
<td>Optometrists</td>
<td>Adult Basic Life Support</td>
<td>ABLS Valid for: 12 months</td>
<td></td>
</tr>
</tbody>
</table>
### Community Dental staff
Resuscitation and Medical Emergencies for Dentists

<table>
<thead>
<tr>
<th>PROFESSIONAL GROUP</th>
<th>MINIMUM MANDATORY RESUSCITATION COURSE</th>
<th>DESIRABLE</th>
<th>RECERTIFICATION INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dieticians</td>
<td>Adult Basic Life Support</td>
<td></td>
<td>ABLS Valid for : 12 months</td>
</tr>
<tr>
<td>Community Rehab Team</td>
<td>Adult Basic Life Support</td>
<td></td>
<td>ABLS Valid for : 12 months</td>
</tr>
<tr>
<td>Chiropodists</td>
<td>Adult Basic Life Support</td>
<td></td>
<td>ABLS Valid for : 12 months</td>
</tr>
<tr>
<td>Cardiac Physiologists and Nurses supervising Exercise Treadmill Tests and chemical stress tests</td>
<td>Adult Resuscitation Day</td>
<td></td>
<td>ARD Valid for : 12 Months</td>
</tr>
<tr>
<td>Professions Allied to Medicine with caseload of predominantly children 10 year old and under</td>
<td>Paediatric Basic Life Support</td>
<td></td>
<td>PBLS Valid for : 12 months</td>
</tr>
<tr>
<td>Radiographers &amp; Imaging Technicians</td>
<td>Adult Basic Life Support and Defibrillation</td>
<td></td>
<td>BLSD Valid for : 12 months</td>
</tr>
<tr>
<td>Operating Department Practitioners</td>
<td>Adult Basic Life Support and Defibrillation Paediatric Basic Life Support</td>
<td>Adult Resuscitation Day Paediatric Resuscitation Day</td>
<td>BLSD Valid for : 12 months PBLS Valid for : 12 months</td>
</tr>
</tbody>
</table>

### Medical Staff

**PROFESSIONAL GROUP**

**MINIMUM MANDATORY RESUSCITATION COURSE**

**DESIRABLE**

**RECERTIFICATION INTERVAL**

**Consultants**

<table>
<thead>
<tr>
<th>Consultants/Associate Specialists in following specialities:</th>
<th>Senior Drs Resuscitation Update (Adult)</th>
<th>Current Advanced Life Support (ALS) Provider</th>
<th>Senior Updates valid for : 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthetics</td>
<td></td>
<td>Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider</td>
<td></td>
</tr>
<tr>
<td>A&amp;E</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultants/Associate Specialists in following specialities:</th>
<th>Senior Drs Resuscitation Update (Adult)</th>
<th>Current Advanced Life Support (ALS) Provider</th>
<th>Senior Updates valid for : 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td></td>
<td>Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider</td>
<td></td>
</tr>
<tr>
<td>Interventional radiology</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Consultants in all other adult specialities**

Note: if consultant attends BLSD or a day long course this stands in lieu of the Senior

<table>
<thead>
<tr>
<th>Senior Drs Resuscitation Update</th>
<th>Current Advanced Life Support (ALS) Provider</th>
<th>Senior Updates valid for : 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider</td>
<td></td>
</tr>
</tbody>
</table>

**Senior Updates valid for : 24 months**

**ALS Valid for: 4 years**

**EPLS Valid for : 4 years**

**APLS Valid for : 4 years**
<table>
<thead>
<tr>
<th>Referene</th>
<th>OWP001</th>
<th>Date of issue</th>
<th>05/08/11</th>
<th>Version</th>
<th>2.2</th>
</tr>
</thead>
</table>

**Drs Resuscitation Update**

- **Consultants in Paediatrics**
  - Senior Drs Resuscitation Update (Paediatric)
  - Current Newborn Life Support Provider (NLS)
  - Annual Neonatal training update
  - Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider
  - Senior Updates valid for: 24 months
    - EPLS Valid for: 4 years
    - APLS Valid for: 4 years
    - NLS Valid for: 4 years

**Middle Grades**

- **Middle Grade Doctors (STs, SPRs and Staff Grades) in Medicine**
  - Adult Resuscitation Day
  - Current Advanced Life Support (ALS) Provider
  - ARD Valid for: 12 months
  - ALS Valid for: 4 years

- **Middle Grade Doctors (STs, SPRs and Staff Grades) anaesthetics**
  - Adult Resuscitation Day
  - Paediatric Resuscitation Day
  - Current Advanced Life Support (ALS) Provider
  - Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider
  - ARD Valid for: 12 months
  - PRD Valid for: 12 months
  - ALS Valid for: 4 years
  - EPLS Valid for: 4 years
  - APLS Valid for: 4 years

- **Middle Grade Doctors (STs, SPRs and Staff Grades) in A&E**
  - Adult Resuscitation Day
  - Paediatric Resuscitation Day
  - Current Advanced Life Support (ALS) Provider
  - Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider
  - ARD Valid for: 12 months
  - PRD Valid for: 12 months
  - EPLS Valid for: 4 years
  - APLS Valid for: 4 years

- **Middle Grade Doctors (STs, SPRs and Staff Grades) in Paediatrics**
  - Paediatric Resuscitation Day
  - Current Newborn Life Support Provider
  - Annual Neonatal training update
  - Current European Paediatric Life Support Provider (EPLS) or Advanced Paediatric Life Support (APLS) provider
  - PRD Valid for: 12 months
  - EPLS Valid for: 4 years
  - APLS Valid for: 4 years
  - NLS Valid for: 4 years
<table>
<thead>
<tr>
<th>Junior Grades</th>
<th>Middle Grade Doctors (STs, SPRs and Staff Grades) in Surgical Specialties</th>
<th>Basic Life Support and Defibrillation</th>
<th>12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY1</td>
<td>Adult Resuscitation Day</td>
<td></td>
<td>12 months</td>
</tr>
<tr>
<td></td>
<td>Paediatric Resuscitation Day(if doing a paediatric rotation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2</td>
<td>Adult Resuscitation Day</td>
<td>ARD  Valid for : 12 months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(at induction)</td>
<td>ALS  Valid for:  4 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult Advanced Life Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paediatric Resuscitation Day (if doing a paediatric rotation)</td>
<td>PRD   Valid for : 12 months</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Resuscitation Training Learning Objectives

Training group will:

3. Adult Basic Life Support *(2 hours duration)*
   
i) Demonstrate safe approach to casualty  
ii) Demonstrate how to assess responsiveness  
iii) Demonstrate how to open the airway  
iv) Distinguish the unconscious casualty from the casualty in cardiorespiratory arrest  
v) Know how to summon help  
vi) Demonstrate cardiopulmonary resuscitation with a BVM or faceshield  
vii) Know how to manage choking in the adult  
viii) Know how to place the unconscious casualty in the recovery position

4. Adult basic Life Support and Defibrillation *(3 hours duration)*
   
i) Adult Basic Life Support (see steps 1.i to 1.vii above)  
ii) Know correct technique for oropharyngeal suction with a yankeur sucker (where appropriate)  
iii) Demonstrate correct technique for insertion of an oropharyngeal airway (where appropriate)  
iv) Demonstrate management of respiratory arrest with a BVM  
v) Understand how to use the PAR scoring system and how to respond to a score of ≥3  
vi) Introduction to the ABCDE approach to the management of the critically ill including anaphylaxis  
vii) Demonstrate safe defibrillation with the Zoll M AED or ZOLL AEDPLUS
5. **Adult Resuscitation Day** *(6.5 hours duration)*

i) Adult Basic Life Support (see steps 1.i to 1.vii above)

ii) Demonstrate airway management with basic adjuncts, including oropharyngeal suction with a yankeur sucker

iii) Understand the ALS algorithm

iv) Demonstrate safe defibrillation with the Zoll M AED or ZOLL AEDPLUS or, where appropriate, safe manual defibrillation with the Zoll M

v) Understand how to use the PAR scoring system and how to respond to a score of $\geq 3$

vi) Understand the ABCDE approach to the management of the critically ill including anaphylaxis

vii) Understand DC cardioversion with the Zoll M (appropriate candidates only)

viii) Understand transcutaneous pacing with the Zoll M (appropriate candidates only)

6. **Paediatric Basic Life Support** *(2 hours duration)*

i) Understand the difference, in resuscitation terms, between an infant, a child and an adult

ii) Demonstrate safe approach to casualty

iii) Demonstrate how to assess responsiveness

iv) Demonstrate how to open the airway

v) Distinguish the unconscious casualty from the casualty in cardiorespiratory arrest

vi) Demonstrate cardiopulmonary resuscitation with a BVM or faceshield

vii) Demonstrate management of the child/infant with foreign body airway obstruction

viii) Know how to place the unconscious casualty in the recovery position

7. **Paediatric Resuscitation Day** *(6.5 hours duration)*

i) Paediatric basic Life Support (see steps 4.1 to 4.vii above)

ii) Understand the assessment and management of the critically ill child

iii) Understand how to obtain vascular access and the drug calculations

iv) Demonstrate airway management with simple adjuncts
v) Understand defibrillation of the child/infant and DC cardioversion (where appropriate)

8. **Newborn Basic Life Support** *(2 hours duration)*

   i) Understand the difference between the infant and the newborn in resuscitation terms

   ii) Demonstrate drying and wrapping the newborn

   iii) Demonstrate assessment of colour, tone, breathing and heart rate

   iv) Know when to get help

   v) Demonstrate opening the airway with basic manoeuvres

   vi) Demonstrate opening the airway with adjuncts

   vii) Demonstrate inflation and ventilation breaths

   viii) Recognise when to commence external chest compressions

   ix) Demonstrate external chest compressions

9. **Senior Doctor’s Adult Resuscitation Update** *(3 hours duration)*

   i) Practice Basic Life Support after brief demonstration

   ii) Understand ALS algorithm

   iii) Understand PARS and the ABCDE approach

   iv) Practice defibrillation after a brief demonstration

10. **Senior Doctor’s Paediatric Resuscitation Update** *(3 hours duration)*

    i) Practice Basic Life Support after a brief demonstration

    ii) Understand Paediatric ALS algorithm

    iii) Understand ABCDE approach to assessment and management of the critically ill child

    iv) Practice defibrillation after a brief demonstration

**Note:** Courses 7 and 8 for senior doctors may be modified according to the specialities of the consultants present.
## Appendix E

### Emergency Trolley Contents

**ADULT RESUSCITATION TROLLEY DAILY CHECKLIST**  (2 Sides)

*Complete as per Section 6.2i of the Trust Integrated Resuscitation Policy*

### AIRWAY

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endotracheal suction catheters 12 &amp; 14 FG</td>
<td>2</td>
</tr>
<tr>
<td>Yankauer suckers</td>
<td>2</td>
</tr>
<tr>
<td>Oropharyngeal (Guedal) airway – sizes 2, 3 &amp; 4</td>
<td>1</td>
</tr>
<tr>
<td>Nasopharyngeal airway – sizes 6mm &amp; 7mm i.d.</td>
<td>1</td>
</tr>
<tr>
<td>Endotracheal tubes, oral, cuffed – sizes 8mm, 7mm, 8mm &amp; 9mm i.d.</td>
<td>2</td>
</tr>
<tr>
<td>Catheter mount</td>
<td>1</td>
</tr>
<tr>
<td>McGill's forceps</td>
<td>1</td>
</tr>
<tr>
<td>Gum elastic bougie</td>
<td>1</td>
</tr>
<tr>
<td>ET tube stylet</td>
<td>1</td>
</tr>
<tr>
<td>Gauze swabs &amp; lubricating jelly</td>
<td>5 &amp; 1</td>
</tr>
<tr>
<td>1&quot; ribbon Gauze and tape</td>
<td>1</td>
</tr>
<tr>
<td>Scissors and artery forceps</td>
<td>1</td>
</tr>
<tr>
<td>Syringe 20 ml</td>
<td>1</td>
</tr>
<tr>
<td>Laryngoscope handles with Macintosh size 3 and size 4 blades – test light source</td>
<td>2 handles; 1 of each blade</td>
</tr>
<tr>
<td>Spake batteries: Duracell Procell MNH400 LR14 1.5v ‘C’</td>
<td>2</td>
</tr>
<tr>
<td>Cricothyroidotomy set</td>
<td>1</td>
</tr>
<tr>
<td>Size 4 I-Gel larynginal mask</td>
<td>1</td>
</tr>
</tbody>
</table>

### BREATHING

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult non-rebreathing oxygen mask</td>
<td>2</td>
</tr>
<tr>
<td>Pocket facemask with oxygen port</td>
<td>1</td>
</tr>
<tr>
<td>Disposable adult bag-valve-mask &amp; tubing</td>
<td>2</td>
</tr>
<tr>
<td>Clear face masks – adult &amp; small adult</td>
<td>1</td>
</tr>
<tr>
<td>Mouth to laryngectomy/tracheostomy shield</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen cylinder code HX in stand, regulator &amp; cylinder key</td>
<td>1</td>
</tr>
<tr>
<td>Nebulizer mask</td>
<td>1</td>
</tr>
</tbody>
</table>
## CIRCULATION

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intravenous Cannula: 14 (Orange), 16 (Grey), 18 (Green) &amp; 20 (Pink)</td>
<td>3 of each</td>
</tr>
<tr>
<td>Hypodermic Needles 21 Gauge</td>
<td>10</td>
</tr>
<tr>
<td>Alcohol Swabs &amp; Cotton Bandage</td>
<td>10 &amp; 2</td>
</tr>
<tr>
<td>Syringes 2 mls, 5 mls, 10 mls &amp; 20 mls</td>
<td>5 of each</td>
</tr>
<tr>
<td>Sharps Bin</td>
<td>1</td>
</tr>
<tr>
<td>Arterial Blood Gas Syringes</td>
<td>4</td>
</tr>
<tr>
<td>Securing Tape and Cannula Dressing</td>
<td>1 &amp; 5</td>
</tr>
<tr>
<td>IV Blood Giving Set</td>
<td>2</td>
</tr>
<tr>
<td>Seldinger Central Venous Catheter Set</td>
<td>1</td>
</tr>
<tr>
<td>Aspiration Needle (Pink 16G x 3.5” Spinal)</td>
<td>2</td>
</tr>
<tr>
<td>Tourniquet</td>
<td>1</td>
</tr>
</tbody>
</table>

## DRUGS

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volpex Plasma Substitute 500 Mls</td>
<td>2</td>
</tr>
<tr>
<td>Compound Sodium Lactate (Hartman’s Solution) or 0.9% Sodium Chloride 1000 mL Bag</td>
<td>2</td>
</tr>
<tr>
<td>500mls 10% Glucose</td>
<td>1</td>
</tr>
<tr>
<td>Salbutamol 5mg and Atrovent 500mcg Nebules</td>
<td>2 of each</td>
</tr>
<tr>
<td>Adult Emergency Drug Box (Pre-packed by Pharmacy)</td>
<td>2</td>
</tr>
</tbody>
</table>

*In addition all acute wards/unit TO stock 90% glucose vials IN the ward drug cupboard*

## DEFIBRILLATOR

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defibrillator, mains Cable &amp; Battery (fitted to defibrillator)</td>
<td>1 of each</td>
</tr>
<tr>
<td>Defibrillator pads - ensure in date and one set connected to defibrillator (obtain from B1/B2 corridors Resuscitation Dept at DPWH, CCU at SGH, ward 5B GDH)</td>
<td>3</td>
</tr>
<tr>
<td>Razors</td>
<td>4</td>
</tr>
<tr>
<td>Monitoring Leads</td>
<td>1</td>
</tr>
<tr>
<td>Monitoring Electrodes</td>
<td>Multi-pack</td>
</tr>
<tr>
<td>Check Defibrillator Daily According to Defibrillator Daily Checklist</td>
<td>Initial box</td>
</tr>
</tbody>
</table>

## ADDITIONAL ITEMS

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable Suction – Test to ensure working</td>
<td>Initial box</td>
</tr>
<tr>
<td>Gloves (Small, Medium &amp; Large) &amp; apron</td>
<td>1 box of each</td>
</tr>
<tr>
<td>Goggles (non-stock requisition – speak to Resuscitation Officer)</td>
<td>3 pairs</td>
</tr>
<tr>
<td>Audit forms (obtain from Resuscitation Officer or off intranet)</td>
<td>10</td>
</tr>
</tbody>
</table>

Person carrying out check sign here
Report any discrepancies to the Resuscitation Officer:
DPWH ext: 7149, SGH ext: 2384
# PAEDIATRIC RESUSCITATION TROLLEY DAILY CHECKLIST

Complete as per Section 6.2i of the Trust Integrated Resuscitation Policy

WRITE DATE IN BOX AND TICK OFF:

## AIRWAY & BREATHING

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft suction catheters: Sizes 8, 8, 10, 12, 14</td>
<td>2 of each</td>
</tr>
<tr>
<td>Rigid (Yankauer) suction catheter: Child and adult</td>
<td>2 of each</td>
</tr>
<tr>
<td>Oropharyngeal airways: Sizes 00, 0, 1, 2, 3, 4</td>
<td>2 of each</td>
</tr>
<tr>
<td>Non-rebreathing 92 mask: Child &amp; Adult</td>
<td>2 of each</td>
</tr>
<tr>
<td>Circular face masks: Sizes 0, 1, 2</td>
<td>2 of each</td>
</tr>
<tr>
<td>Anatomical face masks: Sizes small, medium, large</td>
<td>2 of each</td>
</tr>
<tr>
<td>Self inflating bag valve mask &amp; Reservoir: Paediatric (500ml) with</td>
<td>2 of each</td>
</tr>
<tr>
<td>relief valve Low volume Adult (1000ml)</td>
<td></td>
</tr>
<tr>
<td>Standard Adult (1000ml)</td>
<td></td>
</tr>
<tr>
<td>Tracheal tubes: cuffed: Sizes 5.5 – 9</td>
<td>2 of each</td>
</tr>
<tr>
<td>uncuffed: Sizes 2.5 – 5</td>
<td></td>
</tr>
<tr>
<td>Disposable laryngoscope handle (child)</td>
<td>2</td>
</tr>
<tr>
<td>Reusable laryngoscope handle (adult)</td>
<td>2</td>
</tr>
<tr>
<td>Disposable Miller blade size 0, 1, 2</td>
<td>2 of each</td>
</tr>
<tr>
<td>Disposable Mackintosh blade size 0, 1, 2, 3, 4</td>
<td>2 of each</td>
</tr>
<tr>
<td>Stethoscope</td>
<td>1</td>
</tr>
<tr>
<td>ET CO₂ detectors</td>
<td>2</td>
</tr>
<tr>
<td>Nasogastric tubes size 6, 8, 10, 12</td>
<td>2</td>
</tr>
<tr>
<td>pH paper 0 - 6</td>
<td>1</td>
</tr>
<tr>
<td>Tracheal stylet small and medium</td>
<td>1 of each</td>
</tr>
<tr>
<td>Gum elastic bougie 5ch and 10ch</td>
<td>1 of each</td>
</tr>
<tr>
<td>Magills forceps child and adult</td>
<td>1 of each</td>
</tr>
<tr>
<td>Aqueous gel sachets</td>
<td>3</td>
</tr>
<tr>
<td>Cotton tape to tie in tube and adhesive tape</td>
<td>1 of each</td>
</tr>
<tr>
<td>Oxygen cylinder Code HX in stand</td>
<td>1</td>
</tr>
</tbody>
</table>
## CIRCULATION

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol skin prep wipes</td>
<td>10</td>
</tr>
<tr>
<td>IV cannulas sizes 14, 16, 18, 20, 22, 24 gauge</td>
<td>4 of each</td>
</tr>
<tr>
<td>Intraosseous needles sizes 14, 16 and 18 length or EZ IO Intraosseous drill with 2 adult and 2 pedi needles</td>
<td>2 of each</td>
</tr>
<tr>
<td>Syringes sizes 1, 2, 5, 10, 20, 50 mls</td>
<td>5 of each</td>
</tr>
<tr>
<td>Selection of needles</td>
<td></td>
</tr>
<tr>
<td>21g needle butterfly</td>
<td>5</td>
</tr>
<tr>
<td>Cannula dressings</td>
<td>5</td>
</tr>
<tr>
<td>3 way taps with extension set</td>
<td>5</td>
</tr>
<tr>
<td>IV administration sets (burette and non-burette)</td>
<td>2 of each</td>
</tr>
<tr>
<td>Gauze dressings</td>
<td>2 packs of 5</td>
</tr>
<tr>
<td>Paediatric blood bottles:</td>
<td></td>
</tr>
<tr>
<td>U&amp;E, CRP, FBC, Glucose</td>
<td>3 of each</td>
</tr>
<tr>
<td>X-match &amp; Group and Save</td>
<td></td>
</tr>
<tr>
<td>Virology</td>
<td></td>
</tr>
<tr>
<td>Clotting</td>
<td>1 of each</td>
</tr>
<tr>
<td>Blood cultures</td>
<td></td>
</tr>
<tr>
<td>Toxicology</td>
<td></td>
</tr>
<tr>
<td>• Saline amp 10mls</td>
<td>5 of each</td>
</tr>
<tr>
<td>• Water for injection amp 10mls</td>
<td></td>
</tr>
<tr>
<td>Fluids</td>
<td></td>
</tr>
<tr>
<td>• Volpex Plasma Substitute 500mls</td>
<td></td>
</tr>
<tr>
<td>• Compound Sodium Lactate (Hartman’s Solution) or 0.9% Sodium Chloride 1000mls</td>
<td></td>
</tr>
<tr>
<td>• 10% Dextrose 500mls</td>
<td></td>
</tr>
<tr>
<td>Sharps bin</td>
<td>1</td>
</tr>
<tr>
<td>Sheffield Children’s Hospital Resuscitation Guide</td>
<td>1</td>
</tr>
<tr>
<td>Drug labels</td>
<td>1 roll</td>
</tr>
<tr>
<td>Gloves S, M, L</td>
<td>1 box of each</td>
</tr>
<tr>
<td>Protective goggles</td>
<td>3 pairs</td>
</tr>
</tbody>
</table>

## DEFIBRILLATOR/ MONITORING

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zoll M AED Defibrillator (In some areas this may be shared with the adult resuscitation trolley)</td>
<td>1</td>
</tr>
<tr>
<td>Defibrillation photo-guide for paediatrics</td>
<td>1</td>
</tr>
<tr>
<td>Check defibrillator using daily checklist</td>
<td></td>
</tr>
<tr>
<td>Defibrillation electrodes:</td>
<td></td>
</tr>
<tr>
<td>Set of in-date paediatric pediatric/pedi-padz</td>
<td>1 pack of each</td>
</tr>
<tr>
<td>Set of in-date adult stat-padz</td>
<td></td>
</tr>
<tr>
<td>ECG electrodes adult and child</td>
<td>1 pack of each</td>
</tr>
</tbody>
</table>

Person carrying out check sign here

Report any discrepancies to the Resuscitation Officer:
DPOWH ext. 7149; SGH ext. 2384
### NON-ACUTE PAEDIATRIC RESUSCITATION TROLLEY DAILY CHECKLIST
(2 Sides)
For areas such as endoscopy, x-ray and paediatric outpatients
Complete as per Section 6.21 of the Trust Integrated Resuscitation Policy

#### AIRWAY & BREATHING

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft suction catheters: Sizes 6, 8, 10, 12, 14</td>
<td>1 of each</td>
</tr>
<tr>
<td>Rigid (Yankert) suction catheter: Child</td>
<td>1 of each</td>
</tr>
<tr>
<td>Oropharyngeal airways: Sizes 00, 0, 1, 2</td>
<td>1 of each</td>
</tr>
<tr>
<td>Non-rebreathing 02 mask: Child</td>
<td>1 of each</td>
</tr>
<tr>
<td>Circular face masks: Sizes 00, 0/1</td>
<td>1 of each</td>
</tr>
<tr>
<td>Anatomical face masks: Sizes small, medium, large</td>
<td>1 of each</td>
</tr>
<tr>
<td>Self inflating bag valve mask &amp; Reservoir. Paediatric (500ml) with relief valve</td>
<td>1 of each</td>
</tr>
<tr>
<td>Low volume Adult (1000ml)</td>
<td>1 of each</td>
</tr>
<tr>
<td>Standard Adult (1000ml)</td>
<td>1 of each</td>
</tr>
<tr>
<td>Tracheal tubes: cuffed: Sizes 5.5 – 6.0</td>
<td>1 of each</td>
</tr>
<tr>
<td>Tracheal tubes: uncuffed: Sizes 2.5 - 5</td>
<td>1 of each</td>
</tr>
<tr>
<td>Disposable laryngoscope handle (child)</td>
<td>1</td>
</tr>
<tr>
<td>Reusable laryngoscope handle (adult)</td>
<td>1</td>
</tr>
<tr>
<td>Disposable Miller blade size 0, 1, 2</td>
<td>1 of each</td>
</tr>
<tr>
<td>Disposable Mackintosh blade size 0, 1, 2</td>
<td>1 of each</td>
</tr>
<tr>
<td>Stethoscope</td>
<td>1</td>
</tr>
<tr>
<td>Nasogastric tubes size 6, 8, 10, 12</td>
<td>1 of each</td>
</tr>
<tr>
<td>pH paper 0 - 6</td>
<td>1</td>
</tr>
<tr>
<td>Tracheal stylet small and medium</td>
<td>1 of each</td>
</tr>
<tr>
<td>Gum elastic bougie 5ch</td>
<td>1</td>
</tr>
<tr>
<td>Magilis forceps child</td>
<td>1</td>
</tr>
<tr>
<td>Aqueous gel satchets</td>
<td>3</td>
</tr>
<tr>
<td>Cotton tape to tie in tube and adhesive tape</td>
<td>1 of each</td>
</tr>
<tr>
<td>Oxygen cylinder</td>
<td>1</td>
</tr>
</tbody>
</table>
## CIRCULATION

<table>
<thead>
<tr>
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</tr>
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<td>IV cannulas sizes 14, 16, 18, 20, 22, 24 gauge</td>
<td>2 of each</td>
</tr>
<tr>
<td>Intraosseous needles sizes 16</td>
<td>1</td>
</tr>
<tr>
<td>Syringes sizes 1, 2, 5, 10, 20, 50 ml</td>
<td>2 of each</td>
</tr>
<tr>
<td>Selection of needles</td>
<td></td>
</tr>
<tr>
<td>21g needle butterfly</td>
<td>2</td>
</tr>
<tr>
<td>Cannula dressings</td>
<td>2</td>
</tr>
<tr>
<td>3 way taps with extension set</td>
<td>2</td>
</tr>
<tr>
<td>IV administration sets ( burette and non-burette)</td>
<td>1 of each</td>
</tr>
<tr>
<td>Gauze dressings</td>
<td>2 packs of 5</td>
</tr>
</tbody>
</table>

### Paediatric blood bottles:

- U&E, CRP, FBC, Glucose X-match & Group and Save: 3 of each
- Virology: 1 of each
- Clotting: 1 of each
- Blood cultures: 1 of each
- Toxicology: 1 of each

- Saline amp 10mls & Water for injection amp 10 ml: 3 of each

### Fluids:

- Volpex Plasma Substitute 500mls: 1 of each
- Compound Sodium Lactate (Hartman’s Solution) or 0.9% Sodium Chloride: 1 of each
- 10% Dextrose 500mls: 1 of each

- Sharp’s bin: 1
- Sheffield Children’s Hospital Resuscitation Guide: 1
- Drug labels: 1 roll
- Gloves S, M, L: 1 box of each

### Protective goggles

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective goggles</td>
<td>3 pairs</td>
</tr>
</tbody>
</table>

## DEFIBRILLATOR/ MONITORING

- Share Zoll M Defibrillator with Adult Resuscitation Trolley

- Defibrillation photo-guide for paediatrics: 1

- Defibrillation electrodes:
  - Set of in-date paediatric pedi-padz: 1 pack of
  - ECG electrodes child: 1 pack of

---

Person carrying out check sign here
Report any discrepancies to the Resuscitation Officer:
DPOWH ext. 7149; SGH ext. 2384
Appendix F

Guide to Recording Observations and PARS

PARS Patient at Risk Score (PARS)

<table>
<thead>
<tr>
<th>Patient At Risk Score (PARS)</th>
<th>PAR Score To be completed as per Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Heart Rate</td>
<td></td>
</tr>
<tr>
<td>40 or less</td>
<td>41 – 50</td>
</tr>
<tr>
<td>Respiratory Rate</td>
<td></td>
</tr>
<tr>
<td>8 or less</td>
<td>9 – 14</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>35 or less</td>
<td>35.1 – 38.4</td>
</tr>
<tr>
<td>Central Nervous System</td>
<td>Alert</td>
</tr>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Systolic Blood Pressure</td>
<td></td>
</tr>
<tr>
<td>70 or less</td>
<td>71 – 80</td>
</tr>
<tr>
<td>Urine output (mls per hour)</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1-19</td>
</tr>
</tbody>
</table>

i) Respiratory rate

- Observation
  

  b) Senior/Advanced HCAs – Need to be assessed against Competency 8.4 Monitor and Record Patient’s Respiration

Respiratory rate is an essential observation. It is a very sensitive marker of deterioration, such as that caused by internal bleeding, pulmonary embolus and sepsis. Always observe respirations for a full minute to establish the rate accurately. Also observe depth and pattern of breathing and record abnormalities in notes.

Join respiratory rate observations together to form a line graph to chart trends.
• **PARS**

Record the PARS (see fig. 1 above) on the observation sheet. Note shaded areas (scores of ≥1) indicate that respiratory rate is outside normal range, which may be due to deterioration in the patient’s condition.

---

### ii) Pulse oximetry

**Observation**

- **a) Registered Staff** – See *Royal Marsden Hospital Manual of Clinical Nursing Procedures (6th Ed)*. (Available as download on nursing intranet site) Section 25 Observations – *Respirations*

- **b) Senior/Advanced HCAs** – Need to be assessed against Competency 8. 6: *Undertake Oxygen Saturation Levels*

Always record on observations sheet the % of oxygen (FiO₂) the patient is receiving.

Know how to use pulse oximeter correctly. If you are not sure do not attempt observation and seek help.

• **PARS**

Not currently recorded as part of the PARs, but an essential observation for any patient with an initially high/rising score (≥3)

---

### iii) Heart rate

**Observation**

- **a) Registered Staff** – See *Royal Marsden Hospital Manual of Clinical Nursing Procedures (6th Ed)*. (Available as download on nursing intranet site) Section 25 Observations – *Pulse*

- **b) Senior/Advanced HCAs** – Need to be assessed against: Competency 8. 2: *Monitor and Record Patient’s Pulse*

Heart rate is an essential observation. It is a very sensitive marker of deterioration, such as that caused by internal bleeding, pulmonary embolus and sepsis. Palpate pulse and observe rate, rhythm (regular/irregular) and amplitude (strong or weak).

Join heart rate observations together to form a line graph to chart trends.

• **PARS**
iv) Blood pressure

Observation


b) Senior/Advanced HCAs – Need to be assessed against:

- Competency 8. 3a: Monitor and Record Patient’s Blood Pressure Manually and
- Competency 8. 3b: Monitor and Record Patient’s Blood Pressure – Electronic

Although BP recording is a vital observation, it is important to recognise that blood pressure may be relatively slow to react to changes in the patient’s condition. Respiration and heart rate are the most sensitive markers of early deterioration. Also be aware that patients who are usually hypertensive, such as many of the elderly, may show only a relative fall in BP (e.g. 160 to 130 mmHg systolic) and may not score on the PARS.

Record blood pressure on the chart.

Know how to use manual and electronic sphygmomanometers correctly. If you are not sure do not attempt observation and seek help.

• PARS

Record the PARS (see fig. 1 above) on the bottom of the observation sheet. Note shaded areas (scores of ≥1) indicate that the blood pressure is outside normal range, which may be due to deterioration in the patient’s condition.

v) Urine output

Observation

Sensitive to diminishing perfusion of the kidney associated with conditions such as hypovolaemic and septic shock.

• PARS

Record the PARS (see fig. 1 above) on the bottom of the observation sheet. Note shaded areas (scores of ≥1) indicate that the urine output is outside normal range, which may be due to deterioration in the patient’s condition.
vi) Central Nervous System (CNS)

- Observation

Levels of consciousness can diminish due to poor cerebral perfusion and/or hypoxaemia. Level of consciousness can be measured using either the Glasgow Coma Scale (GCS) or the Alert, Verbal, Pain, Unresponsive (AVPU). The latter is more simple to use, but remains sensitive to CNS impairment.

- PARS

Record the PARS (see fig. 1 above) on the bottom of the observation sheet. Note shaded areas (scores of ≥1) indicate that the consciousness level is outside normal range, which may be due to deterioration in the patient’s condition.

vii) Temperature

- Observation


  b) Senior/Advanced HCAs – Need to be assessed against:

    Competency 8.1: Monitor and Record a Patient’s Temperature

- PARS

Record the PARS (see fig. 1 above) on the bottom of the observation sheet. Note shaded areas (scores of ≥1) indicate that the temperature is outside normal range, which may be due to deterioration in the patient’s condition.
The ABCDE approach is taught as part of the BLSD (abbreviated version), Adult Resuscitation Day and ALS course. Paediatric ABCDE is taught as part of the Paediatric Resuscitation Day and EPLS course and trauma ABCDE is taught on the ATLS course. The ALERT course focuses specifically on the ABCDE approach in adults.
THE ABCDE APPROACH TO THE CRITICALLY ILL (From the BLSD course)

Assessing and managing the critically ill patient can be intimidating, especially as time is limited. The ABCDE approach is a resuscitation technique designed to simplify and prioritise initial care, buying time until expert help arrives. This version of the ABCDE approach has been designed for ward nurses/GPs/ODPs/midwives, dentists & dental nurses and professions allied to medicine.

Basic principles:

- Treat each problem *as you identify it* using the A-B-C-D-E approach, then move on to the next letter.
- *Re-assess* ABCDE to keep track of improvement/deterioration, whilst waiting for help.
- The ABCDE approach can be used by all levels of healthcare professional, working within their scope of practice.
- Use all members of your team (e.g. to raise the alarm or record observations)
- **Get appropriate help!**

A – AIRWAY

*Assessment*

**Complete airway obstruction:** Will rapidly lead to cardiac arrest. Produces ‘see-saw’ respirations (chest drawn in and abdomen expands on inspiration and the opposite occurs on expiration)

**Partial airway obstruction:** Movement of air reduced and often noisy:
- Stridor – Noisy on inspiration. Obstruction at or above level of the larynx.
- Wheeze – Noisy on expiration due to obstruction in the lower airways.
- Gurgling – Suggests fluids/secretions
- Snoring – Partial obstruction by tongue and or soft palate.

*Immediate management*

In most cases simple methods can clear airway obstruction:

- Oro-pharyngeal suction for fluids (remove larger, more solid objects with a finger sweep or Magills forceps providing they are visible)
- Airway opening manoeuvres such as head tilt/chin lift or jaw thrust
- Consider simple airways such as oropharyngeal airways (Guedal)
- If stridor (see above) consider possibility of anaphylaxis (see anaphylaxis guidelines)

Ensure someone places a 2222 call!

*Critically Ill Patients* - Give oxygen 15 litres/min using mask with reservoir and record saturations.

B - BREATHING

*Assessment*

- Look, listen and feel for general signs of respiratory distress:
  - Is breathing noisy suggesting airway obstruction (see Airway above)
  - Central cyanosis (blue lips and tongue) and/or sweating.
  - Accessory muscle use (neck muscles) and abdominal breathing.
  - Assess depth of breath and rhythm of breathing.
  - Is the chest expanding on both sides?
- Count respiratory rate. Normal adult 12 – 18. Can the patient complete sentences?
- What are the oxygen saturations?
**Immediate management**

- Open airway
- If critically ill give oxygen at high inspired concentration (15 litres/min using mask with reservoir)
- If depth and/or rate of breathing inadequate, or breathing is absent, check pulse. If pulse present commence bag-valve-mask ventilation at 1 breath every 6 seconds and assess breathing and pulse every 10 breathes (i.e. every minute). If you cannot detect a pulse commence CPR at 30:2.

**C - CIRCULATION**

**Assessment**

- Assess peripheral circulation (is the patient shutting down peripherally (vasoconstriction) in an attempt to force blood back centrally, to vital organs? An early response to shock.)
  - Colour: Are the fingers and hands pink, blue, pale and mottled
  - Temperature: Are the fingers and hands warm or cold. Cold hands suggest peripheral vasoconstriction.
  - Capillary refill time: apply pressure to the nail bed for 5 seconds, with the fingertip held at the level of the heart, with sufficient pressure to blanch. Release and nail bed should return to colour of surrounding skin in 2 seconds or less. Prolonged time suggests poor peripheral perfusion, but may be due to old age or cold surroundings in some cases.
- Pulse – weak pulse may suggest low blood pressure or peripheral vasoconstriction. Fast (>100) pulse may be a sign of shock or an arrhythmia. Slow pulse (<50) may be a sign of end stage shock or an arrhythmia.
- Check blood pressure
- If chest pain/heaviness/tightness and/or fast or slow rhythm ensure a 12 lead ECG is recorded.

**Immediate management**

- Give prescribed PRN GTN for chest pain and monitor response.
- Insert IV cannula if trained to do so or flush existing cannula. Take bloods if trained to do so and send for U&Es, FBC, clotting (if bleeding problem or on anticoagulant therapy), glucose and group and save (doctor to cross-match).
- Test blood glucose. CAUTION: Reading may be low in peripheral vasoconstriction. ABG or lab sample preferable in emergency.

**D - DISABILITY**

**Assessment**

- Assess the patient's conscious level
  - A Alert: Fully conscious
  - V Voice: drowsy or confused. Only responds to your voice
  - P Pain: Only responds to painful stimuli
  - U Unresponsive
- Examine the pupils (size, equality and reaction to light)

**Immediate management**

- Re-assess and manage ABC
- Nurse in the recovery position if airway not fully protected
- Do not forget blood glucose

**E – EXPOSURE**

Expose the patient, maintaining dignity, to examine for rashes (e.g. anaphylaxis), bleeding, swelling and tenderness (e.g. DVT) and for procedures such as ECG and defibrillation/CPR.