Trust Policy for the Management of Cardiopulmonary Resuscitation in Adults

Document Control:

For Use In:	Norfolk and Norwich University Hospitals NHS Foundation Trust		
	Trustwide		
Search Keywords	Resus, Cardiopulmonary Resuscitation, Resuscitation		
Document Author:	Wayne Bowditch and Kirsty Lewis – Lead Resuscitation Officers		
Document Owner:	Surgery		
Approved By:	Recognise and Respond Committee		
Ratified By:	Clinical Safety and Effectiveness Sub-Board		
Approval Date:	10/01/2024	**Date to be reviewed by:** This document remains current after this date but will be under review	10/01/2027
Implementation Date:	As above		
Reference Number:	1104		

Version History:

Version	Date	Author	Reason/Change
8	May 2021	Lead Resuscitation Officers	Names of new authors & Lead Resuscitation Officers, Matron& CCOT Lead, Resuscitation Council Guidelines 2021, NEWS2, ReSPECT/DNARCPR
9	January 2024	Lead Resuscitation Officers	Addition of Appendix 2: Adult Cardiac Arrest Scribe Sheet

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:
Katie Heathcote, Matron, Recognise and Response Team
Michael Irvine, Consultant Anaesthetist, Chairman Recognise and Respond Committee,
Caroline Barry Consultant in Palliative Care Lead for ReSPECT
Alana Forrester , Critical Care Outreach Lead

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a policy applicable to Norfolk and Norwich University Hospitals NHS Foundation Trust; please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

Contents Page

1. Introduction

1.1. Rationale

This resuscitation policy fully supports the recommendations for clinical practice and training in cardiopulmonary resuscitation published by the Resuscitation Council (UK) (2004, revised 2008 and 2014) and has been constructed to promote compliance with the NHSLA Risk Management Standards (NHSLA, 2011). It has been based on the model document for the management of risk associated with resuscitation.

1.2. Objective

The purpose of this document is to provide direction and guidance for the planning and implementation of a high-quality and robust resuscitation service within the Norfolk and Norwich University Hospitals NHS Foundation Trust. The strategy for resuscitation incorporates the current published guidance to provide an early warning system to recognise patients at risk of deterioration or cardio-respiratory arrest and to identify those patients for whom a “Do Not Attempt Cardiopulmonary Resuscitation (DNACPR/ReSPECT)” order should be considered.

The objective of the Standard Operating Procedure is to:

- The purpose of this document is to provide direction and guidance for the planning and implementation of a high-quality and robust resuscitation service within the Norfolk and Norwich University Hospitals NHS Foundation Trust.
- The strategy for resuscitation incorporates the current published guidance to provide an early warning system to recognise patients at risk of deterioration or cardio-respiratory arrest and to identify those patients for whom a “Do Not Attempt Cardiopulmonary Resuscitation (DNACPR/ReSPECT)” order should be considered.

1.3. Scope

This document covers all sites within the main NNUH footprint. Please note there are exceptions to this where separate documents are available. These areas are aware and operate their own processes.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
Cardiac Arrest (CA):	Is the sudden cessation of mechanical cardiac activity, confirmed by unresponsiveness, absence of breathing or agonal / gasping breathing with or without simultaneous pulse check. In simple terms, cardiac arrest is the point of death.
Cardiopulmonary resuscitation (CPR):	Interventions delivered with the intention of restarting the heart and breathing. These will include chest

	compressions and ventilations and may include attempted defibrillation and the administration of drugs.
Do Not Attempt Cardiopulmonary Resuscitation (DNACPR):	Refers to not making efforts to re-start breathing and / or the heart in cases of respiratory / cardiac arrest. It does not refer to any other interventions / treatment / care such as analgesia, fluid replacement, feeding, antibiotics and fundamental care etc.
Hospital at Night H@N Hospital 24/7 Recognise and Response Team (RRT)	In patient team responding to out of hours calls to critically ill patients

2. Responsibilities

Healthcare organisations have an obligation to provide an effective resuscitation service for their patients and appropriate training for their staff. A suitable infrastructure is required to establish and continue support for these activities.

2.1. Duties within the Organisation

Chief Executive Officer

The Chief Executive Officer is required to ensure that the organisation meets its overall requirements in the provision of a resuscitation service.

Trust Board

The Trust Board is required to ensure that the Resuscitation Policy is agreed, implemented and regularly reviewed within the Clinical Governance framework. It is the responsibility of the Clinical Safety Sub Board, Recognise and Respond Committee and Resuscitation Officers to ensure policy distribution, implementation and compliance throughout the organisation.

Recognise and Respond Committee

As part of the Trust's Governance Structure, a Recognise and Respond Committee has been established to provide strategic direction for the management of the acutely unwell patient throughout the Trust. The focus of the committee will be on the following areas:

- The recognition and management of the acutely deteriorating ward patient;
- The management and resuscitation of the patient in cardiac arrest;
- The processes for Do Not Attempt Cardiopulmonary Resuscitation (DNACPR/ReSPECT) and Ceilings of Care;
- The management of the patient with Sepsis.

Clinical Staff

Clinical staff are to:

- initiate a resuscitation attempt on finding a patient who is unresponsive and pulseless unless the patient has a “Do Not Attempt Cardiopulmonary Resuscitation” order, has a verified Advance Directive or is already in rigor mortis;
- know which patients under their care have "Do Not Attempt Cardiopulmonary Resuscitation" orders;
- ensure that resuscitation status is included in handovers of patient information using a standard format recognised in NCEPOD Time to Intervene (‘for CPR’ or ‘DNACPR’);
- maintain their own resuscitation skills and knowledge and attend mandatory training.

3. Policy Principles

3.1. Prevention of Cardiac Arrest including the use of an early warning system

Prevention of in-hospital cardiac arrest requires staff education, monitoring of patients, recognition of patient deterioration, a system to call for help and an effective response.

The organisation has an Early Warning Score ‘Patient at Risk’ system in place. The Early Warning Score (NEWS2) is a critical illness risk assessment tool which uses the normally recorded patient observations to determine which patients are at risk of acute deterioration. All adult patients in the acute hospital setting have a full set of observations and a NEWS2 completed with each set of observations. An EWS of 3 or over indicates that the patient is at risk of acute deterioration and that the “Callout Cascade” must be followed, Ref. Critical Illness Risk Assessment Tool Guideline TD: 7502.

3.2. The Resuscitation Team

In the event of a cardiac arrest/paediatric arrest, obstetric or neonatal emergency being identified the appropriate emergency team must be alerted immediately. It is also acceptable to call the cardiac arrest team to a deteriorating patient, if the need is urgent and staff have reached the limit of care they can provide. The patient must be assessed first and appropriate treatment initiated before putting out an arrest call. The arrest team is also called to medical emergencies in public areas of the building. The call is made in exactly the same way irrespective of whether it is a cardiac arrest, deteriorating patient or public area call.

The emergency response on each of the organisation’s sites differs according to the type and number of patients seen and the staff available to respond.

At the Norfolk and Norwich Hospital site, the appropriate team will be summoned by using the universal number **2222**. The precise location of the patient must be communicated promptly and clearly to the switchboard operator stating the location by Block, Level and Ward.

- For an adult patient state **adult cardiac arrest / obstetric emergency;**
- For a paediatric patient state **paediatric arrest;**
- For a neonate state **neonatal emergency.**

All 'arrest' bleeps will be alerted simultaneously by the switchboard operator via a speech channel. Each member of the appropriate emergency team must respond at their earliest opportunity. The speech channel will be tested twice daily, to ensure that the system and individual bleeps are in working order, **all** bleep holders **must** respond to this test call. Responses to test calls will be monitored and where there is a failure to respond this must be followed up and remedied immediately.

At Cromer Hospital site the procedure is to call 2222 which connects to the Minor Injuries Unit receptionist so they can activate the response team and call an ambulance if necessary.

On other sites e.g. Norwich Community Hospital, the procedure is to call the Ambulance service by dialling 9 for an outside line, then 999 and stating the full address including post code.

3.2.1. Composition of the Resuscitation Team on NNUH Site

The composition of the respective emergency teams (Adult / Obstetric / Paediatric / Neonatal) is:

- Adult Team – Medical Registrar, Medical FY2, Medical FY1, ITU Anaesthetist, Site Practitioner, Rapid Responder (RRT), Operating Department Practitioner, Porter and Security Officer for non-ward areas;
- Paediatric Team – Paediatric Registrar, Paediatric FY2, Registrar Anaesthetist (4th on-call) Paediatric Senior Nurse, Site Practitioner and Operating Department Practitioner;
- Neonatal team – NICU Medical Registrar, NICU FY2, Advanced Neonatal Nurse Practitioner or Senior Nurse.

3.2.2. Resuscitation Team Briefings

Resuscitation team members will introduce themselves to plan team roles and responsibilities during the Hospital at Night handover meetings at 0800 and 2000. If specific team members (e.g. the ITU Anaesthetist) are not present these team members will be telephoned or bleeped to confirm their role within the team.

3.3. Post Resuscitation Care

If a patient who has suffered a Cardiac Arrest has a Return of Spontaneous Circulation (ROSC) it will usually be necessary to provide ongoing organ support for them in a Critical Care Environment.

Unless it is felt that the patient would not be appropriate for escalation to Critical Care (for example if the patient was extremely frail and the attending team unanimously felt unlikely to benefit) there is an expectation that the parent team registrar will contact the responsible (or if out of hours, on call consultant) for that patient to inform them of the change in the patient's condition. This is mandatory if there is uncertainty of the resident parent team or disagreement between the resident parent team and critical care team about appropriateness of escalation to critical care.

To ensure safe continuity of care and where necessary, safe transfer following resuscitation of the patient. These following steps will be undertaken:

- Referral to a specialist as needed;
- Consideration of specific treatments, for example PCI, therapeutic hypothermia;
- Full and complete hand-over of care;
- Preparation of equipment, oxygen, drugs and monitoring systems;
- Intra-hospital or inter-hospital transfer by staff experienced in patient retrieval and transfer using the Transfer Risk Assessment Tool;
- Liaison with the Ambulance Services (where appropriate);
- Informing relatives;
- Re-stocking of equipment;
- Care of the staff involved in the resuscitation.

3.4. Resuscitation Equipment, Replenishment and Cleaning

All resuscitation trolleys must be maintained in a state of readiness at all times. Arrest trolleys must undergo an abbreviated daily check (trolley seal intact and defibrillator function test) and a full weekly check. The full weekly arrest trolley check should be performed by a member of staff competent at understanding the requirements of the particular equipment. If the arrest trolley is used or the seal is broken a full trolley check must be performed (immediately following conclusion of a resuscitation event). A record of completion of the checks should be maintained.

The resuscitation trolleys should be stocked in accordance with a standardised list issued by the resuscitation department. Single patient use items should be used wherever possible and should be replenished at the earliest opportunity from the Equipment Library or area's own stock in accordance with the organisation-wide policy. Where single use items cannot be utilised, re-usable items should be de-contaminated following the trust- wide infection control document. There should be an adequate supply of these items to ensure their immediate and constant availability for re-stocking and use.

Pharmacy items must be replenished from within the Ward stock.

Emergency Drug packs are sourced from Pharmacy for replacement.

The defibrillator must be operationally checked in accordance with guidance issued by the Resuscitation Training Department.

Bespoke resuscitation equipment trolley/bag checklists do exist; however generic Adult Ward In-patient Resuscitation Trolley equipment lists are detailed below:

- Resuscitation Equipment Procedure Trust Docs ID: 5333
- Adult Resuscitation Trolley Checklist Trust Docs ID: 5334

Any bespoke lists are subject to the Emergency Equipment Checking Standard Operating Procedure, Trust Docs ID: 13400

3.5. Procurement

All resuscitation equipment purchasing is subject to the organisation's standardisation strategy; therefore, all resuscitation equipment purchased must be sanctioned by the Resuscitation Service prior to ordering.

3.6. Manual Handling

In situations where the collapsed patient is on the floor, in a chair or in a restricted / confined space the organisational guidelines for the movement of the patient must be followed to minimise the risks of manual handling and related injuries to both staff and the patient.

3.7. Cross Infection

Whilst the risk of infection transmission from patient to rescuer during direct mouth-to-mouth resuscitation is extremely rare, isolated cases have been reported. It is therefore advisable that direct mouth-to-mouth resuscitation be avoided in the following circumstances:

- All patients who are known to have or suspected of having an infectious disease;
- All undiagnosed patients entering the Emergency Department, Outpatients or other admission source;
- Other persons where the medical history is unknown.

All clinical areas should have immediate access to airway devices (e.g. a pocket mask / bag valve mask) to minimise the need for mouth-to-mouth ventilation. However, in situations where airway protective devices are not immediately available, start chest compressions whilst awaiting an airway device. If there are no contraindications, consider giving mouth-to-mouth ventilations.

3.8. Anaphylaxis

The management of suspected anaphylaxis / anaphylactoid reactions should be conducted in accordance with the Resuscitation Council (UK) Guidelines for the management of anaphylaxis.
https://www.resus.org.uk/anaphylaxis/emergency-treatment-of-anaphylactic-reactions/

An emergency drug pack for use in anaphylaxis is kept either in the arrest trolley or ward drug cupboard area on every ward.

3.9. Defibrillation

Defibrillation should be provided within 3 minutes of collapse anywhere within the hospital. Manual defibrillators are available in ward and critical care areas. Staff are trained in manual defibrillation in areas where it is often needed e.g. cardiology. Automated External Defibrillators (AEDs) are available in some outpatient areas and any member of staff is authorised to use one in an arrest to ensure that early defibrillation is provided.

3.10. Do Not Attempt Cardiopulmonary Resuscitation (DNACPR)

See separate guideline: Trust Docs ID: 13606

4. Training and Competencies

The strategy for resuscitation training shall embody the statements and guidelines published by the Resuscitation Council (UK) and the European Resuscitation Council, incorporating the most recent updates to these guidelines. This explicitly incorporates the identification of patients at risk from cardiac arrest and a strategic approach to implement preventative measures such as Early Warning Systems / Patient at Risk Systems.

The organisation will provide sufficient and appropriate resuscitation training for each of the main staff groups. Profession specific resuscitation training will be directed by their respective functional role and the guidelines and directives issued by their professional bodies (e.g. The Royal College of Anaesthetists). The profession specific resuscitation training incorporates adult, obstetric, paediatric and neonatal resuscitation knowledge and skills.

The approach to teaching is one of positive encouragement and proven educational efficacy which follows the recommendations for resuscitation teaching advocated by the Resuscitation Council (UK) (Mackway-Jones & Walker, 1998).

4.1. General training recommendations

4.1.1. Clinical Staff

New staff should have resuscitation training as part of their induction programme.

All doctors, nurses, midwives and Allied Health Professionals must be adequately and regularly trained in cardiopulmonary resuscitation appropriate to their discipline. The level of that training is determined by their respective professional bodies (e.g. General Medical Council) and / or the duties that those staff would be expected to undertake when in attendance at a cardiac arrest / medical / obstetric / neonatal emergency. All resuscitation training sessions include use of the Early Warning Scoring System to recognise patients at risk of deterioration and a discussion of the 'key points of DNA CPR'. Staff looking after neck breathers and responding to cardiac arrest calls need to understand how to look after these patients and how to manage their airway in an emergency.

4.1.2. Non-Clinical Staff

All hospital staff with frequent, regular contact with patients should be trained in basic life support (BLS).

4.2. Resource issues

Resuscitation training may be prioritised to incorporate the available resources of the resuscitation service, which should be compliant with the Resuscitation Council (UK) standards.

If high standards of cardiopulmonary resuscitation are to be achieved and maintained, it is essential that the policy is adhered to.

5. Monitoring Compliance

Compliance with the process will be monitored through the following:

Key elements	Process for Monitoring	By Whom (Individual / group /committee)	Responsible Governance Committee /dept	Frequency of monitoring
Duties	Cardiac arrest test call	Wayne Bowditch/ Kirsty Lewis Lead Resuscitation Officers	Recognise and Respond Committee	Tested daily
Early Warning Systems	Surveillance of Observation Completeness and EWS Triggers	Alanna Forrester, CCOT Team Lead	Recognise and Respond Committee	Quarterly
Post-Resuscitation Care	NCAA reports used to identify Initial survival survival to discharge % of patients transferred to critical care areas post arrest	Wayne Bowditch/ Kirsty Lewis Lead Resuscitation Officers	Recognise and Respond Committee	Annually
Do Not Attempt Resuscitation Orders	Review of deceased patient's notes Decision	Wayne Bowditch/ Kirsty	Recognise and Respond	On-going audit and annual

	recorded and signed	Lewis Lead Resuscitation Officers	Committee	report to Patient Safety Committee
Process for ensuring the continual availability of Resuscitation Equipment	Resuscitation trolleys included in Perfect Ward Audit Equipment checked and present	Wayne Bowditch/ Kirsty Lewis Lead Resuscitation Officers	Recognise and Respond Committee	Wards and Departments sampled acute/OPD/paeds areas reported as done or 6 monthly
Organisation's expectations in relation to staff training, as identified in the Training Needs Analysis	OLM GAP analysis report to DGMs and Resuscitation Officer	Wayne Bowditch/ Kirsty Lewis Lead Resuscitation Officers	Recognise and Respond Committee	Quarterly report
Process for Monitoring Compliance with all of above	Overall review of above standards	Wayne Bowditch/ Kirsty Lewis Lead Resuscitation Officers	Recognise and Respond Committee	Annually

To ensure that this document is compliant with the above standards, the following monitoring processes will be undertaken:

- Review the National Cardiac Arrest Audit Data quarterly, providing a summary report to the Clinical Safety Sub-Board;
- Undertake an annual audit monitoring the compliance with the Emergency Equipment Checking Standard Operating Procedure;
- Monitor Datix incidents relevant to recognising the deteriorating patient and cardiac arrest attendance.

All events to which a cardiac arrest team is summoned must be audited (DH HSC 2000/028). Full monitoring requirements and responsibilities are noted in the table above.

The Recognise and Respond Committee will:

- Review notes in relation to DNACPR decisions / failure to rescue;
- Monitor complaints and critical incident reports;
- Monitor Training compliance and attendance.

The audit results are to be discussed at relevant governance meetings to review the results and recommendations for further action. Then sent to Clinical Safety and Effectiveness Sub-Board who will ensure that the actions and recommendations are suitable and sufficient.

6. Related Documents

Documents associated (this list is not exhaustive):

- Critical Illness Risk Assessment Tool (EWS)
- Do Not Attempt Cardiopulmonary Resuscitation
- Infection Prevention and Control
- Manual Handling
- Medical Devices

7. References

Resuscitation Council (UK) (2004) Cardiopulmonary Resuscitation - Standards for Clinical Practice and Training. http://www.resus.org.uk

Resuscitation Council (UK) (2021) Resuscitation Guidelines 2021. http://www.resus.org.uk/pages/guide.htm [online]

8. Appendices

Appendix 1: Adult Cardiac Arrest Scribe Sheet

Adult Cardiac Arrest Scribe Sheet NNUH

Date *(dd/mm/yyyy)* ……..

Time *(24 hour clock)* ……

Location: …….

Brief history of event: ……

……..

……

CONFIRMATION OF IDENTITY & CPR RECOMMENDED (tick to confirm)

Patient found by: …… Team Leader ……

Anaesthetist …….. Scribe…….. Other staff ……

Circle / tick as applicable

Initial rhythm	PEA	Asystole	VF	VT	Other ……

Cycle 1	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	VT Other ……

Cycle 2	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	VT Other ……

Cycle 3	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 4	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Comments:

Cycle 5	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 6	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	……	

Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 7	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	…… …	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 8	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	…… …	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 9	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	…… …	
Shock given?		Yes ☐ No ☐
Comment: ……..		
Rhythm check PEA	Asystole VF	V T Other ……

Cycle 10	Start time	……. / ……..
2 minute compressions?		Yes ☐ No ☐
Drugs given?	Adrenaline	Yes ☐ No ☐
	Amiodarone	Yes ☐ No ☐
Other	…… …	

Shock given?					Yes ☐ No ☐
Comment: ……..					
Rhythm check	PEA	Asystole	VF	V T	Other ……

9. Equality Impact Assessment (EIA)

Type of function or policy	Existing

Division	SCEC	**Department**	Recognise and Respond Team
Name of person completing form		**Date**	January 2024

Equality Area	Potential Negative Impact	Impact Positive Impact	Which groups are affected	Full Impact Assessment Required YES/NO
Race	No		N/A	No
Pregnancy & Maternity	No		N/A	No
Disability	No		N/A	No
Religion and beliefs	No		N/A	No
Sex	No		N/A	No
Gender reassignment	No		N/A	No
Sexual Orientation	No		N/A	No
Age	No		N/A	No
Marriage & Civil Partnership	No		N/A	No
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?				

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.