



Quality Standards: Acute Care

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Introduction and scope

Healthcare organisations have an obligation to provide a high-quality resuscitation service and to ensure that staff are trained and updated regularly to a level of proficiency appropriate to each professional's expected role.

This document provides quality standards for cardiopulmonary resuscitation practice and training in the acute health care setting. Acute care refers to acute hospitals that provide inpatient and/or day-case medical and/or surgical care to adults, children, newborn babies or all.

Each section of this document contains the quality standards, supporting information and supporting tools for a specific aspect of cardiopulmonary resuscitation in acute care. The appendix provides a list of suggested measures to assess adherence to the standards specified in each section.

The core standards for the provision of cardiopulmonary resuscitation across all healthcare settings are described in the [Introduction and overview](#) page.

Alongside the quality standards, [there is an acute care equipment and drug list.](#)

1. Resuscitation Committee

Standards

1. Healthcare organisations admitting acutely ill patients must have a Resuscitation Committee with clearly defined terms of reference.
2. The organisation should “ensure that a resuscitation policy is agreed, implemented, and regularly reviewed within the clinical governance framework”. This may be discharged either by having a non-executive director (NED) with responsibility or by the Quality Committee, or equivalent, discharging this role (rather than an individual NED) and including this on the committee work plan, ensuring sign-off from the board.
3. The Resuscitation Committee must be part of the organisation’s core management structure (e.g. clinical governance, clinical risk, quality improvement, education committees).
4. The Resuscitation Committee must include representatives from stakeholder groups (e.g. doctors, clinicians, nurses, resuscitation practitioners, pharmacists, management, patient/lay representative) and appropriate specialities (e.g. ambulance service, anaesthesia, cardiology, dentistry, emergency medicine, general practice, intensive care medicine, mental health, neonatology, obstetrics, paediatrics). The exact composition of the committee will depend on local needs and arrangements.
5. The chair of the Resuscitation Committee must be a senior clinician with an active and credible involvement in resuscitation. This individual would be expected to have the authority to drive and implement change.
6. The Resuscitation Committee must have administrative support.
7. The Resuscitation Committee is responsible for implementing operational policies governing cardiopulmonary resuscitation, practice and training.
8. In the absence of other organisational arrangements, the Resuscitation Committee must also be responsible for implementing operational policies governing the prevention of cardiac arrest.

9. According to local arrangements, it is recommended that the Resuscitation Committee provides advice to other local healthcare organisations who do not have the necessary expertise in resuscitation issues. In some healthcare communities, this is achieved very effectively by having a Resuscitation Committee that spans all the relevant organisations.
10. The Resuscitation Committee must determine the level of resuscitation training required by staff members.
11. At least twice-yearly meetings of the Resuscitation Committee are recommended.
12. Responsibilities of the Resuscitation Committee include:
 - ensuring implementation and adherence to national resuscitation guidelines and standards,
 - defining the role and composition of the resuscitation team(s),
 - ensuring that resuscitation equipment for clinical use is available and ready for use,
 - ensuring that appropriate resuscitation drugs (including those for peri-arrest situations) are available and ready for use,
 - planning the adequate provision of training in resuscitation, determining requirements for and choice of resuscitation training equipment,
 - preparing and implementing policies relating to resuscitation and treatment of anaphylaxis,
 - preparing and implementing policies relating to the prevention of cardiac arrest,

- preparing and implementing a policy on resuscitation conversations and recommendations or decisions (e.g. Emergency Health Care Plans, ReSPECT or DNACPR decisions), and advanced care planning (this is usually in collaboration with palliative care teams and/or Geriatric Medicine teams),
 - quality improvement - action plans based on audits (e.g. review of audit data using National Cardiac Arrest Audit data for benchmarking),
 - recording and reporting of patient safety incidents in relation to resuscitation.
13. The Resuscitation Committee must ensure that there is defined financial support for the resuscitation service.

Supporting information

1. National Cardiac Arrest Audit. [ICNARC – About](#)
2. NHS Executive. Enhancing board oversight: A new approach to non-executive director champion roles. Version 1, December 2021
https://www.england.nhs.uk/wp-content/uploads/2021/12/B0994_Enhancing-board-oversight-a-new-approach-to-non-executive-director-champion-roles_December-2021.pdf
3. Report a patient safety incident.
 - <https://www.england.nhs.uk/patient-safety/report-patient-safety-incident/>
 - <https://www.health-ni.gov.uk/articles/reporting-adverse-incident>
 - <https://www.nss.nhs.scot/health-facilities/incidents-and-alerts/report-an-incident/>
 - <https://du.nhs.wales/patient-safety-wales/patient-safety-incidents/>
4. [Silver Book II: Holistic assessment of older people | British Geriatrics Society \(bgs.org.uk\)](https://www.bgs.org.uk/silver-book-ii)
5. [Review of Do Not Attempt Cardiopulmonary Resuscitation decisions during the COVID-19 pandemic: Interim report \(cqc.org.uk\)](https://www.cqc.org.uk/reports-and-returns/interim-reports/2020-2021/2020-2021-01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000)

6. <https://spcare.bmj.com/content/9/1/1>

2. Resuscitation Practitioners

Standards

1. Every organisation must have at least one person, who is responsible for coordinating the teaching and training of staff in resuscitation. Throughout the document the term Resuscitation Practitioner (RP) is used for this role, with the understanding that there are many job titles and individual roles agreed locally (including Resuscitation Officer, Resuscitation Specialist, Resuscitation Lead and Resuscitation Services Manager).
2. This person may have additional important governance responsibilities (e.g. quality improvement, incident review, attending cardiac arrests/medical emergencies, debriefing, risk assessment, procurement, End of Life Care planning)
3. One whole-time-equivalent RP is recommended for every 750 members of clinical staff - see supporting tools below for further details. Depending on the size and geographical distribution of the organisation, more than one RP may be needed to fulfil training requirements and additional responsibilities relating to resuscitation.
4. RPs must possess a current provider certificate in the relevant life support course/s, with Instructor qualification/s also desirable. This includes RCUK Advanced Life Support, European Paediatric Advanced Life Support, Newborn Life Support, Advanced Resuscitation of the Newborn Infant or ALSG Advanced Paediatric Life Support courses.
5. Participating in the Generic Instructor Course, as a member of Faculty is desirable, as this will facilitate the dissemination of best practice resuscitation education.
6. The RP must have access to a designated training room(s) of adequate size. The room(s) should comfortably accommodate Instructors, Trainees and all the training equipment required for any teaching session.
7. The RP must have access to suitable electronic teaching aids. There must be adequate space for storing equipment. It is recommended that separate office space, with a desk, computer facilities, and lockable document

storage, is available.

8. The RP must have access to agreed administrative assistance to enable course and clinical administration. This should be decided locally.
9. Equipment for training will vary according to local needs. Adult, paediatric and newborn manikins, airway management trainers, an ECG monitor and rhythm simulator, and at least one defibrillator dedicated for training, must be available, if relevant. To ensure appropriate clinical use, equipment for training (especially defibrillators) must be the same model as that used in actual clinical practice.
10. There must be a defined resuscitation budget made available for the RP to maintain, upgrade and purchase new equipment for patient use and for training. Purchasers of health care need to be made aware of this when contracts are negotiated and adequate provision made. Such financial support for resuscitation services must be taken into account during budget planning by the organisation.
11. It is recommended that the RP is responsible for ensuring that there are systems in place for maintaining resuscitation equipment in good working order. This will usually mean delegation of routine checking of equipment to ward staff, other members of staff or departments such as medical/clinical engineering.
12. It is recommended that the RP is involved in data collection and audit of cardiac arrest. It is recommended that this data should be collected as part of the National Cardiac Arrest Audit (NCAA). Interpretation of cardiac arrests/medical emergencies should be sought and discussed within Resuscitation Committee meetings feeding into other internal groups .
13. In order to maintain standards and clinical credibility, it is recommended that responding to and participating in cardiac arrest management is an integral part of the RP's clinical responsibility on a week-to-week basis. RPs with a clinical role must have appropriate clinical supervision and support. Continuing professional development should be supported both for the RP role and for continuing professional registration.
14. The RP has a responsibility to maintain their own education in resuscitation alongside the employer who has a duty to allow the individual to maintain their clinical practice. In order to achieve this, teaching on resuscitation courses outside the organisation is recommended. In addition, regular attendance at professional meetings must be supported with a budget for study expenses.
15. RPs should not be expected to generate income to provide for their own salary.

16. If the RP is expected to generate income for the organisation it should be agreed in writing with the relevant manager. Any income from RCUK courses must be directed to improving resuscitation services.

Supporting information

1. Resuscitation Council UK. [Home | Resuscitation Council UK](#)
2. National Cardiac Arrest Audit. <https://www.icnarc.org/Our-Audit/Audits/Ncaa/About>
3. Scottish Resuscitation Group. [Scottish Resuscitation Group \(webs.com\)](#)

Supporting tools

A local policy and plan based on local structures and training needs analysis needs to be in place when planning appropriate training. This calculation is a historical example developed to support the statement that: 'One whole-time-equivalent RP is recommended for every 750 members of clinical staff':

1. 750 staff to be trained equates to 75 per month over a 10-month period. This is based on an RP working for a total of 10 out of every 12 months, allowing for annual leave, study leave, teaching elsewhere, etc.
2. Each training session lasts approximately 2 hours.
3. Each session has 6 attendees.
4. If all 6 people attend, then 12.5 sessions per month are required.
5. If only 4 people attend, then 18.75 sessions per month are required.
6. Therefore, to provide enough sessions over the year allowing for peaks and troughs about 15 sessions per month are required.
7. 15 sessions per month at 2 hours each provides 30 hours of basic training.
8. This is "classroom" time and does not include set up/set down time, preparation, administration etc.
9. The above calculation also does not include accredited courses or other training such as ward-based scenario or other types of sessions.
10. Most RPs spend at least 50% of their time involved in training activities when all the different types of training and preparation are taken into account.
11. The remainder of an RP's time includes other responsibilities such as audit, governance, DNACPR, clinical commitments, attending cardiac arrest calls, planning, finance, equipment checks, etc.

3. Training of staff

Standards

1. At induction, staff must either have transferable previous resuscitation training or undergo relevant resuscitation training. Induction must cover any trust or department specifics regarding resuscitation of patients. Training should be repeated at regular intervals thereafter to maintain knowledge and skills.
2. Training must be to a level appropriate for the individual's expected clinical responsibilities.
3. Training must include the use of an 'early warning scoring' system to identify the deteriorating patient, including the use of an escalation protocol to ensure early and effective treatment of patients in order to prevent cardiac arrest. The scoring and escalation system must be the same as used in actual clinical care. The use of the National Early Warning Score 2 (NEWS2) was mandated in acute care in 2018. For children, the use of Paediatric Early Warning Score (PEWS) is recommended. For obstetric practice the National Maternity Early Warning Score (MEWS) is recommended.
4. According to NICE Clinical Guideline 50 (2007), staff caring for patients in any acute hospital setting must have competencies in monitoring, measurement, and interpretation of vital signs. They must have the knowledge to recognise deteriorating health and respond effectively to acutely ill patients, appropriate to the level of care they are providing.
5. It is recommended that training enables clinical staff to possess the competencies defined in the Department of Health document 'Competencies for Recognising and Responding to Acutely Ill Patients in Hospital' and the National Outreach Forum document 'Operational Standards and Competencies for Critical Care Outreach Services'. In services caring for children and newborn babies competencies must incorporate recognition of the acutely ill child or infant as described in "Paediatric early warning systems for detecting and responding to clinical deterioration in children: a systematic review", "Recognition of the acutely ill infant HSIB 2021 and Newborn Early Warning Trigger & Track (NEWTT)".
6. According to Resuscitation Council UK guidelines, training must be in place to ensure that clinical staff can undertake appropriate cardiopulmonary resuscitation. Training and facilities must ensure that, when cardiorespiratory arrest occurs, as a minimum all clinical staff can:

- recognise cardiorespiratory arrest
- summon help,
- start CPR,
- attempt defibrillation, if appropriate, within 3 minutes of collapse using an automated external defibrillator or manual defibrillator.

7. Clinical staff should have at least annual updates, depending on role. Those with extant valid qualifications (e.g. ALS etc.) should also be offered annual updates.
8. Training and updates that include an assessment are recommended for clinical staff.
9. The expectation is that non-clinical staff have the resuscitation skills that would be expected from a layperson. If a layperson calls 999 in an emergency, they receive instructions from an ambulance call handler whilst awaiting trained help to arrive. These instructions include starting chest compressions. Telephone guidance does not happen in hospitals unless staff dial 999; hence the expectation that all staff in an acute setting should have some basic knowledge of resuscitation.

As a minimum, non-clinical staff should be trained to:

- recognise cardiorespiratory arrest,
- summon immediate emergency help in accordance with local protocols,
- start CPR using chest compressions,
- locate, apply and use an AED following the device voice prompts.

10. All staff must know how to summon help and be aware of the use of a standard telephone number within the organisation. We recommend that this should be a common national number 2222, as recommended by the National Patient Safety Agency.
11. For all staff, a variety of methods to acquire, maintain and assess resuscitation skills and knowledge can be used for annual updates (e.g. life support courses, simulation training, in-house training, mock-drills, 'rolling refreshers', training using CPR trainers with feedback, e-learning, video-based training/self-instruction). The appropriate methods must be determined locally. For example, training materials such as Lifesaver (www.life-saver.org.uk), developed by Resuscitation Council UK, or very brief videos aimed at the general public may be appropriate for non-clinical staff. 'Hands-on' simulation training and assessment is recommended for clinical staff.

12. A system must be in place for identifying resuscitation equipment for which staff require special training, such as defibrillators and emergency suction equipment.
13. Organisations must recognise and make provision for staff to have enough time to train in resuscitation skills as part of their employment.
14. Specific training for cardiorespiratory arrests in special circumstances (e.g. children, newborn, pregnancy and trauma) must be provided for medical, nursing and other clinical staff in the relevant specialties.
15. All training must be recorded with a personal record of training available to the individual members of staff (e.g. in the organisation's training database).
16. Members of the resuscitation team with a regular involvement in resuscitation, particularly team leaders, may require a level of training beyond that provided by the local RP. These individuals must be encouraged and supported to attend nationally recognised courses such as the Advanced Life Support (ALS) course, the European Paediatric Advanced Life Support (EPALS) course, the Advanced Paediatric Life Support (APLS) course, the Newborn Life Support (NLS) course, the Advanced Resuscitation of the Newborn (ARNI) course, the European Trauma Course (ETC), and the Advanced Trauma Life Support (ATLS) course as appropriate to their role.

Supporting information

1. Competencies for Recognising and Responding to Acutely Ill Patients in Hospital. Department of Health. 2009.
<https://www.norf.org.uk/Resources/Documents/Resources%20documents/competencies%20AIP%20doh.pdf>
2. Establishing a standard crash call telephone number in hospitals. Patient Safety Alert 02. London: National Patient Safety Agency; 2004.
3. The Human Medicines Regulations 2012. This legislation applies to non-prescribers and allows holders of a current Resuscitation Council UK 'Advanced Life Support' provider certificate to administer adrenaline and amiodarone without prescription to adults in cardiac arrest.
<http://www.legislation.gov.uk/ukxi/2012/1916/contents/made>
4. National Early Warning Score (NEWS2). Standardising the assessment of acute-illness severity in the NHS. Royal College of Physicians. Report of a working Party. 19th December 2017.
<http://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2>

5. National Institute for Health and Clinical Excellence. Acutely ill patients in hospital: recognition of and response to acute illness in adults in hospital 2007 (NICE Guideline 50).
6. Recognising and Responding to Acutely Ill Patients in Hospital <https://www.norf.org.uk/Resources/Documents/Resources%20documents/competencies%20AIP%20doh.pdf>
7. Care of deteriorating patients: Healthcare Improvement Scotland SIGN 139 2014. <https://www.sign.ac.uk/media/1077/sign139.pdf>
8. National Outreach Forum (2020). Operational standards and competencies for critical care outreach services. <https://www.norf.org.uk/Resources/Documents/NOrF%20CCCO%20and%20standards/NOrF%20Operational%20Standards%20and%20Competencies%201%20August%202012.pdf>
9. Resuscitation Guidelines 2021. Resuscitation Council UK. <https://www.resus.org.uk/library/2021-resuscitation-guidelines>
10. Quality Standards for the care of Critically Ill or Injured Children 2021. . Paediatric Critical Care Society. <https://pccsociety.uk/wp-content/uploads/2021/10/PCCS-Standards-2021.pdf>
11. Lambert V, Matthews A, MacDonell R, et al. Paediatric early warning systems for detecting and responding to clinical deterioration in children: a systematic review BMJ Open 2017;7:e014497. doi: 10.1136/bmjopen-2016-014497 <https://bmjopen.bmj.com/content/7/3/e014497>
12. Paediatric Early Warning System (PEW System) - developing a standardised tool for England. <https://www.rcpch.ac.uk/resources/paediatric-early-warning-system-pewsystem-developing-standardised-tool-england>
13. Recognition of the acutely ill infant HSIB 2021. <https://www.hsib.org.uk/investigations-and-reports/recognition-of-acutely-ill-infant/recognition-of-the-acutely-ill-infant/>
14. National Maternity Early Warning Score (MEWS)
 - o <https://www.patientsafetyoxford.org/clinical-safety-programmes/safety-in-maternity/national-maternity-early-warning-score-mews-tool/>
 - o https://ihub.scot/media/5308/national-mews-chart_web.pdf
15. Newborn Early Warning Trigger & Track (NEWTT) - a Framework for Practice BAPM (2015) <https://www.bapm.org/resources/38-newborn-early-warning-trigger-track-newtt-a-framework-for-practice-2015>
16. Lockey A, Lin J and Cheng A. Impact of adult advanced cardiac life support course participation on patient outcomes - a systematic review and meta-analysis. Resuscitation 2018;129:48-54

Supporting tools

- Lifesaver. An interactive film by Martin Percy with Resuscitation Council UK. 2013. <http://www.life-saver.org.uk>
- Paediatric Early Warning System (PEWS) – developing a standardised tool for England. <https://www.rcpch.ac.uk/resources/paediatric-early-warning-system-pewsystem-developing-standardised-tool-england>
- Paediatric Early Warning Score (PEWS) <https://www.clinicalguidelines.scot.nhs.uk/nhsggc-guidelines/nhsggc-guidelines/intensive-and-critical-care/paediatric-early-warning-score-pews/>
- Prevention of unexpected cardiac arrest in Raising the Standards: RCoA Quality Improvement Compendium. <https://www.rcoa.ac.uk/safety-standards-quality/quality-improvement/raising-standards-rcoa-quality-improvement-compendium>.
- Subject 11: Resuscitation. UK Core Skills Training Framework. Subject Guide. Skills for Health 2013.
- User Guide for UK Core Skills Training Framework. Skills for Health. 2013.

4. Prevention of cardiorespiratory arrest

Standards

1. The use of the 'Chain of Prevention' concept as a basis for the structuring of the organisation's responses to patient deterioration and the prevention of cardiorespiratory arrest is recommended.
2. The organisation must have an education programme that is focused on the prevention of patient deterioration, for ward staff and responding clinical personnel. It is recommended that staff attain the competencies identified in the Department of Health document 'Competencies for Recognising and Responding to Acutely Ill Patients in Hospital' (2009), and the National Outreach Forum document 'Operational Standards and Competencies for Critical Care Outreach Services'.
3. The organisation must have a clear policy for the monitoring of patients' vital signs, based on the guidance in the National Institute for Health and Clinical Excellence clinical guideline 50 [Acutely ill patients in hospital: recognition of and response to acute illness in adults in hospital (2007)] and the Royal College of Physicians National Early Warning Score (NEWS2) (2017).

4. An early warning scoring system must be in place to identify patients who are critically ill and therefore at risk of cardiorespiratory arrest. The use of the National Early Warning Score (NEWS2) for adults, or a paediatric (PEW System) or newborn (NEWTT) early warning score for children is recommended.
5. The organisation must have a patient charting system that facilitates the regular measurement and recording of early warning scores.
6. The organisation must have a clear, universally known and understood, mandated, unambiguous, graded, activation protocol for escalating monitoring or summoning a response to a deteriorating patient. This should be standardised across the organisation.
7. The use of a standardised method for communicating information about a deteriorating patient (e.g. SBAR, SBARD, RSVP) between staff members is recommended.
8. A designated outreach service or rapid response team capable of responding to acute clinical crises identified by clinical triggers or other indicators, is recommended. This may include members of the resuscitation team.
9. The organisation must have a clear and specific policy that requires a clinical response to 'calling criteria' or early warning systems ('track and trigger'). This must include the specific responsibilities of both senior and more junior clinical staff and identify the maximum response times. NCEPOD recommends that when patients continue to deteriorate after non-consultant review there should be escalation of patient care to a more senior doctor with the appropriate skills (e.g. Critical Care). If this is not done, the reasons for non-escalation must be documented clearly in the patient's health record.

Supporting information

1. Prevention of unexpected cardiac arrest in Raising the Standards: RCoA Quality Improvement Compendium. <https://www.rcoa.ac.uk/safety-standards-quality/quality-improvement/raising-standards-rcoa-quality-improvement-compendium>.
2. European Resuscitation Council Guidelines 2021. <http://www.cprguidelines.eu>
3. International Liaison Committee on Resuscitation Consensus on Science with Treatment Recommendations. <http://www.ilcor.org>
4. National Early Warning Score (NEWS) 2. Royal College of Physicians. Report of a working Party. July 2012 Up dated Dec 2017.

<http://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2>

5. Newborn Early warning Trigger and Track (NEWTT) – a framework for practice (2015) <https://www.bapm.org/resources/38-newborn-early-warning-trigger-track-newtt-a-framework-for-practice-2015>
6. Paediatric Early Warning System (PEWS) – developing a standardised tool for England. <https://www.rcpch.ac.uk/resources/paediatric-early-warning-system-pewsystem-developing-standardised-tool-england>
7. Paediatric Early Warning Score (PEWS) <https://www.clinicalguidelines.scot.nhs.uk/nhsggc-guidelines/nhsggc-guidelines/intensive-and-critical-care/paediatric-early-warning-score-pews/>
8. National Outreach Forum (2020). Operational standards and competencies for critical care outreach services. <https://www.norf.org.uk/Resources/Documents/NOrF%20CCCO%20and%20standards/NOrF%20Operational%20Standards%20and%20Competencies%201%20August%202012.pdf>
9. NICE clinical guideline 50 Acutely ill patients in hospital: recognition of and response to acute illness in adults in hospital. London: National Institute for Health and Clinical Excellence; 2007.
10. Smith GB. In-hospital cardiac arrest: Is it time for an in-hospital 'chain of prevention'? Resuscitation 2010.
11. Resuscitation Council UK Guidelines 2021. <https://www.resus.org.uk/library/2021-resuscitation-guidelines>
12. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (NCEPOD). 2012. <http://www.ncepod.org.uk>

Supporting tools

1. Prevention of cardiac arrest in Raising the Standard: A compendium of audit recipes for continuous quality improvement in anaesthesia. https://www.rcoa.ac.uk/sites/default/files/documents/2019-09/CSQ-ARB-2012_0.pdf

5. The resuscitation team

Standards

1. The Resuscitation Committee must determine the composition of the resuscitation team (may be termed emergency response team).
2. The exact composition of the team will vary between organisations, but overall the team that responds immediately must have the following **minimum skills:**
 - basic airway interventions, including the use of a supraglottic airway in adults,
 - intravenous cannulation, and intraosseous access (essential in children),
 - defibrillation (automated external defibrillation and manual defibrillation),
 - drug administration,
 - skills required for immediate post-resuscitation care,
 - a scribe for more contemporaneous recording of events, and the ability to use prompts and checklists.
3. NCEPOD recommends that each hospital ensures that there is an agreed plan for airway management during cardiac arrest. This may involve bag-mask ventilation for cardiac arrests of short duration, the use of a supraglottic airway device or tracheal intubation if this is within the competence of members of the team responding to the cardiac arrest.
4. In addition to the resuscitation team, access to individuals with the following skills when needed is recommended:
 - tracheal intubation,
 - cardioversion and external pacing,
 - central venous access,
 - focused ultrasound/echocardiography/point-of-care ultrasound.
5. The team should be activated in response to a cardiorespiratory arrest. Certain clinical areas (e.g. emergency departments, intensive care units) have individuals with the necessary resuscitation skills within their own staff and may therefore not always call the hospital resuscitation team/emergency response team.
6. Activation of the team may also be part of the local escalation plan for the deteriorating patient.
7. The resuscitation/emergency response team is responsible for ensuring the appropriate management of relatives (who may or may not wish to be

present at a cardiorespiratory arrest), post-resuscitation transfer, and debriefing.

8. Consideration must be given to allowing relatives or significant companions to be present during a resuscitation attempt. An experienced member of staff who can explain what is going on should be delegated to stay with them and liaise with the team on their behalf.
9. Team members often change daily or more frequently, especially when shift working is used. Members may not know each other or the skill mix of the team members. A resuscitation/emergency response team meeting at the beginning of members' period on duty is recommended to:
 - introduce team members to each other; communication is much easier and more effective if people can be referred to by their name,
 - identify everyone's skills and experience,
 - allocate the team leader role; skill and experience take precedence over seniority,
 - allocate responsibilities; if key skills are lacking (e.g. nobody skilled in tracheal intubation) the team must work out and agree how this deficit can be managed,
 - update the team on any patients who have been identified as 'at risk' during the previous duty period.
10. Team debriefings involving resuscitation team members are recommended - the exact mechanism (e.g. end of each event, end of each shift, weekly) must be determined locally; this should be complementary to the local processes to promote resilience.
11. The resuscitation/emergency response team must be summoned to all cardiorespiratory arrests by the use of a common telephone number. The National Patient Safety Agency has recommended that this number should be 2222.
12. The organisation must ensure that the resuscitation team is activated within 30 seconds of the call for help. This system must be tested daily. Responses to test calls must be monitored and where there is a failure to respond this must be followed up and remedied immediately.
13. The organisation must have a policy for staff and telephone operators for dealing with cardiac arrest calls from remote parts of a hospital site (e.g. car parks, office buildings). In some settings this may include calling an ambulance in addition to the resuscitation team.
14. The role of team leader in a resuscitation team must be undertaken by an individual who is a current Advanced Life Support Provider or has equivalent training. If the patient is a child or newborn, the team leader must have

equivalent paediatric or newborn life support qualifications. Although the team leader at a resuscitation attempt will usually be a doctor on the resuscitation/emergency response team, the role must be allocated at each individual event, based on clinical knowledge, skills and experience.

15. The team leader is responsible for:

- directing and co-ordinating the resuscitation attempt,
- ensuring that current guidelines are followed,
- ensuring the safety of those present,
- ending the resuscitation attempt when indicated,
- documentation (including audit forms),
- communication with relatives,
- handover of care to other clinical teams,
- diagnosis and documentation of death if appropriate. However, certification of death may well be carried out by the responsible clinical team.

The team leader may decide to delegate some of these tasks but must ensure that they are completed.

16. The organisation must ensure that a complete and detailed record of the cardiorespiratory arrest is retained within the patient's clinical record. Collection of data for audit at the time of arrest is recommended.

Supporting information

1. Resuscitation Council UK Guidelines 2021.
2. Edelson DP, Litzinger B, Arora V, et al. Improving in-hospital cardiac arrest process and outcomes with performance debriefing. Arch Intern Med 2008;168:1063-9.
3. Establishing a standard crash call telephone number in hospitals. Patient Safety Alert 02. London: National Patient Safety Agency; 2004.
4. Guidance for Anaesthetists on cardiac arrest teams. Royal College of Anaesthetists. November 2010.
https://www.rcoa.ac.uk/sites/default/files/documents/2019-09/CSQ-ARB-2012_0.pdf
5. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (NCEPOD). 2012. <http://www.ncepod.org.uk>

6. Resuscitation of children and the newborn

Standards

1. Most cardiac arrests in children and the newborn are secondary events. Therefore, specific paediatric early warning scoring systems with a 'Track and Trigger' should be used to prevent cardiac arrest.
2. Timely review by appropriately trained clinicians in response to clinical triggers or other indicators reduces mortality in children and newborn. It is recommended that a formal provision be made to provide this response that has early involvement of paediatric experts to reverse potential declines and to escalate to other resources such as anaesthetic teams or advice from local PICU/ retrieval teams in cases of continued deterioration. This may be realised by members of an outreach service, rapid response team or similar service. The nature of this team will vary according to local need and resources and should be determined locally.
3. When attempting the resuscitation of a child or newborn in cardiorespiratory arrest, as a minimum the team leader must be someone with expertise and training in the resuscitation of children and the newborn. Special knowledge of the equipment, techniques and doses of drugs required for children and the newborn, together with an understanding of the differences in causes and treatment of cardiorespiratory arrest, is essential.
4. Familiarity with their expected roles and experience in the resuscitation of children and the newborn is recommended for all team members. Ideally, organisations should have a separate paediatric resuscitation team.
5. At least one member of a resuscitation team that may be expected to resuscitate children and/or the newborn must have completed an accredited national paediatric and/or newborn resuscitation course (e.g. EPALS/APLS/NLS/ARNI) successfully. In addition, all staff with regular involvement in paediatric or newborn resuscitation must be encouraged to attend accredited national paediatric resuscitation courses (e.g. EPALS, APLS, NLS, ARNI).
6. When resuscitating a child or a newborn, particular consideration must be given to allowing the presence of relatives/guardians during the resuscitation attempt. An experienced member of staff who can explain what is going on should be delegated to stay with them and liaise with the team on their behalf.

7. The use of paediatric and/or newborn resuscitation charts and drug dosing aides is essential. In circumstances where the weight is not known (such as in the emergency department) a method of calculating drug dosages from length or age is useful.
8. Where appropriate, a separate Emergency Care and Treatment Plan, ReSPECT, DNACPR form and/or Emergency Healthcare Plan (EHP) is recommended for children and the newborn.
9. The British Association of Perinatal Medicine (www.bapm.org) provides standards for hospitals providing neonatal care.

Supporting information

1. [2021 Resuscitation Guidelines | Resuscitation Council UK](#)
2. Bradman K, Maconochie I. Can paediatric early warning score be used as a triage tool in paediatric accident and emergency? Eur J Emerg Med.2008;15:359-60 <https://pubmed.ncbi.nlm.nih.gov/19078844/>
3. British Association of Perinatal Medicine. Service Standards for Hospitals Providing Neonatal Care in the UK. November 2022 https://hubble-live-assets.s3.amazonaws.com/bapm/file_asset/file/1494/BAPM_Service_Quality_Standards_FINAL.pdf
4. Intercollegiate Committee for Standards for Children and Young People in Emergency Care Settings. Standards for Children and Young People in Emergency Care Settings. 2012. <http://www.rcpch.ac.uk/emergencycare>
5. Development of PEWS: <https://www.rcpch.ac.uk/resources/paediatric-early-warning-system-england#:~:text=A%20digital%20PEWS%20is%20being,and%20a%20national%20eLearning%20module>.
6. Newborn Early warning Trigger and Track (NEWTT) – a framework for practice (2015) <https://www.bapm.org/resources/38-newborn-early-warning-trigger-track-newtt-a-framework-for-practice-2015>
7. Paediatric Early Warning System (PEWS) – developing a standardised tool for England. <https://www.rcpch.ac.uk/resources/paediatric-early-warning-system-pewsystem-developing-standardised-tool-england>
8. Paediatric Early Warning Score (PEWS) <https://www.clinicalguidelines.scot.nhs.uk/nhsggc-guidelines/nhsggc-guidelines/intensive-and-critical-care/paediatric-early-warning-score-pews/>

9. Parshuram CS, Duncan HP, Joffe AR et al. Multicentre validation of the bedside paediatric early warning system score: a severity of illness score to detect evolving critical illness in hospitalised children. Crit Care 2011;15:R184
10. Larcher V, Craig F, Bhogal K, et al - Making decisions to limit treatment in life-limiting and life-threatening conditions in children: a framework for practice, Archives of Disease in Childhood 2015;100:s1-s23.
https://adc.bmj.com/content/100/Suppl_2/s1
11. Tibballs J, Kinney S. Reduction of hospital mortality and of preventable cardiac arrest and death on introduction of a pediatric medical emergency team. Pediatr Crit Care Med 2009;10:306-12.

Supporting tools

1. Paediatric Early Warning Score (PEWS)
<https://www.clinicalguidelines.scot.nhs.uk/nhsggc-guidelines/nhsggc-guidelines/intensive-and-critical-care/paediatric-early-warning-score-pews/>
2. Newborn Early Warning Trigger & Track (NEWTT) - a Framework for Practice BAPM (2015) <https://www.bapm.org/resources/38-newborn-early-warning-trigger-track-newtt-a-framework-for-practice-2015>

7. Resuscitation in special circumstances

Standard

1. Organisations must have policies and procedures in place for resuscitation in special circumstances (e.g. trauma, obstetrics, patients with tracheostomies).
2. In clinical areas where cardiac arrest due to a special circumstance is likely to be more common, specific training of staff to identify early symptoms, treat deterioration and tailor management of any cardiac arrest is encouraged. Where available, national guidance should be followed.
3. Resuscitation algorithms specific to any likely causes of collapse/cardiac arrest should be displayed in clinical areas.
4. The management of anaphylaxis should follow current NICE guidelines 'Assessment to confirm an anaphylactic episode and the decision to refer

after emergency treatment for a suspected anaphylactic episode' .

Supporting information

1. Maternal Collapse in Pregnancy and the Puerperium (Green-top 56). Royal College of Obstetricians and Gynaecologists. December 2019.
 - o <https://www.rcog.org.uk/guidance/browse-all-guidance/green-top-guidelines/maternal-collapse-in-pregnancy-and-the-puerperium-green-top-guideline-no-56/>
 - o <https://obgyn.onlinelibrary.wiley.com/doi/10.1111/1471-0528.15995>
2. National Tracheostomy Safety Project. <http://www.tracheostomy.org.uk>
3. Major trauma: service delivery. NICE Guideline NG40
4. Methods, evidence and recommendations February 2016
<https://www.nice.org.uk/guidance/ng40/evidence/full-guideline-pdf-2313258877>
5. Truhlář A, Deakin CD, Soar J et al. European Resuscitation Council Guidelines for Resuscitation 2021 Section 6. Cardiac arrest in special circumstances. Resuscitation. <https://www.cprguidelines.eu>
6. Assessment to confirm an anaphylactic episode and the decision to refer after emergency treatment for a suspected anaphylactic episode'. NICE clinical guideline 134. December 2021.
<https://www.nice.org.uk/guidance/cg134/evidence/anaphylaxis-full-guideline-pdf-184946941>
7. Association of Anaesthetists of Great Britain and Ireland (AAGBI) Safety Guideline - Anaphylaxis and allergies. <http://www.aagbi.org/>
8. Dunning J, Archbold A, de Bono JP, et al. Joint British Societies' guideline on management of cardiac arrest in the cardiac catheter laboratory Heart 2022;108:e1-e18 <https://heart.bmj.com/content/108/12/e1.abstract>

8. Patient transfer

After successful resuscitation, patients may need transfer to another part of the hospital (e.g. cardiac/coronary care unit, intensive care unit, catheter laboratory, theatres) or to another hospital.

Standards

1. Standards for patient transfer must be based on guidance from the Association of Anaesthetists of Great Britain and Ireland, the Intensive Care Society and the Paediatric Intensive Care Society.
2. Many regions now have critical care transfer teams for babies, children and adults. Local policy/procedures should be followed when a transfer is required.

Supporting information

1. Intensive Care Society. Guidelines for the transport of the critically ill adult (3rd Edition 2011). Transfer of the critically ill adult. Intensive Care Society 01.01.2019 <https://ics.ac.uk/resource/transfer-critically-adult.html>
2. Standardised systems of care for intra- and inter-hospital transfers Emergency and acute medical care in over 16s: service delivery and organisation NICE guideline 94 March 2018 <https://www.nice.org.uk/guidance/ng94/evidence/34.standardised-systems-of-care-for-intra-and-interhospital-transfers-pdf-172397464673>
3. Quality Standards for the Care of the Critically Ill Child. Paediatric Intensive Care Society. [Home - Paediatric Critical Care Society \(pccsociety.uk\)](http://pccsociety.uk)
4. PCCS Acute Transport Group. <https://pccsociety.uk/pccs-subgroups/acute-transport-group/>
5. BAPM Neonatal Transport Group. <https://www.bapm.org/pages/transport>

9. Post-cardiac-arrest care

Standards

1. It is recommended that hospitals use a local protocol for post-cardiac-arrest care that includes the use of temperature management. This should be based on current guidelines.
2. Guidance on the post-cardiac-arrest care of children and babies can be found in the European Paediatric Life Support / Advanced Paediatric Life Support and Newborn Life Support manuals.
3. Patients may require transport to other units. See Section 8 for Patient Transfer standards.

Supporting information

1. Resuscitation Council UK Guidelines 2021.
<https://www.resus.org.uk/library/2021-resuscitation-guidelines>
2. Resuscitation Council UK. European Paediatric Advanced Life Support. Fifth Edition, 2021.
3. Advanced Life Support Group, Advanced Paediatric Life Support, 6th Edition, 2016, Wiley-Blackwell.

10. Resuscitation equipment

Standards

[Click here](#) to look at the equipment and drug list for an acute care setting.

Supporting tools

RCUK equipment lists

11. Recommendations relating to cardiopulmonary resuscitation

Standards

1. Healthcare professionals must be familiar with and follow published guidance, including in particular 'Decisions relating to Cardiopulmonary Resuscitation, a joint statement by the British Medical Association, the Resuscitation Council UK, and the Royal College of Nursing' and the General Medical Council's current guidance on 'Treatment and care towards the end of life: good practice in decision making'.
2. Healthcare professionals must be familiar with and must comply with the law as it applies to decisions about CPR. There are some differences in the law among countries of the United Kingdom. Healthcare provider organisations must ensure that their staff receive appropriate information and training regarding these laws.

3. Resuscitation Council UK advises that CPR discussions and recommendations should always be made within the context of overall goals of care. The ReSPECT (Recommended Summary Plan for Emergency Care and Treatment process <https://www.resus.org.uk/respect>) is one way of doing this. The ReSPECT process facilitates conversations between a person, their families, and their health and care professionals to understand what matters to the patient and what treatments – including CPR – would be of benefit to them, and then records the agreed recommendations on the ReSPECT form.
4. Healthcare professionals involved in making recommendations about CPR, and/or conducting a ReSPECT conversation must have appropriate training and competency in so doing, and similarly those who undertake the sensitive discussions with patients and those close to patients must have appropriate training and competency in so doing. Healthcare provider organisations must ensure that they have sufficient staff trained and competent in performing these functions, and that staff have adequate time and facilities to perform them properly.
5. Resuscitation Council UK has defined standards for recording recommendations about CPR. It is recommended that recommendations about CPR are documented alongside documentation about overall goals of care. It is recommended that these are recorded on a form that is easily recognised and has a standard content and format, to allow healthcare professionals to recognise it and assess its content and validity immediately.
6. Healthcare organisations must have policies about CPR recommendations and documents that are recognised by the other organisations so that recommendations about CPR continue across organisational and geographic boundaries when patients are transferred from one setting to another. In particular this should include the ambulance service, so that these decisions are respected during transfer.
7. Healthcare organisations must ensure that healthcare staff have access to appropriate stationery or electronic media for recording, accessing and reviewing recommendations about CPR. As electronic records become more prevalent, individual trusts must implement systems this access is uniformly available to healthcare staff wherever a cardiac arrest occurs.
8. Healthcare organisations must ensure that patients and those close to patients have ample opportunities to discuss goals of care, resuscitation and recommendations about CPR. Early conversations can occur in many settings (preoperatively, in out-patients, in primary care and in acute and intensive care). Written information about resuscitation recommendations, or information in other media (e.g. DVD or podcast) should be made readily

available for patients and those close to them but should not be used as an attempted substitute for sensitive, face-to-face discussion with a suitably trained and competent healthcare professional.

Supporting information

1. Adults with incapacity (Scotland) Act 2000 Part 5 Code of Practice.
<https://www.gov.scot/publications/adults-incapacity-scotland-act-2000-code-practice-third-edition-practitioners-authorized-carry-out-medical-treatment-research-under-part-5-act/>
2. [Guidance from the British Medical Association, Resuscitation Council UK, and the Royal College of Nursing](#), 3rd edition,(1st Revision) 2016. Do not attempt resuscitation (DNAR) decisions in the perioperative period, Association of Anaesthetists of Great Britain and Ireland, May 2009.
<https://anaesthetists.org/Home/Resources-publications/Guidelines/DNAR-decisions-in-the-perioperative-period>
3. ReSPECT RCUK <https://www.resus.org.uk/respect/respect-healthcare-professionals>
4. Mental Capacity Act 2005 (England and Wales).
<http://www.legislation.gov.uk/ukpga/2005/9/contents>
5. NHS Executive. Health Services Circular 2000/028 - Resuscitation Policy
6. Recommended guidance for recording decisions about cardiopulmonary resuscitation. Resuscitation Council UK. Revised 2015.
7. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (NCEPOD). 2012. <http://www.ncepod.org.uk>
8. Treatment and care towards the end of life: decision making, General Medical Council. http://www.gmc-uk.org/guidance/ethical_guidance/end_of_life_care.asp
9. The Confidential Inquiry into premature deaths of people with learning difficulties (CIPOLD) 2013. <http://www.bris.ac.uk/cipold/fullfinalreport.pdf>
10. Standards for Children and Young People in Emergency Care Settings 2012
https://www.rcpch.ac.uk/sites/default/files/Standards_for_children_and_young_people_in_emergency_care_settings_2012.pdf

Supporting tools

1. The RCUK has supported the development of the Recommended Summary Plan for Emergency Care and Treatment:
<https://www.resus.org.uk/respect/respect-healthcare-professionals>
2. Scotland has a single DNACPR policy. For more information including supporting tools see: <https://www.gov.scot/publications/attempt-cardiopulmonary-resuscitation-dnacpr-integrated-adult-policy-decision-making-communication/>

12. Audit and reporting

Standards

1. NCEPOD recommends that every CPR attempt is reported through the organisation's patient safety incident reporting system. This information must be reported to the organisation's Board on a regular basis.
2. All CPR attempts must be reviewed. When appropriate, a root cause analysis must be undertaken, and the action plan implemented (a suggested guide for reviewing cardiac arrests is available in the appendix).
3. Taking part in the National Cardiac Arrest Audit (NCAA) is recommended. NCAA is included in the Department of Health's Quality Accounts as a recognised national audit.
4. Audit of DNACPR policies is mandatory (Health Services Circular 2000/028).
5. Organisations must review local audit data regularly against published standards. Where audit identifies deficiencies or unexpected poor performance, a review at a senior organisational level must be undertaken. The Resuscitation Committee must receive appropriate support to achieve this.

Supporting information

1. National Cardiac Arrest Audit. <https://www.icnarc.org/Our-Audit/Audits/Ncaa/About>
2. NHS Executive. Health Services Circular 2000/028 - Resuscitation Policy http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Healthservicecirculars/DH_4004244

3. Report a patient safety incident:
 - <https://www.england.nhs.uk/patient-safety/report-patient-safety-incident/>
 - <https://www.health-ni.gov.uk/articles/reporting-adverse-incident>
 - <https://www.nss.nhs.scot/health-facilities/incidents-and-alerts/report-an-incident>
 - <https://du.nhs.wales/patient-safety-wales/patient-safety-incidents>
4. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (NCEPOD). 2012. [NCEPOD - Cardiac Arrest Procedures: Time to Intervene? Report \(2012\)](#)
5. Time Matters – A review of patients who underwent CPR as a result of an out-of-hospital cardiac arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) 2021. NCEPOD - Out of Hospital Cardiac Arrests: (2019) <http://www.ncepod.org.uk>
6. BPSU study - Outcome of resuscitated term babies with no heart rate detected at 10 minutes of age. (Commenced Nov 2022) <https://www.rcpch.ac.uk/work-we-do/bpsu/study-outcome-resuscitated-term-babies-no-heart-rate-detected-10-minutes-age>

Supporting tools

Example guide* to reviewing cardiac arrests:

Answer the following questions:

1. Was there a clearly documented physiological monitoring plan stating type and frequency of observations in the 24 hours preceding the arrest (as per NICE, RCP and NCEPOD Guidance) and were these undertaken as per request?
2. What were the patient's Early Warning Scores in the 24 hours preceding the arrest?
3. If the patient's scores at any time in that 24-hour period were elevated to 'trigger level', as per the local escalation policy, was the correct escalation undertaken?
4. Were there other reasons for escalating care (e.g. symptoms [chest pain], signs [clammy], laboratory results, or staff or patient/relative concern)?

5. If there were other reasons for escalating care was the correct escalation undertaken?
6. Did the patient receive appropriate assessment and/or treatment in response to a clearly identified reason for escalation?
7. If the patient received treatment, did their condition improve in response to that treatment?
8. If the patient did not improve, was the patient escalated to a more senior level in a timely manner?
9. Did the patient have documented and discussed ceilings of care, including resuscitation status?
10. Has the review identified any other system, process or organisational deficiencies (e.g. missing equipment or drugs, equipment failures, problems with team performance or communication)?

If the answer to any of the above questions raises concern, proceed to root cause analysis and action plan.

*

Modified from original checklist developed by Kate Beaumont, Nursing Director

13. Research

Standards

1. The NHS Constitution highlights the NHS commitment to conduct and use of research to improve the current and future health and care of the population.
2. Research must be conducted in accordance with the NHS Research Governance Framework. Research involving human participants, their organs, tissue or data require NHS Research and Development approval. Such research may also require approval from a Research Ethics Committee. If in doubt advice should be sought from the local Research and Development Office in the first instance or NHS Research Ethics Advice Service.
3. Research involving patients who lack capacity must also comply with relevant legislation (e.g. UK Medicines for Human [Use \[Clinical Trials\] Regulations 2004](#) ; [Mental Capacity Act 2005](#) [England and Wales]; [Adults with Incapacity \[Scotland\] Act 2000](#)); [Mental Capacity Act 2016 \(Northern Ireland\)](#) .

4. The organisation's Resuscitation Committee can be a valuable source of advice for those contemplating undertaking clinical research in resuscitation.

Supporting information

1. UK Policy Framework for Health and Social Care Research Last updated on 29 April 2022 <https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/uk-policy-framework-health-social-care-research/uk-policy-framework-health-and-social-care-research/>
2. National Research Ethics Service. <https://www.hra.nhs.uk/about-us/committees-and-services/res-and-recs/research-ethics-service/>
3. National Research Ethics Service Is my study research? <http://www.hra-decisiontools.org.uk/research/>
4. NHS Constitution. <https://www.gov.uk/government/publications/the-nhs-constitution-for-england>

14. APPENDIX

Suggested measures to assess adherence to standards

The numbers listed in the first column correspond to the standards referred to in the corresponding chapter of this document.

Aspect of cardiopulmonary resuscitation in acute care	Example measures
Resuscitation Committee standard	
1, 2, 3, 4, 5, 6, 7	Check list and Terms of reference
8, 9	Resuscitation Policy and minutes of meetings
10	Training Policy and training needs analysis
11	Minutes of meetings and action logs
12	Terms of reference, Annual report, Trust level quality, assurance reports
13	Audit of accounts
Resuscitation Officers/ Resuscitation Practitioner standards	
1	Staffing records
2, 3, 4	RO/RP job description or person specification
5	Evidence from RO/RP appraisal
6, 7	Inspection
8, 10, 15, 16	Accounts, financial audit
9	Evidence of equipment checklists, action plans and Equipment policy
10	Audit reports
11, 12, 13, 14	RO/RP appraisal

Aspect of cardiopulmonary resuscitation in acute care	Example measures
Training of staff standards	
1, 2	Resuscitation Policy, Induction programme; training re training needs analysis documentation
3	Course content, lesson plans
4, 5, 6, 7, 8, 9, 10, 11, 12	Training records, course content, lesson plans, compe documents, audit of individual cardiac arrests
13, 14, 15, 16, 17	Staff training records
Prevention of cardiorespiratory arrest standard	
1, 2, 3	Copy of policy
4, 5, 6	Copy of policy, patient observation chart and escalati plan
7	Review of training materials, and clinical practice
8, 9	Copy of policy, audit of individual cases, reporting into Resuscitation/deteriorating patient committee
The resuscitation team standard	
1, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15	Copy of policy, audit of individual cardiac arrests, mor review groups
2, 4	Copy of policy, training records, review of team certifi assessment of team competencies, audit of individual cardiac arrests

Aspect of cardiopulmonary resuscitation in acute care	Example measures
11	Copy of policy, and switchboard records
16	Documentation and audit reports
Resuscitation of children standard	
1, 2	Copy of policy, audit of individual cardiac arrests, morbidity review groups
3, 4, 5	Policy, and training records, review of team certificate assessment of team competencies, audit of individual cardiac arrests
6	Copy of policy, audit of individual cardiac arrests
7, 8, 9	Copy of policy, forms, implementation
Resuscitation in special circumstances standard	
1	Policy, lesson plans
Patient transfer standard	
1	Policy - resuscitation and safe transfer policies
Post-cardiac arrest care standard	
1, 2, 3	Policy, Care Pathway, Critical Care Bundles for use on units

Aspect of cardiopulmonary resuscitation in acute care	Example measures
Decisions relating to cardiopulmonary resuscitation standard	
1, 2, 3, 4, 5, 6, 7	Policy, audit of adherence to policy, minutes of Resuscitation Committee meetings
Audit and reporting standard	
1	Policy, minutes of Board meetings, audit
2, 4	Documentation, policy
3	Registration with NCAA, and NCAA reports
5	Minutes of relevant meetings
Research standards	
1, 2, 3	Policy; Ethics Committee minutes and records