Resuscitation Council UK

Education Guidelines

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Key points

New guidance:

- Accredited life support courses are recommended as they can improve patient outcomes.
- Faculty development is important to improve education.

Enhanced guidance:

- Every person should learn to provide the basic skills to save a life.
- To improve patient survival from cardiac arrest, essential core skills in resuscitation (including non-technical skills) need to be defined and taught.
- Technology enhanced education should be used to teach resuscitation.
- Simulation should be used in resuscitation education.

Introduction

Guidelines 2021 are based on the International Liaison Committee on Resuscitation 2020 Consensus on Science and Treatment Recommendations and the European Resuscitation Council Guidelines for Resuscitation (2021). Refer to

the ERC Guidelines publications for supporting reference material.

The process by which the RCUK Guidelines have been developed are detailed in the 2021 Process Manual.

Resuscitation Council UK (RCUK), as a scientific based organisation, grounds its guidelines on current medical evidence. The same applies, in terms of educational evidence, for the RCUK Education Guidelines for resuscitation. The RCUK approach to education can be grouped into four themes (4 'I's):

1. Ideas (theories of education and how we learn),
2. Inquiry (research which both develops from and informs the ideas mentioned),
3. Implementation (approaches based on the research),
4. Impact (outcome of these educational approaches both for learning and clinical practice).

Management of cardiac arrest in patients with known or suspected COVID-19 is not specifically included in these guidelines, but is covered within RCUK's separate COVID-19 Guidance.

The process used to produce the Resuscitation Council UK Guidelines 2021 has been previously accredited, and is pending reaccreditation by the National Institute for Health and Care Excellence. The guidelines process includes:

- Systematic reviews with grading of the certainty of evidence and strength of recommendations. This led to the 2020 International Liaison Committee on Resuscitation (ILCOR) Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations.
- The involvement of stakeholders from around the world including members of the public and cardiac arrest survivors.
- Details of the guidelines development process can be found in the Resuscitation Council UK Guidelines Development Process Manual.

Guidelines

Accredited life support courses are recommended as they can improve patient outcomes

- Accredited ALS training and accredited neonatal resuscitation training for

healthcare professionals improve the outcome of patients. The effect of other life support courses on patient outcome is less clear, but it is reasonable to recommend other accredited life support courses. Further research is needed to quantify their actual impact on patient outcomes.

Faculty development is important to improve education

- In many areas of education, the quality of the teacher has a major impact on learning, and this can be improved by training and ongoing faculty development. The evidence for these effects in resuscitation training is scarce and many recommendations on faculty development are therefore extrapolated from other areas. Three aspects of faculty development are important:
  - selection of suitable instructors
  - initial instructor training
  - maintenance and regular update of their teaching quality.

Every person should learn to provide the basic skills to save a life

- Those with a duty to respond to emergencies need to be competent to perform resuscitation, depending on the level of rescue they provide, from basic life support (BLS) to advanced life support, for children (including newborn) and/or adults, according to the current RCUK guidelines.
- Resuscitation competencies are best maintained if training and retraining is distributed over time, and frequent retraining is suggested between two and twelve months.
- For healthcare professionals (HCPs), accredited advanced life support training is recommended, as well as the use of cognitive aids and feedback devices during resuscitation training. Specific team membership and team leadership training should be a part of advanced life support courses, and data-driven, performance-focused debriefing needs to be taught.
- Key points in resuscitation education for bystanders and first responders are:
  - Enhance willingness to perform CPR.
  - Reinforce the chain of survival.
  - Teach resuscitation using feedback devices.
  - Distribute resuscitation training over time (spaced education).
  - Maintain resuscitation competencies by frequent retraining.
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Key points in resuscitation education for HCPs are:

- Teach every healthcare professional high-quality CPR (from BLS to advanced life support level, children (including newborn) and/or adults, special circumstances depending on the workplace and patient mix).
- Teach accredited advanced life support courses and include team and leadership training in such courses.
- Use cognitive aids.
- Teach and use debriefing.

To improve patient survival from cardiac arrest, essential core skills in resuscitation (including non-technical skills) need to be defined and taught

- Teaching the technical skills to perform resuscitation on every given level is very important.
- For BLS, this includes teaching effective chest compressions and the safe use of an AED. In paediatric BLS, ventilation skills should be taught together with chest compressions.
- Specific learning goals for advanced life support are airway management, vascular access, application of advanced resuscitation approaches for special situations and circumstances, as well as the treatment of peri-arrest arrhythmias and immediate post-resuscitation care.
- Equally important, however, is the teaching of non-technical skills: e.g. communication, collaboration in teams and with different professions, awareness of the critical situation etc. The management of human factors (the causal factors of accidents where human involvement influences outcome) is crucial to achieving high-quality CPR and good clinical practice. Teaching non-technical skills will increase the willingness of trained responders to help victims in a life-threatening situation, improve the initiation of the chain of survival by starting BLS and give participants of life support courses the confidence to attempt resuscitation whenever needed.

Technology-enhanced education should be used to teach resuscitation

- Learning CPR can be supported by the use of smartphones, tablets, etc. by using apps and social media, as well as feedback devices. These learning modalities may be teacher-independent. They improve retention and facilitate competency assessment in CPR. Gamified learning, (e.g. virtual

and augmented reality, tablet apps simulating monitors, etc.) may engage many learners. Virtual Learning Environments are recommended to be used for pre-course e-learning, as part of a blended learning approach, or for self-learning independent of time and location for all levels of CPR courses.

Simulation should be used in resuscitation education

- High- as well as low-fidelity simulation in resuscitation education facilitates contextualised learning for a variety of learners. It integrates technical and non-technical skills and considers the environment or context of specific learner groups and the different levels of expertise. Hence, simulation provides the opportunity to learn to deal with human factors in critical situations. Specific team or leadership training should be included in resuscitation simulations and courses. Profound learning occurs during the reflection phase in the debriefing of a simulated resuscitation.

References

ERC Guidelines 2021: https://cprguidelines.eu/

Restart a Heart campaign: https://resus.org.uk/rsah

Related content
Training Courses
GIC (Generic Instructor Course)
ILSi (Immediate Life Support Instructor Course)
Restart A Heart Day