

The New European Resuscitation Council Guidelines 2025 Focus on the Utmost Importance of the First Minutes—and Other Updates

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Abstract

The European Resuscitation Council guidelines are published every 5 years based on the International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science of the International Liaison Committee on Resuscitation. This year's update has no new chapters, but the evidence for the individual points and the importance, eg, of the first minutes after collapse with systems saving lives (Kids Save Lives, lay resuscitation, first responder systems, dispatcher-assisted resuscitation, and cardiac arrest centres) has been strengthened, and the role of survivors and co-survivors has been newly included.

Key Points

- Emphasis on early resuscitation: the first 3-5 minutes are crucial.
- Expansion of "Systems Saving Lives": Greater focus on prevention, integrated resuscitation systems, and cardiac arrest centres.
- Clinical and educational updates expanded: New recommendations address CPR-induced consciousness, ventilation quality, paediatric and neonatal resuscitation, post-resuscitation care, and targeted resuscitation training.

Key words: resuscitation, systems saving lives, guidelines

INTRODUCTION

The updated European Resuscitation Council (ERC) guidelines have recently been published.¹ They are based on the International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science of the International Liaison Committee on Resuscitation (ILCOR) and therefore on the global scientific evidence available with all associated scientific publications. The guidelines are updated every 5 years. The scope of the individual guidelines was developed by the writing groups at the beginning of 2024 and was posted for public comments afterwards.

While no entirely new chapters or major aspects have been added in this update to the guidelines, the chapter 'Systems saving lives' (covering topics such as lay resuscitation campaigns, telephone resuscitation, first responder systems, and cardiac arrest centres [CACs]), which was newly created in the last version in 2021, has gained further and much more importance.¹ The evidence for the individual points has been strengthened, and the possible future impacts of social media, artificial

intelligence (AI), advocacy, and the role of survivors and co-survivors has been newly included.²

The intended audience for the ERC guidelines 2025 comprises laypersons, first aiders, first responders, community health care staff, ambulance staff, hospital staff, instructors, teachers in schools, educators, persons responsible for health care policy and practice, and everybody who is interested in improving survival after cardiac arrest.¹

RELEVANT UPDATES

The new guidelines include the following chapters: 'Epidemiology in resuscitation', 'Systems saving lives', 'Adult basic life support (BLS)', 'Adult advanced life support (ALS)', 'Adult special circumstances in resuscitation', 'Paediatric life support (PLS)', 'Newborn resuscitation and support of transition of infants at birth (NLS)', 'Adult post-resuscitation care', 'Education of resuscitation', 'Ethics in resuscitation', and 'First aid'.¹

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The following provides an overview on the most important changes of the guidelines—with a focus on the first and most important minutes after the collapse.

In the BLS chapter, the role of the dispatcher is described in much more detail, and this is significant for the early detection of the cardiac arrest. The procedure for laypeople has been adjusted: Helpers should call the emergency number for any unconscious or unresponsive person, and abnormal breathing no longer needs to be confirmed beforehand. The assessment of breathing can then be carried out during the call and/or with the support of the dispatcher. This approach is expected to save valuable time until chest compressions can begin.³

In the ALS chapter, emphasis is placed on initiating successful ALS interventions as early as possible. This is particularly important for ventilation by emergency medical services, which—as authors of recent studies have demonstrated—is often not successful enough. For the first time, measures addressing *cardiopulmonary resuscitation (CPR)-induced consciousness*, a not uncommon phenomenon whereby patients show signs of awareness during resuscitation, are included. If necessary, rescuers may consider using sedatives or analgesic drugs to prevent pain and distress for patients during CPR.⁴ The chapter also focuses on a new section about ALS in environments with limited CPR resources. This addition highlights 2 main aspects: Firstly in high-income countries, resuscitation often takes place under constrained conditions; even in highly developed countries, areas with low-resource settings can exist. Not only do differences between countries exist but also between regions; for example, at a mountaintop, at night, in adverse weather conditions, or during mass incidents. Secondly, many regions in the Global South routinely face significant limitations in the availability of CPR resources. In such settings, priority should be given to the prevention of cardiac arrest and to strengthening community-based first aid and BLS capacities. In the ALS context, limited personnel and equipment availability may affect patient outcomes after a cardiac arrest.⁴

Further recommendations have been added for PLS for the general public, parents, and caregivers as well as for guideline implementation at the system level. A dedicated subsection now covers cardiac arrest in children in special circumstances.⁵ The distinction between PLS and NLS has been clarified, providing guidance on when to apply each algorithm. It is recommended that the most familiar algorithm is used, with the option to switch to the other algorithm, if necessary (either NLS or PLS), if resuscitation of an infant is required outside the delivery area.⁶

The section on cardiac arrest in special circumstances now includes numerous adapted, more detailed algorithms as well as modifications to BLS and ALS for preventing and treating cardiac arrest in special circumstances.⁷ Regarding temperature management in post-resuscitation care, the prevention of fever is recommended. In hemodynamic management, the recommendation specifies maintaining a mean arterial pressure > 60-65 mmHg.⁸

The education chapter now places a stronger emphasis on resuscitation training for specific groups, such as children, and on teaching methods aimed at delivering high-quality resuscitation skills. These methods include *blended learning*, *self-directed learning*, and *gamified learning*.⁹ Finally, the ethics chapter now places greater

importance on providing resources and mechanisms to support the mental health of rescuers.¹⁰

The guidelines now also recommend using social media platforms to improve, for example, public awareness and education in CPR. Examples of content for schools or universities could include interactive content, short videos, or live CPR training sessions. This content must be checked in advance by experts to ensure it is in accordance with international guidelines. Additionally, advocacy has been added as a topic to encourage local authorities and/or the government to implement policies and legislation that improves survival rates and patient outcomes after a cardiac arrest. Public awareness campaigns such as World Restart a Heart Day, major sport events, or the implementation of mandatory CPR education courses in schools (eg, Kids Save Lives) should be key elements in every country. Another new recommendation emphasizes the role of digital health and AI. While these innovations show high potential for, for example, enhancing early recognition and early CPR or supporting post-resuscitation care, they are not yet ready for widespread implementation. Further political action and research is needed to integrate them properly into clinical practice and to recognize and implement their benefits nationwide in the future.²

In the adapted chain of survival within the chapter ‘Systems saving lives’, several changes for medical services can be found. The revised version of the chain of survival shows recent developments in the field of cardiac arrest prevention, survivorship, and long-term recovery after a cardiac arrest. To show the importance of cardiac arrest prevention, the topic was moved to the header of the first ring, maintaining the content. The second ring summarizes the central rings, with integrating early CPR and defibrillation. The third ring illustrates advanced and post-resuscitation care. The final ring is completely new, designed to emphasize the importance of quality of life after a cardiac arrest.²

Added to that, in the chapter ‘Systems saving lives’, the importance of treatment for adults with non-traumatic out-of-hospital cardiac arrest in a specialized CAC is highlighted and points out the need for establishing local, regional, and national protocols to develop and maintain regional cardiac arrest networks in health care systems.²

SUMMARY

Summarizing all the main changes in the ERC guidelines 2025, the focus and relevance of the first minutes after collapse with systems saving lives and the updated chain of survival are particularly pointed out. All detailed changes can be found in the ERC guidelines 2025¹ as well as in translations into many languages by national resuscitation councils.

Conflict of Interest

Nadine Rott works for the German Resuscitation Council (GRC) and is a member of the ILCOR Communication Committee and the Editorial Board of *Resuscitation Plus*. Lina Reinsch works for the GRC. Bernd W. Böttiger is Treasurer of the ERC, Founder of the ERC Research NET, Chairman of the GRC, Member of the ALS Task Force of the ILCOR, Former Member of the Executive Committee of the German Interdisciplinary Association for Intensive Care and Emergency Medicine, Founder of the

Deutsche Stiftung Wiederbelebung, Federal Medical Advisor of the German Red Cross, Member of the Advisory Board of the Deutsche Herztiftung, Co-Editor of *Resuscitation*, Editor of *Notfall + Rettungsmedizin*, Co-Editor of the *Brazilian Journal of Anesthesiology*. He received fees for lectures from the following companies: Forum für medizinische Fortbildung, C.R. Bard GmbH, and Doccla.

REFERENCES

1. Greif R, Lauridsen KG, Djärv T, et al. European Resuscitation Council guidelines 2025 executive summary. *Resuscitation*. 2025;**215**:110770.
2. Semeraro F, Schnaubelt S, Olasveengen TM, et al. European Resuscitation Council guidelines 2025 systems saving lives. *Resuscitation*. 2025;**215**:110821.
3. Smyth MA, van Goor S, Hansen CM, et al. European Resuscitation Council guidelines 2025 adult basic life support. *Resuscitation*. 2025;**215**:110771.
4. Soar J, Böttiger BW, Carli P, et al. European Resuscitation Council guidelines 2025 adult advanced life support. *Resuscitation*. 2025;**215**:110769.
5. Djakow J, Turner NM, Skellet S, et al. European Resuscitation Council guidelines 2025 paediatric life support. *Resuscitation*. 2025;**215**:110767.
6. Hogeveen M, Monnelly V, Binkhorst M, et al. European Resuscitation Council guidelines 2025 newborn resuscitation and support of transition of infants at birth. *Resuscitation*. 2025;**215**:110766.
7. Lott C, Karageorgos V, Abelairas-Gomez C, et al. European Resuscitation Council guidelines 2025 special circumstances. *Resuscitation*. 2025;**215**:110753.
8. Nolan JP, Sandroni C, Cariou A, et al. European Resuscitation Council and European Society of Intensive Care Medicine guidelines 2025 post-resuscitation care. *Resuscitation*. 2025;**215**:110809.
9. Nabecker S, de Raad T, Abelairas-Gomez C, et al. European Resuscitation Council guidelines 2025 education for resuscitation. *Resuscitation*. 2025;**215**:110739.
10. Raffay V, Wittig J, Bossaert L, et al. European Resuscitation Council guidelines 2025 ethics in resuscitation. *Resuscitation*. 2025;**215**:110734.