

CONCORSO PUBBLICO PER TITOLI ED ESAMI A N.3 POSTI DI DIRIGENTE MEDICO

bando prot.n.40512 del 14/10/2025

PROVA SCRITTA

CRITERI

1 domande a risposta aperta	<p>Criteri di valutazione:</p> <ul style="list-style-type: none"> • Attinenza al tema • Completezza • Proprietà di linguaggio <p>Foglio prova con 25 righe Non è previsto il foglio di brutta copia</p>	Tempo 40 minuti
-----------------------------	--	--------------------

PROVA SCRITTA 1

Sindrome coronarica acuta: gestione clinica preospedaliera, ruolo della Centrale Operativa

PROVA SCRITTA 2

Ictus cerebrale: gestione clinica preospedaliera, ruolo della Centrale Operativa

PROVA SCRITTA 3

Trauma grave: gestione clinica preospedaliera, ruolo della Centrale Operativa

PROVA PRATICA

CRITERI

1 domanda a risposta aperta	<p>Punti – massimo 30 Righe a disposizione – 25</p> <p>Criteri di valutazione:</p> <ul style="list-style-type: none"> • Attinenza • Completezza • Proprietà di linguaggio <p>Foglio prova con 25 righe Non è previsto il foglio di brutta copia</p>	Tempo 40 minuti
-----------------------------	--	--------------------

PROVA PRATICA 1

Elisoccorso FVG vi comunica un paziente 45 anni ustionato 2°-3° 65% BSA a Tolmezzo. Non problemi meteo, non problemi autonomia. Quale schematica strategia per la destinazione ed il trasporto.

PROVA PRATICA 2

Ospedale San Vito al Tagliamento chiede un secondario indifferibile per un aneurisma aorta toracica in rottura ma al momento ancora in compenso. Quale schematica strategia per la destinazione ed il trasporto.

PROVA PRATICA 3

Ospedale di Pordenone chiede un secondario per un paziente con una frattura amielica di T2-3-4 da sottoporre a stabilizzazione chirurgica. Quale schematica strategia per la destinazione ed il trasporto.

PROVA ORALE

CRITERI

colloquio professionale 1 domanda	Criteri di valutazione: <ul style="list-style-type: none"> • Pertinenza • Completezza e precisione nella trattazione Punti – massimo 20	Tempo 15 minuti al massimo
informatica 1 domanda a risposta multipla	Criteri di valutazione: <ul style="list-style-type: none"> • Esatta idoneità • Errata non idoneità 	
inglese lettura e traduzione	Criteri di valutazione: <ul style="list-style-type: none"> • Esatta idoneità • Errata non idoneità 	

COLLOQUIO Risposta orale	INFORMATICA crocetta sulla risposta che ritiene esatta,	A	B
Glasgow Coma Scale in emergenza preospedaliera: valutazione della gravità del coma.	La tastiera è normalmente una periferica di	input	output
Paziente di 70 Kg, trauma cranico grave con GCS=5, intubato e ventilato meccanicamente. Valori di EtCO2 indicati e motivazione.	Quando si riceve una mail con un "fermaglio" visualizzato, significa che:	contiene un allegato	contiene un software privo di virus
Gestione immediata di un paziente accoltellato al torace durante una rissa con ferita penetrante emitorace destro, quinto spazio intercostale.	In Word come viene definito lo spazio che distanzia le righe di un documento?	rientranza	interlinea
Terapia adeguata in fase preospedaliera di paziente con pneumotorace iperteso	Con quale termine si indica lo scaricamento di dati da Internet?	download	upload
Accesso intraosseo in emergenza: indicazioni al posizionamento, possibilità di utilizzo	A cosa serve una compressione dei dati?	a ridurre la dimensione di un file	a rendere il file stampabile da qualunque computer
Utilizzo di Acido Tranexamico in pazienti con trauma: indicazioni e tempi di somministrazione	Quale software risulterebbe adeguato per presentare al pubblico i risultati di un'indagine statistica?	PowerPoint	Access

INGLESE – vedi allegato.



ELSEVIER

Available online at ScienceDirect

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitationEUROPEAN
RESUSCITATION
COUNCIL

Practice Guideline

European Resuscitation Council Guidelines 2025 Executive Summary



Robert Greif^{a,r,1}, Kasper G. Lauridsen^{b,1}, Therese Djärv^c, Jacqueline Eleonora Ek^d, Vix Monnelly^e, Koenraad G. Monsieurs^f, Nikolaos Nikolaou^g, Theresa M. Olasveengen^h, Federico Semeraroⁱ, Anastasia Spartinou^{j,k}, Joyce Yeung^{l,m}, Enrico Baldi^{n,o}, Dominique Biarent^p, Jana Djakow^{q,r,s}, Marlie van Gils^t, Sander van Goor^u, Jan-Thorsten Gräsner^{v,w}, Marije Hogeveen^x, Vlasios Karageorgos^{y,z}, Carsten Lott^{aa,ab}, John Madar^{ac}, Sabine Nabecker^{ad}, Timo de Raad^{ae}, Violetta Raffay^{af}, Jessica Rogers^{ag}, Claudio Sandroni^{ah}, Sebastian Schnaubelt^{ai,aj}, Michael A. Smyth^{ak,al,am}, Jasmeet Soar^{an}, Johannes Wittig^{ao,ap}, Gavin D. Perkins^{aq,ar,2}, Jerry P. Nolan^{as,at,2}, on behalf of the European Resuscitation Council Guidelines 2025 Collaborator Group

Abstract

The 2025 European Resuscitation Council (ERC) Guidelines present the most up-to-date evidence-based guidelines for the practice of resuscitation across Europe. The ERC Guidelines 2025 are based on evidence produced by the International Liaison Committee on Resuscitation (ILCOR) in the form of systematic reviews, scoping reviews, and evidence updates, published as the ILCOR Consensus on Science with Treatment Recommendations. The certainty of evidence of these ILCOR treatment recommendations was used to issue the ERC Guidelines 2025 Recommendations. In some cases, the ERC made good practice statements when evidence was absent for certain topics. If no ILCOR review was available, the ERC writing groups conducted their own reviews to provide recommendations. The ERC Guidelines 2025 cover the epidemiology of cardiac arrest, the role that systems play in saving lives, adult basic life support, adult advanced life support, resuscitation in special circumstances, post resuscitation care, newborn resuscitation and support of transition of infants at birth, paediatric basic and advanced life support, resuscitation ethics, education for resuscitation, and first aid. These guidelines are a framework of recommendations for the approach to out-of-hospital and in-hospital resuscitation; the implementation is achieved locally taking local legislation and health care regulations into consideration.

Introduction

The history

The European Resuscitation Council (ERC) aims to preserve human life by making high-quality resuscitation available to all.² To achieve this, up-to-date evidence-based European resuscitation guidelines

for the prevention and treatment of cardiac arrest and life-threatening emergencies have been published since 1992. The 1992 guidelines covered basic³ and advanced life support (ALS).⁴ Two years later in 1994, a guideline for paediatric life support (PLS)⁵ and a guideline for the management of *per*-arrest arrhythmias⁶ followed. Guidelines for basic and advanced management of the airway and ventilation during resuscitation⁷ were published in

* Corresponding author at: Faculty of Medicine, University of Bern, Bern, Switzerland.

E-mail address: tino.greif@erc.edu (R. Greif).

¹ Both authors share the first authorship.

² Both authors share the senior author position.

<https://doi.org/10.1016/j.resuscitation.2025.110770>

0300-9572/© 2025 European Resuscitation Council. Published by Elsevier B.V.

P Perkins

ahh
CS

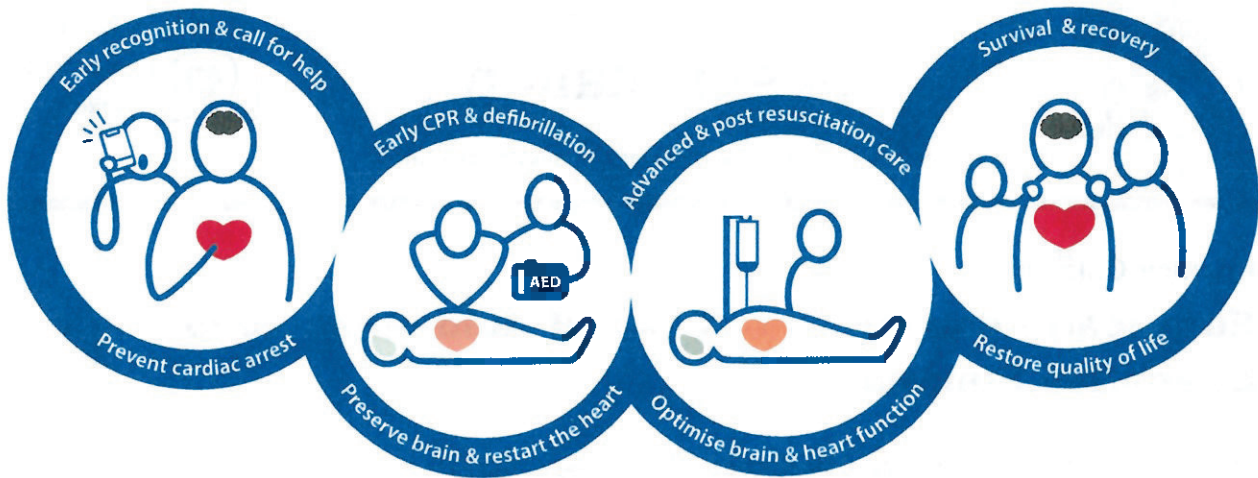


Fig. 1 – Chain of survival.

1996 and updated ERC guidelines on basic life support (BLS) and ALS in 1998.^{8,9} In 2000, international guidelines were produced in collaboration with the International Liaison Committee on Resuscitation (ILCOR).¹⁰ Subsequently, the ERC produced its guidelines every 5 years: 2005¹¹, 2010¹², 2015¹³, and 2021¹⁴ (with a one-year delay because of COVID-19). In addition, the ERC published guideline updates in 2017 and 2018^{15,16} based on the ILCOR Consensus on CPR Science and Treatment Recommendation (CoSTR) publications.^{17,18} An ERC update was published in 2020 and concerned resuscitation in the context of COVID-19.¹⁹ The ERC Guidelines 2025 are based on an extensive update on resuscitation science from ILCOR's CoSTR 2025²⁷ and provide the most up-to-date evidence-based guidelines for laypersons, healthcare professionals and all stakeholders responsible for health policy across Europe.

The chain of survival

The four-ring ERC Chain of Survival was first presented 20 years ago^{1,11} as a concept to highlight time-sensitive interventions that aim to improve survival of cardiac arrest victims. It included early recognition and activation of the emergency medical services in the first ring, early CPR and defibrillation in the second and third ring, and post-resuscitation care in the fourth ring.

The chain of survival has been revised for the ERC Guidelines 2025 so that it reflects recent developments in resuscitation science in prevention of cardiac arrest, survivorship, and long-term recovery following cardiac arrest. Following discussions about the numbers of rings and additional text, the ERC has retained the four-ring chain of survival and retained the simplicity of the original drawing.

Prevention of cardiac arrest was already part of the first ring, but to emphasise its growing importance it was moved to the header of this ring. The content of that ring was kept as before: early recognition of a deteriorating patient or cardiac arrest (in- or out-of-hospital) and early call for help. The second ring condensed the former two central rings and integrated early cardiopulmonary resuscitation and defibrillation as an integrated approach to restart the heart and preserve brain and heart function. The new drawing visualises a per-

son providing an AED while CPR is ongoing. The third ring is now advanced- and post-resuscitation care, aiming to optimise heart and brain function. The newly designed final ring emphasises the importance of recovery to restore the quality of life for the cardiac arrest survivor and their community. Restoration of heart and brain function is depicted by a return to the same colours used for these organs in the first ring (Fig. 1).

International Liaison Committee on Resuscitation²¹

The International Liaison Committee on Resuscitation (ILCOR, <https://www.ilcor.org>) includes representatives from the American Heart Association (AHA), the ERC, the Heart and Stroke Foundation of Canada (HSFC), the Australian and New Zealand Committee on Resuscitation (ANZCOR), the Resuscitation Council of Southern Africa (RCSA), the Inter-American Heart Foundation (IAHF), the Resuscitation Council of Asia (RCA), and the Indian Resuscitation Council Federation (IRCF), and as a collaborating organization International Federation of Red Cross and Red Crescent (IFRC).

The vision of ILCOR is to save more lives globally through resuscitation,^{22,23} through promoting, disseminating and advocating international implementation of evidence-informed resuscitation and first aid, using transparent evaluation and a consensus summary of scientific data.²⁴ As one of the founding members, the ERC works closely with ILCOR to achieve those goals. The core activity of the ILCOR task forces is the systematic assessment of evidence to produce the international CoSTR.

From 2000 to 2015, researchers from the ILCOR member councils evaluated resuscitation science in 5-yearly cycles. After the publication of the 2015 international CoSTR,²⁵ ILCOR committed to a continuous evidence-evaluation process, and publication of annual CoSTR updates.

The 2025 CoSTR summary and the 96 systematic reviews, the 43 scoping reviews, and the 112 evidence updates of resuscitation science were published in *Resuscitation* and *Circulation* as the 2025 CoSTR,^{27–34} which are the basis for the evidence informing the ERC Guidelines 2025 (Table 1).

P. Perjell

Alm
CA

Table 1 – Summary outline of the process steps for the 2025 CoSTR (reproduced from CoSTR 2025²⁹).**Processes for Systematic review (SR)**

Develop PICOST (including inclusion and exclusion criteria)

Confirm content expert team

Level of importance allocated to individual outcomes

Develop and fine-tune database specific search strategies

Registers systematic reviews (SR) with PROSPERO

Revised search strategies used to search databases

Articles identified by the search are screened according to inclusion and exclusion criteria

Compile final list of studies to include

Assessment of bias for individual studies

Data extracted for creation of tables

GRADE Evidence Profile table created

Evidence to Decision framework completed

Draft Consensus on Science (CoS) statements and Treatment Recommendations (TRs)

Revised draft of CoS and TR

Summary statement created (including recommendation about future reviews)

Public invited to comment on draft CoS and TRs

Detailed iterative review of CoS and TRs to create final version for posting and publication

The ERC Guidelines 2025 development process

High-quality, evidence-informed guidelines are used increasingly to organise healthcare systems, and to guide healthcare professionals in their daily clinical practice.³⁵

The Institute of Medicine established quality standards for clinical practice guidelines in 2011,³⁶ followed by the Guidelines International Network in 2012.^{37–39} The ERC follows these principles for guideline development. This includes full transparency of the guidance on panel composition, decision-making processes, conflicts of interest management, guideline objective, development methods, evidence review and creation of recommendations, ratings of evidence, guideline review, and funding. A written protocol describing the guideline development process was developed and approved by the ERC Board before the start of the guideline development process and made available to the public on the ERC website.⁴⁰

Composition of Guidelines Writing Groups

The ERC Articles of Association and Bylaws guided the formal process of the ERC guidelines development.² The ERC Director of Guidelines and ILCOR is elected by the General Assembly of the ERC and mandated to co-ordinate the Guidelines development pro-

cess. The ERC Guidelines Steering Committee was created to support the Director of Guidelines and ILCOR. Key for the formation of the Guidelines Steering Committee was diversity (e.g. gender distribution, early and mid-career and senior resuscitation professionals), which resulted in the following member composition: ERC Director Guidelines and ILCOR (Chair), ERC Director of Science, ERC Director of External Affairs, ERC Chair and Chair-elect, Editor-in-Chief of Resuscitation, representatives from each writing group, Chair of the ERC Diversity, Equity, and Inclusion Committee, and an ERC project manager. All writing groups were represented in the Guidelines Steering Committee, and each Guidelines Steering Committee member was part of no more than two writing groups.

An open call for writing group members was made in February 2024. Following a review of conflicts of interest (described below), writing group chairs and members were appointed by the Board. Members were appointed based on their expertise and credibility as leading (or emerging) resuscitation scientists/clinicians/methodologists, a balance of professions (medicine, physician, non-physician, nursing, paramedicine), diversity (gender, ethnicity, seniority (senior and mid-career level), and geography across Europe.

The ERC also invited content experts for specific ERC Guidelines 2025 from the European associations that have a seat in the ERC General Assembly: members of the European Society for Emergency Medicine (EuSEM) participated in the ERC Guidelines 2025 adult

P Perfeld

Ali

CA

Basic Life Support (BLS), adult Advanced Life Support (ALS), Paediatric Life support (PLS), Special Circumstances, Systems Saving Lives, Ethics and First Aid; the International Federation of Red Cross and Red Crescent (IFRC) in First Aid and Education, the European Society for Intensive Care Medicine (ESICM) in Post Resuscitation Care and adult ALS; the European Society of Anaesthesiology and Intensive Care (ESAIC) in Special Circumstances, Systems Saving Lives, BLS, ALS; and the European Society of Cardiology (ESC) in ALS and Post Resuscitation Care. Following the recommendations on guideline development, we included a community advisor (volunteer lay persons, survivors, co-survivors, family members of a survivor or non-survivor, etc.) in nearly all writing groups to include also the view of the communities and the public in the ERC guidelines 2025.^{41,42}

The appointed writing groups ranged in size from 13 to 22 members, and most were physicians ($n = 86$, 63%). Thirty-eight percent of writing group members were female, and 28 (20%) were early or mid-career researchers. The writing group members came from 29 countries including Australia, Austria, Belgium, Brazil, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Malta, Netherlands, Norway, Poland, Romania, Serbia, Slovenia, Spain, Sri Lanka, Sweden, Switzerland, Tunisia, United Kingdom, and United States.

The competences and role description for writing group members included:

- Provide measurable clinical and scientific expertise in resuscitation (e.g. PubMed citations,⁴³ h-factor retrieved from Google Scholar,⁴⁴ i-Cite RCR).⁴⁵
- Actively participate in the majority of Guidelines writing group virtual meetings.
- Systematically review the published literature on specific topics at the request of the Guidelines writing groups.
- Present review findings and lead discussions within the group on specific topics.
- Develop and refine clinical practice algorithms and the Guidelines.
- Fulfil the International Committee of Medical Journal Editors (ICMJE) requirements for authorship.
- Be prepared to be publicly accountable for the contents of the Guidelines and promote their adoption.
- Being an ERC member (except invited persons from European associations, and community advisors).
- Comply with the ERC non-disclosure agreement and the conflict-of-interest policy.⁴⁶ (Fig. 2)

Conflict of interest management

Conflict of interest (COI) was managed according to international recommendations⁴⁷ and followed the ERC policy for COI (Supplement B).⁴⁸ Guidelines Steering Committee and writing group members completed an annual COI declaration. The COI declarations were reviewed by the ERC Governance Committee which prepared and submitted a report to the Guidelines Steering Committee. The ERC guideline development process allowed public access to individual writing group members' COIs through a request form via the ERC webpage.

The members of the Guidelines Steering Committee, the writing group chairs, and at least 50% of the writing group were required to be free of commercial conflicts of interest. At the chair's discretion, writing group members with a COI were still able to participate in discussions that related to the topic, but were not involved in voting, decisions, drafting or approving recommendations.

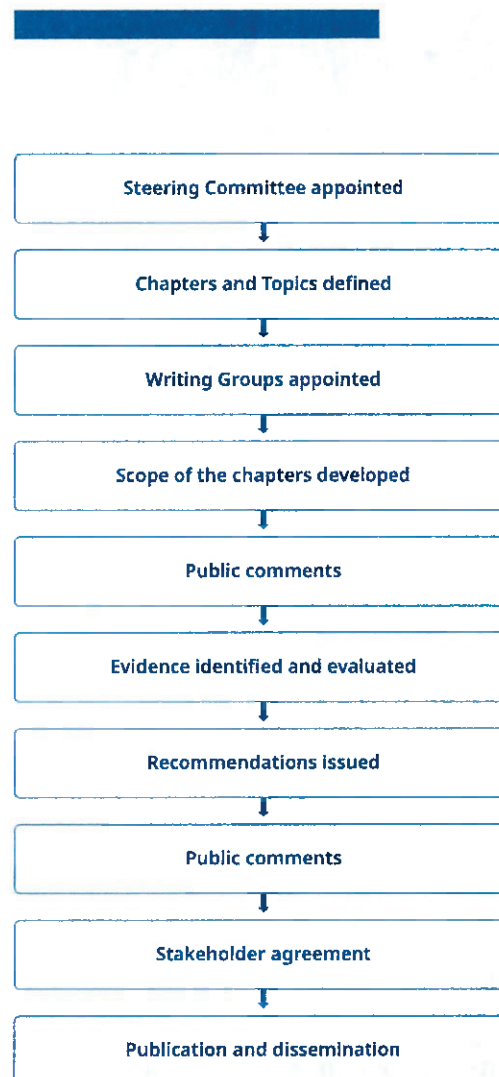


Fig. 2 – Stepwise process for the development of the ERC Guidelines 2025.

The ERC has financial relationships with business partners who support the overall work of the ERC.⁴⁸ The development of the ERC guidelines occurred entirely independently from the influence of business partners. None of the Guidelines Steering Committee members or the writing group members were paid by the ERC or any other entity to write these guidelines.

Diversity equality, equity and inclusion^{49–52}

The ERC is committed to integrate diversity, equality, equity and inclusion (DEI) as core principles in the development of the ERC guidelines 2025.⁵⁰ A representative of the ERC DEI committee joined the Guidelines Steering Committee to guide this integration. The DEI considerations in the guideline process include recommendations for resuscitation in low-resource settings, graphic tables suitable for those with colour vision impairment and subti-

P. Perle

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

ILCOR Task Force was confident that the desirable effects of an action or intervention outweighed the undesirable effects. Such deliberations were informed by the Evidence to Decision Framework developed by GRADE⁸¹ which enables consideration of the desirable effects, undesirable effects, certainty of evidence, values, balance of effects, resources required, cost effectiveness, equity, acceptability and feasibility. A strong recommendation indicates that the desirable effects outweigh the undesirable effects, and typically uses terms such as 'we recommend'. Weak recommendations (low confidence that the desirable effects outweigh the undesirable effects) typically use the term 'we suggest'. Only systematic reviews could result in new or modified ILCOR treatment recommendations that were summarized in the ILCOR CoSTRs.⁸²

ILCOR introduced adaptations of recently performed systematic reviews including an update of the literature search and assessment of the evidence according to GRADE methodology,⁸³ aiming to make a consensus on science statement and, if appropriate, a treatment recommendation.

ILCOR scoping reviews take a broader approach to a topic, and were reported in accordance with the PRISMA extension for scoping reviews utilising narrative summaries across a broader range of subjects that would not be possible through more narrowly focussed systematic reviews.^{84,85} Scoping reviews, unlike systematic reviews, cannot formulate a treatment recommendation. Instead, they can trigger a future systematic review, or a good practice statement can be formulated to provide guidance in an area where no or only very weak evidence exists.^{86,87} (Table 2)

ILCOR evidence updates²⁸ were designed to address topics that were previously reviewed to identify if any new evidence had emerged. Such evidence updates either provided assurance that previous treatment recommendations remained valid or highlighted the need to update a previous systematic review. Evidence updates do not enable changes to be made to treatment recommendations or good practice statements but may prompt new recommendations through updated systematic reviews.

Systematic reviews from other organisations available in public domains were eligible for inclusion if they were conducted and reported according to AMSTAR (Assessing the methodological quality of systematic reviews)⁸⁸ and PRISMA recommendations.⁸⁰

Table 2 – Certainty of evidence for a specific outcome (or across outcomes).

Grade	Description certainty level
High	We are very confident that the true effect lies close to that of the estimate of the effect
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Decision-making processes

The ERC guidelines 2025 are based on the 2025 ILCOR CoSTRs.²⁷⁻³⁴

Where treatment recommendations or good practice statements are provided by ILCOR, they have been followed by the ERC. For topics that had no ILCOR recommendation or good practice statement, the ERC writing groups performed their own reviews and discussed the available evidence within the writing groups until consensus was achieved. The writing group chairs ensured that each working group member had the opportunity to present and debate their views and ensured that discussions were open and constructive. All discussions took place during many videoconferences that were held between April 2024 and June 2025. Failure to reach consensus was made clear in the final wording of the recommendation. The quorum for conducting writing group business and for reaching consensus was at least 75 % of the writing group members. The ERC guideline recommendations were endorsed by all writing group members.

Stakeholder consultation and peer review

The scope document was posted on the ERC website for public comment between 16 May 2024 and 12 June 2024. The drafts of all ERC Guidelines 2025 were posted between 5 and 30 May 2025 for open peer review via the ERC guidelines web site. The opportunities to review and comment on these documents were advertised through e-mail, social media (Facebook, Instagram, LinkedIn, X/former Twitter) and the ERC network of 31 national resuscitation councils. Those providing feedback had to identify themselves and highlight any relevant conflict of interest. All national resuscitation councils of the ERC were asked to comment on the guidelines and agreed to the ERC Guidelines 2025.

The ERC Guidelines 2025 drafts received 820 written responses – 7 % of responders reported a conflict of interest of which 29 % were commercial conflicts and 71 % academic. Feedback comments were distributed to the writing groups. Where appropriate, writing groups adapted their draft guidelines accordingly. The final drafts of the guidelines were approved by the ERC Board and the members of the ERC General Assembly in June 2025.

Guideline updates

In 2016, ILCOR started a continuous evidence evaluation process and published each completed CoSTR on the ILCOR website along with annual ILCOR CoSTRs in Circulation and Resuscitation. The ERC recognises the substantial time, effort and resources required to implement new evidence in resuscitation science and to incorporate this into resuscitation guidelines. As the ERC is cognisant of the confusion that could be caused by frequent changes to guidelines, the ERC decided to maintain the 5-year cycles for routine updates to its guidelines and resuscitation course materials. Each new CoSTR published by ILCOR is reviewed by the ERC Science and Educational Committees, and the ERC Directors of Science and ILCOR, to assess its potential impact on the ERC guidelines and education programmes. If important practice changing ILCOR statements are made, which are in conflict with ERC guidelines, the ERC may provide guideline updates to those topics in between the 5-year cycles. This ensures timely judgement of the potential impact of implementing any new science (lives saved, improved neurological outcome, reduced costs) while considering the challenges of a change (cost, logistical consequences, dissemination and communication).

Availability

All ERC guidelines and updates will be freely available through the ERC website and as a freely-downloadable open-access publication in the ERC official journal, *Resuscitation*. National resuscitation councils can translate ERC guidelines for non-commercial use locally.

P. Pajek

Altu



tled linked videos to facilitate understanding for those with hearing difficulties.

Each writing group included at least one early-mid career researcher (20 % of authors in these guidelines), and where possible a lay person was also involved as a community advisor.⁵³

Diversity was considered when forming the writing groups and the Guidelines Steering Committee in terms of gender (38 % female, compared with 27 % in 2021), age (51.3 ± 10.9 years, compared with 56.8 ± 10.8 years in 2021), and geographic location (28 countries, 23 European and 5 non-European, compared with 24 countries, 22 European and 2 non-European in 2021).

The ERC guidelines are based on ILCOR treatment recommendations that integrate equity as part of the Evidence to Decision framework.^{54,55} Where possible, we checked the equity in the guideline recommendations using (A) the World Health Organization (WHO) INTEGRATE tool for equity to formulate concise guidelines for clinical practice⁵⁶, (B) the residence, race, ethnicity, culture, language, occupation, gender/sex, religion, education, socioeconomic status, and social capital (PROGRESS) plus tool,^{57,58} and (C) the INternational CLinical Epidemiology Network (INCLIN) tool for low-resource settings.⁵⁹ The ERC intends to extend the develop the DEI process in the future.^{59–62}

Scope of the guidelines

The ERC Guidelines 2025 address resuscitation practice for the ERC network of 31 national resuscitation councils.² The intended audience are lay persons, first aiders, first responders, community healthcare staff, ambulance staff, hospital staff, instructors, teachers in schools, educators, those responsible for healthcare policy and practice, and everybody in the community who is interested in improving survival after cardiac arrest. The ERC Guidelines 2025 are relevant to both the community (out-of-hospital) and hospital settings. The scope of the individual guidelines was developed by the writing groups in the beginning of 2024. The different guideline scopes were posted for public consultation for 2 weeks in May 2024 before being finalised and approved by the ERC General Assembly in June 2024.

The 2025 Guidelines cover the following topics

- Epidemiology in resuscitation⁶³
- Systems saving lives⁶⁴
- Adult basic life support⁶⁵
- Adult advanced life support⁶⁶
- Adult special circumstances in resuscitation⁶⁷
- Adult post resuscitation care (in collaboration with the European Society of Intensive Care Medicine)⁶⁸
- Newborn resuscitation and support of transition of infants at birth⁶⁹
- Paediatric life support⁷⁰
- Education of resuscitation⁷¹
- Ethics in resuscitation⁷²
- First Aid⁷³

Resuscitation in low-resource settings

Previous ERC guidelines were – and still are – developed predominantly by people from high-resource settings, and for patients and caregivers living in high-resource settings. These guidelines have always assumed an EMS and hospital system equipped with all up-to-date devices, trained personnel (or capacity to train all personnel), and at least 24/7 referral options to tertiary care. This may be true for many parts in Europe, however, not all European regions can be considered as high-resource as there are e.g., lower- or middle-income countries, remote areas, or offshore facilities,

etc.^{74,75} Within remote areas, the available infrastructure varies.⁷⁶ Also, natural disasters, pandemics, or armed conflicts may quickly turn high-resource settings into low-resource settings.

The ERC guidelines are also used in low-income countries and, in line with the ILCOR's focus on the truly global applicability of recommendations,⁷⁷ the ERC Guidelines 2025 include considerations on how to apply the recommendations in low-resource settings whenever possible. The guideline recommendations for low-resource settings have been developed together with experts from the respective resource settings whenever possible.

In the context of the ERC Guidelines 2025, 'low-resource settings' refers to conditions where healthcare systems are significantly constrained to provide optimal care. Thus, it may not only refer to low-income settings but any area, setting, or situation with significant constraints to the healthcare system, even in some high-resource countries that are facing increasing financial challenges. Low-resource settings often suffer from a less developed medical infrastructure: This means limited access to essential resources like funding, medications, equipment, transport, or trained staff. These limitations severely impact the ability to provide quality healthcare services to the population at an evidence-based level.

Methods

The step-by-step process for guideline development is summarised in Fig. 2. The ERC Guidelines Steering Committee defined the different ERC Guidelines 2025. An open call for writing group members was made in February 2024. Following a review of conflicts of interest (described below), writing group chairs and members were appointed by the Board. The writing groups developed the scope of their guidelines using a standardised template which contained the overall objective, intended audience, setting for their use, and the key topics that would be covered. These guideline scopes were presented for public comment and revised. The writing groups then identified, discussed, and synthesised the relevant evidence. Based on this, existing guidelines recommendations were updated, new evidence from ILCOR systematic or scoping reviews was integrated into existing recommendations. If topics were not covered by ILCOR, ERC writing groups also undertook their own reviews to assess the available evidence and to synthesise key information and themes.

Evidence reviews

The ERC Guidelines are informed by the continuous ILCOR Evidence Evaluation process which is described in detail elsewhere.^{27,28} (Table 1) For the ILCOR CoSTR, three types of evidence evaluation were performed: systematic reviews, scoping reviews, and evidence updates.

ILCOR systematic reviews follow the methodological principles described by the Institute of Medicine, Cochrane Collaboration, and Grading of Recommendations Assessment, Development, and Evaluation (GRADE).^{78,79} The reviews are presented according to the Preferred Reporting Items for a Systematic Review and Meta-Analysis (PRISMA).⁸⁰

ILCOR systematic reviews generally have a focused and narrow structured question following the Population, Intervention, Comparison, Outcome, Study design, Timeframe framework. Each treatment recommendation indicated the strength of the recommendation and the certainty of the evidence according to GRADE methodology. The strength of recommendations reflects the extent to which the

all u

P. Perle



GA