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The ERC Newsletter is an informative publication providing regular updates on the latest developments and achievements in the field of resuscitation. It covers a wide range of topics, from scientific advancements to events and news highlights from the ERC and its affiliated organisations. The newsletter is a valuable resource for anyone interested in staying up-to-date with resuscitation science and practice. Whether you are a resuscitation science enthusiast, healthcare professional, or simply interested in our activities, the ERC Newsletter is a must-read.

# Advocacy & Lobbying: ERC Policy Toolkit - CPR Training for a New Generation of Lifesavers

#### **Policy Toolkit**

EUROPEAN

RESUSCITATION

#### CPR TRAINING FOR A NEW GENERATION OF LIFESAVERS

COMPILING BEST PRACTICES TO ENGAGE YOUNG PEOPLE TO LEARN CPR



**Read the Full Article and Download the Toolkit Here** 

# **Event: The ERC Congress - Resuscitation 2025**

#### THE ERC CONGRESS - RESUSCITATION 2025



The European Resuscitation Council is dedicated to making high-quality resuscitation care accessible worldwide. As a part of the initiative, the ERC is proud to support medical professionals from low and lower-middle income countries. To facilitate attendance, we are providing reduced registration fees for nurses, physicians, and other healthcare providers from these regions.

Be part of Resuscitation 2025, our annual ERC Congress in Rotterdam, Netherlands, and join the international movement to advance resuscitation care.

**Register Now** 

# Science and Education: A Milestone for Survivors and Co-Survivors

The European Resuscitation Council conducted a global survey that represents a significant step in recognising and supporting the cardiac arrest survivor community.

We are excited to share the results of this survey in an article published in Resuscitation Plus titled 'Organisations supporting cardiac arrest survivors: An exploratory survey of organisational structures and activities'.

We are thankful to everyone who supported us during the process and took part in this important survey.

Read the Full Article Here

**Important Dates** 



Webinar on Drowning: June 18 <u>Registration Link</u>



Early Bird Registration Deadline: July 7 <u>Registration Link</u>

## Young ERC: Exciting news from the Young ERC





# Pitch your research proposal at RESUS25!

Do you have a research proposal to help fill а knowledge gap in resuscitation science? Apply for the Future Innovations in Resuscitation Science and Technology (F.I.R.S.T.) competition to get a chance to present your idea to an expert jury and your peers at the European Resuscitation Council Congress 2025. Stay tuned to our social media channels for more information on how to apply!

#### A brand-new project

We are excited to announce the launch of a new pilot project focused on research-based mentorship. This 12-month initiative will provide aspiring early career researchers in resuscitation science with structured guidance and access to experienced mentors outside their current research environments. By connecting early career mentees with ERC-affiliated mentors, we aim to nurture the next generation of leaders in resuscitation science and establish new networks within the ERC's scientific community. Stay tuned to our social media channels for more information on how to sign up!

Want to stay updated on all Young ERC initiatives and connect with our early career community? Follow us on social media!

#### You Can Find All Our Social Media Channels Here

#### Tribute to Professor Douglas Chamberlain CBE OStJ KSG



Professor Douglas Chamberlain CBE OStJ KSG

The European Resuscitation Council mourns the loss of Professor Douglas Chamberlain CBE OStJ KSG, one of the founder members of the ERC. We would like to honour a visionary whose contributions groundbreaking have transformed emergency medical care. He played a key role in advocating for the introduction of paramedics and the implementation of early defibrillationadvancements that have saved countless lives. He helped establish the first public AED in the 1970s. His unwavering commitment to improving pre-hospital care has left a profound legacy that continues to inspire generations of emergency medical professionals around the world.

#### **Trending on Social Media**



Learn Basic CPR to Save Lives

Honourable Prime Minister of Greece, Kyriakos Mitsotakis and the Kids Save Lives Team



Kids Save Lives - Greece <u>View the post on Instagram</u>



Celebrating World Nurses Day! <u>View the post on Facebook</u>



May the 4th be With You <u>View the post on LinkedIn</u>



European Driving License Directive to Include Compulsory First Aid and CPR Training <u>View the post on LinkedIn</u>

## **Industry Partner: Advertorial**

# Enhancing Out-of-Hospital Cardiac Arrest Survival: Advancing Bystander Intervention and Resuscitation Technology

Out-of-hospital cardiac arrest (OHCA) remains a critical public health challenge, with bystanders present in nearly half of cases. Bystander cardiopulmonary resuscitation (bCPR) and automated external defibrillator (AED) use significantly improve survival rates, however, global implementation remains suboptimal. This paper synthesises evidence-based strategies to optimise the chain of survival, emphasising the pivotal role of bystander-initiated CPR and advanced technological innovations in resuscitation systems.

#### 1. Bystander-Initiated Resuscitation: A Cornerstone of Survival

Epidemiological data confirm that 49% of OHCA events occur in the presence of witnesses, yet bCPR is performed in only 32-45% of cases globally <sup>[1]</sup>. Key determinants of effective bCPR implementation include:

**Public Access Defibrillation (PAD) Programs:** AED deployment in public spaces reduces time-to-defibrillation by 4.2 minutes, improving survival to hospital discharge by 48.7% <sup>[2]</sup>. Amoul's collaboration with the European Resuscitation Council (ERC) exemplifies scalable training models, having certified over 600,000 individuals in Basic Life Support (BLS) across China using standardised ERC 2021 guidelines.

**Quality Assurance in Training:** Amoul's proprietary manikin-based scoring system (<u>https://en.amoulmed.com/products/27/</u>) integrates real-time feedback mechanisms, including compression depth (5–6 cm), rate (100–120/min), and full chest recoil, with objective performance metrics correlated to improved skill retention. This digital platform generates actionable evaluation reports, addressing deficiencies in chest compression fraction (CCF) and ventilation timing.

#### 2. Technological Innovations Addressing Resuscitation Gaps

Current protocols emphasise minimising interruptions in chest compressions (CCF  $\geq$ 80%). However, interruptions exceeding 10-16 seconds are common, reducing coronary perfusion pressure <sup>[3]</sup>. Innovations like the CPR-Ventilation Linkage System address this by synchronising ventilation with compression pauses, reducing no-flow time and improving end-tidal  $CO_2$  levels. During compression pauses, microprocessor-controlled triggers activate the ventilator circuit, delivering synchronised tidal volumes (6-7 mL/kg) at 10 breaths/min, aligned with the 30:2 compression-to-ventilation ratio. Clinical validation demonstrates a 58% reduction in no-flow time and 22% improvement in end-tidal  $CO_2$  (EtCO<sub>2</sub>) levels compared to manual resuscitation.

Multi-Modal Resuscitation Platforms such as the EMS-600, combine mechanical CPR, capnography-guided ventilation, and automated defibrillation. Piston-driven compression with load-distributing band technology maintains consistent depth/rate despite patient movement. Waveform capnography enables real-time assessment of ventilation efficacy and ROSC detection. Biphasic truncated exponential waveform (15-200 J) with impedance compensation, reducing transthoracic impedance by 27% in porcine models. These platforms streamline workflows, enhance interdisciplinary coordination, and improve survival benchmarks.

#### 3. Clinical Implications and Future Directions

Emerging technologies, including Al-driven ROSC prediction and 5G-enabled tele-CPR guidance, hold promise for further optimising outcomes. Post-resuscitation care bundles, incorporating targeted temperature management, remain essential for long-term prognosis.

Overall, optimising OHCA survival requires scaling evidence-based training, deploying advanced resuscitation technologies, and integrating interdisciplinary care. The Amoul CPR-Ventilation Linkage System and integrated EMS-600 platform represent paradigm shifts in resuscitation science, addressing historical limitations in CPR quality and interdisciplinary coordination. Widespread adoption of these systems, coupled with aggressive PAD implementation, holds promise to elevate survival benchmarks and redefine the standard of care in prehospital emergency medicine.



[1] N Engl J Med . 2015 Jun 11;372(24):2307-15. doi: 10.1056/NEJMoa1405796.
 [2] Resuscitation . 2022 Mar:172:204-228. doi: 10.1016/j.resuscitation.2021.11.032. Epub 2022 Feb 15.

[3] Resuscitation . 2024 Oct:203:110366. doi: 10.1016/j.resuscitation.2024.110366. Epub 2024 Aug 23.

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