

Informe semanal de evidencia en reanimación

Bibliografía correspondiente a la semana del 11 de octubre de 2026

54 registros revisados · 54 incluidos · 0 tangenciales · 0 preclínicos exclusivamente animales

Nota metodológica: se han revisado los 54 registros del archivo fuente. Cuando PubMed no aporta abstract, la ficha se limita estrictamente a los metadatos y al título disponibles, sin reconstruir ni inferir resultados no incluidos en el documento.

Executive Summary

La bibliografía de esta semana es especialmente rica en estudios clínicos y de sistemas, sin resultados claramente tangenciales ni trabajos exclusivamente animales. En cuidados posresucitación, un gran estudio nacional propone fenotipos de laboratorio tempranos con asociaciones pronósticas diferentes, mientras que biomarcadores renales, índices inmunonutricionales y scores de predicción muestran utilidad limitada o incremental. En ECPR, la edad aparece como modificador continuo del posible beneficio, la evolución del ritmo durante RCP aporta información pronóstica adicional y los datos nacionales alemanes plantean dudas sobre la dispersión de programas de bajo volumen. En farmacología, dos trabajos abordan antiarrítmicos: la amiodarona en pacientes que convierten desde un ritmo no desfibrilable y una emulación de ensayo que no demuestra superioridad significativa de lidocaína frente a amiodarona. En monitorización, el análisis espectral de la onda pletismográfica de pulsioximetría abre una vía no invasiva para detectar ROSC durante compresiones. La vía aérea sigue sin un ganador claro: el metaanálisis de dispositivo supraglótico frente a intubación muestra resultados discordantes según el diseño de los estudios. También destacan la epidemiología pediátrica de OHCA en Australia/Nueva Zelanda, los drones con DEA en horario nocturno, la validación de reglas TOR en obstrucción por cuerpo extraño y la necesidad de reforzar rehabilitación y seguimiento de supervivientes.

Control de recuento

Grupo	N	Tratamiento en el informe
Directamente relacionados con RCP/reanimación	54	Incluidos y categorizados
Resultados tangenciales	0	No identificados
Preclínicos / exclusivamente no humanos	0	No identificados

Top 8 de la semana

1. Early Post-ROSC Laboratory Phenotypes and Clinical Outcomes after Out-of-Hospital Cardiac Arrest: A 10-Year National Cohort Study.

Cohorte nacional de 1.514 supervivientes de OHCA que identifica tres fenotipos de laboratorio en las primeras seis horas pos-ROSC: disfunción multiorgánica, homeostático e inmunodisregulado. Los dos últimos se asociaron con menor riesgo de mala recuperación neurológica y menor mortalidad a 30 días y 3 años frente al fenotipo multiorgánico. ¿Cambia mi práctica? Todavía no: es un enfoque de estratificación prometedor, pero requiere validación externa antes de orientar terapias por fenotipo.

PMID / DOI: 42855036 · 10.1016/j.resuscitation.2026.111351

2. Outcomes Following Impedance Threshold Device Use During Out-of-Hospital Cardiac Arrest.

Análisis de 97.439 OHCA de una base nacional: el uso de ITD se asoció con más ROSC y supervivencia a llegada hospitalaria, pero con menor supervivencia al alta y peor disposición neurológica en el subconjunto con seguimiento. La dirección opuesta de los desenlaces sugiere fuerte confusión por selección y contexto de uso. ¿Cambia mi práctica? No. El estudio no demuestra beneficio clínico neto y refuerza la necesidad de interpretar con cautela datos observacionales sobre dispositivos de RCP.

PMID / DOI: 42849561 · 10.1016/j.resuscitation.2026.111340

3. Spectral Characteristics and Parameters of Pulse Oximetry Waveforms for Assessing Resuscitation Status.

Estudio multicéntrico de 497 episodios que analiza la onda pletismográfica de pulsioximetría durante RCP. Algunos patrones espectrales mostraron alta especificidad para identificar ROSC durante compresiones y para reconocer actividad eléctrica sin pulso. ¿Cambia mi práctica? Es una tecnología muy prometedora porque utiliza señales ya disponibles en monitores estándar, pero necesita validación prospectiva antes de incorporarse a decisiones clínicas.

PMID / DOI: 42843615 · 10.1016/j.resuscitation.2026.111346

4. Amiodarone After Conversion From a Non-shockable to a Shockable Rhythm in Out-of-Hospital Cardiac Arrest A Propensity Score-Matched Analysis from the German Resuscitation Registry.

En pacientes inicialmente no desfibrilables que evolucionaron a ritmo desfibrilable, el uso de amiodarona se asoció con más ROSC al ingreso, mayor supervivencia a 24 horas y al alta, pero sin mejoría estadísticamente significativa del resultado neurológico. ¿Cambia mi práctica? Es una señal relevante para el momento de administración de amiodarona en este subgrupo, pero el diseño observacional no permite adelantar por sí solo la recomendación actual.

PMID / DOI: 42838501 · 10.1016/j.resuscitation.2026.111349

5. Impact of Cardiac Rhythm Dynamics during Cardiopulmonary Resuscitation on Clinical Outcomes in Patients Treated with Extracorporeal Cardiopulmonary Resuscitation (ECPR): A Systematic Review and Meta-analysis.

Metaanálisis de 10 estudios y 5.183 pacientes con ECPR: la mejoría desde ritmo no desfibrilable a desfibrilable se asoció con mayor probabilidad de buen resultado neurológico, mientras que el deterioro desde desfibrilable, especialmente hacia asistolia, se asoció con peor pronóstico. ¿Cambia mi práctica? Puede enriquecer la selección dinámica para ECPR; la evolución del ritmo parece aportar información adicional al ritmo inicial, aunque la evidencia sigue siendo observacional.

PMID / DOI: 42838500 · 10.1016/j.resuscitation.2026.111348

6. Time to Return of Spontaneous Circulation and Long-Term Outcomes in Bystander-Witnessed Out-of-Hospital Cardiac Arrest Survivors.

Registro danés de 2.583 supervivientes a 30 días tras OHCA presenciada: mayor tiempo hasta ROSC se asoció con más diagnóstico posterior de daño anóxico, pero no con peor supervivencia a largo plazo, ingreso en residencia ni retorno al trabajo entre quienes ya habían sobrevivido 30 días. ¿Cambia mi práctica? Recalca que una reanimación prolongada no excluye recuperación significativa y que el tiempo hasta ROSC no debe interpretarse de forma aislada.

PMID / DOI: 42838497 · 10.1016/j.resuscitation.2026.111342

7. Supraglottic airway versus endotracheal intubation in out-of-hospital cardiac arrest: a systematic review and meta-analysis.

Metaanálisis de 13 estudios y 246.659 pacientes comparando dispositivo supraglótico con intubación. No hubo diferencia en supervivencia al alta; el análisis global observacional favoreció intubación para ROSC, pero los ensayos aleatorizados mostraron la dirección contraria. ¿Cambia mi práctica? No permite declarar una vía aérea superior de

forma universal. La discordancia por diseño y la heterogeneidad apoyan una estrategia adaptada a competencia y sistema.

PMID / DOI: 42831128 · 10.1016/j.resplu.2026.101491

8. Lidocaine Versus Amiodarone in Patients With Shockable Out-of-Hospital Cardiac Arrest: A Target Trial Emulation.

Emulación de ensayo objetivo en 2.451 OHCA desfibrilables tratados con antiarrítmico. La supervivencia estimada fue 26,2% con lidocaína frente a 23,5% con amiodarona, pero la diferencia ajustada no alcanzó significación; tampoco hubo diferencia neurológica significativa. ¿Cambia mi práctica? No establece superioridad de lidocaína, aunque el intervalo de confianza no excluye un beneficio clínicamente relevante y justifica más investigación comparativa.

PMID / DOI: 42456091 · 10.1097/CCM.00000000000007265

ERC / ILCOR Watch

No se identifica en el archivo una nueva guía ERC ni un nuevo CoSTR de ILCOR. Sí aparecen varias señales relevantes para dominios de futura revisión: antiarrítmicos durante FV/TV sin pulso, selección dinámica para ECPR mediante evolución del ritmo y edad, vía aérea supraglótica frente a intubación, reglas de terminación en obstrucción por cuerpo extraño, ITD, estrategias de RCP por testigos y objetivos de presión arterial pediátrica pos-ROSC. El artículo de recomendaciones actuales sobre OHCA resume las actualizaciones de 2025, pero no constituye por sí mismo una nueva guía ERC/ILCOR. Los trabajos de educación, IA y seguridad presentados alrededor del European Resuscitation Congress son señales de implementación y factores humanos, no cambios de recomendación clínica.

Research Radar

Tendencias emergentes: 1) fenotipado pos-ROSC mediante datos rutinarios y biomarcadores, con transición desde marcadores aislados hacia perfiles multimodales; 2) selección ECPR más dinámica, incorporando edad, ritmo durante la reanimación, pH/lactato y volumen del centro; 3) monitorización fisiológica no invasiva durante compresiones mediante pletismografía y otras señales ya presentes en monitores; 4) reevaluación de dispositivos y estrategias históricas de RCP, como ITD, con atención a desenlaces a largo plazo; 5) vía aérea basada en competencia y contexto más que en una superioridad universal; 6) expansión de sistemas de respuesta comunitaria con drones, campañas y entrenamiento; 7) mayor atención a supervivencia a largo plazo, rehabilitación, retorno al trabajo y decisiones éticas de limitación de tratamientos.

Artículos directamente relacionados, por categorías

Sistemas EMS, respuesta comunitaria y cadena de supervivencia

3. Twenty years in the battle against sudden cardiac death: progress, pitfalls, and prospects for the future.

Referencia: Resusc Plus. 2026 Jul 2;31:101401. doi: 10.1016/j.resplu.2026.101401. eCollection 2026 Sep.

Autores: Newman MM(1), Peattie G(1), Subramanian A(2), Jampel H(3), Farrell J(1), Fowler RL(4).

PMID: 42857572

DOI: 10.1016/j.resplu.2026.101401

Tipo de estudio: Revisión narrativa / perspectiva histórica y comunitaria

Mensaje principal: As SCAF marks its 20th anniversary, the organization celebrates two decades of progress and looks ahead with optimism. Its mission remains steadfast: to raise awareness, empower bystanders to act, support survivors, and advance innovations that reduce preventable deaths from sudden cardiac arrest.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

Sudden cardiac arrest (SCA) is a life-threatening emergency that requires immediate intervention from lay responders. To address this critical need, the national Sudden Cardiac Arrest Foundation (SCAF) was established in 2005 to raise awareness, promote community engagement, and support survivors. The history of cardiopulmonary resuscitation, defibrillation, and public response programs illustrates decades of progress in resuscitation science and has helped lay the groundwork for the creation of SCAF. In addition to serving as a trusted information hub, SCAF leads several key initiatives. The Cardiac Arrest Survivor Alliance™ provides an online community for those affected by cardiac arrest, offering connection, support, and resources. The Call-Push-Shock campaign promotes three lifesaving steps to address out-of-hospital cardiac arrest: call 911, perform CPR, and use an automated external defibrillator (AED). While SCA remains a major cause of death, significant progress has been made in public education and response. Technological innovations such as dispatcher-assisted CPR, the widespread placement of AEDs, and improved EMS and cardiac arrest registries, have all strengthened the chain of survival. Public understanding has also improved, with the media increasingly distinguishing SCA from heart attacks, thanks in part to SCAF's tireless advocacy. As SCAF marks its 20th anniversary, the organization celebrates two decades of progress and looks ahead with optimism. Its mission remains steadfast: to raise awareness, empower bystanders to act, support survivors, and advance innovations that reduce preventable deaths from sudden cardiac arrest.

13. Child drowning in northern Bangladesh: barriers, local initiatives, and opportunities for prevention.

Referencia: Front Public Health. 2026 Sep 23;14:1849358. doi: 10.3389/fpubh.2026.1849358. eCollection 2026.

Autores: Alam E(1)(2), Anika IT(3), Alam J(4)(5), Akter H(4)(5).

PMID: 42846439

DOI: 10.3389/fpubh.2026.1849358

Tipo de estudio: Estudio de métodos mixtos basado en hogares

Mensaje principal: In the absence of nationwide community-based drowning prevention programmes, this study recommends active community engagement to raise awareness, enhance understanding of child drowning risks, strengthen water safety, swimming, rescue, and cardiopulmonary resuscitation (CPR) skills, and reduce harmful post-rescue practices. Given the prevalence of low-income households, communities often lack the financial capacity to fence or fill unnecessary water reservoirs. Consequently, effective prevention of child drowning in northern Bangladesh will require coordinated efforts among individuals, households, communities, local councils, and civil administrations.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: Although Bangladesh has achieved substantial progress in reducing mortality from infectious diseases, child drowning, particularly in the northern regions, remains a neglected public health concern and constitutes the leading cause of death among children aged 1-17 years in rural areas. Approximately 18,268 children (aged 0-17 years) die from drowning annually, equivalent to an average of 50 deaths per day. **OBJECTIVE:** This study aims to identify the socio-demographic characteristics of caregivers, the types of child supervision and reasons for its absence, water safety skills, traditional rescue practices, and the community's preferences for child drowning prevention interventions in northern Bangladesh. **METHODS:** We conducted face-to-face in-depth interviews and case-story analysis with 117 households that experienced drowning in two selected unions in northern Bangladesh. We employed quantitative analysis to examine the socio-demographic characteristics of the parents and carers, along with a mixed-methods approach for data collection on the reasons for a lack of adult supervision, water safety and rescue knowledge, the community's role in preventing child drowning, and the assistance required from public and private institutions to prevent child drowning in the region. **RESULTS:** After visiting a total of 18,004 households, we identified 117 drowning incidents, including 85 fatal and 32 non-fatal drownings in the last 6 years. The households that experienced drowning had an average monthly income of BDT 7,610, a lower level of education, and were primarily involved in farming and daily wage earnings. The study found that low understanding of child drowning risk, unawareness, and a lack of active adult supervision of children were associated with drowning deaths. Multivariable logistic regression identified greater distance from the drowning site, caregiver age, and household size as significant factors associated with fatal drowning, while each additional metre of distance from the drowning site increased the odds of fatal drowning. We also found limited knowledge about water safety and a lack of swimming and rescue skills as major factors in child drowning deaths. At the community level, participants preferred installing fencing along pond walkways and other reservoirs. **CONCLUSION:** In the absence of nationwide community-based drowning prevention programmes, this study recommends active community engagement to raise awareness, enhance understanding of child drowning risks, strengthen water safety, swimming, rescue, and cardiopulmonary resuscitation (CPR) skills, and reduce harmful post-rescue practices. Given the prevalence of low-income households, communities often lack the financial capacity to fence or fill unnecessary water reservoirs. Consequently, effective prevention of child drowning in northern Bangladesh will require coordinated efforts among individuals, households, communities, local councils, and civil administrations.

18. Global Rate of Bystander Cardiopulmonary Resuscitation in Out-of-Hospital Cardiac Arrest: A Systematic Review and Meta-Analysis.

Referencia: Heart Lung Circ. 2026 Oct 6:S1443-9506(26)00405-1. doi: 10.1016/j.hlc.2026.04.121. Online ahead of print.

Autores: Shen L(1), Chen C(2), Long L(2), Su X(1), Xie H(2), Dai J(3).

PMID: 42838865

DOI: 10.1016/j.hlc.2026.04.121

Tipo de estudio: Revisión sistemática y metaanálisis

Mensaje principal: Less than one-third of individuals with OHCA receive BCPR. Despite a modest temporal increase, significant and actionable disparities persist across income levels, geographic regions, patient populations, and arrest locations. These findings highlight the need for targeted public health interventions, policy reforms, and tailored educational strategies to address these inequities and improve the global response to OHCA.

Comentario crítico breve: La síntesis de evidencia es clínicamente relevante, aunque la certeza final depende de la calidad, heterogeneidad y diseño de los estudios incluidos. Las conclusiones deben ponderar especialmente la discrepancia entre evidencia observacional y aleatorizada cuando exista.

Abstract / resumen del registro fuente:

BACKGROUND: Out-of-hospital cardiac arrest (OHCA) is a leading cause of mortality worldwide, and bystander cardiopulmonary resuscitation (BCPR) is one of determinants of survival. This systematic review and meta-analysis aimed to determine the prevalence of BCPR and investigate sources of heterogeneity. **METHOD:** We conducted a systematic search of PubMed, Scopus, Embase, and Web of Science from inception until 1 August 2025, for observational studies that reported the incidence of BCPR in OHCA. We performed a random-effects meta-analysis to calculate the pooled prevalence of BCPR. Subgroup analyses were conducted to explore heterogeneity based on geography, income level, patient demographics, and study characteristics. **RESULTS:** Our analysis included 229 studies encompassing 4,421,570 OHCA patients from 45 countries. The pooled prevalence of receiving BCPR was 32.1% (95% confidence interval [CI] 29.7%-34.5%), with substantial heterogeneity ($I^2=99.9\%$). BCPR rates were significantly higher in high-income countries compared to low- and middle-income countries (34.9% vs 13.9%; $p<0.0001$) and in paediatric versus adult populations (49.2% vs 31.4%; $p=0.0002$). OHCA occurring in residential settings had a 28% lower likelihood of receiving BCPR than those in public locations (risk ratio [RR] 0.72; 95% CI 0.64-0.80). Furthermore, female patients were mildly less likely to receive BCPR than male patients (RR 0.96; 95% CI 0.93-0.99). Trend analysis revealed a modest but significant increase in BCPR prevalence over time (slope 0.29% per year; $p=0.016$). **CONCLUSIONS:** Less than one-third of individuals with OHCA receive BCPR. Despite a modest temporal increase, significant and actionable disparities persist across income levels, geographic regions, patient populations, and arrest locations. These findings highlight the need for targeted public health interventions, policy reforms, and tailored educational strategies to address these inequities and improve the global response to OHCA.

20. Cardiovascular Emergency Action Planning in the United States Military.

Referencia: Mil Med. 2026 Oct 6;usag460. doi: 10.1093/milmed/usag460. Online ahead of print.

Autores: Dean JL(1)(2), Soderstrom MA(1)(2), Keithler AN(1)(2), Franzos MA(2)(3), Haigney M(2)(3), Friedman EM(4), Murphy CE(5), Petek BJ(6).

PMID: 42838519

DOI: 10.1093/milmed/usag460

Tipo de estudio: Revisión / planificación de sistemas

Mensaje principal: Accordingly, the broad adoption of structured but flexible CV EAPs across the U.S. military represents a practical and meaningful opportunity to improve survival after SCA.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

Sudden cardiac arrest/death (SCA/D) are uncommon but potentially catastrophic events in military service members, occurring most often during physically demanding training and operational activities. Compared with similarly aged athletic populations, service members experience higher rates of SCD, highlighting the unique risks inherent in military service. Although cardiovascular (CV) screening can identify many at-risk individuals, it does not prevent all acute CV events. In athletic populations, improvements in emergency preparedness including cardiopulmonary resuscitation (CPR) training, rapid automated external defibrillator (AED) use, and rehearsed emergency action plans (EAPs) have been associated with significant improvements in survival following sports-related SCA. However, despite similar exertional demands, standardized CV-specific EAPs are inconsistently established and implemented across military settings. Existing policies emphasize physical readiness and emergency response capabilities, yet substantial variability remains regarding formalized planning for CV emergencies that occur during military activities. Importantly, military environments differ substantially from traditional athletic venues. Physical training (PT) and operational missions often occur in austere locations with limited medical resources, evacuation constraints, environmental extremes, and reliance on other service members as initial responders. Additionally, service members may be required to engage in prolonged exertion, load carriage, water-based activities, or remote operations that may delay recognition and treatment of SCA. These unique factors necessitate military-specific CV EAPs that extend beyond traditional competitive athlete frameworks and incorporate adaptable emergency response

strategies for diverse tactical environments. Accordingly, the broad adoption of structured but flexible CV EAPs across the U.S. military represents a practical and meaningful opportunity to improve survival after SCA.

29. Incidence, Process of Care, and Outcomes of In-Hospital Cardiac Arrest in China: A Multicenter Prospective Registry Study.

Referencia: Circulation. 2026 Oct 6. doi: 10.1161/CIRCULATIONAHA.126.080404. Online ahead of print.

Autores: Wang C(#)(1), Zheng J(#)(1), Zheng W(#)(1), Yang K(#)(1), Yan X(2), Chai Y(3), Chen F(4), Huang L(5), Wang R(6), Han X(7), Ma Y(8), Ma J(1), Zhang J(1), Bian Y(1), Cheng K(1), Liu R(1), Pan C(1), Shang R(1), Wang M(1), Song R(1), Pang J(1), Wang J(1), Girotra S(9), Zhang G(10), Xu F(1), Chen Y(1); BASIC-IHCA Coordinators and Investigators.

PMID: 42836281

DOI: 10.1161/CIRCULATIONAHA.126.080404

Tipo de estudio: Registro prospectivo multicéntrico

Mensaje principal: This multicenter registry highlights a substantial burden of IHCA in China, with markedly low survival rates. Despite prompt initial resuscitation, critical gaps persist in postresuscitation care. Systemic and cultural factors, including the infrequent use of do not attempt cardiopulmonary resuscitation orders, may further contribute to survival disparities. These findings suggest several system-level opportunities to improve IHCA outcomes, including structured response systems, optimized critical care resource allocation, and greater integration of advanced care planning.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: In-hospital cardiac arrest (IHCA) is an acute event associated with high mortality. Although survival has improved in high-income countries, contemporary multicenter data from low- and middle-income countries remain scarce, limiting global benchmarking and the identification of system-level opportunities for improvement. **METHODS:** This cohort study used data from the BASIC-IHCA (Baseline Investigation of In-Hospital Cardiac Arrest) registry. Adult patients (≥ 18 years) who experienced IHCA and received cardiopulmonary resuscitation between July 1, 2019, and December 31, 2020, at 37 hospitals across 29 provinces in China were included. The primary outcome was survival to 30 days or hospital discharge. Secondary outcomes included return of spontaneous circulation, 6- and 12-month survival, and favorable neurological outcome (Cerebral Performance Category score 1-2). Process measures focused on the timeliness of resuscitation response and the implementation of postresuscitation interventions. **RESULTS:** Among 17 602 patients (median age, 66 years; 65.5% male), the annual incidence of adult IHCA was 4.1 per 1000 admissions. Cardiac etiology was identified in 6569 (37.3%) patients, and 2380 (13.5%) presented with initial shockable rhythm. Among all patients, 16 872 (95.9%) received cardiopulmonary resuscitation within 1 minute; timely defibrillation or epinephrine was achieved in 71.4% and 84.4% of patients with initial shockable and nonshockable rhythms, respectively. Sustained return of spontaneous circulation was achieved in 6200 (35.2%) patients, of whom 222 (3.6%) received temperature control therapy and 320 (5.2%) underwent coronary angiography. Overall, 1610 (9.1%) patients survived to 30 days or discharge, with 1241 (7.1%) having a favorable neurological outcome. At 12 months, 1075 (6.1%) patients remained alive, and 986 (5.6%) had a favorable neurological outcome. **CONCLUSIONS:** This multicenter registry highlights a substantial burden of IHCA in China, with markedly low survival rates. Despite prompt initial resuscitation, critical gaps persist in postresuscitation care. Systemic and cultural factors, including the infrequent use of do not attempt cardiopulmonary resuscitation orders, may further contribute to survival disparities. These findings suggest several system-level opportunities to improve IHCA outcomes, including structured response systems, optimized critical care resource allocation, and greater integration of advanced care planning.

31. Designing and implementing the first national CPR championship in Greece: the "KIDS SAVE LIVES - TA PAIDIA SOZOUN ZOES" experience.

Referencia: Resusc Plus. 2026 Sep 21;32:101495. doi: 10.1016/j.resplu.2026.101495. eCollection 2026 Nov.

Autores: Chatzikonstantinou E(1), Stefanakis A(1), Böttiger BW(2)(3), Rott N(3), Liagkou P(1), Ntagka N(1), Sakkas K(1), Rouska C(1), Ethymiou I(1), Athanasoula E(1), Giannoudi M(1).

PMID: 42835327

DOI: 10.1016/j.resplu.2026.101495

Tipo de estudio: Estudio de implementación / evaluación educativa

Mensaje principal: The KSL National CPR Championship represents an effective, engaging, and scalable approach to BLS education among schoolchildren. The initiative enhances skill acquisition, confidence, and community awareness, supporting the integration of structured CPR training into national educational policy to improve OHCA outcomes.

Comentario crítico breve: El trabajo es especialmente útil para implementación local y mejora de procesos. La ausencia de un diseño comparativo robusto o de desenlaces clínicos limita la inferencia causal.

Abstract / resumen del registro fuente:

BACKGROUND: Basic Life Support (BLS) is critical in improving survival following out-of-hospital cardiac arrest (OHCA), yet survival rates remain low in countries such as Greece. Early education and community engagement are key to increasing bystander cardiopulmonary resuscitation (CPR) rates. The "KIDS SAVE LIVES - TA PAIDIA SOZOUN ZOES (KSL)" initiative aims to address this gap through school-based BLS training and innovative educational strategies. **AIM:** To describe the implementation and evaluate the effectiveness of the first National CPR Championship for school-aged children in Greece. **METHODS:** This study consisted of two phases. Phase I involved the design and implementation of the KSL CPR Championship - a national, school-based competition assessing CPR skills using objective metrics via QCPR technology. Phase II included a post-event evaluation through a 24-item questionnaire distributed to participants (students, teachers, and parents), assessing perceptions, satisfaction, and educational impact. **RESULTS:** In 2025 the CPR Championship accommodated 196 schools, comprising of 432 student participants. High-quality CPR performance was observed across all school levels (mean scores: 95.7-96.3% out of 100%, with 88.2% in special needs schools). A total of 197 respondents completed the questionnaire. Most participants (94%) considered the Championship a reliable method for assessing BLS skills, while 99% agreed it was an effective training approach and should be repeated regularly. All respondents reported improved confidence in CPR skills, and 99% would recommend the program. Strong support was expressed for sustained CPR education, including in-school mannequins (99%), AED availability (96%), and mandatory national CPR training in schools (100%). **CONCLUSION:** The KSL National CPR Championship represents an effective, engaging, and scalable approach to BLS education among schoolchildren. The initiative enhances skill acquisition, confidence, and community awareness, supporting the integration of structured CPR training into national educational policy to improve OHCA outcomes.

[42. Nighttime human-supervised drone-delivered automated external defibrillators: a quasi-experimental mixed-methods feasibility study.](#)

Referencia: Resusc Plus. 2026 Sep 4;32:101457. doi: 10.1016/j.resplu.2026.101457. eCollection 2026 Nov.

Autores: Chan CKJ(1), Ho SYJ(1), Yip A(2), Tung FLN(1).

PMID: 42830836

DOI: 10.1016/j.resplu.2026.101457

Tipo de estudio: Estudio cuasiexperimental de factibilidad con métodos mixtos

Mensaje principal: Under controlled, early-night, open-area conditions, all human-supervised flight drone-delivered AED operations missions were completed without observed safety incidents. However, successful nighttime implementation requires addressing pilot workload, interface design, and operational protocols. These findings support development of 24/7 drone AED services while highlighting critical human factors considerations for sustainable operations.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

AIM: To evaluate the feasibility, safety, and operational challenges of human-supervised flight drone-delivered automated external defibrillator (AED) operations during nighttime for out-of-hospital cardiac arrest (OHCA), using a convergent mixed-methods design integrating quantitative performance metrics with qualitative human factors analysis. **METHODS:** A quasi-experimental study with 24 controlled flights (12 daytime, 12 nighttime) was conducted in a semi-urban area using a DJI M30T drone carrying a lightweight CellaED (480 g) over 877 m. Advanced-rated paramedic drone pilots executed human-supervised flight flights under extended visual line of sight (EVLOS), using automated waypoint navigation and manual final approach and landing. protocols. Quantitative data included flight times and safety incidents, analyzed using paired t-tests. Qualitative data from semi-structured pilot interviews were analyzed thematically using the SHELL (Software-Hardware-Environment-Liveware-Liveware) human factors framework. Integration occurred through convergent triangulation comparing quantitative duration metrics with pilot-reported operational themes. **RESULTS:** All 24 flights completed successfully without safety incidents or obstacle-avoidance triggers. Mean flight times were comparable (day: 136.00 ± 8.71 s vs. night: 139.92 ± 14.16 s; paired mean difference 3.92 s, S.D. 16.49, $p = 0.43$, Cohen's $d = 0.24$). Qualitative analysis identified eight major themes: night-mode interface challenges, GPS routing reliability, infrared sensor performance, pilot fatigue and stress, communication coordination, cognitive workload, landing zone conditions, and regulatory constraints. Triangulation of quantitative and qualitative findings showed that despite comparable flight performance, pilots reported significantly increased cognitive demands and environmental complexity during nighttime operations. **CONCLUSION:** Under controlled, early-night, open-area conditions, all human-supervised flight drone-delivered AED operations missions were completed without observed safety incidents. However, successful nighttime implementation requires addressing pilot workload, interface design, and operational protocols. These findings support development of 24/7 drone AED services while highlighting critical human factors considerations for sustainable operations.

46. Differential Association of Prehospital Physician Presence with Outcomes in Out-of-Hospital Cardiac Arrest: Secondary Analysis of a Nationwide Registry.

Referencia: Prehosp Emerg Care. 2026;30(7):1070-1078. doi: 10.1080/10903127.2026.2704730. Epub 2026 Jul 23.

Autores: Kawahara N(1), Takayama W(1), Morishita K(1).

PMID: 42467413

DOI: 10.1080/10903127.2026.2704730

Tipo de estudio: Análisis secundario retrospectivo de registro nacional

Mensaje principal: Prehospital physician presence was associated with improved neurological and survival outcomes after OHCA, with variation across patient subgroups; however, given the observational design and potential selection bias, these findings should be regarded as hypothesis-generating. Further prospective studies are warranted to define patient subgroups that benefit most from physician presence on scene and to optimize dispatch protocols accordingly.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

OBJECTIVES: Although prehospital physician involvement may affect outcomes after out-of-hospital cardiac arrest (OHCA), its effect could vary across patient subgroups. We aimed to evaluate whether physician presence is associated with improved survival in subgroups of patients with OHCA. **METHODS:** We used an observational study design and a retrospective secondary analysis of data from the nationwide Japanese Association for Acute Medicine OHCA registry (2014-2022). Adult patients (age ≥ 18 years) resuscitated after hospital arrival with complete prehospital physician data were included. The primary outcome was favorable neurological status at 30 days, defined

as a cerebral performance category score of 1 or 2. Multivariate logistic regression was performed to assess the association between physician presence and outcomes, adjusting for clinically relevant confounders. Prespecified subgroup analyses were also performed according to age, witness status, bystander intervention, etiology, and extracorporeal cardiopulmonary resuscitation (ECPR) use. **RESULTS:** Among 83,239 patients, 9,562 had physician attendance. Physician presence was associated with favorable neurological outcomes at 30 days (adjusted odds ratio 1.49, 95% confidence interval 1.34-1.65). The association was consistent across most prespecified subgroups and was stronger among patients with unwitnessed arrest; however, no significant association was observed in patients who underwent ECPR. **CONCLUSIONS:** Prehospital physician presence was associated with improved neurological and survival outcomes after OHCA, with variation across patient subgroups; however, given the observational design and potential selection bias, these findings should be regarded as hypothesis-generating. Further prospective studies are warranted to define patient subgroups that benefit most from physician presence on scene and to optimize dispatch protocols accordingly.

52. Self-Directed External BLS Training: Motivations for Continuing Professional Development Among Japanese Nurses.

Referencia: J Contin Educ Nurs. 2026 Oct;57(10):457-464. doi: 10.3928/00220124-20260414-03. Epub 2026 Jun 17.

Autores: Murakami K(1), Tan CSL(2).

PMID: 42307170

DOI: 10.3928/00220124-20260414-03

Tipo de estudio: Estudio cualitativo / formación continuada

Mensaje principal: Japanese nurses' motivation for participating in external BLS training reflects professional values, social influences, and organizational conditions. Health care organizations can sustain participation and promote continuous professional development by providing structured support, fostering reflective learning opportunities, and addressing emotional and social factors.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: Basic Life Support (BLS) training is essential for emergency care, yet participation in external courses often relies on nurses' initiative rather than institutional support. In Japan, where continuing education is inconsistently implemented, little is known about what motivates nurses to independently pursue and repeat BLS training. This study explored the motivational and contextual factors influencing Japanese nurses' participation in external BLS training. **METHOD:** A qualitative study was conducted that used semi-structured interviews with eight registered nurses. Data underwent thematic analysis. **RESULTS:** Eight themes emerged: desire for growth and competence, career advancement and professional recognition, role of peers and colleagues, motivation rooted in past experiences, balancing financial investment with perceived value, navigating competing demands, impact of organizational policies, and sustaining competence through repetition. **CONCLUSION:** Japanese nurses' motivation for participating in external BLS training reflects professional values, social influences, and organizational conditions. Health care organizations can sustain participation and promote continuous professional development by providing structured support, fostering reflective learning opportunities, and addressing emotional and social factors.

Desfibrilación y farmacología durante la reanimación

21. Amiodarone After Conversion From a Non-shockable to a Shockable Rhythm in Out-of-Hospital Cardiac Arrest A Propensity Score-Matched Analysis from the German Resuscitation Registry.

Referencia: Resuscitation. 2026 Oct 6;111349. doi: 10.1016/j.resuscitation.2026.111349. Online ahead of print.

Autores: Knapp J(1), Greif R(2), Bathe J(3), Wnent J(4), Harding U(5), Seewald S(6), Fischer M(7).

PMID: 42838501

DOI: 10.1016/j.resuscitation.2026.111349

Tipo de estudio: Cohorte retrospectiva de registro con propensity-score matching

Mensaje principal: In OHCA patients with an initial non-shockable rhythm who subsequently converted to a shockable rhythm, amiodarone administration was associated with improved short-term and long-term survival, but not with a statistically significant improved favourable neurological outcome. Future controlled studies might define the proper (earlier) time of amiodarone administration.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Amiodarone should be administered after three shocks according the current ERC ALS guidelines. However, its effect in out-of-hospital cardiac arrest (OHCA) patients with an initial non-shockable rhythm who subsequently convert to a shockable rhythm is not established. METHODS: We performed a retrospective observational cohort study using data from the German Resuscitation Registry. Adult patients with non-traumatic OHCA, having an initial non-shockable rhythm and subsequently received at least two defibrillations were included. Propensity-score-matched patient pairs (1:1) were analysed to compare outcomes between patients who received amiodarone during resuscitation and those who did not. The primary outcome was survival to hospital discharge. Secondary outcomes included hospital admission with return of spontaneous circulation (ROSC), 24-hour survival, survival to hospital discharge, and favourable neurological outcome at hospital discharge. RESULTS: Of 5,535 patients included 3,181 received amiodarone and 2,354 did not. After propensity-score matching, 1,843 patients remained in each group. Amiodarone administration was associated with higher rates of hospital admission with ROSC (26.7% vs. 23.0%; OR 1.22, 95% confidence interval 1.05-1.42), 24-hour survival (21.4% vs. 14.7%; OR 1.58, 95% CI 1.33-1.87), and survival to hospital discharge (6.5% vs. 4.2%; OR 1.58, 95% CI 1.18-2.12). Favourable neurological outcome at hospital discharge was not statistically significant (3.7% vs. 2.9%; OR 1.31, 95% CI 0.91-1.89). CONCLUSIONS: In OHCA patients with an initial non-shockable rhythm who subsequently converted to a shockable rhythm, amiodarone administration was associated with improved short-term and long-term survival, but not with a statistically significant improved favourable neurological outcome. Future controlled studies might define the proper (earlier) time of amiodarone administration.

26. Automated External Defibrillators for In-Hospital Cardiac Arrest: A Systematic Review.

Referencia: Resuscitation. 2026 Oct 6:111350. doi: 10.1016/j.resuscitation.2026.111350. Online ahead of print.

Autores: Ansari F(1), Walker M(2), Oleksin R(3), Roy A(4), Taylor A(5), Brooks SC(6).

PMID: 42838496

DOI: 10.1016/j.resuscitation.2026.111350

Tipo de estudio: Revisión sistemática

Mensaje principal: Available evidence is insufficient to determine whether routine ward-level AED deployment improves IHCA outcomes. Included studies were observational and heterogeneous and CPR quality and training were incompletely characterized. Potential benefit from earlier defibrillation in shockable rhythms must be weighed against possible compression interruptions. Contemporary comparative studies are needed.

Comentario crítico breve: La síntesis de evidencia es clínicamente relevante, aunque la certeza final depende de la calidad, heterogeneidad y diseño de los estudios incluidos. Las conclusiones deben ponderar especialmente la discrepancia entre evidencia observacional y aleatorizada cuando exista.

Abstract / resumen del registro fuente:

BACKGROUND: Automated external defibrillators (AEDs) improve survival after out-of-hospital cardiac arrest, but their role in in-hospital cardiac arrest (IHCA) remains uncertain. This systematic review evaluates whether ward-

accessible AED capability prior to code blue team arrival improves survival and neurologic outcomes compared with standard resuscitation systems. **METHODS:** Six databases were searched. Eligible studies compared AED use to manual defibrillation in IHCA outside specialized areas. Primary outcome was survival with favorable neurological status (CPC 1-2, mRS 0-3, or no deterioration from baseline). Secondary outcomes included ROSC, survival at 24 hours, survival to discharge, 30-day survival, CPR quality, and timing metrics. Three independent reviewers performed study selection, data extraction, and risk-of-bias assessment. Due to substantial heterogeneity, results were synthesized descriptively. **RESULTS:** Six reports from five unique study cohorts met inclusion criteria (total screened = 5,510). Neurologically favorable survival was inconsistent. One study reported improved outcomes following a combined AED-and-training intervention, whereas the largest multicentre cohort found no significant difference in neurological disability among survivors (adjusted relative risk 1.01, 95% CI 0.93-1.09). ROSC and survival to discharge were not consistently improved. Only one study directly quantified AED-associated compression pauses, and effects on time to defibrillation varied by setting. **CONCLUSION:** Available evidence is insufficient to determine whether routine ward-level AED deployment improves IHCA outcomes. Included studies were observational and heterogeneous and CPR quality and training were incompletely characterized. Potential benefit from earlier defibrillation in shockable rhythms must be weighed against possible compression interruptions. Contemporary comparative studies are needed.

48. Lidocaine Versus Amiodarone in Patients With Shockable Out-of-Hospital Cardiac Arrest: A Target Trial Emulation.

Referencia: Crit Care Med. 2026 Oct 1;54(10):2579-2589. doi: 10.1097/CCM.00000000000007265. Epub 2026 Jul 15.

Autores: Gelbenegger G(1), Cheskes S(2)(3)(4)(5)(6), Drennan IR(4)(5)(7), Lin S(2)(6)(7), Jilma B(1), Zeitlinger M(1), Scales DC(8), Jorda A(1).

PMID: 42456091

DOI: 10.1097/CCM.00000000000007265

Tipo de estudio: Emulación de ensayo objetivo con datos observacionales de registro

Mensaje principal: No statistically significant difference in survival or favorable neurologic outcome was observed between lidocaine and amiodarone; however, the wide CIs cannot exclude a clinically meaningful benefit for lidocaine. These findings are consistent with randomized controlled trials, but residual confounding cannot be excluded.

Comentario crítico breve: La emulación de un ensayo objetivo intenta reducir sesgos propios de comparaciones observacionales, pero no sustituye a la aleatorización. El estudio no demuestra superioridad estadísticamente significativa de lidocaína y mantiene la posibilidad de confusión residual.

Abstract / resumen del registro fuente:

OBJECTIVES: Amiodarone or lidocaine are recommended for the treatment of shockable out-of-hospital cardiac arrest (OHCA). Previous comparisons between the two antiarrhythmic drugs were inconclusive. **DESIGN:** This analysis included data from the Resuscitation Outcomes Consortium Cardiac Epidemiologic Registry 3 (2011-2015). A target trial framework was used to overcome confounding inherent in observational comparisons. **SETTING:** Data from patients with OHCA were prospectively collected by emergency medical services (EMS) at multiple North American sites. **PATIENTS:** Adults with nontraumatic OHCA and an initial shockable rhythm who received at least three defibrillation attempts were included. Time zero was defined as first antiarrhythmic drug administration, at which eligibility criteria had to be met. **INTERVENTIONS:** Two antiarrhythmic treatment strategies were compared: lidocaine vs. amiodarone. **MEASUREMENTS AND MAIN RESULTS:** The primary outcome was survival to hospital discharge. The key secondary outcome was favorable neurologic outcome at discharge (modified Rankin scale score of 3 or less). Group differences were adjusted using inverse probability weighting (key covariates: age, sex, location of OHCA, witness status, bystander resuscitation, automated external defibrillator shock, elapsed time from call to advanced life support arrival/first EMS shock/advanced airway, intraosseous access) and a multiple logistic regression model. Of 2451 patients included, 987 received lidocaine and 1464 received amiodarone. The adjusted percentage point difference in survival to hospital discharge was 2.8% favoring lidocaine (95% CI, -0.6 to 6.2); the

estimated survival probabilities were 26.2% (275/987) with lidocaine and 23.5% (329/1464) with amiodarone. No difference was observed in the estimated probability of favorable neurologic outcome at discharge between the lidocaine group (17.7%) and the amiodarone group (16.2%) (adjusted difference, 1.5%; 95% CI, -1.5 to 4.5).

CONCLUSIONS: No statistically significant difference in survival or favorable neurologic outcome was observed between lidocaine and amiodarone; however, the wide CIs cannot exclude a clinically meaningful benefit for lidocaine. These findings are consistent with randomized controlled trials, but residual confounding cannot be excluded.

Reanimación avanzada, ECPR/ECMO y soporte circulatorio

4. Early-Phase Computed Tomography Bowel Diameter and Neurological Outcomes Post-Extracorporeal Cardiopulmonary Resuscitation.

Referencia: Emerg Med Int. 2026 Oct 9;2026:4291375. doi: 10.1155/emmi/4291375. eCollection 2026.

Autores: Hiyama S(1), Inoue M(1), Inoue K(1), Kato T(1), Shibahashi K(1), Sugiyama K(1).

PMID: 42857397

DOI: 10.1155/emmi/4291375

Tipo de estudio: Estudio observacional exploratorio unicéntrico

Mensaje principal: The results of this exploratory investigation suggest that bowel diameter may represent a potential adjunctive marker associated with functional outcomes post-ECPR for OHCA.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

AIM: We aimed to conduct an exploratory investigation on the association between bowel diameter on early-phase abdominal computed tomography (CT) and neurological outcomes in patients undergoing extracorporeal cardiopulmonary resuscitation (ECPR) for out-of-hospital cardiac arrest (OHCA). **METHODS:** This observational study included patients who underwent ECPR for OHCA and abdominal CT before intensive care unit admission between January 2015 and December 2021 at a tertiary emergency medical center. Maximum bowel diameter was measured with a picture archiving and communication system by an investigator blinded to outcomes. The primary endpoint was unfavorable neurological outcomes at 1 month, defined as Cerebral Performance Category 3-5. The discriminatory ability of bowel diameter was assessed using the area under the receiver operating characteristic curve (AUC). **RESULTS:** Data from 181 patients were analyzed (median age, 57 years; 84.5% male). Bowel diameter demonstrated a weak ability to predict unfavorable neurological outcomes, with an AUC of 0.58 (95% confidence interval [CI], 0.47-0.70). However, higher discriminatory performance was observed in subgroups of patients aged $\geq$ 65 years (AUC, 0.83; 95% CI, 0.69-0.96) and those with initial nonshockable rhythms (AUC, 0.69; 95% CI, 0.47-0.91). **CONCLUSION:** The results of this exploratory investigation suggest that bowel diameter may represent a potential adjunctive marker associated with functional outcomes post-ECPR for OHCA.

10. Age-Dependent Benefit of ECPR in OHCA: An Interaction Analysis.

Referencia: Chonnam Med J. 2026 Sep;62(3):122-128. doi: 10.4068/cmj.2026.62.3.122. Epub 2026 Sep 21.

Autores: Chang MH(1)(2), Lin YE(3), Chang MC(4), Chang WH(5)(6)(7)(8).

PMID: 42851276

DOI: 10.4068/cmj.2026.62.3.122

Tipo de estudio: Cohorte retrospectiva con análisis de interacción

Mensaje principal: These findings demonstrate that ECPR effectiveness is strongly age-dependent. Consequently, age should be considered as a continuous effect modifier rather than a rigid eligibility threshold for ECPR selection.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

ECPR effectiveness in OHCA remains inconsistent, and age-related effect modification is not well defined. This retrospective study analyzed 470 adult patients (2011-2025), comparing ECPR (n=71) to CCPR (n=399). Using multivariable regression and inverse probability of treatment weighting (IPTW), we found that increasing age independently associated with higher mortality (aOR: 1.064). Also, a significant interaction between age and treatment strategy was identified ($p < 0.001$). ECPR provided a substantial mortality reduction in younger patients, but this benefit progressively attenuated with age. These findings demonstrate that ECPR effectiveness is strongly age-dependent. Consequently, age should be considered as a continuous effect modifier rather than a rigid eligibility threshold for ECPR selection.

19. Lactate and pH as Predictors of In-Hospital Mortality in Extracorporeal Cardiopulmonary Resuscitation: A Single-Center Retrospective Study.

Referencia: J Cardiothorac Vasc Anesth. 2026 Sep 3:S1053-0770(26)00876-1. doi: 10.1053/j.jvca.2026.08.166. Online ahead of print.

Autores: Reddy KP(1), Olia SE(2), Usman AA(1), Ibrahim ME(2), Bermudez CA(2), Cevalco M(2), Szeto WY(2), Augoustides JG(1), Vernick WJ(1), Gutsche JT(1), Spelde AE(3).

PMID: 42838847

DOI: 10.1053/j.jvca.2026.08.166

Tipo de estudio: Cohorte retrospectiva unicéntrica

Mensaje principal: These findings support the inclusion of lactate and pH in a cumulative, multifactorial risk stratification framework to inform real-time prognostication and patient selection for ECPR on an individual programmatic basis.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

OBJECTIVES: Extracorporeal cardiopulmonary resuscitation (ECPR) is increasingly used for patients with refractory cardiac arrest, yet optimal criteria for patient selection remain poorly understood. Precannulation lactate and pH values are prognostic markers, but given the wide ranges in existing literature, there is no consensus on threshold values that optimally stratify risk. This study aims to evaluate individual and combined prognostic values of precannulation lactate and pH in predicting hospital mortality. **DESIGN:** Retrospective cohort study. **SETTING:** Single, quaternary academic center. **PARTICIPANTS:** Adult patients undergoing ECPR between September 2011 and April 2025 (n = 484). **INTERVENTIONS:** None. **MEASUREMENTS AND MAIN RESULTS:** Pre- and postcannulation lactate and pH values were retrospectively identified. Logistic regression–assessed associations between lactate and pH and hospital mortality, receiver operating characteristic curves, and area under the curve values were calculated. Optimal cut-off values for lactate and pH were calculated using the Youden index in receiver operating characteristic analyses. Median lactate was 8.7 mmol/L (IQR 4.1-12.3), and median pH was 7.23 (IQR 7.09-7.34). In-hospital mortality was 62.4%. Non-survivors had significantly higher median lactate (9.3 v 7.3, $p < .001$) and lower median pH (7.2 v 7.27, $p < .001$) values. In multivariable logistic regressions, lactate (OR 1.13 per mmol/L, 95% CI 1.05-1.22) and pH (OR 0.61 per 0.1 unit, 95% CI 0.47-0.76) were each independently associated with mortality. However, in models including both variables, pH remained a significant predictor of mortality, whereas lactate did not. Optimal cut points were 10.85 mmol/L for lactate and 7.2 for pH. **CONCLUSION:** These findings support the inclusion of lactate and pH in a

cumulative, multifactorial risk stratification framework to inform real-time prognostication and patient selection for ECPR on an individual programmatic basis.

22. Impact of Cardiac Rhythm Dynamics during Cardiopulmonary Resuscitation on Clinical Outcomes in Patients Treated with Extracorporeal Cardiopulmonary Resuscitation (ECPR): A Systematic Review and Meta-analysis.

Referencia: Resuscitation. 2026 Oct 6:111348. doi: 10.1016/j.resuscitation.2026.111348. Online ahead of print.

Autores: Marabotti A(1), Cianchi G(2), Franceschi E(2), Rob D(3), Bělohávek J(4), Bonizzoli M(2).

PMID: 42838500

DOI: 10.1016/j.resuscitation.2026.111348

Tipo de estudio: Revisión sistemática y metaanálisis

Mensaje principal: Rhythm dynamics provide valuable prognostic insights for candidates for extracorporeal cardiopulmonary resuscitation. Rhythm decay toward asystole may predict resuscitation failure and poor neurological survival, suggesting that it should prompt a critical re-evaluation of the appropriateness of extracorporeal cardiopulmonary resuscitation.

Comentario crítico breve: La síntesis de evidencia es clínicamente relevante, aunque la certeza final depende de la calidad, heterogeneidad y diseño de los estudios incluidos. Las conclusiones deben ponderar especialmente la discrepancia entre evidencia observacional y aleatorizada cuando exista.

Abstract / resumen del registro fuente:

BACKGROUND: Although the initial presenting cardiac rhythm is an established prognostic factor for extracorporeal cardiopulmonary resuscitation, heart rhythm dynamics during conventional cardiopulmonary resuscitation remain poorly studied. We evaluated how the evolution of rhythm affects neurological outcomes and survival among recipients of extracorporeal cardiopulmonary resuscitation. **METHODS:** We systematically searched PubMed and Embase for studies evaluating rhythm dynamics, focusing on Rhythm Improvement (from non-shockable to shockable) or Rhythm Decay (from shockable to non-shockable). The primary outcome was survival with a favorable neurological outcome at the longest follow-up; the secondary outcome was overall survival. A random-effects model analysis with the Hartung-Knapp adjustment was used. **RESULTS:** Ten observational studies evaluating 5183 subjects with out-of-hospital cardiac arrest treated with extracorporeal cardiopulmonary resuscitation were included. Rhythm improvement was associated with a higher probability of a favorable neurological outcome (RR 3.12, 95% CI 1.26-7.74; GRADE: Low) compared with refractory non-shockable rhythms. Conversely, rhythm decay reduced the likelihood of a favorable neurological outcome compared with a sustained shockable rhythm (RR 0.41, 95% CI 0.21-0.80; GRADE: Moderate). Notably, decay toward asystole showed a robust negative association with good neurological recovery (RR 0.20, 95% CI 0.09-0.45; GRADE: Moderate), whereas decay toward pulseless electrical activity did not reach statistical significance (RR 0.62, 95% CI 0.31-1.25; GRADE: Low). **CONCLUSIONS:** Rhythm dynamics provide valuable prognostic insights for candidates for extracorporeal cardiopulmonary resuscitation. Rhythm decay toward asystole may predict resuscitation failure and poor neurological survival, suggesting that it should prompt a critical re-evaluation of the appropriateness of extracorporeal cardiopulmonary resuscitation.

49. Landscape of Extracorporeal Cardiopulmonary Resuscitation in Germany. A Nationwide Retrospective Study.

Referencia: Prehosp Emerg Care. 2026;30(7):1056-1062. doi: 10.1080/10903127.2026.2697436. Epub 2026 Jul 22.

Autores: Jasny T(1), Klocka JA(1), Lotz G(1), Supady A(2), Hoechter DJ(3), Rieder C(3), Swol J(4), Weber L(1), Zacharowski K(1), Friedrichson B(1).

PMID: 42413030

DOI: 10.1080/10903127.2026.2697436

Tipo de estudio: Estudio retrospectivo nacional

Mensaje principal: Between 2018 and 2023, ECPR was used for 2.9% of refractory OHCA cases admitted to hospitals in Germany. ECPR utilization increased while survival remained unchanged at approximately 12%. The widespread provision of ECPR by institutions with low case volume, within the specific regulatory and organizational context of

the German health care system, underscores the need for national quality standards and registries to improve consistency of ECPR care.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

OBJECTIVES: Sudden cardiac death is a leading cause of death globally. Recent guidelines recommend considering extracorporeal cardiopulmonary resuscitation (ECPR) for refractory cardiac arrest, but evidence regarding favorable outcomes remains scarce. **METHODS:** This nationwide retrospective observational study analyzes ECPR for out-of-hospital cardiac arrest (OHCA) in Germany. The Federal Statistical Office of Germany provided data for all refractory OHCA patients in German hospitals between 2018 and 2023, including identification of those who received ECPR. All patients aged 18 years and older were included. The primary endpoint was hospital mortality. Secondary endpoints were center caseload and location. **RESULTS:** Between 2018 and 2023 27,056 patients were admitted with OHCA refractory to conventional CPR and 785 (2.9%) received ECPR. Survival without ECPR was 11.3% and 11.8% with ECPR, with no significant difference between the groups. ECPR utilization increased from 1.8% (n = 62) in 2018 to 4.1% (n = 168) in 2023, but survival rates remained unchanged. Among hospitals treating patients with OHCA, 11.6% (n = 102) provided ECPR. The median number of annual cases per ECPR center was three. Urban centers had higher prior VA ECMO experience and ECPR caseload. Survival was higher for urban centers, though not statistically significant. **CONCLUSIONS:** Between 2018 and 2023, ECPR was used for 2.9% of refractory OHCA cases admitted to hospitals in Germany. ECPR utilization increased while survival remained unchanged at approximately 12%. The widespread provision of ECPR by institutions with low case volume, within the specific regulatory and organizational context of the German health care system, underscores the need for national quality standards and registries to improve consistency of ECPR care.

50. Ethical Dilemmas in Pediatric Extracorporeal Cardiopulmonary Resuscitation: Qualitative Study of Interprofessional Perspectives.

Referencia: *Pediatr Crit Care Med.* 2026 Oct 1;27(10):1278-1286. doi: 10.1097/PCC.0000000000004006. Epub 2026 Jun 26.

Autores: Limaye M(1)(2), Peterson ME(3)(4), Derrington S(5), Mueller C(3), Han PK(6).

PMID: 42348810

DOI: 10.1097/PCC.0000000000004006

Tipo de estudio: Estudio cualitativo

Mensaje principal: In this single-center study carried out 2022-2023, we explored interprofessional perspectives on the ethical complexities in pediatric ECPR. Viewing these themes through a virtues-based ethical perspective may offer a structured approach to facilitate team dialogue. Further research is needed to determine whether this approach influences clinical decision-making and impacts team alignment.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

OBJECTIVES: Interprofessional perspectives on the ethical dilemmas associated with pediatric extracorporeal cardiopulmonary resuscitation (ECPR) are underexplored in the literature. In this study we aimed to explore interprofessional perspectives on pediatric ECPR and the ethical dilemmas encountered by healthcare teams. **DESIGN:** Descriptive, exploratory, qualitative study using semi-structured interviews. **SETTING:** Noncardiac PICU at a quaternary care academic center in the United States. **PARTICIPANTS:** Fifteen pediatric providers from general surgery, noncardiac intensive care, and perfusion. **INTERVENTION:** None. **MEASUREMENTS AND MAIN RESULTS:** Semi-structured interviews were conducted between December 2022 and April 2023. Interviews were audio recorded

and professionally transcribed verbatim. Using a constructivist grounded theory approach, interviews were coded by an interprofessional team using qualitative software. Interviewing continued until thematic saturation was reached. Codes were organized into common themes using the constant comparative method and discussed in iterative multidisciplinary meetings. Themes were analyzed through a virtues-based ethical framework to better characterize the ethical motivations guiding professional perspectives. We identified five major themes, including 1) informed consent; 2) decision-making authority; 3) past experiences; 4) end-of-life care; and 5) resource allocation. **CONCLUSIONS:** In this single-center study carried out 2022-2023, we explored interprofessional perspectives on the ethical complexities in pediatric ECPR. Viewing these themes through a virtues-based ethical perspective may offer a structured approach to facilitate team dialogue. Further research is needed to determine whether this approach influences clinical decision-making and impacts team alignment.

Vía aérea, ventilación, monitorización y calidad de la RCP

9. Spirometry and end-tidal carbon dioxide changes during chest compressions with PPE: a simulation randomized crossover study.

Referencia: Cent Eur J Public Health. 2026 Sep;34(3):185-190. doi: 10.21101/cejph.a8785.

Autores: Cmorej P(1)(2), Bureš P(1)(2), Kounovský O(1)(2), Kohlová A(2)(3), Boguská D(4), Ralbovská DR(5), Hrach K(2), Šín R(6), Pekara J(7).

PMID: 42853053

DOI: 10.21101/cejph.a8785

Tipo de estudio: Estudio aleatorizado cruzado de simulación

Mensaje principal: PPE use during simulated resuscitation was not associated with deterioration of spirometric parameters. Although Et-CO₂ increased slightly during selected CPR cycles, these changes were unlikely to represent clinically relevant respiratory impairment.

Comentario crítico breve: El diseño aleatorizado mejora la inferencia causal. La aplicabilidad depende del contexto del estudio y, en simulación, de que la mejora observada se traduzca después a pacientes reales.

Abstract / resumen del registro fuente:

OBJECTIVES: Personal protective equipment (PPE) use in prehospital emergency care has increased significantly since the coronavirus pandemic onset in 2019. Few studies have been published on the PPE effects on spirometry parameters and end-tidal carbon dioxide (Et-CO₂). This study aimed to determine whether PPE use affects spirometric parameters and Et-CO₂ during chest compressions. **METHODS:** This was a randomized crossover simulation study with 35 emergency medical service providers who performed 20 minutes of intermittent chest compressions on a mannikin (five 2 min cycles alternated by 2 min of rest). Two iterations were completed in randomized order: without PPE and with PPE. Spirometry parameters (forced vital capacity, forced expiratory volume in 1 s, peak expiratory flow, and Tiffeneau index) and end-tidal carbon dioxide were measured. **RESULTS:** No spirometry parameter differences were noted between the two groups ($p > 0.05$). When using PPE with an FFP2 mask, Et-CO₂ was higher at the end of the first and fifth chest compression cycles ($p \leq 0.001$). **CONCLUSION:** PPE use during simulated resuscitation was not associated with deterioration of spirometric parameters. Although Et-CO₂ increased slightly during selected CPR cycles, these changes were unlikely to represent clinically relevant respiratory impairment.

12. Outcomes Following Impedance Threshold Device Use During Out-of-Hospital Cardiac Arrest.

Referencia: Resuscitation. 2026 Oct 8:111340. doi: 10.1016/j.resuscitation.2026.111340. Online ahead of print.

Autores: Weidman AC(1), Crowe RP(2), Treichel A(2), Menegazzi JJ(3).

PMID: 42849561

DOI: 10.1016/j.resuscitation.2026.111340

Tipo de estudio: Análisis observacional retrospectivo de base nacional EMS

Mensaje principal: ITD use was associated with improved prehospital outcomes but worsened dispositional outcomes among patients experiencing OHCA, suggesting this device may prove beneficial early in resuscitation of OHCA patients.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: Existing work is equivocal regarding the benefit of impedance threshold device (ITD) use among patients experiencing out-of-hospital cardiac arrest (OHCA). We examined the association of ITD use with prehospital outcomes and longer-term dispositions in a nationally representative sample of OHCA patients. **METHODS:** We included adult, non-traumatic, OHCA scene runs from the 2024 ESO Data Collaborative. We compared patients treated with (a) ITD only; (b) ITD and active compression-decompression device (ITD+ACD); and (c) neither device (no ITD). Prehospital outcomes included return of spontaneous circulation (ROSC) and survival to hospital arrival (SHA); disposition outcomes included survival to hospital discharge and favorable neurologic outcome (i.e., discharge to home). We used multivariate logistic regression to examine the association of treatment group with outcomes, adjusting for demographics and several potential confounders. **RESULTS:** We included 97,439 patient records (85.3% no ITD; 13.1% ITD only; 1.6% ITD+ACD). Disposition outcomes were available for 13,026 patients (23.3%). ROSC was higher for patients treated with ITD only (26.7%) than those treated with no ITD (23.8%; aOR=1.09 [1.04, 1.14]); a similar pattern emerged for SHA. Conversely, survival to discharge was lower for patients treated with ITD only (23.9%) than those treated with no ITD (32.0%; aOR=0.68, [.61, .76]); a similar pattern emerged for favorable neurologic outcome. The ITD+ACD group showed more extreme versions of the trends observed for ITD only. **CONCLUSIONS:** ITD use was associated with improved prehospital outcomes but worsened dispositional outcomes among patients experiencing OHCA, suggesting this device may prove beneficial early in resuscitation of OHCA patients.

14. Spectral Characteristics and Parameters of Pulse Oximetry Waveforms for Assessing Resuscitation Status.

Referencia: Resuscitation. 2026 Oct 7:111346. doi: 10.1016/j.resuscitation.2026.111346. Online ahead of print.

Autores: Li C(1), Tang H(2), Yang J(2), Chai Y(1), Yu X(2), Xu S(3), Xu J(4).

PMID: 42843615

DOI: 10.1016/j.resuscitation.2026.111346

Tipo de estudio: Estudio multicéntrico retrospectivo

Mensaje principal: Pulse oximetry plethysmography waveform analysis-using signals already available on standard monitors-may provide a non-invasive, real-time approach that may help identify ROSC during ongoing compressions and distinguish between stable and unstable circulation.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Real-time assessment of physiological resuscitation status is critical for guiding personalised cardiopulmonary resuscitation (CPR) and avoiding unnecessary harm from prolonged chest compressions. Non-invasive, objectively trackable tools for this purpose remain limited. **METHODS:** This multicentre retrospective study (2013-2018) included 451 adult patients with cardiac arrest (497 CPR episodes) from 14 Chinese tertiary hospitals, comprising 158 Out-of-Hospital Cardiac Arrest (OHCA) episodes with prehospital SpO₂/ECG monitoring continued upon ED arrival and full pulse oximetry plethysmography (POP)/ECG/end-tidal carbon dioxide (ETCO₂) monitoring established in the ED, and 339 In-Hospital Cardiac Arrest (IHCA) episodes occurring in the ED. We analysed POP waveforms across four statuses: compression-only (CC), chest compression with return of spontaneous circulation

(CC+ROSC, spontaneous circulation during ongoing compressions), non-compression without ROSC, and spontaneous circulation-only (SC). Time-domain (area under the POP curve [POPAUC]) and frequency-domain spectral features were evaluated against clinically documented ROSC. RESULTS: A frequency-domain "hybrid" pattern during the CC+ROSC identified ROSC with 100% specificity (PPV 1.000). In CC status, POPAUC was higher in stable-ROSC than unstable-ROSC (3232.2±1008.2 vs. 2769.6±1013.0 PVP, $P=0.007$). The POPAUC was lower in CC+ROSC status than in SC status for stable-ROSC (2768.2±997.8 vs. 3335.8±842.4 PVP, $P=0.001$), but the reverse was observed for unstable-ROSC (2697.5±941.0 vs. 1338.1±952.6 PVP, $P<0.001$). POP waveforms disappearance with concurrent ECG presence identified pulseless electrical activity with 100% specificity. CONCLUSION: Pulse oximetry plethysmography waveform analysis-using signals already available on standard monitors-may provide a non-invasive, real-time approach that may help identify ROSC during ongoing compressions and distinguish between stable and unstable circulation.

38. Supraglottic airway versus endotracheal intubation in out-of-hospital cardiac arrest: a systematic review and meta-analysis.

Referencia: Resusc Plus. 2026 Sep 14;32:101491. doi: 10.1016/j.resplu.2026.101491. eCollection 2026 Nov.

Autores: Costa BS(1), Colla MCP(1), de Moraes JW(1), Rizzolli LG(2), Rezende EF(3), Cenci LP(4), Grillo ITC(5), Cruz LWLC(6), Silva JM Jr(7)(8), Zivkovic AR(9), Caldonazo T(10)(11), Passos FS(12), Ehler J(13), Trembl RE(14).

PMID: 42831128

DOI: 10.1016/j.resplu.2026.101491

Tipo de estudio: Revisión sistemática y metaanálisis

Mensaje principal: In out-of-hospital cardiac arrest, survival to hospital discharge did not differ between strategies, whereas SGA placement, compared with TI, was associated with a lower likelihood of ROSC. In an exploratory subgroup analysis of studies reporting neurological outcomes at ≥ 1 month after OHCA, TI was associated with a higher likelihood of favorable neurological outcome compared with SGA. Given the mostly observational evidence, substantial heterogeneity, and reversal in randomized trials, these findings are hypothesis-generating and warrant randomized confirmation. Prospero Registration: CRD420261337076.

Comentario crítico breve: La síntesis de evidencia es clínicamente relevante, aunque la certeza final depende de la calidad, heterogeneidad y diseño de los estudios incluidos. Las conclusiones deben ponderar especialmente la discrepancia entre evidencia observacional y aleatorizada cuando exista.

Abstract / resumen del registro fuente:

PURPOSE: Evidence comparing supraglottic airway with tracheal intubation in out-of-hospital cardiac arrest remains conflicting, and prior meta-analyses covered few randomized trials. We compared these strategies in adults.

METHODS: PubMed, Embase, and the Cochrane Library were searched from inception to January 2026 for randomized and observational studies comparing the two strategies in adults. Primary outcomes were survival to hospital discharge and return of spontaneous circulation (ROSC); favorable neurological outcome was secondary. Risk of bias was assessed with ROBINS-I and RoB 2, and certainty with GRADE. Risk ratios (RR) with 95% confidence intervals (CI) were pooled using restricted maximum likelihood random-effects models, with heterogeneity (I^2), subgroup, sensitivity, meta-regression, and exploratory trial sequential analyses. RESULTS: Thirteen studies (246,659 patients) were included. Survival to hospital discharge did not differ between SGA and TI groups (RR 0.96; 95% CI 0.82-1.12; $I^2 = 80\%$). Compared with tracheal intubation, supraglottic airway placement was associated with a lower rate of return of spontaneous circulation (RR 0.86; 95% CI 0.77-0.96; $I^2 = 96\%$), particularly in the prehospital setting (RR 0.82; 95% CI 0.71-0.95). The direction of the association differed according to study design: SGA was associated with a lower rate of ROSC than TI in observational studies (RR 0.81; 95% CI 0.73-0.89), whereas SGA was associated with a higher rate of ROSC than TI in the two randomized trials (RR 1.09; 95% CI 1.03-1.16). Favorable neurological outcome did not differ overall (RR 0.99; 95% CI 0.88-1.11; $I^2 = 61\%$), although the exploratory subgroup analysis showed a borderline statistically significantly lower rate of favorable neurological outcomes with SGA compared with TI among studies assessing outcomes at ≥ 1 month after the event (RR 0.90; 95% CI 0.81-0.99). Exploratory trial sequential analyses were overall inconclusive, with more supportive findings observed for ROSC. These exploratory

analyses should be interpreted cautiously. **CONCLUSION:** In out-of-hospital cardiac arrest, survival to hospital discharge did not differ between strategies, whereas SGA placement, compared with TI, was associated with a lower likelihood of ROSC. In an exploratory subgroup analysis of studies reporting neurological outcomes at ≥ 1 month after OHCA, TI was associated with a higher likelihood of favorable neurological outcome compared with SGA. Given the mostly observational evidence, substantial heterogeneity, and reversal in randomized trials, these findings are hypothesis-generating and warrant randomized confirmation. Prospero Registration: CRD420261337076.

44. Association of Chest Compression Depth, Rate, and Spring Resistance with "Quality CardioPulmonary Resuscitation" (QCPR) Scores in a Manikin Model.

Referencia: J Med Syst. 2026 Oct 5;50(1):142. doi: 10.1007/s10916-026-02469-z.

Autores: Metličar Š(1), Lauridsen KG(2)(3), Štiglic G(4)(5)(6), Fijačko N(7).

PMID: 42830370

DOI: 10.1007/s10916-026-02469-z

Tipo de estudio: Estudio experimental en maniquí

Mensaje principal: Additionally, we observed QCPR score differences of up to 18% for identical preset CC depth and rate settings with different springs. High QCPR scores were often achieved outside guideline ranges, emphasizing the need to interpret QCPR scores alongside absolute CC parameters and use guideline-compliant metrics as the standard for training and research.

Comentario crítico breve: Permite estudiar desempeño técnico y factores humanos de forma controlada, pero no demuestra beneficio clínico en pacientes. Su valor es optimizar entrenamiento o dispositivos antes de validación clínica.

Abstract / resumen del registro fuente:

Training in high-quality chest compressions (CCs) is essential for effective resuscitation; however, it remains unclear how accurately real-time feedback systems, such as Laerdal Medical's (Stavanger, Norway) Quality CardioPulmonary Resuscitation (QCPR) scoring system, reflect guideline-compliant CC quality. We aimed to investigate how CC depth, rate, and spring resistance affect QCPR scores. We conducted an experimental study using a Resusci Anne QCPR manikin (Laerdal Medical, Stavanger, Norway) equipped with interchangeable 30-, 50-, and 60-kg chest springs and a Corpuls mechanical CC device (GS Elektromedizinische Geräte G. Stemple GmbH, Kaufering, Germany). For each spring resistance, continuous CCs were delivered in two-minute intervals at predefined combinations of CC depth (2.0-6.0 cm) and rate (80-120 compressions per minute). CC quality was quantified using the QCPR score (0%-100%). Across all spring resistances, QCPR scores rose modestly at 3.0-3.5 cm and increased further at 4.0-4.5 cm, where the greatest score variation across preset CC rates and spring resistances was observed. At ≥ 5.0 cm, QCPR scores were consistently high (57%-100%). Overall, CC depth was the primary determinant of the QCPR score, with the highest scores observed at ≥ 5.0 cm. Additionally, we observed QCPR score differences of up to 18% for identical preset CC depth and rate settings with different springs. High QCPR scores were often achieved outside guideline ranges, emphasizing the need to interpret QCPR scores alongside absolute CC parameters and use guideline-compliant metrics as the standard for training and research.

53. Compression-only or standard cardiopulmonary resuscitation for out-of-hospital cardiac arrest: a systematic review and meta-analysis of randomized controlled trials.

Referencia: Monaldi Arch Chest Dis. 2026 Sep 7;96(3). doi: 10.4081/monaldi.2025.3362. Epub 2025 May 22.

Autores: Sandhu AS(1), Maan MAA(2), Obi O(3), Hervir O(4), Abdelnour M(5), Gandhi N(6), Fatahi M(7), Mohamed A(8), Yadav RP(9), Shah JZ(10), Ehsan M(11), Rehman WU(12).

PMID: 40421483

DOI: 10.4081/monaldi.2025.3362

Tipo de estudio: Revisión sistemática y metaanálisis de ensayos aleatorizados

Mensaje principal: No significant difference was observed between the two groups regarding 1-day survival (RR 1.07, 95% CI: 0.94 to 1.23), survival to hospital admission with a good neurological outcome (cerebral performance category 1 or 2) (RR 1.10, 95% CI: 0.80 to 1.51), return of spontaneous circulation (RR 1.05, 95% CI: 0.95 to 1.17), and survival to hospital admission (RR 1.08, 95% CI: 0.93 to 1.25). This meta-analysis found that chest CO-CPR significantly improves survival to hospital discharge compared to sCPR for managing OHCA, while yielding comparable results for other resuscitation outcomes.

Comentario crítico breve: La síntesis de evidencia es clínicamente relevante, aunque la certeza final depende de la calidad, heterogeneidad y diseño de los estudios incluidos. Las conclusiones deben ponderar especialmente la discrepancia entre evidencia observacional y aleatorizada cuando exista.

Abstract / resumen del registro fuente:

This meta-analysis aims to compare chest compression-only cardiopulmonary resuscitation (CO-CPR) with standard CPR (sCPR), which includes mouth-to-mouth ventilation, as potential strategies for managing out-of-hospital cardiac arrest (OHCA). We systematically searched various databases and registries such as MEDLINE, Embase, The Cochrane Library, and Clinicaltrials.gov to retrieve relevant studies. We used the revised Cochrane "Risk of Bias" tool for randomized trials (RoB 2.0) to assess the risk of bias in included studies. Revman 5.4 was used to pool dichotomous outcomes under a random-effects model. A total of 4 randomized controlled trials were included in our meta-analysis. Our results indicate that CO-CPR was associated with a significantly increased survival to hospital discharge compared to sCPR [relative risk (RR) 1.22, 95% confidence interval (CI): 1.01 to 1.46] with minimal heterogeneity ($I^2=0\%$). No significant difference was observed between the two groups regarding 1-day survival (RR 1.07, 95% CI: 0.94 to 1.23), survival to hospital admission with a good neurological outcome (cerebral performance category 1 or 2) (RR 1.10, 95% CI: 0.80 to 1.51), return of spontaneous circulation (RR 1.05, 95% CI: 0.95 to 1.17), and survival to hospital admission (RR 1.08, 95% CI: 0.93 to 1.25). This meta-analysis found that chest CO-CPR significantly improves survival to hospital discharge compared to sCPR for managing OHCA, while yielding comparable results for other resuscitation outcomes.

Cuidados posresucitación, rehabilitación y neuropronóstico

5. Early Post-ROSC Laboratory Phenotypes and Clinical Outcomes after Out-of-Hospital Cardiac Arrest: A 10-Year National Cohort Study.

Referencia: Resuscitation. 2026 Oct 9:111351. doi: 10.1016/j.resuscitation.2026.111351. Online ahead of print.

Autores: Liu X(1), Chong KW(2), Lau YH(2), Drum CL(3), Richards AM(4), Lip GY(5), Yeo KK(2), Ong ME(6), Lim SL(7); Singapore PAROS and SingCLOUD investigators.

PMID: 42855036

DOI: 10.1016/j.resuscitation.2026.111351

Tipo de estudio: Cohorte retrospectiva nacional

Mensaje principal: Early post-ROSC laboratory data identified three prognostically distinct phenotypes among resuscitated OHCA patients. These exploratory findings support external validation and investigation of phenotype-guided therapies.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Prior phenotyping in out-of-hospital cardiac arrest (OHCA) relied predominantly on prehospital indicators, which neither describe nor grade the underlying ischemia-reperfusion injury. We aimed to derive laboratory-based phenotypes and describe their clinical characteristics and outcome associations. **METHODS:** We

conducted a retrospective cohort study of adult resuscitated OHCA patients of presumed cardiac etiology between 01/02/2011 and 01/01/2022, linking Singapore's national OHCA and cardiovascular databases. Unsupervised latent class analysis (LCA) was applied to 14 laboratory variables within six hours post-return of spontaneous circulation (ROSC). Stability was confirmed through split-sample validation. Logistic regression and Cox proportional hazards model, adjusted for age, sex and initial cardiac rhythm, assessed poor neurological recovery at hospital discharge, 30-day and 3-year mortality. RESULTS: Among 1514 eligible patients (median age 65.0 years, 73.6% males), LCA identified three distinct phenotypes: multi-organ dysfunction (MOD, N=286), homeostatic (HOM, N=967), and immune-dysregulated (IMD, N=261), independently reproduced in derivation (entropy=0.817) and replication (entropy=0.892) subsamples. The most discriminative variables were creatinine, eosinophil and lymphocyte. Compared to MOD, both HOM (aOR: 0.50, 95% CI 0.30-0.78, p=0.004) and IMD (aOR: 0.46, 95% CI 0.26-0.78, p=0.005) phenotypes had significantly lower odds of poor neurological recovery. This pattern was consistent for 30-day mortality (HOM aHR: 0.71, 95% CI 0.61-0.83; IMD aHR: 0.78, 95% CI 0.64-0.94) and 3-year mortality (HOM aHR: 0.70, 95% CI 0.60-0.82; IMD aHR: 0.74, 95% CI 0.62-0.90), all $p \leq 0.01$. CONCLUSION: Early post-ROSC laboratory data identified three prognostically distinct phenotypes among resuscitated OHCA patients. These exploratory findings support external validation and investigation of phenotype-guided therapies.

8. Immunonutritional status and survival after cardiac arrest: prognostic value of the prognostic nutritional index, the cholesterol-modified prognostic nutritional index, and the controlling nutritional status score in post-cardiopulmonary resuscitation intensive care patients.

Referencia: Ir J Med Sci. 2026 Oct 9. doi: 10.1007/s11845-026-04672-w. Online ahead of print.

Autores: Sahin F(1), Kocayigit H(2), Akben M(2), Eryilmaz EG(2), Erdem AF(3).

PMID: 42853471

DOI: 10.1007/s11845-026-04672-w

Tipo de estudio: Cohorte retrospectiva unicéntrica

Mensaje principal: PNI, CPNI, and CONUT were significantly associated with ICU mortality after out-of-hospital cardiac arrest. These indices may reflect systemic inflammation, immune dysfunction, metabolic stress, and nutritional reserve rather than nutritional status alone. Their availability from routine laboratory parameters may support early risk stratification. Further prospective studies are needed to confirm their prognostic value and clinical applicability.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Patients achieving return of spontaneous circulation (ROSC) after cardiac arrest experience marked systemic inflammation, metabolic stress, and nutritional impairment, all of which contribute to high mortality. Practical prognostic indices reflecting immunonutritional status may facilitate early risk stratification in this population. **AIM:** To evaluate the prognostic value of immunonutritional indices for predicting mortality in patients with ROSC after out-of-hospital cardiac arrest. **METHODS:** This single-center, retrospective cohort study included adult patients admitted to the intensive care unit after ROSC following out-of-hospital cardiac arrest between January 2015 and January 2025. Prognostic Nutritional Index (PNI), cholesterol-modified Prognostic Nutritional Index (CPNI), and Controlling Nutritional Status (CONUT) scores were calculated from laboratory parameters obtained within the first 24 h of ICU admission. Patients were classified as survivors or non-survivors based on ICU outcome. Associations with mortality were evaluated using univariate and multivariate logistic regression analyses, and discriminatory performance was assessed using receiver operating characteristic curve analysis. **RESULTS:** Among 444 post-ROSC patients, non-survivors had lower PNI (43.66 ± 15.47 vs. 55.06 ± 17.21) and higher CPNI (81.10 ± 13.70 vs. 66.90 ± 18.25) and CONUT scores (4.27 ± 3.04 vs. 2.43 ± 2.43 ; all $p < 0.001$). In separate stepwise multivariable models, PNI (aOR 0.64 per 10-point increase), CPNI (aOR 1.25 per 10-point increase), and CONUT (aOR 1.24 per 1-point increase) remained

independently associated with mortality. AUCs were 0.689, 0.631, and 0.681, respectively; PNI showed the highest sensitivity (86.3%) at a cut-off of ≤ 59.90 . **CONCLUSION:** PNI, CPNI, and CONUT were significantly associated with ICU mortality after out-of-hospital cardiac arrest. These indices may reflect systemic inflammation, immune dysfunction, metabolic stress, and nutritional reserve rather than nutritional status alone. Their availability from routine laboratory parameters may support early risk stratification. Further prospective studies are needed to confirm their prognostic value and clinical applicability.

17. Serial plasma proenkephalin A 119-159 and dipeptidyl peptidase 3 after cardiac arrest: association with long-term neurological outcome.

Referencia: Resusc Plus. 2026 Sep 17;32:101496. doi: 10.1016/j.resplu.2026.101496. eCollection 2026 Nov.

Autores: Þorgeirsdóttir B(1)(2), Lybeck A(1)(3), Friberg H(1)(2), Frigyesi A(1)(3).

PMID: 42840193

DOI: 10.1016/j.resplu.2026.101496

Tipo de estudio: Cohorte retrospectiva multicéntrica

Mensaje principal: Early penKid was associated with poor neurological outcome and mortality after cardiac arrest, whereas cDPP3 was associated with mortality at 12 h. These biomarkers added limited discriminatory value beyond established clinical predictors.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

To evaluate whether serial plasma proenkephalin A 119-159 (penKid) and circulating dipeptidyl peptidase 3 (cDPP3) after cardiac arrest are associated with long-term neurological outcome and mortality. **METHODS:** We performed a retrospective multicentre cohort study of adults admitted to intensive care after cardiac arrest in southern Sweden. Biomarkers were measured on admission and at 12 and 48 h. The primary outcome was poor neurological outcome, defined as Cerebral Performance Category 3-5 at 2-6 months. The secondary outcome was 180-day mortality. Models were adjusted for established peri-arrest prognostic variables. Odds ratios and hazard ratios are reported per 1-SD increase in log10transformed biomarker concentration. **RESULTS:** Among 417 patients, 271 (65%) had poor neurological outcome and 266 (64%) died within 180 days. PenKid was independently associated with poor neurological outcome at admission (adjusted odds ratio 1.62, 95% confidence interval 1.15-2.28) and 12 h (1.50, 1.08-2.09), and with mortality at admission (adjusted hazard ratio 1.36, 1.20-1.54) and 12 h (1.33, 1.17-1.51). cDPP3 was independently associated with mortality at 12 h (1.26, 1.11-1.43), but not with poor neurological outcome after adjustment. Neither biomarker significantly improved discrimination beyond the clinical reference model. **CONCLUSIONS:** Early penKid was associated with poor neurological outcome and mortality after cardiac arrest, whereas cDPP3 was associated with mortality at 12 h. These biomarkers added limited discriminatory value beyond established clinical predictors.

23. Non-enrolment and non-completion of cardiac rehabilitation among survivors of out-of-hospital cardiac arrest with ischaemic aetiology: a nationwide register-based cohort study.

Referencia: Resuscitation. 2026 Oct 6;111343. doi: 10.1016/j.resuscitation.2026.111343. Online ahead of print.

Autores: Kristensen LQ(1), Oestergaard LG(2), Svendsen ML(3), Gadager BB(4), Eiskjær H(5), van Tulder M(6), Maribo T(7).

PMID: 42838499

DOI: 10.1016/j.resuscitation.2026.111343

Tipo de estudio: Cohorte nacional basada en registros

Mensaje principal: A large proportion of OHCA survivors of ischaemic aetiology either did not enrol in or did not complete cardiac rehabilitation. The findings underscore the need for systematic referral to cardiac rehabilitation after OHCA and more tailored rehabilitation approaches.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Survival after out-of-hospital cardiac arrest (OHCA) of ischaemic aetiology is increasing, yet access to and completion of cardiac rehabilitation remain uncertain. **AIM:** To investigate non-enrolment in and non-completion of cardiac rehabilitation among OHCA survivors of ischaemic aetiology including temporal trends, and to examine sociodemographic characteristics associated with non-participation and non-completion. **METHODS:** This nationwide Danish register-based cohort study included adults surviving ≥ 30 days after a first-time OHCA between 2019 and 2023. Multivariable logistic regression models were used to examine the association between non-enrolment and non-completion, respectively, and sociodemographic parameters of age, sex, cohabitation, comorbidity, education, and employment. **RESULTS:** A total of 1,684 OHCA survivors were included. Overall, 55% did not enrol in CR, and among those who enrolled, 50% did not complete the programme. Non-enrolment was highest in 2020-2022 (60-62%) and declined to 43% in 2023. Survivors who were retired had higher odds of non-enrolment (OR 1.74, 95% CI 1.42-2.44), whereas higher education (OR 0.76, 95% CI 0.55-0.98) and moderate/severe comorbidity (OR 0.53, 95% CI 0.43-0.65) were associated with lower odds of non-enrolment. No sociodemographic characteristics were significantly associated with non-completion. **CONCLUSION:** A large proportion of OHCA survivors of ischaemic aetiology either did not enrol in or did not complete cardiac rehabilitation. The findings underscore the need for systematic referral to cardiac rehabilitation after OHCA and more tailored rehabilitation approaches.

25. Time to Return of Spontaneous Circulation and Long-Term Outcomes in Bystander-Witnessed Out-of-Hospital Cardiac Arrest Survivors.

Referencia: Resuscitation. 2026 Oct 6:111342. doi: 10.1016/j.resuscitation.2026.111342. Online ahead of print.

Autores: Oxwall A(1), Würtz Yazdanfard PD(2), Nørskov A(3), Hindborg M(2), Yonis H(4), Andersen MP(5), Hansen CM(6), Kragholm K(7), Ringgren KB(8), Christensen HC(9), Folke F(6), Torp-Pedersen C(10).

PMID: 42838497

DOI: 10.1016/j.resuscitation.2026.111342

Tipo de estudio: Cohorte nacional basada en registro

Mensaje principal: In bystander-witnessed 30-day OHCA survivors, prolonged resuscitation does not preclude recovery, time-to-ROSC was associated with anoxic brain damage but not nursing home admission, return-to-work, or long-term survival.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND AND AIMS: Immediate Out-of-hospital cardiac arrest (OHCA) survival is time-sensitive, however, evidence linking resuscitation time to recovery is limited. We examined time from emergency call to return of spontaneous circulation (time-to-ROSC) and survivor outcomes. **METHODS:** From the Danish Cardiac Arrest Registry, we included adults with bystander-witnessed OHCA (2016-2023) surviving ≥ 30 days, without prior anoxic brain damage or nursing home admission. Time-to-event and multivariable regression analyses stratified by time-to-ROSC (A:0-10, B:11-18, C:>18 minutes) assessed 11-month anoxic brain damage and nursing home admission, plus long-term survival and return-to-work through December 2024. **RESULTS:** We included 2,583 patients (n=875, 869, 839;

groups A-C, respectively), 78% male; median age 65; median time-to-ROSC 14 min. Anoxic brain damage increased with time-to-ROSC (A-C: 0.3%, 1.8%, 3.2%; $p < 0.001$). Adjusted analyses showed an overall association ($p = 0.03$); HRs: 5.58 (95% CI 1.58-19.64) for B and 9.98 (95% CI 2.93-33.96) for C versus A. Nursing home admission decreased with time-to-ROSC (A-C: 3.1%, 2.2%, 1.3%; $p = 0.04$), but adjustments attenuated the association ($p = 0.3$). Long-term survival was similar (5-year Kaplan-Meier estimate: 79%; 95% CI 77-81%; $p = 0.80$; adjusted $p = 0.99$). Among employed patients ($n = 177, 168, 179$), return-to-work was similar (5-year cumulative incidence: 60%; 95% CI 56-65%; $p = 0.31$; adjusted $p = 0.29$). **CONCLUSIONS:** In bystander-witnessed 30-day OHCA survivors, prolonged resuscitation does not preclude recovery, time-to-ROSC was associated with anoxic brain damage but not nursing home admission, return-to-work, or long-term survival.

27. Prehospital Prognostication after Out-of-Hospital Cardiac Arrest in Tertiary Care Centers: The R-EDByUS Score in the JAAM-OHCA Registry.

Referencia: Resuscitation. 2026 Oct 6;111341. doi: 10.1016/j.resuscitation.2026.111341. Online ahead of print.

Autores: Shimada T(1), Kawai R(2), Shintani A(2), Kodera S(3), Fujisawa N(4), Saitoh W(4), Iwasaki Y(5), Kishimori T(5), Matsuzuka S(6), Hayashi Y(4), Shibata A(4), Ito A(4), Otsuka K(4), Higashikuni Y(4), Takeda N(3), Nishimura T(6), Mizobata Y(6), Fukuda D(4).

PMID: 42838495

DOI: 10.1016/j.resuscitation.2026.111341

Tipo de estudio: Estudio de validación pronóstica en registro

Mensaje principal: The R-EDByUS score showed good discrimination in the JAAM-OHCA Registry, supporting its use for early risk stratification in cardiogenic OHCA even in tertiary care centers.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

AIM: The R-EDByUS score predicts unfavorable neurological outcomes after out-of-hospital cardiac arrest (OHCA) using prehospital variables alone, with separate models based on return of spontaneous circulation (ROSC) status at hospital arrival. However, whether the score remains valid in patients transported to tertiary care centers is uncertain. We therefore aimed to validate it externally in this setting. **METHODS:** Using the JAAM-OHCA Registry, we analyzed adult patients with presumed cardiogenic OHCA transported to tertiary care centers. The regression-based R-EDByUS score was applied to predict unfavorable neurological outcome (Cerebral Performance Category 3-5) at 1 month in the prehospital ROSC and ongoing cardiopulmonary resuscitation (CPR) cohorts. Discrimination and calibration were assessed, and score performance was examined across in-hospital intervention subgroups (percutaneous coronary intervention, targeted temperature management, and extracorporeal membrane oxygenation). We also assessed the proportion of patients with unfavorable outcomes among those with a predicted probability $\geq 99\%$. **RESULTS:** Of 29,345 patients, 3,305 were classified into the prehospital ROSC cohort and 26,040 into the ongoing CPR cohort. The score showed good discrimination, with areas under the curve of 0.906 and 0.913, and good calibration in the prehospital ROSC cohort. Discrimination was lower among patients who received PCI, TTM, or ECMO in the ongoing CPR cohort. Among patients with a predicted probability $\geq 99\%$, 100% (112/112; prehospital ROSC) and 99.9% (20,560/20,588; ongoing CPR) had unfavorable outcomes. **CONCLUSION:** The R-EDByUS score showed good discrimination in the JAAM-OHCA Registry, supporting its use for early risk stratification in cardiogenic OHCA even in tertiary care centers.

39. Sex differences in management and outcomes after out-of-hospital cardiac arrest with angiographically confirmed obstructive coronary artery disease.

Referencia: Resusc Plus. 2026 Sep 14;32:101490. doi: 10.1016/j.resplu.2026.101490. eCollection 2026 Nov.

Autores: Svitekova K(1), Rob D(1), Mockova E(1), Kavalkova P(1), Pudil J(1), Dusik M(1), Macoun J(1), Svobodova E(2), Malik J(3), Valerianova A(3), Trhlikova S(4), Spicak J(4), Belohlavek J(1).

PMID: 42831122

DOI: 10.1016/j.resplu.2026.101490

Tipo de estudio: Análisis post hoc de registro prospectivo

Mensaje principal: In this cohort of patients with angiographically confirmed obstructive CAD following OHCA, no statistically significant sex-related differences were observed in management, procedural success, 30-day survival, or neurological outcomes. Men exhibited more extensive CAD.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: Previous studies have reported sex-based disparities in care, often disadvantaging women. Large registry analyses are limited by incomplete characterization of out-of-hospital cardiac arrest OHCA aetiology and coronary angiography (CAG) findings. We aimed to evaluate sex differences in management and outcomes among patients with angiographically confirmed obstructive coronary artery disease (CAD) following OHCA. **METHODS:** We performed a post hoc analysis of consecutive adult OHCA patients with angiographically confirmed obstructive CAD admitted between 2012 and 2023 using a prospective OHCA registry. Obstructive CAD was defined as $\geq 70\%$ coronary stenosis identified by coronary angiography and considered the most likely cause of OHCA. The primary outcome of this analysis was 30-day survival. The secondary outcome was favourable neurological outcome at hospital discharge. Multivariable logistic regression was used to assess the independent association between sex and 30-day survival. **RESULTS:** Among 1219 OHCA admissions, 634 (52%) patients had angiographically confirmed CAD, and 580 (91.5%) were included in the final analysis (median age 61 years, 15.3% women). ST-segment elevation myocardial infarction was the predominant aetiology in both groups (64% in women vs. 59.9% in men). Men more frequently had a history of CAD and prior myocardial infarction. No significant sex-related differences were observed in PCI utilization, procedural success, targeted temperature management, or extracorporeal cardiopulmonary resuscitation use. Thirty-day survival was 66.2% in women and 61.5% in men (log-rank $p = 0.33$), while favourable neurological outcome (Cerebral Performance Category 1-2) occurred in 55.1% and 53.8%, respectively ($p = 0.82$). Men more frequently exhibited multivessel CAD, whereas women more often had identifiable culprit lesions. In multivariable analysis, sex was not significantly associated with 30-day survival (adjusted OR 0.75, 95% CI 0.39-1.41, $p = 0.37$). **CONCLUSIONS:** In this cohort of patients with angiographically confirmed obstructive CAD following OHCA, no statistically significant sex-related differences were observed in management, procedural success, 30-day survival, or neurological outcomes. Men exhibited more extensive CAD.

40. Validation and comparison of two prearrest prediction scores for in-hospital cardiac arrest survival.

Referencia: Resusc Plus. 2026 Sep 14;32:101493. doi: 10.1016/j.resplu.2026.101493. eCollection 2026 Nov.

Autores: Karim H(1)(2)(3), Piscator E(4)(5), Riva G(3)(6), Ekvall KO(7)(8), Lauridsen KG(7)(8), Djärv T(4)(9).

PMID: 42831011

DOI: 10.1016/j.resplu.2026.101493

Tipo de estudio: Estudio de validación de modelos pronósticos

Mensaje principal: PIHCA score and the GO-FAR 2 score performed well and comparatively for prediction of survival with favorable neurological outcome following IHCA in a Swedish setting. Both scores could be considered for clinical use, in addition to sound clinical judgment, where the PIHCA score seems more adapted for clinical use.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: The optimal pre-arrest prediction model for survival with favorable neurological outcomes following in-hospital cardiac arrest (IHCA) to aid Do-Not-Attempt-Cardiopulmonary-Resuscitation-decisions remains uncertain. This study aimed to externally validate the Prediction of Outcome for In-Hospital Cardiac Arrest (PIHCA) score and the Good Outcome Following Attempted Resuscitation (GO-FAR) 2 score and compare their performance for IHCA survival prediction. **METHOD:** We collected data from IHCA across three Swedish hospitals covering all care levels. We identified IHCA through the Swedish Registry of Cardiopulmonary Resuscitation during 2015-2021 and extracted prediction model data through electronic medical records. Outcome measure was survival with favorable neurological survival defined as Cerebral Performance Category 1-2 at discharge, obtained from the registry. Prediction model performance was assessed with AUROC-curves (c-statistic), calibration coefficients and nonparametric calibration plots. **RESULTS:** We identified 647 IHCA of which 501 were eligible for inclusion. Overall, 28% had survival with favorable neurological outcome. AUROC for the PIHCA score was 0.73 (95% CI: 0.67-0.78), compared to 0.70 (95% CI: 0.65-0.75) for the GO-FAR 2 score. The 95% CI for difference of AUROC-score when PIHCA score was compared to GO-FAR 2 score was -0.01 to 0.06, i.e. not significant. The PIHCA score calibration coefficient was 0.69 (95% CI 0.51-0.88) compared to the GO FAR 2 score calibration coefficient of 1.02 (95% CI 0.73-1.34). The calibration plots were adequate for both scores, although with some degree of miscalibration at certain ranges for each model. **CONCLUSION:** PIHCA score and the GO-FAR 2 score performed well and comparatively for prediction of survival with favorable neurological outcome following IHCA in a Swedish setting. Both scores could be considered for clinical use, in addition to sound clinical judgment, where the PIHCA score seems more adapted for clinical use.

54. [Palliative extubation after ROSC in the emergency setting-a guideline for emergency physicians].

Referencia: Med Klin Intensivmed Notfmed. 2026 Oct;121(7):557-566. doi: 10.1007/s00063-025-01271-y. Epub 2025 Apr 29.

Autores: Volberg C(1)(2), Politt K(3), Passon S(3), Heuser N(3), Hofacker E(4), Wulf H(3).

PMID: 40298962

DOI: 10.1007/s00063-025-01271-y

Tipo de estudio: Guía práctica / recomendación ética-asistencial

Mensaje principal: Tras un ROSC logrado antes de conocer una voluntad previa de no reanimación, puede surgir un conflicto entre la continuidad del tratamiento y los deseos previamente expresados por el paciente. El artículo, basado en tres casos, aborda los aspectos éticos y legales de la extubación paliativa tras ROSC.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

In the prehospital emergency setting, resuscitation following cardiac arrest is initiated as soon as possible after arrival of the emergency services in order to minimize the no-flow time, i.e., the period during which there is no blood circulation and therefore no oxygen supply to the organs. There is frequently no opportunity to ask relatives about the prespecified or presumed wishes of the patient, e.g., in the form of a living will, until after initiation of emergency medical interventions. If an advance directive stipulates "do not resuscitate" (DNR), then this wish is legally binding for treatment. However, if return of spontaneous circulation (ROSC) has been achieved in the meantime, the treating emergency team faces an ethical dilemma, and patients are often taken to hospital against their prespecified will. This leads to unwanted overtreatment. Based on three case reports, the following article discusses the ethical and legal aspects of palliative extubation after ROSC in patients with a predefined DNR status.

Factores humanos, ética, formación e implementación

1. Simulation-Based Training in Emergency Skills: A Narrative Review Across Diverse Learner Populations.

Referencia: Adv Med Educ Pract. 2026 Oct 5;17:650732. doi: 10.2147/AMEP.S650732. eCollection 2026.

Autores: Chen B(#)(1)(2), Wang X(#)(3), Li D(1)(2), Chen H(1)(2), Gao F(1)(2), Liang G(1)(2), He F(4), Liu S(5), Li H(6), Zeng R(1)(2).

PMID: 42857680

DOI: 10.2147/AMEP.S650732

Tipo de estudio: Revisión narrativa

Mensaje principal: Simulation training enhances emergency skills across diverse populations, but long-term retention and cost-effectiveness require further investigation. Future directions include multicenter randomized controlled trials with extended follow-up, standardized outcome measures, and rigorous cost-effectiveness analyses to strengthen the evidence base for simulation-based emergency skills education.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

BACKGROUND: Emergency skills are critical competencies for managing sudden medical events, reducing disability, and lowering mortality rates. Traditional training methods are often limited by deficiencies in knowledge retention, skill acquisition, and clinical application. Despite growing evidence on simulation-based training, a comprehensive synthesis across diverse learner populations and training modalities remains lacking. This narrative review aims to provide a comprehensive narrative synthesis of current evidence regarding the implementation of simulation training in emergency skills education. MAIN BODY: A literature search was conducted across PubMed, Web of Science, and Scopus (2010-2026) using keywords related to simulation training, emergency skills, cardiopulmonary resuscitation, virtual reality, and medical education. The review is organized around four thematic areas: (1) theoretical foundations and core design elements of simulation training, including feedback, repetition, and scenario fidelity; (2) simulation training for practicing professionals, encompassing layered training models and crisis resource management; (3) simulation training for diverse learner populations, including school-age learners, health profession students, and community participants; and (4) emerging technologies including virtual reality, augmented reality, and wearable devices, which offer immersive and scalable alternatives despite distinct limitations. These modalities demonstrated significant improvements in knowledge acquisition, skill proficiency, and long-term retention, alongside self-reported gains in learner confidence, a subjective outcome that should be distinguished from objectively assessed competence. However, methodological limitations such as small sample sizes, brief follow-up periods, and heterogeneous outcome measures were pervasive. CONCLUSIONS: Simulation training enhances emergency skills across diverse populations, but long-term retention and cost-effectiveness require further investigation. Future directions include multicenter randomized controlled trials with extended follow-up, standardized outcome measures, and rigorous cost-effectiveness analyses to strengthen the evidence base for simulation-based emergency skills education.

2. Improving the Documentation of Clinical Frailty and Resuscitation Status on a Psychiatric Older Adult Ward: A Quality Improvement Project.

Referencia: Cureus. 2026 Sep 9;18(9):e115979. doi: 10.7759/cureus.115979. eCollection 2026 Sep.

Autores: Ramsundar C(1), Tran O(1), Doukova E(1), Nikolova G(1).

PMID: 42857582

DOI: 10.7759/cureus.115979

Tipo de estudio: Proyecto de mejora de calidad

Mensaje principal: The pathway is low cost and has been adopted as standard practice, with ongoing monitoring planned. Further cycles targeting frailty scoring completion and DNACPR form rates are planned.

Comentario crítico breve: El trabajo es especialmente útil para implementación local y mejora de procesos. La ausencia de un diseño comparativo robusto o de desenlaces clínicos limita la inferencia causal.

Abstract / resumen del registro fuente:

Background Older adults admitted to psychiatric inpatient wards frequently have significant physical health comorbidities, placing them at elevated risk of deterioration and death. Despite national guidance, documentation of clinical frailty assessments and do not attempt cardiopulmonary resuscitation (DNACPR) decisions in this setting remains inconsistent. This project was therefore implemented to improve the documentation of resuscitation decisions and frailty assessments on The Oaks, which is a 20-bedded acute psychiatric admissions ward for adults over 65 years at Chase Farm Hospital, North London NHS Foundation Trust. **Method** A quality improvement project (QIP) was conducted across four phases between August 2024 and April 2025. Baseline data collection (Phase 1) examined 20 current inpatients for documentation of frailty assessment using the Rockwood Clinical Frailty Scale (RCFS) and DNACPR status in the electronic patient record (RiO). Following multidisciplinary team (MDT) discussion (Phase 2), a standardised pathway was implemented which included routine frailty assessment on admission, MDT safety huddle discussion, patient and family information provision (Phase 3, including a bespoke CPR/DNAR information leaflet), and completion of DNACPR forms at care planning meetings. Re-evaluation (Phase 4) examined notes for all patients admitted over a one-month period (21 January to 21 February 2025). **Results** Following implementation of the intervention, DNACPR form completion increased from 5% to 30% (absolute increase: 25 percentage points; Fisher's exact test: $p = 0.095$). Documentation of DNACPR discussions increased from 15% to 90% (absolute increase: 75 percentage points; Fisher's exact test: $p < 0.001$), representing a sixfold relative increase. Where forms were not completed, reasons were clearly documented. Of the two project objectives, DNACPR documentation was measured as the primary re-evaluation outcome. Frailty documentation was not formally re-evaluated; however, this will be assessed in future QI cycles to accurately reflect the study findings. **Conclusion** This QIP demonstrates that a structured, MDT-driven pathway can produce short-term feasibility and a substantial improvement in DNACPR discussion documentation on a single older adult psychiatric ward. The pathway is low cost and has been adopted as standard practice, with ongoing monitoring planned. Further cycles targeting frailty scoring completion and DNACPR form rates are planned.

15. Predictors of High Self-Efficacy in Cardiopulmonary Resuscitation: A Regression Model Analysis.

Referencia: J Emerg Nurs. 2026 Oct 6:S0099-1767(26)00283-7. doi: 10.1016/j.jen.2026.07.023. Online ahead of print.

Autores: Rodríguez-García MC, Montoya-Giménez E, Martínez-Puertas H, Garrido-Molina JM, García-Viola A, Márquez-Hernández VV.

PMID: 42841834

DOI: 10.1016/j.jen.2026.07.023

Tipo de estudio: Estudio transversal correlacional

Mensaje principal: Greater motivation, recent institutional cardiopulmonary resuscitation training, greater clinical experience in emergency and critical care settings, advanced postgraduate education, and age were associated with higher cardiopulmonary resuscitation self-efficacy among emergency nurses and physicians. These findings support implementing regular training, advanced educational pathways, and workforce strategies within emergency and critical care settings to strengthen cardiopulmonary resuscitation preparedness and improve the quality of care for patients who experience cardiac arrest.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

INTRODUCTION: Cardiac arrest remains a leading cause of mortality worldwide. Effective cardiopulmonary resuscitation relies not only on technical proficiency but also on contextual and psychological factors. Identifying determinants of high cardiopulmonary resuscitation self-efficacy among emergency nurses and physicians is therefore crucial to improving cardiopulmonary resuscitation performance and patient outcomes. **METHODS:** A cross-sectional descriptive-correlational study was conducted with emergency nurses and physicians ($N = 399$) from

emergency and critical care units in Spain. Data were collected in February 2025 using validated Spanish instruments, including the Spanish versions of the Cardiopulmonary Resuscitation Motivation Scale and the cardiopulmonary resuscitation subscale of the Basic Resuscitation Skills Self-Efficacy Scale. Predictors of cardiopulmonary resuscitation self-efficacy were examined using multiple linear regression analysis. A 95% confidence level was established, and P values < .05 were considered statistically significant. RESULTS: Motivation ($\beta = 0.31$, $P < .001$), recent institutional cardiopulmonary resuscitation training ($\beta = -0.23$, $P < .001$), clinical experience in emergency and critical care ($\beta = 0.12$, $P = .03$), advanced postgraduate education ($\beta = 0.11$, $P = .02$), and age ($\beta = 0.11$, $P = .049$) were identified as significant independent predictors of cardiopulmonary resuscitation self-efficacy. DISCUSSION: Greater motivation, recent institutional cardiopulmonary resuscitation training, greater clinical experience in emergency and critical care settings, advanced postgraduate education, and age were associated with higher cardiopulmonary resuscitation self-efficacy among emergency nurses and physicians. These findings support implementing regular training, advanced educational pathways, and workforce strategies within emergency and critical care settings to strengthen cardiopulmonary resuscitation preparedness and improve the quality of care for patients who experience cardiac arrest.

24. Most Older Long-Term Care Residents in Oslo Have Documented Do-Not-Resuscitate Status: A Cross-Sectional Study.

Referencia: Resuscitation. 2026 Oct 6;111:344. doi: 10.1016/j.resuscitation.2026.111344. Online ahead of print.

Autores: Bowen CE(1), Halse BAS(2), Seterelv SS(3), Selbæk G(4), Langballe EM(5), Skirbekk VF(6).

PMID: 42838498

DOI: 10.1016/j.resuscitation.2026.111344

Tipo de estudio: Estudio transversal

Mensaje principal: There was no evidence that documented positive CPR status was related to sex, marital status, primary contact. Our findings provide population-level evidence on documented CPR status in long-term care and highlight the need for future research on how such decisions are made.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

With population aging, understanding the frequency and distribution of decisions to attempt or withhold cardiopulmonary resuscitation (CPR) in long-term care populations is increasingly important. In Oslo, CPR status, that is, an advance decision about whether CPR should or should not be attempted, is systematically assessed and documented for all long-term care residents. Comprehensive register data therefore provide a unique opportunity to assess advance CPR decisions at the population level. We obtained cross-sectional data on the documented CPR status of nearly all persons aged 50+ years admitted to public or private long-term care facilities in Oslo between 2018 and 2023 (N=7,860). We examined the proportion of long-term care residents with documented positive CPR status (CPR should be attempted) and used multivariable logistic regression to analyze the associations between documented positive CPR status and age, sex, marital status, primary contact (e.g., son, daughter, spouse, professional), functional limitations, institutional relocations, duration of stay, and year of admission. We found that 9.2% of long-term care residents had documented positive CPR status. Documented positive CPR status was related to younger age, fewer limitations, shorter duration of stay, and fewer relocations. Compared with residents first admitted in 2018, documented positive CPR status was less likely among those first admitted between 2019 and 2022, but not among those first admitted in 2023. There was no evidence that documented positive CPR status was related to sex, marital status, primary contact. Our findings provide population-level evidence on documented CPR status in long-term care and highlight the need for future research on how such decisions are made.

32. Evaluation of adherence to national regulations for documentation of limitations of life-sustaining treatments after a limited intervention at a Swedish hospital.

Referencia: Resusc Plus. 2026 Sep 17;32:101492. doi: 10.1016/j.resplu.2026.101492. eCollection 2026 Nov.

Autores: Piscator E(1)(2), Ekestam C(3), Bremer L(3), Heilborn U(2).

PMID: 42835303

DOI: 10.1016/j.resplu.2026.101492

Tipo de estudio: Estudio antes-después de mejora de calidad

Mensaje principal: A moderate intervention in terms of cost and work effort for the organisation can significantly improve adherence to regulations regarding documentation of limitations of Life-Sustaining Treatments, although further improvement is needed.

Comentario crítico breve: El trabajo es especialmente útil para implementación local y mejora de procesos. La ausencia de un diseño comparativo robusto o de desenlaces clínicos limita la inferencia causal.

Abstract / resumen del registro fuente:

AIM: The aim of this study was to improve adherence to the Swedish National Board of Health and Welfare's regulations for documenting decisions regarding Limitations of Life-Sustaining Treatments at Capio St. Göran's Hospital in Stockholm following a limited intervention. METHODS: This was a before-and-after-study. The intervention took place in June 2023 and consisted of three parts: 1. Implementation of a modified digital medical record form for documentation of decisions regarding limitations of Life-Sustaining Treatments. 2. A brief educational intervention for physicians at the hospital. 3. Publication of an updated hospital protocol for decisions on limitations of Life-Sustaining Treatments. We analysed 100 randomly selected documentations of limitation of Life-Sustaining Treatments in adult patients before the intervention, and 98 after the intervention. Adherence to individual mandatory criteria and overall adherence to the regulatory requirements was evaluated. RESULTS: Overall adherence to all documentation regulations increased from 1% to 63% ($p < 0.01$). Grounds for the decision were well documented both pre- and post-intervention (99% and 97%, $p > 0.99$). All other individual criteria improved: consultation with another licenced caregiver (65-89%, $p < 0.01$), dialogue with the patient or motivation why not (24-89%, $p < 0.01$), information to the family or motivation why not (23-74%, $p < 0.01$), the view of the patient (14-86%, $p < 0.01$) and the view of the family (4-70%, $p < 0.01$). CONCLUSION: A moderate intervention in terms of cost and work effort for the organisation can significantly improve adherence to regulations regarding documentation of limitations of Life-Sustaining Treatments, although further improvement is needed.

36. When a social-media AI campaign becomes a safety lesson: reflections from European Resuscitation Congress 2026.

Referencia: Resuscitation. 2026 Oct 5;229:111338. doi: 10.1016/j.resuscitation.2026.111338. Online ahead of print.

Autores: Semeraro F(1), Bakry M(2), Bürgstein E(3), Montomoli J(4).

PMID: 42833509

DOI: 10.1016/j.resuscitation.2026.111338

Tipo de estudio: Comentario / reflexión sobre IA y seguridad

Mensaje principal: El registro fuente identifica una reflexión sobre seguridad y uso de IA en una campaña de redes sociales vinculada al European Resuscitation Congress 2026, pero no aporta abstract que permita detallar sus argumentos o conclusiones.

Comentario crítico breve: Al no disponer de abstract en el archivo fuente, no es posible valorar con rigor la metodología, los argumentos completos ni la fuerza de las conclusiones. Se conserva la referencia por su relevancia temática, pero no se atribuyen mensajes adicionales que no estén respaldados por el registro.

Abstract / resumen del registro fuente:

No disponible en el registro PubMed incluido en el archivo fuente.

45. Simulation-Based CPR Education for Student Nurses: A Narrative Review of Effects on Knowledge, Skills, and Confidence.

Referencia: Adv Med Educ Pract. 2026 Sep 29;17:618905. doi: 10.2147/AMEP.S618905. eCollection 2026.

Autores: Mohamed SY(1), Bashir J(1), Muhammad T(2).

PMID: 42829704

DOI: 10.2147/AMEP.S618905

Tipo de estudio: Revisión narrativa

Mensaje principal: Simulation-based education may be a useful approach for supporting the development of CPR knowledge, skills, and confidence among nursing students. Further longitudinal studies using standardized assessment methods, particularly in low- and middle income countries, are needed to strengthen the evidence and inform the implementation of simulation-based CPR education.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

BACKGROUND: Simulation-based education has become an important teaching strategy in nursing education, particularly for high-risk and time-sensitive procedures such as cardiopulmonary resuscitation (CPR). This review aimed to synthesize the available evidence on the effects of simulation-based education on CPR knowledge, skill retention and confidence among nursing students. **METHODS:** A narrative review of the literature was conducted using studies identified through Google Scholar and PubMed. Peer-reviewed studies published between 2016 and 2026 were considered. Studies addressing simulation-based CPR education among nursing students and reporting outcomes related to CPR knowledge, skills, or confidence were included. A total of 42 studies were included in the review. **RESULTS:** The current research shows that there are usually associations between simulation-based education and improved levels of CPR knowledge, skills retention, and self-confidence when compared to traditional forms of education. Yet, different simulation designs, facilitators' experience, evaluation techniques, and available resources may impact the results. Information about retention and transferring learning to clinical settings is rather scarce. **CONCLUSION:** Simulation-based education may be a useful approach for supporting the development of CPR knowledge, skills, and confidence among nursing students. Further longitudinal studies using standardized assessment methods, particularly in low- and middle income countries, are needed to strengthen the evidence and inform the implementation of simulation-based CPR education.

Pediatría y neonatología

6. The Epidemiology of Paediatric Out-of-Hospital Cardiac Arrest in Australia and New Zealand: A Report from The Australasian Resuscitation Outcomes Consortium Epistry (Aus-ROC).

Referencia: Resuscitation. 2026 Oct 9;111347. doi: 10.1016/j.resuscitation.2026.111347. Online ahead of print.

Autores: Saha A(1), Howell S(1), Nehme Z(2), Acworth J(3), Finn J(4), Ball S(4), Belcher J(4), Bosley E(5), Doan T(6), Dicker B(7), Hutchinson H(8), Maessen S(7), Swain A(9), Faddy S(10), Davis K(10), Mayhew J(10), Keir A(11), Norsworthy D(11), Green M(12), McDermott M(12), Dantanarayana A(13), Perillo S(14), Cooper C(15), Cameron P(1), Bray J(16).

PMID: 42855035

DOI: 10.1016/j.resuscitation.2026.111347

Tipo de estudio: Estudio epidemiológico de registro poblacional (Aus-ROC)

Mensaje principal: The incidence, patient characteristics, and survival outcomes of pOHCA in our region differ significantly by age groups. Age- and context-specific prevention and resuscitation strategies are essential for reducing the burden and improving survival outcomes.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: This first epidemiological study of paediatric out-of-hospital cardiac arrest (pOHCA) across Australia and New Zealand explores the incidence, patient and event characteristics, both overall and by developmental age groups, and examines factors associated with outcomes. **METHODS:** All pOHCA (aged <18 years) attended by emergency medical services (EMS) in Australia and New Zealand from 2017 to 2023 were included. Crude incidence rates (per 100,000 person-years) were calculated for EMS-attended and EMS-treated cases. Logistic regression models were used to identify associations between patient and arrest characteristics and survival (event and 30-day/hospital discharge). **RESULTS:** EMS attended 4,779 cases and treated 3,139 (65.7%). Incidence rates for EMS-attended and EMS-treated cases were 10.1 and 6.6, respectively; with a bimodal age distribution peaking in infants (65.4) and adolescents (11.4). Most EMS-attended cases were unwitnessed (66.9%), of medical origin (60.1%), had initial non-shockable rhythms (91.1%), occurred in private residences (74.3%), and received bystander cardiopulmonary resuscitation (62.7%). Few (1.6%) received bystander defibrillation. Arrest characteristics varied widely between age groups. Survival to 30-days/hospital discharge in EMS-treated cases was 10.0% (highest in late childhood [15.4%] and lowest in infants [7.9%]). Multivariable analysis identified that increasing age was positively associated with event survival, whilst bystander-witnessed arrest, initial shockable rhythm, arrest aetiology, and EMS response time were significant predictors of short and long-term survival. **CONCLUSION:** The incidence, patient characteristics, and survival outcomes of pOHCA in our region differ significantly by age groups. Age- and context-specific prevention and resuscitation strategies are essential for reducing the burden and improving survival outcomes.

30. Low-dose, high-frequency simulation with respiratory function monitor feedback enhances face mask ventilation across neonatal resuscitation devices: A prospective study in neonatology fellows.

Referencia: Resusc Plus. 2026 Sep 18;32:101497. doi: 10.1016/j.resplu.2026.101497. eCollection 2026 Nov.

Autores: Carlton SJ(1), Hagan JL(1), Neveln NK(1), Lemke DS(1)(2), Sundgren NC(1).

PMID: 42835672

DOI: 10.1016/j.resplu.2026.101497

Tipo de estudio: Estudio prospectivo de simulación

Mensaje principal: Self-reported confidence improved significantly across all devices, though clinical FMV frequency did not change. These findings support the use of RFMs in neonatal training regardless of device type while highlighting the need for strategies to improve long-term skill retention.

Comentario crítico breve: Permite estudiar desempeño técnico y factores humanos de forma controlada, pero no demuestra beneficio clínico en pacientes. Su valor es optimizar entrenamiento o dispositivos antes de validación clínica.

Abstract / resumen del registro fuente:

Face mask ventilation (FMV) is a critical skill in neonatal resuscitation, yet structured assessment of neonatology fellow competence has remained limited. This study evaluated whether low-dose, high-frequency simulation with real-time respiratory function monitor (RFM) feedback improved FMV performance across commonly used ventilation devices. A prospective, single-center study was conducted over nine months involving neonatology fellows who performed simulated FMV using a T-piece resuscitator, self-inflating bag, and flow-inflating bag. Each session included blinded and unblinded RFM conditions. Primary outcomes included tidal volume (TV) within target range, mask leak, peak inspiratory pressure (PIP), positive end-expiratory pressure (PEEP), respiratory rate, and self-reported proficiency. Mixed-effects models accounted for repeated measures. TV within goal range was higher with RFM feedback (80.3% vs 62.3%, $p < 0.0001$) and mask leak was lower with feedback across all three devices. No independent effect of feedback was observed for PIP or respiratory rate. Increasing session number improved respiratory rate, PIP, and PEEP but did not significantly improve TV or mask leak, suggesting limited skill improvement without feedback. Performance varied by device modestly, but higher performance was associated with RFM feedback and practice sessions across all devices. Self-reported confidence improved significantly across all devices, though clinical FMV frequency did not change. These findings support the use of RFMs in neonatal training regardless of device type while highlighting the need for strategies to improve long-term skill retention.

34. Cardiac warning symptoms in paediatric out-of-hospital ventricular fibrillation cardiac arrest survivors.

Referencia: Open Heart. 2026 Oct 5;13(2):e004412. doi: 10.1136/openhrt-2026-004412.

Autores: Tollit J(1)(2), Field E(1)(2), Oates S(2), Norrish G(1)(2), Cervi E(1)(2), Starling L(2), Kaski JP(3)(2).

PMID: 42833702

DOI: 10.1136/openhrt-2026-004412

Tipo de estudio: Serie retrospectiva de supervivientes pediátricos

Mensaje principal: Almost half of paediatric OHCA survivors had warning symptoms prior to their event, representing potential missed opportunities to identify an underlying diagnosis prior to OHCA. These findings highlight the need for more education, both for medical professionals and the general public, about 'red flag' symptoms.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: Out-of-hospital cardiac arrest (OHCA) in children is a rare but devastating event, with an estimated incidence of 9 per 100 000 person-years and a survival rate of less than 10%. OHCA may be the presenting event in children with undiagnosed cardiovascular disease. A substantial proportion of adults experiencing an unexpected OHCA report previous symptoms, but whether the same is true in paediatric survivors has not been systematically evaluated previously. This study aims to describe cardiac symptoms in children prior to presenting with OHCA. **METHODS:** Clinical characteristics and preceding symptoms of 58 consecutive patients aged 0-18 without a pre-existing causative diagnosis presenting with a survived OHCA between 1996 and 2025 to a single UK paediatric tertiary referral centre were reviewed. **RESULTS:** The median age at cardiac arrest was 11 years (IQR 7-14 years). 29 OHCA (50%) occurred on exertion. Following the OHCA, 42 patients (72.4%) were diagnosed with an inherited cardiac condition, most commonly hypertrophic cardiomyopathy (n=17, 29.8%). 18 patients (31.0%) had a family history of sudden cardiac death. 28 patients (50.9%) had reported cardiac symptoms prior to their OHCA, including 13 (23.6%) who had experienced syncope. Of the 13 patients who experienced syncope, only three sought medical attention and none had follow-up arranged. **CONCLUSIONS:** Almost half of paediatric OHCA survivors had warning symptoms prior to their event, representing potential missed opportunities to identify an underlying diagnosis prior to OHCA. These findings highlight the need for more education, both for medical professionals and the general public, about 'red flag' symptoms.

35. Pediatric post-ROSC blood pressure: searching for the optimal target.

Referencia: Resuscitation. 2026 Oct 5;111339. doi: 10.1016/j.resuscitation.2026.111339. Online ahead of print.

Autores: Joffe AR(1), deCaen A(2).

PMID: 42833510

DOI: 10.1016/j.resuscitation.2026.111339

Tipo de estudio: Comentario / perspectiva

Mensaje principal: El registro fuente identifica un comentario centrado en la búsqueda del objetivo óptimo de presión arterial tras ROSC pediátrico, pero no aporta abstract ni resultados que permitan resumir una recomendación concreta.

Comentario crítico breve: Al no disponer de abstract en el archivo fuente, no es posible valorar con rigor la metodología, los argumentos completos ni la fuerza de las conclusiones. Se conserva la referencia por su relevancia temática, pero no se atribuyen mensajes adicionales que no estén respaldados por el registro.

Abstract / resumen del registro fuente:

No disponible en el registro PubMed incluido en el archivo fuente.

41. Prognostic utility of the revised post-cardiac arrest syndrome for therapeutic hypothermia score in pediatric patients with post-cardiac arrest syndrome.

Referencia: Resusc Plus. 2026 Sep 11;32:101489. doi: 10.1016/j.resplu.2026.101489. eCollection 2026 Nov.

Autores: Suenaga Y(1), Nakano S(1), Nitsu T(1), Ueta I(1).

PMID: 42830995

DOI: 10.1016/j.resplu.2026.101489

Tipo de estudio: Cohorte retrospectiva pediátrica

Mensaje principal: The rCAST score demonstrated good discriminative ability for neurological outcomes in infants and young children with PCAS. However, unfavorable outcomes in some patients with low scores warrant caution in clinical decision-making.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: The accurate prognosis of post-cardiac arrest syndrome (PCAS) is critical for guiding intensive care and family communication. The revised post-Cardiac Arrest Syndrome for Therapeutic hypothermia (rCAST) score incorporates six readily available clinical variables and has shown promise in children. However, prior validations involved older children. We aimed to externally validate rCAST scores in a cohort of infants and young children. **METHODS:** We retrospectively examined patients with PCAS (with pre-arrest pediatric cerebral performance category scores of 1-3 and receiving targeted temperature management) admitted to a pediatric intensive care unit (PICU) between December 2016 and March 2024. Patients were stratified into low-, moderate-, and high-severity groups based on their rCAST scores. The primary outcome was neurological status at PICU discharge. **RESULTS:** Among 5456 PICU admissions, 75 were included (median age, 17 months [interquartile range: 4-72]; 68% without pre-existing conditions). Favorable neurological outcomes occurred in 28% of patients overall, with 76% in the low (n = 17) and 73% in the moderate (n = 11) groups, but none in the high group (n = 47). The overall in-hospital mortality rate was 60%: 6% in the low group and 87% in the high group (P < 0.001). The rCAST score showed good discrimination for both unfavorable neurological outcome (area under the curve [AUC], 0.947; 95% confidence interval [CI], 0.894-1.000) and mortality (AUC, 0.857; 95% CI, 0.750-0.964). **CONCLUSIONS:** The rCAST score demonstrated good discriminative ability for neurological outcomes in infants and young children with PCAS. However, unfavorable outcomes in some patients with low scores warrant caution in clinical decision-making.

43. It takes two: development of simulation training for two-handed neonatal mask ventilation integrating a respiratory function monitor; a non-randomised before-and-after simulation study.

Referencia: Resusc Plus. 2026 Sep 14;32:101488. doi: 10.1016/j.resplu.2026.101488. eCollection 2026 Nov.

Autores: Ryan LJ(1)(2), Murphy E(1)(2), Smiles L(1), Moore CM(1), O'Dea M(1), Higgins M(1)(2), Le Cornu Q(2), Curley AE(1)(2), O'Curraín EM(1)(2).

PMID: 42830795

DOI: 10.1016/j.resplu.2026.101488

Tipo de estudio: Estudio de simulación antes-después no aleatorizado

Mensaje principal: Effective facemask ventilation in a neonatal manikin was associated with a two-handed hold without training or prior clinical experience. After training facemask leak was low with both holds. Feedback indicated increased participant preference for two-handed PPV after training.

Comentario crítico breve: El diseño antes-después permite detectar cambios de desempeño tras la intervención formativa, pero no controla completamente efectos de aprendizaje, repetición u otros factores temporales. Al tratarse de simulación, la transferencia del beneficio a la práctica clínica debe demostrarse por separado.

Abstract / resumen del registro fuente:

INTRODUCTION: Facemask leak is common with a one-handed hold and can reduce the efficacy of neonatal resuscitation. Our objective was to assess a standardised, respiratory function monitor (RFM)-guided training intervention for two-handed neonatal positive pressure ventilation (PPV). **METHODS:** Development of a two-handed PPV training algorithm occurred through an iterative process with learner and expert feedback. Participants performed PPV via a facemask on a term manikin with feedback from the RFM display (Monivent Neo100). We first piloted the training intervention on ten clinicians over six sessions. The intervention was then assessed through a before-and-after, non-randomised simulation-based study, blinded to the RFM, comparing mask leak, tidal volume and participant feedback. Mask hold style and hand preference were recorded. **RESULTS:** Prior to the intervention, 17/40 (42%) had previously used two-handed PPV in clinical practice. Forty clinicians were included in the training study. Mask leak was significantly lower with a two-handed hold before training: one-handed median 27%, (IQR 3-73%) vs two-handed: 2.5% (1-31%), $p < 0.01$ median difference (95% CI) of -5.5 (-23 to -1). Post-training mask leak was comparable between holds: one-handed median 6% (IQR 2-55%); and two-handed 2% (0-5%), $p < 0.01$ median difference (95% CI) -4 (-18 to -1). Pre-training, 11/40 (27%) preferred two-handed compared with one-handed PPV. Following training 20/40 (50%) preferred two-handed. **CONCLUSION:** Effective facemask ventilation in a neonatal manikin was associated with a two-handed hold without training or prior clinical experience. After training facemask leak was low with both holds. Feedback indicated increased participant preference for two-handed PPV after training.

Circunstancias especiales, trauma y casos clínicos

7. Opioid-Associated vs Undifferentiated Out-of-Hospital Cardiac Arrest: Examining differences in outcomes and the relationship with Utstein variables.

Referencia: Resuscitation. 2026 Oct 9:111352. doi: 10.1016/j.resuscitation.2026.111352. Online ahead of print.

Autores: Mok V(1), Lee M(2), Buxton JA(3), Helmer J(4), Tu AW(5), van Diepen S(6), Hutton J(7), Scheuermeyer F(8), Christenson J(8), Grunau B(9).

PMID: 42855034

DOI: 10.1016/j.resuscitation.2026.111352

Tipo de estudio: Análisis observacional de registro

Mensaje principal: Overall, we did not detect an association between opioid toxicity and outcomes. In models with interaction terms, the relationship between Utstein and outcomes differed between opioid-associated and other OHCA, highlighting the impact opioid-associated cases may have in observational OHCA analyses.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

BACKGROUND: The pathophysiology of out-of-hospital cardiac arrest (OHCA) due to opioid toxicity is different from other OHCA. Our aims were to determine: (1) whether opioid-toxicity is associated with OHCA outcomes; and, (2) whether the relationship between Utstein variables and outcomes differ between those with opioid-associated (OA) and other OHCA. **METHODS:** We analysed adult emergency medical services (EMS)-treated OHCA from the British Columbia Cardiac Arrest Registry. Using post-mortem toxicological investigations, death certificates, and hospital-based diagnoses, we classified as OA-OHCA or "undifferentiated OHCA". We fit a multivariable logistic regression model to assess the association between OA-OHCA (versus undifferentiated OHCA) and favourable neurological outcome at hospital discharge. We then added pre-specified interaction terms to individual models for: sex, initial cardiac rhythm, bystander CPR, witnessed arrest, and location type. **RESULTS:** Of 10,786 OHCA: 1349 (13%) were OA-OHCA, of whom 331 (25%) were female, and the median age was 40 years (IQR 31-50); 9437 (87%) were undifferentiated, of whom 2910 (31%) were female, and the median age was 70 years (IQR 58-81). We did not detect an association between OA-OHCA (OR 1.02, 95% CI 0.77, 1.35) and survival with favourable neurological outcomes.

Models adding interaction terms demonstrated statistically significant interactions for: sex ($p=0.032$), initial cardiac rhythm ($p=0.024$), and bystander-witnessed status ($p<0.001$). **CONCLUSION:** Overall, we did not detect an association between opioid toxicity and outcomes. In models with interaction terms, the relationship between Utstein and outcomes differed between opioid-associated and other OHCA, highlighting the impact opioid-associated cases may have in observational OHCA analyses.

11. Silent Intraoperative Right Coronary Artery Occlusion at a Prior Stent Site Progressing to Ventricular Fibrillation During Hip Hemiarthroplasty: A Case Report.

Referencia: Cureus. 2026 Oct 7;18(10):e117610. doi: 10.7759/cureus.117610. eCollection 2026 Oct.

Autores: Wang W(1), Wan Q(1), Yu Z(1), Yang Z(2), Ba L(3).

PMID: 42851256

DOI: 10.7759/cureus.117610

Tipo de estudio: Caso clínico

Mensaje principal: This case illustrates a descriptive temporal sequence in which progressive monitor-detected ST-segment changes preceded hemodynamic deterioration and subsequent ventricular fibrillation, followed by nursing verification, escalation, and multidisciplinary rescue; it does not establish that any specific monitoring or escalation strategy altered the outcome. Because this is a single case, the chronology described is observational and does not permit causal inference regarding the outcome.

Comentario crítico breve: El caso ilustra una situación clínica relevante, pero no permite estimar frecuencia, eficacia ni causalidad. Su valor principal es aumentar la vigilancia clínica y generar hipótesis.

Abstract / resumen del registro fuente:

Perioperative myocardial infarction may occur without typical ischemic symptoms in elderly patients undergoing hip fracture repair. We describe the case of an 86-year-old woman with hypertension, coronary artery disease, and prior right coronary artery stenting who underwent right hip hemiarthroplasty under spinal anesthesia after clopidogrel had been withheld for one week. Continuous electrocardiographic monitoring showed progressive ST-segment elevation first recognized by the anesthesia nurse, who verified the finding and immediately informed the anesthesiology team. ST-segment elevation preceded a decline in heart rate and blood pressure and was followed by ventricular fibrillation during emergency transfer for coronary angiography. Repeated cardiopulmonary resuscitation and 200-J defibrillation produced transient rhythm recovery, with recurrent ventricular fibrillation until coronary reperfusion. Angiography showed acute right coronary artery occlusion at the previous stent site with thrombus; balloon angioplasty, intracoronary tirofiban, and implantation of a 2.75×29 mm drug-eluting stent restored TIMI grade 3 flow, with approximately 30% residual stenosis. Troponin T was >50 ng/mL on postoperative day 1, 4056 ng/mL on day 5, and 900 ng/mL on day 9; no major bleeding, transfusion, or neurological complications were documented. The patient ambulated before discharge on postoperative day 15. This case illustrates a descriptive temporal sequence in which progressive monitor-detected ST-segment changes preceded hemodynamic deterioration and subsequent ventricular fibrillation, followed by nursing verification, escalation, and multidisciplinary rescue; it does not establish that any specific monitoring or escalation strategy altered the outcome. Because this is a single case, the chronology described is observational and does not permit causal inference regarding the outcome.

16. Case Report: Ischemic bowel necrosis following intra-aortic balloon pump support in a patient with cardiogenic shock.

Referencia: Front Cardiovasc Med. 2026 Sep 22;13:1845966. doi: 10.3389/fcvm.2026.1845966. eCollection 2026.

Autores: Luo X(1)(2), Li C(1)(2), Ye Q(1)(2), Lin X(3), Liu S(4), Zhu F(5), Fang M(1)(2).

PMID: 42840577

DOI: 10.3389/fcvm.2026.1845966

Tipo de estudio: Caso clínico

Mensaje principal: This case highlights a rare and catastrophic complication following coronary stent implantation and IABP therapy in a patient with cardiogenic shock. Bowel ischemia in this setting is rarely attributable to a single mechanism: systemic hypoperfusion after cardiac arrest, IABP-related reduction in mesenteric blood flow due to balloon-aortic length mismatch, vasopressor-induced splanchnic vasoconstriction, and ischemia-reperfusion injury likely acted in concert. Clinicians should remain highly vigilant for early signs of ischemic bowel necrosis in patients receiving IABP support, particularly those requiring high doses of vasoactive agents, and should be aware that serum lactate trends may not reliably reflect splanchnic perfusion. Early recognition through serial abdominal examination and timely imaging is essential.

Comentario crítico breve: El caso ilustra una situación clínica relevante, pero no permite estimar frecuencia, eficacia ni causalidad. Su valor principal es aumentar la vigilancia clínica y generar hipótesis.

Abstract / resumen del registro fuente:

BACKGROUND: The intra-aortic balloon pump (IABP) is a widely used mechanical circulatory support device for patients with acute myocardial infarction complicated by cardiogenic shock. Although generally safe, IABP use may impair visceral organ perfusion and lead to rare but severe complications, including ischemic bowel necrosis. **CASE PRESENTATION:** A 59-year-old man was admitted after experiencing a cardiac arrest caused by an extensive acute anterior myocardial infarction. Following successful cardiopulmonary resuscitation, emergency coronary angiography revealed total occlusion of the mid-segment of the left anterior descending artery. Primary percutaneous coronary intervention was performed with implantation of a drug-eluting stent and IABP support, achieving a thrombolysis in myocardial infarction grade 3 flow. On the fourth postoperative day, the patient developed progressive abdominal distension, absent bowel sounds, and refractory septic shock. Contrast-enhanced computed tomography revealed small bowel dilation with air-fluid levels, hepatic portal venous gas, and pneumatosis intestinalis, findings suggestive of ischemic bowel necrosis. Further evaluation indicated that the distal end of the intra-aortic balloon was positioned below the origin of the superior mesenteric artery, suggesting that a mismatch between the aortic anatomy and balloon length contributed to mesenteric hypoperfusion in the setting of cardiogenic shock and high-dose vasopressor therapy. The IABP counterpulsation ratio was adjusted to 1:2, and broad-spectrum antibiotics were administered. Despite these interventions, the patient's condition continued to deteriorate, with persistent high fever and circulatory collapse. The family ultimately decided to discontinue treatment due to unsustainable vital signs and a poor prognosis. **CONCLUSION:** This case highlights a rare and catastrophic complication following coronary stent implantation and IABP therapy in a patient with cardiogenic shock. Bowel ischemia in this setting is rarely attributable to a single mechanism: systemic hypoperfusion after cardiac arrest, IABP-related reduction in mesenteric blood flow due to balloon-aortic length mismatch, vasopressor-induced splanchnic vasoconstriction, and ischemia-reperfusion injury likely acted in concert. Clinicians should remain highly vigilant for early signs of ischemic bowel necrosis in patients receiving IABP support, particularly those requiring high doses of vasoactive agents, and should be aware that serum lactate trends may not reliably reflect splanchnic perfusion. Early recognition through serial abdominal examination and timely imaging is essential.

33. Predictors of outcome in 215 patients requiring emergency department thoracotomy: A 2-year prospective study in a large urban trauma center.

Referencia: Surgery. 2026 Sep 7;110607. doi: 10.1016/j.surg.2026.110607. Online ahead of print.

Autores: Asensio JA(1), Martin SD(2), Roque-Buenrostro J(2), Smith-Singares E(3), Mondschein DJ(2), Ceron SA(2), Rowe VL(4), Garcia LA(5), Wilson KL(6), Williams MW(7), Lambert HO(8), Velasco JM(9).

PMID: 42833938

DOI: 10.1016/j.surg.2026.110607

Tipo de estudio: Estudio prospectivo de trauma

Mensaje principal: For patients presenting in arrest requiring emergency department thoracotomy, all parameters plus a cardiopulmonary resuscitation duration of 12 minutes are predictive of mortality. Seventy-five percent of

patients can be excluded from emergency department thoracotomy. Emergency department thoracotomy should be applied selectively to patients sustaining penetrating cardiac injuries and some vascular injuries.

Comentario crítico breve: El trabajo aborda una cuestión relevante de reanimación. La magnitud de su impacto práctico depende de la población, el contexto asistencial y la solidez de los desenlaces estudiados.

Abstract / resumen del registro fuente:

BACKGROUND: Emergency department thoracotomy is a formidable procedure. We prospectively evaluated physiologic parameters in patients undergoing emergency department thoracotomy, mortality at the scene of the traumatic incident, and upon arrival, including cardiopulmonary resuscitation time, cardiovascular respiratory score, time to emergency department thoracotomy, and restoration of blood pressure, and identified predictors of outcomes. **METHODS:** This was a prospective 2-year study of patients in cardiopulmonary arrest requiring emergency department thoracotomy in a trauma center. Statistical analysis included univariate and stepwise logistic regression analysis. **RESULTS:** Two hundred fifteen patients admitted in cardiopulmonary arrest required emergency department thoracotomy. Penetrating injury (n = 167, 78%), gunshot wounds (n = 142, 78.0%), stab wounds (n = 21, 12.6%), shotgun wounds (n = 4, 2.4%), and blunt (n = 48, 22%). The mean revised trauma score was -0.6, the mean injury severity score was -42, and the mean duration of cardiopulmonary resuscitation was 12 minutes. Emergency department deaths totaled 162 (75%), and 1-hour survivors totaled 53 (25%). Overall survivors were 6 of 215 (2.8%). Penetrating cardiac injury survivors were 6 of 74 (8.2%). Two groups were compared: (1) emergency department deaths versus 1-hour survivors-all physiologic parameters were predictive of outcomes ($P < .0001$) and (2) 1-hour survivors versus overall survivors-no physiologic parameters were predictive of outcome. Duration of cardiopulmonary resuscitation ($P = .04$), penetrating mechanism ($P < .001$), and exsanguination ($P < .006$) were significant. The cardiovascular respiratory score revealed a trend ($P = .007$). Death versus overall survival-restoration of blood pressure was predictive ($P < .006$). Stepwise logistic regression, using a 4-factor model, including no spontaneous ventilation, absence of pulse upon arrival, injury severity score >45 , and blunt mechanism of injury, was 99.3% predictive of mortality. **CONCLUSION:** For patients presenting in arrest requiring emergency department thoracotomy, all parameters plus a cardiopulmonary resuscitation duration of 12 minutes are predictive of mortality. Seventy-five percent of patients can be excluded from emergency department thoracotomy. Emergency department thoracotomy should be applied selectively to patients sustaining penetrating cardiac injuries and some vascular injuries.

[37. Comparing apples with mochi: why foreign body airway obstruction studies need a common language.](#)

Referencia: Resuscitation. 2026 Oct 5;229:111337. doi: 10.1016/j.resuscitation.2026.111337. Online ahead of print.

Autores: Dunne CL(1), McRae AD(2).

PMID: 42833508

DOI: 10.1016/j.resuscitation.2026.111337

Tipo de estudio: Comentario / perspectiva metodológica

Mensaje principal: El registro fuente identifica un comentario metodológico que reclama un lenguaje común para los estudios sobre obstrucción de vía aérea por cuerpo extraño, pero no aporta abstract que permita desarrollar sus propuestas específicas.

Comentario crítico breve: Al no disponer de abstract en el archivo fuente, no es posible valorar con rigor la metodología, los argumentos completos ni la fuerza de las conclusiones. Se conserva la referencia por su relevancia temática, pero no se atribuyen mensajes adicionales que no estén respaldados por el registro.

Abstract / resumen del registro fuente:

No disponible en el registro PubMed incluido en el archivo fuente.

47. Performance of Termination-of-Resuscitation Rules in Foreign Body Airway Obstruction-Related Out-of-Hospital Cardiac Arrest: A Prospective Multicenter Registry Analysis.

Referencia: Prehosp Emerg Care. 2026;30(7):1063-1069. doi: 10.1080/10903127.2026.2703842. Epub 2026 Aug 18.

Autores: Soliven REMR(1)(2), Igarashi Y(1), Norii T(3), Nakanishi H(4), Suga R(1), Takiguchi T(1), Okada I(1), Nakae R(1), Yokobori S(1); MOCHI Investigators.

PMID: 42456096

DOI: 10.1080/10903127.2026.2703842

Tipo de estudio: Análisis secundario de registro prospectivo multicéntrico

Mensaje principal: In FBAO-related OHCA, BLS-TOR would have classified two patients with favorable neurological outcome as TOR-positive. The ALS-TOR rule was restrictive, but small numbers and 30-day survival among TOR-positive patients preclude firm safety conclusions. Termination-of-resuscitation criteria warrant cautious, etiology-aware interpretation when FBAO is suspected.

Comentario crítico breve: Aporta evidencia de práctica real y, en varios trabajos, tamaños muestrales importantes. Persisten confusión residual, sesgo de selección y limitaciones de registro, por lo que las asociaciones no deben interpretarse como causalidad.

Abstract / resumen del registro fuente:

OBJECTIVES: Termination-of-resuscitation (TOR) rules were derived mainly from cardiac-origin out-of-hospital cardiac arrest (OHCA), but their interpretation in foreign body airway obstruction (FBAO)-related OHCA remains uncertain. This condition is a potentially reversible hypoxic arrest in which standard TOR criteria may perform differently. We evaluated the 2025 American Heart Association basic life support (BLS)-TOR and advanced life support (ALS)-TOR criteria in FBAO-related OHCA. **METHODS:** This secondary analysis of the prospective Multi-center Observational CHoking Investigation (MOCHI) registry included patients with FBAO-related OHCA transported to 25 Japanese hospitals from April 2020 to March 2023. For the primary TOR analysis, we included patients who had not achieved return of spontaneous circulation (ROSC) before emergency medical services (EMS) arrival, because TOR rules are intended for patients who remain in cardiac arrest at the time of EMS assessment. Patients were retrospectively classified according to BLS-TOR and ALS-TOR criteria. Primary measures were the specificity of TOR-positive status for predicting unfavorable neurological outcome, defined as the proportion of patients with favorable neurological outcome (Cerebral Performance Category 1-2) who were classified as TOR-negative, and the proportion of TOR-positive patients who nevertheless achieved favorable neurological outcome. **RESULTS:** Of 248 patients with FBAO-related OHCA (median age, 81.5 years; 83.1% witnessed), 49 (19.8%) survived to 30 days and 9 (3.6%) achieved favorable neurological outcome. The BLS-TOR rule classified 150/229 evaluable patients as TOR-positive; 2 achieved favorable neurological outcome (1.3%; 95% CI, 0.4-4.7; specificity, 77.8% [95% CI, 45.3-93.7]), and 20 survived to 30 days (13.3%; 95% CI, 8.8-19.7). The ALS-TOR rule classified 12/242 patients as TOR-positive; none achieved favorable neurological outcome, but 4 survived to 30 days (33.3%; 95% CI, 13.8-60.9). **CONCLUSIONS:** In FBAO-related OHCA, BLS-TOR would have classified two patients with favorable neurological outcome as TOR-positive. The ALS-TOR rule was restrictive, but small numbers and 30-day survival among TOR-positive patients preclude firm safety conclusions. Termination-of-resuscitation criteria warrant cautious, etiology-aware interpretation when FBAO is suspected.

Directrices, ensayos en curso y revisiones de práctica

28. Design and rationale of the TANGO2 trial: A randomized controlled non-inferiority trial of bystander compression-only CPR versus standard CPR in out-of-hospital cardiac arrest.

Referencia: Am Heart J. 2026 Oct 6:107623. doi: 10.1016/j.ahj.2026.107623. Online ahead of print.

Autores: Boberg E(1), Merigo G(2), Riva G(3), Ringh M(4), Ristagno G(5), Jonsson M(6), Nordius C(7), Magliocca A(8), Skrifvars MB(9), Byrsell F(10), Jonsson F(11), Claesson A(12), Svensson L(13), Nordberg P(14), Nord A(15), Hollenberg J(16).

PMID: 42838476

DOI: 10.1016/j.ahj.2026.107623

Tipo de estudio: Protocolo y diseño de ensayo aleatorizado de no inferioridad

Mensaje principal: CURRENT STATUS: Enrolling. TRIAL REGISTRATION: ClinicalTrials.gov Identifier: NCT03981107, <https://clinicaltrials.gov/study/NCT03981107>.

Comentario crítico breve: Es un protocolo y todavía no aporta resultados clínicos. Su interés reside en la pregunta de no inferioridad y en el potencial de aportar evidencia aleatorizada sobre compresiones solas frente a RCP estándar.

Abstract / resumen del registro fuente:

RATIONALE: Bystander cardiopulmonary resuscitation (CPR) before emergency medical services arrival is associated with improved survival after out-of-hospital cardiac arrest (OHCA). Compression-only CPR (CO-CPR) is simpler to teach and perform, eliminates interruptions in chest compressions for rescue breaths, and has been associated with higher bystander CPR rates. For adults with OHCA of presumed medical etiology, clinical equipoise remains regarding the optimal CPR strategy for previously trained bystanders. **PRIMARY HYPOTHESIS:** Bystander CO-CPR is non-inferior to standard CPR (S-CPR) for 30-day survival in dispatch-assisted out-of-hospital cardiac arrest **DESIGN:** TANGO2 is an international, multicenter, randomized, open-label, non-inferior trial. Dispatchers randomize eligible cases 1:1 to CO-CPR or S-CPR via an integrated decision-support system. Protocol adherence is evaluated via systematic dispatch audio review. Per-protocol (PP) analysis is prespecified as the primary analysis, supported by modified intention-to-treat (mITT) analysis. Non-inferiority is defined as an absolute risk difference above -1.0 percentage points. **SITES:** All Emergency Medical Dispatch Centers in Sweden and selected sites in Italy. **ESTIMATED ENROLLMENT:** 3,260 per-protocol EMS-treated OHCA patients **ENROLLMENT DATES:** Start date: 2017. Estimated completion date: December 2027. **CURRENT STATUS:** Enrolling. **TRIAL REGISTRATION:** ClinicalTrials.gov Identifier: NCT03981107, <https://clinicaltrials.gov/study/NCT03981107>.

51. [Out-of-hospital cardiac arrest : Current recommendations along the chain of survival and patient management].

Referencia: Med Klin Intensivmed Notfmed. 2026 Oct;121(7):594-605. doi: 10.1007/s00063-026-01462-1. Epub 2026 Jun 23.

Autores: Bork M(1), Pooth JS(2), Michels G(3), Busch HJ(2).

PMID: 42334575

DOI: 10.1007/s00063-026-01462-1

Tipo de estudio: Revisión de recomendaciones / actualización

Mensaje principal: Following the return of spontaneous circulation (ROSC) the clinical course is predominantly shaped by the post-cardiac arrest syndrome (PCAS). Structured care within specialized centers and a multimodal timely neuroprognostication are essential to improve neurological outcomes and facilitate evidence-based decision-making regarding further treatment.

Comentario crítico breve: Aporta síntesis, contexto o recomendaciones de práctica, pero no genera evidencia clínica primaria. Su utilidad principal es orientar implementación, docencia o futuras preguntas de investigación.

Abstract / resumen del registro fuente:

Out-of-hospital cardiac arrest (OHCA) continues to pose a significant clinical challenge with low survival rates. The updated 2025 guidelines emphasize the critical role of the chain of survival, optimized basic life support (BLS) and the strategic use of extracorporeal cardiopulmonary resuscitation (ECPR). Following the return of spontaneous circulation (ROSC) the clinical course is predominantly shaped by the post-cardiac arrest syndrome (PCAS). Structured care within specialized centers and a multimodal timely neuroprognostication are essential to improve neurological outcomes and facilitate evidence-based decision-making regarding further treatment.

Estudios tangenciales y preclínicos

En esta búsqueda no se identificaron resultados claramente tangenciales ni estudios exclusivamente animales/preclínicos que debieran separarse del cuerpo principal. Los 54 registros se han conservado en el análisis principal por su relación directa con reanimación, cadena de supervivencia, cuidados posparada, educación, ética o sistemas asistenciales.

Base acumulativa de evidencia - índice de esta semana

Nº	PMID	Título	Categoría	Estado
1	42857680	Simulation-Based Training in Emergency Skills: A Narrative Review Across Diverse Learner Populations.	Factores humanos, ética, formación e implementación	Incluido
2	42857582	Improving the Documentation of Clinical Frailty and Resuscitation Status on a Psychiatric Older Adult Ward: A Quality Improvement Project.	Factores humanos, ética, formación e implementación	Incluido
3	42857572	Twenty years in the battle against sudden cardiac death: progress, pitfalls, and prospects for the future.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
4	42857397	Early-Phase Computed Tomography Bowel Diameter and Neurological Outcomes Post-Extracorporeal Cardiopulmonary Resuscitation.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
5	42855036	Early Post-ROSC Laboratory Phenotypes and Clinical Outcomes after Out-of-Hospital Cardiac Arrest: A 10-Year National Cohort Study.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
6	42855035	The Epidemiology of Paediatric Out-of-Hospital Cardiac Arrest in Australia and New Zealand: A Report from The	Pediatría y neonatología	Incluido

		Australasian Resuscitation Outcomes Consortium Epistry (Aus-ROC).		
7	42855034	Opioid-Associated vs Undifferentiated Out-of-Hospital Cardiac Arrest: Examining differences in outcomes and the relationship with Utstein variables.	Circunstancias especiales, trauma y casos clínicos	Incluido
8	42853471	Immunonutritional status and survival after cardiac arrest: prognostic value of the prognostic nutritional index, the cholesterol-modified prognostic nutritional index, and the controlling nutritional status score in post-cardiopulmonary resuscitation intensive care patients.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
9	42853053	Spirometry and end-tidal carbon dioxide changes during chest compressions with PPE: a simulation randomized crossover study.	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido
10	42851276	Age-Dependent Benefit of ECPR in OHCA: An Interaction Analysis.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
11	42851256	Silent Intraoperative Right Coronary Artery Occlusion at a Prior Stent Site Progressing to Ventricular Fibrillation During Hip Hemiarthroplasty: A Case Report.	Circunstancias especiales, trauma y casos clínicos	Incluido
12	42849561	Outcomes Following Impedance Threshold Device Use During Out-of-	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido

		Hospital Cardiac Arrest.		
13	42846439	Child drowning in northern Bangladesh: barriers, local initiatives, and opportunities for prevention.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
14	42843615	Spectral Characteristics and Parameters of Pulse Oximetry Waveforms for Assessing Resuscitation Status.	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido
15	42841834	Predictors of High Self-Efficacy in Cardiopulmonary Resuscitation: A Regression Model Analysis.	Factores humanos, ética, formación e implementación	Incluido
16	42840577	Case Report: Ischemic bowel necrosis following intra-aortic balloon pump support in a patient with cardiogenic shock.	Circunstancias especiales, trauma y casos clínicos	Incluido
17	42840193	Serial plasma proenkephalin A 119-159 and dipeptidyl peptidase 3 after cardiac arrest: association with long-term neurological outcome.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
18	42838865	Global Rate of Bystander Cardiopulmonary Resuscitation in Out-of-Hospital Cardiac Arrest: A Systematic Review and Meta-Analysis.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
19	42838847	Lactate and pH as Predictors of In-Hospital Mortality in Extracorporeal Cardiopulmonary Resuscitation: A Single-Center Retrospective Study.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
20	42838519	Cardiovascular Emergency Action	Sistemas EMS, respuesta	Incluido

		Planning in the United States Military.	comunitaria y cadena de supervivencia	
21	42838501	Amiodarone After Conversion From a Non-shockable to a Shockable Rhythm in Out-of-Hospital Cardiac Arrest A Propensity Score-Matched Analysis from the German Resuscitation Registry.	Desfibrilación y farmacología durante la reanimación	Incluido
22	42838500	Impact of Cardiac Rhythm Dynamics during Cardiopulmonary Resuscitation on Clinical Outcomes in Patients Treated with Extracorporeal Cardiopulmonary Resuscitation (ECPR): A Systematic Review and Meta-analysis.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
23	42838499	Non-enrolment and non-completion of cardiac rehabilitation among survivors of out-of-hospital cardiac arrest with ischaemic aetiology: a nationwide register-based cohort study.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
24	42838498	Most Older Long-Term Care Residents in Oslo Have Documented Do-Not-Resuscitate Status: A Cross-Sectional Study.	Factores humanos, ética, formación e implementación	Incluido
25	42838497	Time to Return of Spontaneous Circulation and Long-Term Outcomes in Bystander-Witnessed Out-of-Hospital Cardiac Arrest Survivors.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
26	42838496	Automated External Defibrillators for In-	Desfibrilación y farmacología	Incluido

		Hospital Cardiac Arrest: A Systematic Review.	durante la reanimación	
27	42838495	Prehospital Prognostication after Out-of-Hospital Cardiac Arrest in Tertiary Care Centers: The R-EDByUS Score in the JAAM-OHCA Registry.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
28	42838476	Design and rationale of the TANGO2 trial: A randomized controlled non-inferiority trial of bystander compression-only CPR versus standard CPR in out-of-hospital cardiac arrest.	Directrices, ensayos en curso y revisiones de práctica	Incluido
29	42836281	Incidence, Process of Care, and Outcomes of In-Hospital Cardiac Arrest in China: A Multicenter Prospective Registry Study.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
30	42835672	Low-dose, high-frequency simulation with respiratory function monitor feedback enhances face mask ventilation across neonatal resuscitation devices: A prospective study in neonatology fellows.	Pediatría y neonatología	Incluido
31	42835327	Designing and implementing the first national CPR championship in Greece: the "KIDS SAVE LIVES - TA PAIDIA SOZOUN ZOES" experience.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
32	42835303	Evaluation of adherence to national regulations for documentation of limitations of life-sustaining	Factores humanos, ética, formación e implementación	Incluido

		treatments after a limited intervention at a Swedish hospital.		
33	42833938	Predictors of outcome in 215 patients requiring emergency department thoracotomy: A 2-year prospective study in a large urban trauma center.	Circunstancias especiales, trauma y casos clínicos	Incluido
34	42833702	Cardiac warning symptoms in paediatric out-of-hospital ventricular fibrillation cardiac arrest survivors.	Pediatría y neonatología	Incluido
35	42833510	Pediatric post-ROSC blood pressure: searching for the optimal target.	Pediatría y neonatología	Incluido
36	42833509	When a social-media AI campaign becomes a safety lesson: reflections from European Resuscitation Congress 2026.	Factores humanos, ética, formación e implementación	Incluido
37	42833508	Comparing apples with mochi: why foreign body airway obstruction studies need a common language.	Circunstancias especiales, trauma y casos clínicos	Incluido
38	42831128	Supraglottic airway versus endotracheal intubation in out-of-hospital cardiac arrest: a systematic review and meta-analysis.	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido
39	42831122	Sex differences in management and outcomes after out-of-hospital cardiac arrest with angiographically confirmed obstructive coronary artery disease.	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido
40	42831011	Validation and comparison of two prearrest prediction	Cuidados posresucitación, rehabilitación y	Incluido

		scores for in-hospital cardiac arrest survival.	neuropronóstico	
41	42830995	Prognostic utility of the revised post-cardiac arrest syndrome for therapeutic hypothermia score in pediatric patients with post-cardiac arrest syndrome.	Pediatría y neonatología	Incluido
42	42830836	Nighttime human-supervised drone-delivered automated external defibrillators: a quasi-experimental mixed-methods feasibility study.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
43	42830795	It takes two: development of simulation training for two-handed neonatal mask ventilation integrating a respiratory function monitor; a non-randomised before-and-after simulation study.	Pediatría y neonatología	Incluido
44	42830370	Association of Chest Compression Depth, Rate, and Spring Resistance with "Quality CardioPulmonary Resuscitation" (QCPR) Scores in a Manikin Model.	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido
45	42829704	Simulation-Based CPR Education for Student Nurses: A Narrative Review of Effects on Knowledge, Skills, and Confidence.	Factores humanos, ética, formación e implementación	Incluido
46	42467413	Differential Association of Prehospital Physician Presence with Outcomes in Out-of-Hospital Cardiac Arrest: Secondary Analysis	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido

		of a Nationwide Registry.		
47	42456096	Performance of Termination-of-Resuscitation Rules in Foreign Body Airway Obstruction-Related Out-of-Hospital Cardiac Arrest: A Prospective Multicenter Registry Analysis.	Circunstancias especiales, trauma y casos clínicos	Incluido
48	42456091	Lidocaine Versus Amiodarone in Patients With Shockable Out-of-Hospital Cardiac Arrest: A Target Trial Emulation.	Desfibrilación y farmacología durante la reanimación	Incluido
49	42413030	Landscape of Extracorporeal Cardiopulmonary Resuscitation in Germany. A Nationwide Retrospective Study.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
50	42348810	Ethical Dilemmas in Pediatric Extracorporeal Cardiopulmonary Resuscitation: Qualitative Study of Interprofessional Perspectives.	Reanimación avanzada, ECPR/ECMO y soporte circulatorio	Incluido
51	42334575	[Out-of-hospital cardiac arrest : Current recommendations along the chain of survival and patient management].	Directrices, ensayos en curso y revisiones de práctica	Incluido
52	42307170	Self-Directed External BLS Training: Motivations for Continuing Professional Development Among Japanese Nurses.	Sistemas EMS, respuesta comunitaria y cadena de supervivencia	Incluido
53	40421483	Compression-only or standard cardiopulmonary resuscitation for out-of-hospital cardiac	Vía aérea, ventilación, monitorización y calidad de la RCP	Incluido

		arrest: a systematic review and meta-analysis of randomized controlled trials.		
54	40298962	[Palliative extubation after ROSC in the emergency setting- a guideline for emergency physicians].	Cuidados posresucitación, rehabilitación y neuropronóstico	Incluido