

Spanish registry of patients suffering an out-of-hospital cardiac arrest treated by emergency services

Submission date 19/02/2023	Recruitment status Recruiting	☒ Prospectively registered ☐ Protocol
Registration date 22/02/2023	Overall study status Ongoing	☐ Statistical analysis plan ☐ Results
Last Edited 21/03/2025	Condition category Circulatory System	☐ Individual participant data ☐ Record updated in last year

Plain English summary of protocol

Background and study aims

Out-of-hospital cardiac arrest (OHCA) is a major public health problem. Patient survival depends on a series of precise and coordinated actions that must be established from the moment of patient collapse. Society, the citizens themselves, are a fundamental part of the chain of survival. All EMS are committed to improving care and outcomes in OHCA. Participation in a common registry, with homogeneous definitions, methods and quality controls, will allow to know and adapt best clinical practices, reduce variability and promote lines of research.

The Out-of-Hospital Spanish Cardiac arrest Registry (OHSCAR) started in 2013. Since its creation has collected data in defined periods. From 2023 it changes its recruitment periods and becomes a continuous OHCA registry. (Proyecto OHSCAR - CERCP)

Who can participate?

Spanish public EMSs caring for patients with cardiac arrest.

The Research group on Bioengineering and Resuscitation (BioRes). Its main research line is the application of Digital Signal Processing and Machine Learning to biomedical signals. BIORES - Escuela de Ingeniería de Bilbao - UPV/EHU

The EASP is a strategic and instrumental company of the SSPA and SNS for the innovation of health systems, the improvement of population's health, and the promotion of scientific and technical collaboration and exchange, at national and international level Escuela Andaluza de Salud Pública (easp.es)

What does the study involve?

Incidence of resuscitation attempts, general patient and event characteristics, treatment received and survival to discharge of patients treated by Spanish EMS.

What are the possible benefits and risks of participating?

The registry will allow the implementation of a quality circle in each participating EMS and, as a whole, to know the clinical practice and health outcomes of OHCA care in Spain. It will facilitate comparison and benchmarking between EMSs and integration with different national and international research projects.

Where is the study run from?

Emergency Services in 13 Spanish regions and in two major capitals (Madrid y Zaragoza).
Population served over 40 million inhabitants.

When is the study starting and how long is it expected to run for?

January 2023 to December 2043

Who is funding the study?

Spanish Resuscitation Council (Spain)

RiojaSalud Foundation (Spain)

Who is the main contact?

Dr. José I. Ruiz Azpiazu, jirazpiazu@riojasalud.es / jirazpiazu@gmail.com

Fernando Rosell Ortiz, MD, PhD, frosell@riojasalud.es / fernandorosell@gmail.com

Contact information

Type(s)

Scientific

Contact name

Dr Jose Ignacio Ruiz Azpiazu

ORCID ID

<https://orcid.org/0000-0002-1353-2597>

Contact details

Perez Galdos, 55 - 6

Logroño

Spain

26005

+34 639300522

jirazpiazu@riojasalud.es

Type(s)

Scientific

Contact name

Dr Fernando Rosell Ortiz

ORCID ID

<https://orcid.org/0000-0003-0260-9955>

Contact details

Duques de Najera 6

Logroño

Spain

26002

+34 697958689

frosell@riojasalud.es

Additional identifiers

Study information

Scientific Title

Survival of patients suffering an out-of-hospital cardiac arrest treated by emergency services in Spain. Out-of-Hospital Spanish Cardiac arrest Registry

Acronym

OHSCAR

Study objectives

To know the epidemiology, treatment, survival and changes in the clinical practice for the out-of-hospital cardiac arrest management in Spain will improve the survival of these patients.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 31/01/2023, Ethical Committee of La Rioja (Edificio CIBIR – 3 planta, C/ Piqueras 98, 26006, Logroño – La Rioja, Spain; +34 941 278 855. Ext. 84780; secretaria.ceic@riojasalud.es), ref: CEImLAR PI 647

Primary study design

Observational

Study design

Observational retrospective multicentre study

Study type(s)

Other

Health condition(s) or problem(s) studied

Survival in Out-of-hospital cardiac arrest (OHCA)

Interventions

Continuous registry of OHCA patients attended by Spanish emergency services EMS. The registry follows the Utstein template guidelines to report OHCA variables. The researchers are SEM professionals participating in the OHSCAR registry. They use the pre-hospital medical records and the in-hospital ones, in cases with successful resuscitation, to assess the treatment, evolution and status at discharge.

Intervention Type

Other

Primary outcome(s)

Survival at hospital discharge with good neurological status (Cerebral Performance Category scale ≤ 2) measured using patient records

Key secondary outcome(s)

The registry incorporates variables of the event (place, witnessed, time), the patient (sex, age), the treatment received (basic life support, advanced life support, times intervals), the outcome after resuscitation (dead, recovery of spontaneous pulse, transfer to hospital), hospital treatment (coronary intervention, active temperature control), neurological status at discharge (cerebral performance categories scale). Follow-up at one month. The sources of data are; the medical records of the emergency services, the call data and schedules from the dispatching centers and the follow-up from the patients' digital health records (hospital data and revisions after discharge)

Completion date

31/12/2048

Eligibility

Key inclusion criteria

Cases of OHCA in which an EMS performed resuscitation or post-resuscitation care after cardiopulmonary resuscitation (CPR) attempts by a first responder

Participant type(s)

All

Healthy volunteers allowed

No

Age group

All

Sex

All

Key exclusion criteria

Cases in which the EMS suspended resuscitation on the grounds that it was not indicated due to futility criteria confirmed during resuscitation. An attempt at CPR was considered futile when new data during resuscitation showed that it was not indicated (terminal disease, prolonged arrest time prior to EMS arrival, "Do not resuscitate" orders)

Date of first enrolment

01/01/2024

Date of final enrolment

31/12/2048

Locations

Countries of recruitment

Spain

Study participating centre

Servicio de Emergencias Sanitarias 061 La Rioja

Piqueras 96

Logroño

Spain

26006

Study participating centre

Servicio de Urgencia Médica de la Comunidad de Madrid, SUMMA 112

Antracita 2 bis

Madrid

Spain

28045

Study participating centre

Subdirección de urgencias y atención a la urgencia vital de Navarra

Plaza de la paz SN

Pamplona

Spain

31002

Study participating centre

Emergentziak Osakidetza

Maria Diaz De Haro 53

Bilbao

Spain

48010

Study participating centre

061 Aragon

Avda navarra 78

Zaragoza

Spain

50011

Study participating centre

Gerencia de Emergencias Sanitarias de Castilla y León

Hospital Militar 24 - 2

Valladolid

Spain

47007

Study participating centre
Servei Emergencies Mediques
Pablo Iglesias 101
L'Hospitalet de Llobregat
Spain
08908

Study participating centre
SAMUR Protección Civil
Ronde las Provincias 7
Madrid
Spain
28011

Study participating centre
Urxencias sanitarias 061
Rua da Cultura SN
A Estrada (Pontevedra)
Spain
36680

Study participating centre
Gerencia de urgencias y emergencias 061 del Servicio Murciano de Salud
Jose Sancez lozano 7
Murcia
Spain
30005

Study participating centre
Servicio de Emergencias 061 Cantabria
Rosalia de Castro SN
Santander
Spain
39011

Study participating centre
Servicio de Atención Médica Urgent 061 de las Islas Baleares
Carrer Illes balears 1B
Palma de mallorca

Spain
07014

Study participating centre
Emergencias Sanitarias de Extremadura 112
Av America 2
Merida
Spain
06800

Study participating centre
Servicio de Emergencias Sanitarias, Comunidad Valenciana
Avenida Campanar
21 - 5 A Planta Escola Enf la Fe
Valencia
Spain
46009

Sponsor information

Organisation
Spanish Resuscitation Council

Organisation
Riojasud Foundation

Organisation
Fundacion Asisa

Funder(s)

Funder type
Research council

Funder Name
Spanish Resuscitation Council

Funder Name

Riojasalud Foundation

Results and Publications

Individual participant data (IPD) sharing plan

Spanish EMS are public services. Each of them depends on the corresponding health administration. The custody of the data corresponds to these administrations. The monitoring and traceability of the data is the responsibility of each EMS. The database centralized in the RiojaSalud Foundation includes anonymized alphanumeric data. Each EMS can access its own data and reports and its IP can access the general reports of the country. Access is allowed to the Spanish Ministry of Health and, upon request, with the consent of the EMS, raw case data could be accessed. Under these assumptions, access to anonymized data to verify an analysis, a report, or a publication would be feasible after the approval of the EMS that has provided the data for its realization. In this sense, the registry has a steering committee composed of the PI of each participating institution.

IPD sharing plan summary

Stored in publicly available repository, Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Study website	Study website	11/11/2025	11/11/2025	No	Yes