



Out-of-Hospital Cardiac Arrest Register



National Ambulance Service

Out-of-Hospital Cardiac Arrest Register Annual Report 2021 Summary

October 2022



Key findings 2021

OHCAR Annual Report Summary

Demographics

2,906

out-of-hospital cardiac arrest incidents were recorded as treated by Emergency Medical Service



33%
Female patients



67%
Male patients

81%

Private setting*

74%

Occurred in the home

19%

Public setting

* includes 'home', 'farm' or 'residential institution'

Emergency Medical Services

81%

Cardiac arrest recognition by emergency call takers

29%

Defibrillation performed

55%

Advanced airway use

67%

Epinephrine administered

34%

Transported to hospital

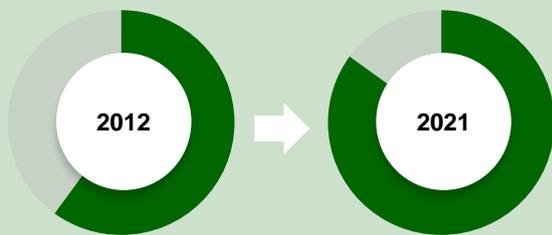
14%

EMS witnessed cases survived

Key findings 2021

OHCAR Annual Report Summary

Community Involvement

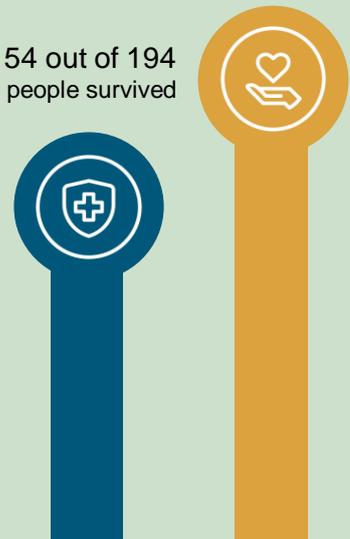


Since 2012, bystander CPR* has increased from 60% to 85%.

* Cardio Pulmonary Resuscitation
** Emergency Medical Services

6.7% defibrillated before EMS** arrival (n = 194)

54 out of 194 people survived



Post Cardiac Arrest Outcome

6.1%

returned home to their communities

97%

of survivors were recorded as having a good neurological outcome

25%

of patients in the Utstein comparator group survived to hospital discharge

Key messages 2021

OHCAR Annual Report Summary

Overall Patient and Event Characteristics

- **2,906** out-of-hospital cardiac arrest incidents recorded on OHCAR (61 per 100,000 population in 2021)
 - **57%** occurred in an urban area
 - **67%** Male
 - Median age **67** years (interquartile range 53 – 78)
 - **85%** presumed medical cause
 - **74%** happened in the home
 - **85%** Bystander CPR attempted
 - **50%** Bystander witnessed
 - **6.7%** of patients had defibrillation attempted pre EMS arrival
 - **16%** had sustained ROSC to Hospital arrival

Non EMS Defibrillation

- In 2021, of all cases where an initial shockable rhythm was found, **non-EMS defibrillation** occurred in **35%** of cases
- Non-EMS responders defibrillated **198 patients**, of whom **54 survived (27.8%)**
- Of all survivors of OHCA in 2021, **54 (30.3%)** resulted from non-EMS defibrillation

Survivors - Patient and Event Characteristics

- **178** patients survived
- **6.1%** discharged alive
- **152** had good to moderate neurological function on discharge

Utstein Group

- **13%** of patients were in the Utstein Group
- **48%** ROSC pre-hospital
- **37%** ROSC on arrival at hospital
- **25%** were discharged alive

^aDefinition of urban is matched with the CSO definition of a settlement i.e. defined as having a minimum of 50 occupied dwellings, with a maximum distance between any dwelling and the building closest to it of 100 metres, and where there is evidence of an urban centre ¹⁵.

^b The Utstein subgroup includes patients who are >17 years, with presumed medical aetiology, bystander witnessed event and an initial shockable rhythm.

Key messages 2021

OHCAR Annual Report Summary

“ The Out of Hospital Cardiac Arrest Register (OHCAR) aims to improve outcomes in Ireland by continuous performance measurement and feedback to service providers and the broader community.

“ The Chain of Survival has 4 steps and can be implemented by any member of the public, supported over the phone by the HSE National Ambulance Service (NAS) 112/999 team.

“ The Register in Ireland is funded by the National Ambulance Service as a means of quality assuring and quality improving the care provided in this extreme emergency by ambulance services in Ireland.

“ Last year 178 patients survived their out-of-hospital cardiac arrest to leave hospital alive, 97% with moderate to good neurological outcome.

“ Responders, who are not members of the Emergency Medical Services, can make all the difference when an out of hospital cardiac arrest occurs

“ Responders include a wide range of trained volunteers (both lay and health care professionals), off-duty Emergency Medical Service (EMS) staff and members of the public who encounter an emergency and are prepared to provide care.

“ Community First Responders are an integral part of dealing with an emergency in the community in that they provide vital lifesaving CPR and defibrillator treatment to patients while an ambulance is on route.

Anyone interested in becoming a Community First Responder can visit www.becomeacfr.ie and get in touch. There is currently a need for additional Community First Responders right around the country and you will be given the essential training required.

