

PE2067/N: Improve data on young people affected by conditions causing Sudden Cardiac Death

British Heart Foundation Scotland written submission, 14 October 2025¹

British Heart Foundation is committed to improving survival of out-of-hospital cardiac arrest, understanding the barriers to improving survival, and influencing all steps of the Chain of Survival.

BHF's 2025 Strategy outlines its commitments to helping to place defibrillators in high-priority communities, continuing the rollout of The Circuit, and CPR training through RevivR.²

BHF Scotland welcomes the opportunity to provide evidence to the Citizens Participation and Petitions Committee. This submission outlines evidence on defibrillator access and potential data-led placement strategies.

Current Context

Currently in Scotland there are approximately 3752 out-of-hospital cardiac arrests (OHCA) each year, and less than one in ten people survive an OHCA.³ For every minute that a person experiencing a cardiac arrest does not receive CPR and defibrillation, their chance of survival reduces by up to 10%.⁴ Early defibrillation is a key part of the Chain of Survival, but it is estimated that a public access defibrillator (PAD) is only used in one in ten OHCA's.⁵ PADs are an essential resource for community survival, however, data shows that access to defibrillators is not consistent across communities in Scotland.

Access to Defibrillators

Early defibrillation is key to increasing survival of an OHCA, evidence shows defibrillation within 3-5 minutes can increase survival rates by as much as 50-70%.⁶ However, across Scotland there are multiple areas that lack defibrillators and where long retrieval times are impacting survival.

For example, Scottish Ambulance Service's OHCA report highlights a significant difference in PAD use in different areas across Scotland that they suggest is attributed to lack of access to PADs.⁷ Earlier this year, using Circuit data (the UK's national defibrillator network) BHF identified 12 areas across Scotland with limited

¹ This document has been provided as a briefing ahead of the Committee's thematic evidence session on emergency cardiac care petitions on 29 October 2025.

² British Heart Foundation (2025). *Our Strategy: Turning an Era of Scientific Opportunity into Lifesaving Progress*. Available at: <https://www.bhf.org.uk/-/media/files/what-we-do/our-strategy/bhf-strategy-final.pdf?rev=42c4b86b4ddb4f8e930cf980e1f2e7c3> [www.bhf.org.uk]

³ Scottish Ambulance Service. (2025). *Scotland's out-of-hospital cardiac arrest report 2023–24*. <https://www.scottishambulance.com/media/pelfnspc/ohca-report-2023-24.pdf>

⁴ Resuscitation Council UK. *Defibrillation*. <https://www.resus.org.uk/public-resources/defibrillation>

⁵ Scottish Ambulance Service. (2025). *Scotland's out-of-hospital cardiac arrest report 2023–24*. <https://www.scottishambulance.com/media/pelfnspc/ohca-report-2023-24.pdf>

⁶ Scottish Ambulance Service. (2025). *Scotland's out-of-hospital cardiac arrest report 2023–24*. <https://www.scottishambulance.com/media/pelfnspc/ohca-report-2023-24.pdf>

⁷ Scottish Ambulance Service. (2025). *Scotland's out-of-hospital cardiac arrest report 2023–24*. <https://www.scottishambulance.com/media/pelfnspc/ohca-report-2023-24.pdf>

access to defibs and significant levels of deprivation, the retrieval time in some of these areas can be as high as 17 minutes 46 seconds (Saltcoats, North Ayrshire).⁸

People in areas of greatest deprivation are up to twice as likely to experience an OHCA and because data shows a link between areas of greatest deprivation and lower availability of PADs.⁹ Rates of bystander CPR, another key link in the chain of survival, are also much lower in area of greatest deprivation as are rates of survival.

This data makes clear that any action to increase access to PADs should consider these areas of greatest need, where retrieval rates remain high and survival remains low, to reduce these health inequalities. Ensuring defibrillators are emergency-ready also requires robust guardianship and maintenance protocols, which BHF supports through The Circuit but securing guardians can be a challenge which should also be considered when placing PADs.

It is estimated that around 15% of OHCA's happen in the workplace,¹⁰ so although some workplaces may be a good place to site a defibrillator, evidence suggests there are more likely to be needed in more residential areas, with 71% of worked arrests in Scotland taking place at an individual's home.

Data and tools are available that could aid in the strategic placement of defibrillators to areas that need them most.

PADmap is a free, publicly available resource that was launched earlier this year by the University of Edinburgh and was funded by the Scottish Government and St John Scotland. The tool uses data from the Scottish Ambulance Service and The Circuit to create a map showing mathematically optimised locations for suggested PAD placement, combining 'historic cardiac arrest locations with the locations of all the existing defibrillator to compute locations that are most likely to see future cardiac arrests'.¹¹

Defibrillators and Schools

One proposal to increase access to defibrillators across Scotland is to provide all schools in Scotland with a PAD. This is a measure that has been implemented in England, and to some extent Wales, and is being implemented in Northern Ireland.

There are potential benefits to providing schools with PADs, research has shown that 33% of all OHCA's occur within 300m of a school, making them potentially good sites to place PADs where they are most needed.¹² They are often well located within residential areas and with most worked arrests happening in the home supplying a PAD to every school could potentially provide better defibrillator coverage to local communities. It would also increase the number of registered

⁸ BHF Circuit data

⁹ Scottish Ambulance Service. (2025). *Scotland's out-of-hospital cardiac arrest report 2023–24*. <https://www.scottishambulance.com/media/pelfnspc/ohca-report-2023-24.pdf>;

Burgoine T, Austin D, Wu J, *et al* Automated external defibrillator location and socioeconomic deprivation in Great Britain, *Heart* 2024;110:188-194.

¹⁰ Resuscitation Council UK. (2021). *Epidemiology of cardiac arrest Guidelines*.

<https://www.resus.org.uk/library/2021-resuscitation-guidelines/epidemiology-cardiac-arrest-guidelines>

¹¹ PADmap. *PADmap: Public Access Defibrillator Locations*. <https://padmap.org/>

¹² M. Benson *et al*, (2022) Location of out-of-hospital cardiac arrests and automated external defibrillators in relation to schools in an English ambulance service region

defibrillators in Scotland by 19.4% from 9,829 to 11,731.¹³ Rollout of this measure could also be delivered at pace.

Using data from The Circuit, BHF Scotland have investigated the potential impact of placing PADs on all schools on average retrieval times across each local authority in Scotland. In some local authorities there is a marked reduction in retrieval time. For example, in Glasgow City the average retrieval time drops from an average of 5 minutes 12 seconds to 3 minutes 48 seconds and in the most deprived areas in Glasgow City there would be a 25% decrease in the average retrieval time.¹⁴

However, evidence is limited, and this impact is not seen across all local authority areas. In some areas there is only a small decrease in retrieval time by only a few seconds, like North Ayrshire and Renfrewshire.¹⁵ The impact in areas of greatest deprivation is also not seen consistently across all local authorities. This data is top level and presents only an average retrieval time, meaning that it will potentially include schools that are not best placed to site a defibrillator.

Schools could be a beneficial place to site defibrillators in some cases, however, this option is less strategic than using a tool like PADmap to ensure that PADs are places where they are most likely to be used.

Sudden Cardiac Death

BHF Scotland defer to the guidance published by the UK National Screening Committee on population screening for cardiac conditions. We note that the current recommendation is against a population level screening programme.

For more information on sudden cardiac death and screening please see BHF Scotland's response to petition PE2067/G: https://www.parliament.scot/-/media/files/committees/citizen-participation-and-public-petitions-committee/correspondence/2023/pe2067/pe2067_g.pdf

A further briefing on this subject can be provided to committee members on request.

¹³ BHF Circuit data

¹⁴ BHF Circuit data

¹⁵ BHF Circuit data