Citizen Participation and Public Petitions Committee
Wednesday 12 November 2025
17th Meeting, 2025 (Session 6)

Emergency Cardiac and Stroke Care Petitions

Introduction

1. At its meeting on 7 May 2025, the Committee agreed to take evidence on petitions related to the provision of defibrillators in Scotland. The Committee then agreed to include these petitions in a thematic evidence session on emergency cardiac and stroke care with the Minister for Public Health and Women's Health. The Committee also agreed to hear evidence from cardiac care stakeholders prior to hearing from the Minister, and it did so on 29 October 2025. The Committee agreed for the session with the Minister to cover themes arising from the following petitions:

    - PE1989: Increase defibrillators in public spaces and workplaces
    - PE2048: Review the FAST stroke awareness campaign
    - PE2067: Improve data on young people affected by conditions causing Sudden Cardiac Death
    - PE2101: Provide Defibrillators for all Primary and Secondary Schools in Scotland

2. Petition summaries for each petition are included in **Annexe A** and the Official Report of the Committee's last consideration of each petition is included at **Annexe B**. The Official Report of the Committee's evidence session with cardiac care stakeholders is also included at **Annexe B.**

3. The Committee has received new written submissions for petition PE2048 from the petitioner, Scottish Ambulance Service, the Minister for Public Health and Women's Health, NHS Ayrshire and Arran, NHS Shetland, Chest, Heart & Stroke Scotland, NHS Forth Valley and Stephen Kerr MSP. It has also received new written submissions for petition PE2067 from the Consulate General of Italy in Edinburgh and the Cabinet Secretary for Health and Social Care. Finally, it has received a briefing for petitions PE1989, PE2067 and PE2101 from the British Heart Foundation. All of these are set out in **Annexe C**.

4. At today's meeting the Committee will hear evidence from:

    - Jenni Minto, Minister for Public Health and Women's Health
    - Kylie Barclay, Senior Policy Manager, Long Term Conditions Policy
    - Martin Macdonald, Stroke Senior Policy Manager, Long Term Conditions Policy

- Will Wood, Unit Head, Long Term Conditions Policy

Action

5. The Committee is invited to decide what action to take.

Clerks to the Committee
November 2025

Annexe A: Summary of petitions

PE1989: Increase defibrillators in public spaces and workplaces

Petitioner

Mary Montague

Date Lodged

14 December 2022

Petition summary

Calling on the Scottish Parliament to urge the Scottish Government to support the provision of defibrillators in public spaces and workplaces.

Previous action

I contacted Paul Sweeney MSP to ask about a Petition to widen access to Automated External Defibrillators (AED) and was advised of the Committee route.

Background information

Following the fatal cardiac arrest of a close family member in a large, local supermarket, my request for an Automated External Defibrillator (AED) was refused, despite my highlighting that all other large supermarkets locally provided these.

A bereaved family may be comforted to know that everything that could have been done to save the life of their loved one, was done. The effect on shop staff in such a fatality can be traumatic also.

Sudden cardiac arrest is the leading cause of death in adults over the age of 40. British Heart Foundation say that “Cardiac arrest is a critical medical emergency" and "Unless treated immediately, leads to death within minutes. With around 3,200 out-of-hospital cardiac arrests in Scotland each year, the survival rate is just 1 in 10". An AED increases survival rates but the provision of AEDs is random.

PE2048: Review the FAST stroke awareness campaign

Petitioner

James Anthony Bundy

Date Lodged

19 September 2023

Petition summary

Calling on the Scottish Parliament to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST stroke campaign, and ensuring that awareness campaigns include all the symptoms of a potential stroke.

Previous action

I have contacted Keith Brown MSP and requested a meeting be set up to discuss the petition.

Background information

Anthony (Tony) Bundy tragically lost his life on 29th June 2023 after suffering a Basilar Artery Ischaemic Stroke. When Tony started suffering a stroke, his face and arms were unaffected, and his speech was not slurred. This meant that Tony passed the "FAST" stroke test, and was denied the emergency treatment required to save his life until it was too late.

Tony's family are now raising awareness of all the symptoms of stroke, including the inability to stand, cold sweats, eyes struggling to focus, slowed speech, nausea, and vomiting.

We are calling for a review of the FAST stroke campaign, looking at international examples, in order to ensure stroke awareness campaigns include the wider range of symptoms of stroke. This is intended to maximise knowledge amongst the general public and medical profession.

Increasing awareness will hopefully mean fewer families will have to experience the pain and loss that Tony’s family has endured.

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

Petitioner

Sharon Duncan

Date Lodged

14 November 2023

Petition summary

Calling on the Scottish Parliament to urge the Scottish Government to commission research to establish how many people aged 14-35 are affected by conditions that cause Young Sudden Cardiac Death; clarify the number of people who die annually in Scotland from these conditions; and set up a pilot study to establish if voluntary screening can reduce deaths.

Previous action

I have written to, and met with, my MSP, Oliver Mundell, regarding the lack of clarity in data currently available.

I have also introduced an MSP Pledge urging MSP's to support a national strategy to prevent Young Sudden Cardiac Death and help save the lives of at least 12 healthy young people who die every week. Along with other bereaved parents, I have raised money to provide screening and publicised this issue in national press and television.

Background information

On 19 March 2022, my son, David Hill, died while playing for the Parliament's rugby team in Dublin. Almost a year after his death we found that he had died from an undiagnosed genetic condition which stopped his heart.

There is no screening programme for young people with these conditions and current estimates are that there are at least 12 preventable deaths each week in the UK.

Cardiac Risk in the Young (CRY) support and fund research as well as providing screening, which is mostly funded by bereaved families. Through this, CRY believes the incidence of young people identified with a potentially fatal cardiac condition (if untreated) to be 1:300, with another 1:100 to be found with a condition that could cause serious issues later in life if not monitored. The National Screening Committee (NSC) believe the incidence to be approx. 1 or 2:100,000. This discrepancy makes it difficult to establish the benefit of funding a national strategy. With accurate data from Scotland, the NSC could revisit their decision.

Screening costs £65 per person, and initially consists of an ECG, with follow-up by cardiologists.

PE2101: Provide Defibrillators for all Primary and Secondary Schools in Scotland

Petitioner

Peter Earl on behalf of Troqueer Primary School

Date Lodged

21 May 2024

Petition summary

Calling on the Scottish Parliament to urge the Scottish Government to provide Primary and Secondary Schools with Automated External Defibrillators (AED).

Background information

After a trip to our local Operation Safety event, we looked into the availability of defibrillators in our local area. We were shocked to find out how under resourced our local area was. We do have a local defibrillator but we discovered it was too far away to have a positive impact on anybody who might suffer a cardiac arrest at our school. During events, busy periods we could have up to 400 - 500 people on site. It is not safe enough to not have an AED at hand.

We decided to raise money to buy an AED ourselves. We have learned a lot about enterprise, AEDs, the circulatory system, and how important these devices are.

Our schools are worryingly under resourced compared to other parts of the UK. Providing defibrillators in schools will also help local communities and should be considered as a matter of urgency. The lives of pupils and staff members are being put at risk.

Please help us to get them provided in ALL schools.

Annexe B: Extracts from the Official Report

Extract from the Official Report of last consideration of PE2048 on 19 February 2025

The Convener: That brings us to petition PE2048, which has been lodged by James Anthony Bundy, who I see joins us in the public gallery. The petition calls on the Scottish Parliament to urge the Scottish Government to increase awareness of the symptoms of stroke by reviewing its promotion of the FAST—face, arms, speech, time—stroke awareness campaign and ensuring that awareness campaigns include all symptoms of a potential stroke. My colleague Stephen Kerr joins us for consideration of the petition.

At the previous meeting—I apologise again that I was indisposed and unable to participate—the committee heard evidence from representatives of stroke awareness charities, the Scottish Ambulance Service, NHS 24 and clinician academics who specialise in stroke care. Following that meeting, we have received a new submission from the Stroke Association to provide further detail on the research that Mr John Watson referred to during that discussion.

I remind Mr Bundy that the option to provide written submissions to aid our consideration of the petition is always available, whether that is sharing new views or any additional suggestions that he might hope that the committee would consider.

Unfortunately, as I said earlier, David Torrance is not well and is unable to be with us today, but members have had an opportunity to reflect on the evidence that both panels of witnesses provided. On my reading of the *Official Report*, that evidence appeared to suggest that improving clinical awareness of less common symptoms of stroke and ensuring timely treatment for people experiencing a stroke might hold the key to delivering better outcomes for patients.

Although there appeared to be consensus that the current situation is not good enough, participants raised concerns that, with regard to public awareness, widening the FAST approach to include balance and eyes could have the counter-productive effect of delaying individuals from presenting for diagnosis and treatment, with initial studies indicating lower levels of recall for BE FAST—balance, eyes, face, arm, speech, time—compared to FAST and a risk that individuals will wait for all symptoms to be present before they seek help.

The committee also heard that Scotland’s stroke services have limited capacity and that our priority should be ensuring that people experiencing a stroke can access timely and appropriate treatment. Witnesses expressed concern that, if everyone who presents with vision or balance issues was sent for a stroke assessment without further generalist diagnostic examination, the risk increases that we would end up delaying access for patients experiencing a stroke.

Before I invite colleagues to comment and reflect, I invite Mr Kerr to contribute to our discussion.

Stephen Kerr (Central Scotland) (Con): Thank you for the opportunity to say a few words to the committee this morning, particularly in the light of the summary that you have just presented.

Before I do so, I hope that you do not mind if I take the opportunity to acknowledge the incredible efforts of James Bundy and his family, especially his mum, Selena. Their campaign to improve stroke awareness is not just about public health; it is personal, deeply meaningful and already saving lives.

James works in my parliamentary office, and his commitment to BE FAST comes from his experience of the sudden and tragic loss of his dad, Tony, to a stroke. He is determined to ensure that other families do not face the same heartbreak that the Bundy family have faced. They have channelled their grief into action, and their efforts are already making a difference.

At their campaign's heart is a very simple but vital improvement, which builds on the existing FAST model by adding two additional early warning signs: balance and eyes. FAST has done an excellent job at helping the public become more aware of stroke symptoms, but we now know, based on evidence, that it does not cover all strokes.

Many people, in particular those who have strokes that affect the back of the brain, do not present with facial weakness or arm numbness. Instead, the symptoms often include a sudden loss of balance or vision problems. BE FAST strengthens FAST by making sure that more strokes are recognised earlier, so that people get the treatment that they need in time.

The evidence is clear: time is everything when it comes to stroke care. Every minute that is lost reduces the chance of survival and recovery, as was the case in the tragedy that befell Tony and the Bundy family. BE FAST awareness is growing among the public and national health service staff, and, already, strokes are being recognised sooner and patients are receiving life-saving treatment more quickly. I therefore conclude that the campaign is already having a positive impact.

Selena has said:

"Life has been tough since the death of my husband. We believe his condition was not picked up using routine tests. We have been campaigning hard on this issue, and we hope to see positive change to help people displaying the lesser-known signs of stroke, to stop this tragedy happening to others."

Convener, you mentioned specific evidence that the committee had received about the memorability of FAST versus BE FAST. Frankly, I struggle to believe that the public, who send us to this place, cannot grasp the concept of BE FAST when the evidence suggests that they are aware of FAST. It seems to me that experts are being faintly reductive if in their suggestion that the public cannot grasp BE FAST.

The time has come for us to take the next step, because BE FAST is not difficult to remember. In fact, the two-word acronym is arguably slightly easier to remember, because BE FAST also conveys the essence that lies behind the effective countering of a stroke's effects, which is time. The next step is for Scotland to formally adopt BE

FAST in public health messaging, NHS training and emergency response protocols. That simple, practical change will prevent strokes from being missed and ensure that more people receive urgent care when they need it.

I note what you said in your summary, convener, about capacity in the NHS. It is a subject that I have raised with Neil Gray, the Cabinet Secretary for Health and Social Care, in the chamber. He said on the record that the issues of capacity ought not to prohibit people from turning up in hospital if they believe that they or their loved ones have symptoms of a stroke. Therefore, I do not think that the argument that there is an issue of capacity is valid—especially in the eyes of the Scottish Government, according to the pronouncements of Neil Gray.

As you mentioned, the Stroke Association has submitted additional evidence that suggests that it would now support a trial of BE FAST, and I note that. NHS Ayrshire and Arran has said that it is willing run a trial in its health board area.

I see all that as positive. I hope that there might be an opportunity for James Bundy himself to respond to some of the evidence that the committee has received. I thank you, convener and members of the committee, for the way in which you have engaged with the issue. Your scrutiny of the evidence and your willingness to listen and reflect demonstrates a real commitment to improving stroke outcomes in Scotland. That is what this is all about.

The Bundy family has already helped to change and save lives but, together, we can take that further. It is a small change that will lead to a big difference. It will save lives.

Jackson Carlaw: Thank you, Mr Kerr. This petition has impressed its importance on the committee and it is one with which we have engaged, hence the journey that led us to hearing from the two panels of witnesses at our last meeting.

Would any colleagues who were present at that meeting like to offer reflections on the evidence that we heard, on Mr Kerr’s contribution and on how we might now proceed?

Fergus Ewing: I am grateful to Mr Kerr for his contribution this morning. I find myself largely in agreement with it.

I should say that the witnesses that we heard from last week were not enthused about moving from FAST to BE FAST. To be fair to them, there were various reasons: they thought that it would bring people from the emergency department to the stroke department who would then be referred back to the emergency department. A separate issue was the overload problem that Mr Kerr mentioned. There was also a hint of a suggestion that the general public are not quite sophisticated or clever enough to cope with and spit out six letters as opposed to four. I must say that I was not particularly impressed by that argument. On the other hand, we have heard from a newly published document in America that BE FAST was found not to work as well as FAST. We will want to study that.

However, we should pursue the matter further. Perhaps we should write to NHS Fife seeking further information on the BE FAST pilot trial that it undertook. We heard in

NHS Fife's written submission that it undertook a pilot scheme, but it did not say what the findings were, including any available analysis and evaluation of the pilot.

We might also write to NHS Ayrshire and Arran, which offered to carry out a pilot—it was the only health board to make that offer, and it did so gratis; it was voluntary, not conscripted. The minister Jenni Minto said that she would be sympathetic to a pilot, although she did not go as far as advocating for it.

Were there a pilot in Ayrshire and Arran, it would have to be properly and rigorously set up so that its findings had statistical validity. That might involve a bit of thought and organisation by the experts—otherwise, to put it bluntly, it is rubbish in, rubbish out. If Ayrshire and Arran wants to do that, I think that we should contact the board and ask whether it would be willing to consider that further with the relevant bodies, with the Bundy family also contributing if they wish to do so.

10:30

We could also write to Chest Heart & Stroke Scotland and the Scottish Ambulance Service seeking further detail about the training programme and resources referred to during the round-table discussion and specifically about the guidance being produced for clinicians to increase awareness of atypical stroke symptoms, such as changes to balance and eyesight, that are absent from the FAST acronym but would be present in the BE FAST one.

Lastly, there would probably have to be some sort of public awareness campaign prior to the launch of the pilot so that people in Ayrshire and Arran are aware that it is happening. I think that a modest public awareness campaign would continue to create further interest and awareness nationally, because I am sure that newspapers and the media would cover that campaign very well in the way that, to be fair to them, they do. That in itself would be an opportunity to continue raising awareness and arguably, as Mr Kerr has said, to save further lives, which must be a good thing.

The Convener: Do any colleagues have further reflections?

Maurice Golden: I agree with everything that Mr Ewing has said.

I was slightly concerned by the evidence that we took regarding the marketing of and communication about BE FAST rather than FAST. In that regard, I wonder if we could write to the Chartered Institute of Marketing, first to ask whether there is any evidence about whether the addition of two letters to a four-letter word makes any difference to people remembering that term and secondly to find out whether there is any evidence about the effect that adding two letters has on meaning. That might be useful evidence to obtain.

The Convener: As a former resident of South Ayrshire, I can say that I am sure that my friends and neighbours were sufficiently erudite and compos mentis to absorb those additional two letters. That was my experience.

I wonder whether the minister has seen the evidence that we received from the witness panels. Notwithstanding the slight lack of enthusiasm that was expressed, we could also go back to the minister to highlight Ayrshire and Arran health board's willingness to undertake a pilot, about which the minister was sympathetic. As well as writing to that health board, we could facilitate that discussion.

In light of other recommendations by colleagues, we will keep the petition open and will seek to advance the aims of that petition on the basis that we have just described. I thank Mr Kerr as I do Mr Bundy, who joined us in the public gallery.

Extract from the Official Report of last consideration of PE2067 on 5 March 2025

The Convener: The next petition is PE2067, which was lodged by Sharon Duncan and calls on the Scottish Parliament to urge the Scottish Government to commission research to establish how many people aged 14 to 35 are affected by conditions that cause young sudden cardiac death, to clarify the number of people in Scotland who die annually from these conditions and to set up a pilot study to establish if voluntary screening can reduce deaths.

Is that Sharon Duncan in the public gallery? My eyesight is so faulty these days, but I believe that she is in the gallery—a very good morning to you.

We had hoped to be joined by Oliver Mundell for our consideration of this petition but, unfortunately, he is unwell and has not been able to attend the Parliament this week. He has sent his apologies.

We last considered this petition at our meeting on 20 March 2024, when we agreed to write to a number of organisations with a view to better understanding what research may be under way and to invite views on the call for a pilot study for a voluntary screening programme. Copies of all the responses that we have received are included in our papers for today's meeting.

The response from Cardiac Risk in the Young—CRY—provides details on calculating and understanding the incidence of conditions associated with young sudden cardiac death. It suggests that there are inaccuracies in the way that the incidence is recorded by the Office for National Statistics, which has led to the UK and Scottish Governments underestimating the impact that those conditions have on families and society at large. That is clearly disturbing.

Similarly, the British Heart Foundation and Chest Heart & Stroke Scotland both highlighted the importance of research for improving understanding of the prevalence of sudden cardiac death and how best to identify the risks associated with it. Both organisations indicated support for further research, with Chest Heart & Stroke Scotland believing that, if the Scottish Government commissioned research, including a pilot study on voluntary screening, it could provide crucial insight and offer a valuable contribution to the current evidence base.

We also received a response from the Minister for Public Health and Women's Health setting out how the Scottish Government and other UK nations engage with the work of the UK National Screening Committee. It noted that Governments cannot tell the NSC which issues it should consider or review.

In its response dated May 2024, the UK National Screening Committee states that it is not aware of any significant new work on whole population screening that would suggest a different outcome to its 2019 review. It does, however, plan to review evidence relating to population screening for sudden cardiac death within the next three years. The response also notes that the NSC's terms of reference have been expanded to include consideration of targeted or stratified screening programmes, and although it has not yet been asked to consider targeted or stratified screening for sudden cardiac death, it can be alerted to any new published peer-reviewed evidence that might suggest a case for a new screening programme.

We have also received two submissions from the petitioner. She welcomes the responses from Cardiac Risk in the Young, Chest Heart & Stroke Scotland and the British Heart Foundation, and also draws our attention to discussions that have taken place elsewhere in the UK, including an event at the Italian embassy in London that explored the mandatory screening programme for young people who are involved in organised sport in Italy, and how that programme might be adapted for use in the UK. Ms Duncan also shared information about the meeting that she had with the then First Minister, Humza Yousaf, and the Cabinet Secretary for Health and Social Care to discuss the possibility of commissioning or supporting research into the impact of diseases leading to sudden cardiac death in Scotland.

Quite a bit of progress has been made, but there is still work to do. Do colleagues have any suggestions for action?

Foysol Choudhury (Lothian) (Lab): We should keep the petition open and write to the Cabinet Secretary for Health and Social Care to highlight the evidence that the committee has received, and seek an update on any discussions that the cabinet secretary has had with the chief scientific officer about commissioning or supporting research into the impact of diseases that lead to sudden cardiac death in Scotland.

We could also ask what consideration the Scottish Government has given to commissioning a pilot study on voluntary screening, including details of any engagement that it has had with organisations such as the British Heart Foundation, Cardiac Risk in the Young, and Chest Heart & Stroke Scotland on that particular ask of the petition.

Given what the petitioner highlighted in their submission about the Italian screening programme, I wonder whether the Italian consulate would be able provide a briefing or some research on that programme, which has reduced SCD by almost 90 per cent.

The Convener: That is also a welcome suggestion. I have to say that I was unaware of the programme in Italy, so I think that it would be useful to have some further information on it.

Obviously, this is an issue that has resonance for all of us here in Parliament, given the loss of one of our staffing colleagues.

Fergus Ewing: I agree with that recommendation. I note that Mr Mundell has been pursuing the issue doggedly and with feeling since the outset.

There is a very serious issue that has not, to me, been resolved, although I am no expert. The Minister for Public Health and Women’s Health has provided a fairly lengthy reply, unlike in some cases, so that is good. On one hand, the petitioner initially argued that there were 12 preventable deaths per week, which is quite a high incidence, but the National Screening Committee argues precisely the opposite. In her response of 21 April 2024, the minister said:

“The error, or misunderstanding of the incidence of YSCD, is why we have made repeated requests to meet with the National Screening Committee to clarify this issue … We have also requested for the NSC to transparently publish the pre-screening and post-screening incidence death rates for other conditions which meet the NSC screening criteria.”

I wonder whether we have quite got to the bottom of that, and whether, when we are writing to the cabinet secretary, we could ask whether that meeting with the National Screening Committee has taken place, what it says, what its updated position is, and what is the explanation for the apparent massive discrepancy between the two positions. If the petitioner is right, the problem is profoundly serious, not only for her, given her tragic loss, but for many families across Scotland and, indeed, the UK. We therefore have a duty to ensure that the minister’s efforts are assisted by the committee, so that we get to the bottom of this, if we possibly can.

The Convener: Thank you, Mr Ewing. Because of the scheduling of the petition, we have ended up considering it almost as we come around to the anniversary of the death of Sharon Duncan’s son, David Hill, on 19 March 2022. I thank colleagues and the Scottish Rugby Union for the work that they do in keeping David’s memory alive and the work that the Parliament and others do to bring attention and feeling to the issue. He is still sorely missed by many of us here in the Parliament.

On the basis of those recommendations, are we content to keep the petition open and pursue the various suggestions that have been made?

Members *indicated agreement.*

Extract from the Official Report of last consideration of PE1989 and PE2101 on 7 May 2025

The Convener: PE1989, lodged by Mary Montague, is the first of two petitions concerning defibrillator provision that the committee is considering this morning. I declare an interest in that Mary Montague is the provost of East Renfrewshire Council, which is the presiding local authority in which my Eastwood constituency sits. The petition calls on the Scottish Parliament to urge the Scottish Government to support the provision of defibrillators in public spaces and workplaces.

We last considered the petition on 30 October 2024, when we agreed to write to the Minister for Public Health and Women’s Health. The minister’s response highlights the Scottish Government’s participation in the Save a Life for Scotland partnership and the increase in defibrillator deployment by the public in recent years. The minister also points to a number of relevant factors that go beyond the availability of defibrillators, such as optimal placement, accessibility of the equipment and bystander confidence to use defibrillators.

The committee pressed the minister on engagement with the United Kingdom Government regarding defibrillator provision through the Health and Safety at Work etc Act 1974. The Scottish Government's response explains that there is a lack of strong evidence for the effectiveness of legislation to mandate defibrillators in designated places and that, as such, the Scottish Government is focusing efforts on its established approach to improving survival rates.

The committee will recall that we were a bit concerned about the Scottish Government's response. Defibrillators are now being provided everywhere else in the United Kingdom. I think that I recall that a Barnett consequential had even been provided in respect of that. I cannot remember whether that is correct, but that is my vague recollection. Nonetheless, it appears that Scotland is taking a unique position by not progressing provision, and I do not think that the committee was entirely convinced by that approach. Do colleagues have suggestions for how we might proceed?

Fergus Ewing (Inverness and Nairn) (SNP): I agree with what you have said, convener. In her response, which I am looking at, the minister, Jenni Minto, said:

“there is currently a lack of strong evidence for the effectiveness of enacting legislation to mandate deployment of PAD”—

public access defibrillators—

“in designated places”

and

“it is unclear whether such legislation would be ... effective”,

which suggests that there could be some evidence—we do not know what it is. If there is a lack of clarity, the best way to proceed might be to call the Minister for Public Health and Women's Health to give evidence to the committee on the petition. I do not wish to pre-empt any procedure; we will also consider the next petition, which is also about defibrillators.

The Convener: Are colleagues agreed? I think that the committee wants to bring the minister in to give evidence on this area, because we felt that we had received pretty compelling testimony, and there is now the example from elsewhere in the country. Scotland seems to be uniquely taking the view that we should not be providing defibrillators. I do not think that they are terribly complicated to utilise. There are one or two in my constituency, and the committee has heard from people whose lives have been saved by their provision. Therefore, I think that we will hold the petition open. Are we agreed?

Members *indicated agreement.*

The Convener: Mr Ewing has referred to the next petition, PE2101, which was lodged by Peter Earl on behalf of Troqueer primary school. It calls on the Scottish

Parliament to urge the Scottish Government to provide primary and secondary schools with automated external defibrillators. When the committee last considered the petition, in September 2024, we agreed to write to the Minister for Public Health and Women's Health. Members will recall that we highlighted the UK Government's provision of defibrillators to all schools in England and asked whether the Scottish Government would provide direct funding to do the same. I think that that might have been the example to which I was referring a moment ago.

The minister's response reiterates that local authorities make decisions on purchasing, installing and maintaining defibrillators for schools in their area. The response also states that solutions to improve survival from cardiac arrest may differ between areas. The Save a Life for Scotland partnership takes a data-driven approach to working with local authorities to understand the chain of survival in their areas and how to improve it.

The committee has also received a written submission from Rodger Hill. Rodger, as most of us will now know, is the father of our late parliamentary colleague, the researcher David Hill, who died while playing rugby for the Scottish Parliament rugby team in Ireland. The submission outlines the work undertaken by the charity set up in David's memory, the DH9 Foundation, which includes facilitating the installation of 42 defibrillators in Dumfries and Galloway. Mr Hill's freedom of information requests reveal that, of 2,446 schools, 893 have defibrillators on site. The submission calls for a renewed commitment from the Scottish Government to deliver cardiopulmonary resuscitation training to every child in schools biennially, and it calls for grant funding to provide defibrillators in schools across Scotland.

Mr Ewing has suggested that we couple the petition with the previous one and advise the minister that we would like to take evidence on both of them. Do members agree with Mr Ewing's suggestion?

Members *indicated agreement.*

The Convener: Both petitions will be kept open, and we will be able to examine the issues in detail with the minister when she is available to give evidence.

Extract from the Official Report of Emergency Cardiac Care evidence session on 29 October 2025

The Convener: The next item is a thematic evidence session on emergency cardiac care issues that have been raised in various petitions. The first is PE1989, to increase defibrillators in public spaces and workplaces, which was lodged by Mary Montague. I always make a point of noting that Mary is the provost of my local authority in East Renfrewshire. The petition was tabled prior to her appointment in that position. The next petition is PE2067, to improve data on young people affected by conditions causing sudden cardiac death, which was lodged by Sharon Duncan, who is the mother of David Hill, who was a Parliamentary colleague who died while playing rugby for the Scottish parliamentary team in Ireland. The other is PE2101, to provide defibrillators for all primary and secondary schools in Scotland, which was submitted by Peter Earl on behalf of Troqueer primary school.

We have used the evidence that has been raised in our consideration of the three petitions to date to draw up a series of themes to allow us to explore the issues. In due course, we will hear from the minister but, this morning, I am delighted to say that we are joined by Kym Kestell, policy and public affairs officer at the British Heart Foundation Scotland; Kirsty Morrison, policy and campaigns officer at Chest Heart & Stroke Scotland; and Steven Short, programme lead for out-of-hospital cardiac arrest with the Scottish Ambulance Service. A very warm welcome to you all.

There are five themes. Each of us is going to lead on one of them, and other colleagues will jump in with questions. Please indicate if you would like to answer a question. For the *Official Report,* it will be helpful if the leader of each section says their name as they come in, otherwise it might not be entirely clear who is contributing.

The five themes that we have identified to look at are data, research and guidance; public awareness; the provision of life-saving equipment and emergency preparedness; preventative actions and protection of vulnerable populations—it is striking that the survival rate is a lot lower in deprived areas—and cross-sectoral policy, which means how those things bounce across different areas of responsibility.

The first of the themes is data, research and guidance. Fergus Ewing will lead on that.

Fergus Ewing (Inverness and Nairn) (Ind): Plainly, any medical treatment or process must be based on the best evidence and data. That is pretty obvious. One of the several petitions before us asks to improve data on young people who are affected by conditions that cause sudden cardiac death. I want to ask each of you about your views on data, research and guidance. First, what data currently exists on sudden cardiac death in young people in Scotland? Is there enough data? Are there gaps? If so, how should they be filled?

I appreciate that it is quite a broad theme but, given the importance of evidence-based practices in medicine as the sound way to proceed, it is perhaps a good starting point. What data exists, and what are your views about what more might or should be done?

Steven Short (Scottish Ambulance Service): I am happy to kick off on that. Data underpins all of our programmes, not least on out-of-hospital cardiac arrest. We have a data-rich system for out-of-hospital cardiac arrest. The Scottish Ambulance Service publishes a report every year on behalf of the whole strategy partnership in Scotland. As has been alluded to, the report breaks down data by Scottish index of multiple deprivation scores, age and whether people are male or female, so we know the demographic and the age range of the patients who are having cardiac arrest.

Of course, cardiac arrest is caused by multiple things. It is not just caused by the heart; there can be many other causes, and that impacts on the types of treatments that we deliver. The causes are perhaps the elements in the data that are not as well defined or understood. We can give broad themes for the causes, but that much more granular data is not necessarily as available as it is for other elements. It probably could be but, at this point, we tend to report on slightly higher-level data.

Kirsty Morrison (Chest Heart & Stroke Scotland): Data is essential. The work that we do at Chest Heart & Stroke Scotland is always evidence and data driven. I think that everyone round the table and my colleagues here would agree with that. Our focus as an organisation is on helping people to live well after an event. When it comes to cardiac arrest, we invest about 10 per cent of our work and resources into prevention, but we are more focused on the other end of the chain of survival.

We believe that greater amounts of data would increase the ability to support movement on the issue that is raised in petition PE2067. On the data that is available at the moment, I do not have more than you have, but it is clear that there are data gaps and some disputes. Sudden cardiac death seems to be a tricky area. I know that the petitioner highlighted death certificates, for example. Those will not always be the best way to understand the full extent of the issue, as information is not always reported on them. It is a tricky area, but we agree that more data would be incredibly helpful. We are grateful for the Scottish cardiac audit programme and other sources of data starting to come through, because that allows us to create more effective strategies and it allows the health sector as a whole to understand the issue.

Kym Kestell (British Heart Foundation Scotland): I agree with my colleagues, and the BHF is really supportive of improving data collection and better research. I want to highlight a bit of work that the BHF is funding at the moment.

You might be aware that the Scottish Government funded a pilot in the west of Scotland on inherited cardiac conditions, and the BHF has funded two clinical co-ordinators to roll out that programme to the rest of Scotland. In short, the pilot is a service to contact the families of those who have, sadly, passed away from a sudden cardiac death, where that has been indicated in their post-mortem. The service is there to give the family support and signpost them to genetic testing; to gather better data and research; to understand a bit better the risk factors; and to understand better the genetic relationships and who might be more at risk. That is being rolled out across Scotland, and it has been quite successful so far. We are funding those positions for two years, and we are at the beginning of the two years.

The programme is working closely with the Scottish cardiac audit programme to ensure that data is collected and that the programme is monitored. We are also working with colleagues in Denmark, which has a registry for sudden cardiac death and out-of-hospital cardiac arrest. Denmark's population is equivalent in size to that of Scotland, and data collection there is really good, so we are working with international colleagues to improve ours. The work is highlighting the fact that better research is needed, which the BHF is committed to.

The BHF has funded £30 million-worth of research in the CureHeart programme, which is the biggest-ever research grant through our big beat challenge. The programme is about potentially finding a cure for genetic cardiomyopathy, which is a leading cause of and risk factor in sudden cardiac death. As you can see, we are committed to the work in that space.

I have a couple of quotes from people who are involved in the inherited cardiac conditions pilot on how their families have been supported through the programme. A family member said:

“Whoever had the gene”—

the gene related to the greater risk of sudden cardiac death—

“regardless of how scared we were, I knew we’d be looked after.”

That shows that having the clinical co-ordinator positions funded, and the work by the Scottish Government and the BHF is having a major impact on people’s families. This is, understandably, a really emotional and important topic. It is great that there is support on the ground for people who are going through bereavement. They are going through grief, but they are being supported through the whole process and not being left to signpost themselves to services.

Fergus Ewing: My second and only further question is: what do you believe would improve data collection and analysis to inform screening and prevention strategies? Two of you have referred to gaps. Are there any particular steps that you would advocate for or areas where you feel that gaps need to be filled in order to improve data collection to inform screening? I am thinking particularly of young people, who are the topic of one of the petitions.

Steven Short: Joining up the data is one of the challenges. Many agencies become involved in dealing with such tragic cases. Where patients survive, there is almost a pathway for providing follow-up. Where, tragically, the patient dies, it is a question of how we pull together all the agencies to make sure that we get that data. We can then fill the gaps to ensure that, for example, we make all the extra testing for other family members available to everyone. Through the work that is happening in the west of Scotland, we are learning a lot about data gathering and joining up data between agencies to help fill the gaps.

Kym Kestell: I agree. The continuation of work and pilots such as the one that Steven Short mentioned, and rolling them out Scotland-wide will, I hope, fill some of those data gaps. Through the work with colleagues in Denmark and the Scottish cardiac audit programme, we hope that, as the pilot is rolled out across Scotland, we will only get better data and evidence around that particular issue. We hope that that work will continue and that the data that we get from it will inform our policy.

The Convener: I have a couple of follow-up questions. You talked about the roll-out of the pilot. What is its status currently? Is it still just a pilot, or has the roll-out started?

Kym Kestell: The roll-out has started. It has been rolled out across Scotland through the two clinical co-ordinators that the BHF funded. It is being rolled out as we speak.

The Convener: Is there a timeline? When do you expect it to have rolled out?

Kym Kestell: I do not have an exact answer for that at the moment, but we are very happy to write to the committee clerks after this meeting.

The Convener: My second question is on the issue of data and the Government’s “Out of hospital cardiac arrest: strategy 2021 to 2026” document. A paragraph in that says that the strategy “does not address cardiac arrests in children, or those caused by external physical injury”.

It goes on:

“Both of these types of cardiac arrest are far less common than those caused by medical conditions in adults, and require a different approach to their management.”

Given that the strategy document was written at a certain point and that data is emerging and being collected, does the data continue to support the view that there is still not a necessity to look at children per se or cardiac arrests as a result of physical injury, which was potentially one of the issues underlying one of the petitions that we are considering?

Steven Short: We report on children as part of the annual report, using available data, and through all the other measures in the report, but work on child death happens separately and is run by Healthcare Improvement Scotland. There is a multi-agency review into every death of a child in Scotland. We learn from those deaths and from that piece of work that is co-ordinated by Healthcare Improvement Scotland. Therefore, it is not that we do not do any work to improve cardiac arrests in children and young people. Lots of work is going on, but the way the data is reported and the processes for such cardiac arrests are slightly different. That is often because those cardiac arrests have different causes and different treatment options. There are themes within children’s deaths, which can be picked up through Healthcare Improvement Scotland for public awareness, for example.

The Convener: Therefore, in essence, the data gathering is not ignored—

Steven Short: Far from it—

The Convener: It is just that data is gathered through a different mechanism.

Steven Short: Yes.

09:45

David Torrance (Kirkcaldy) (SNP): Good morning. Petition PE2067 highlighted issues around public awareness and education in relation to cardiac arrest, sudden cardiac death and inherited cardiac conditions. How can the public’s understanding and awareness of cardiac emergency be improved? Who is going to go first?

Steven Short: I am happy to jump in first. It is a really important topic, and, in some respects, it is a good news story in Scotland. Over the past decade, we have made massive improvements in terms of survival from cardiac arrest. A huge part of that is as a result of the public awareness raising and training that has been provided through the Save a Life for Scotland partnership. A decade ago, in the region of 45 per cent of all cardiac arrests had bystander CPR, which is poor and low. The improvement work has seen that figure get closer to 70 per cent, and the rate for 30-day survival from out-of-hospital cardiac arrest has doubled.

However, there is still work to be done. Denmark has already been mentioned in that regard. On the basis of some of the examples from Denmark, we know that we can probably improve further. Large swathes of the population still do not have awareness, whether of cardiac conditions or of how to perform bystander CPR or use a publicly available defibrillator.

On what more can be done, that is exactly the work that the Save a Life for Scotland partnership is doing. As well as its, for want of a better expression, business-as-usual activities—all the work that it has done over the past decade—we are now, and have been for some time, proactively looking for and reaching out to more difficult-to-reach communities, so that there is an equitable response to cardiac arrest across the country. The best care happens in the community before the Ambulance Service arrives. For these individuals, it is an immediately life-threatening emergency, and they need the public to intervene to help to save their life. It is through that partnership work and the Save a Life for Scotland partnership that the vast amount of that work is being done. We have seen improvements, but there is more to do.

Kym Kestell: I agree. The Save a Life for Scotland partnership is doing incredible work on this. The BHF works a lot on CPR training. We have RevivR, which is a free and accessible online tool to teach as many people as possible CPR. It takes only 15 minutes. The idea behind all these different ways of learning CPR is to make it accessible and to normalise it. We have just rolled out classroom RevivR. The idea is to socialise the idea of being aware of and doing CPR, knowing how to use a defibrillator and knowing where your nearest defibrillator is—knowing whether your community has one. I know that mine is on my road, but people need to know whether it is at their local church, the school or a few streets over, for example.

We are encouraging people to be aware of their communities and their environments but also to recognise that there are places in Scotland that are underserved, with regard to defibrillator access and CPR training, and that there is more work to do to ensure that those communities are CPR-ready and ready to support anybody who experiences a cardiac arrest.

The Convener: Maurice Golden will explore those themes further shortly.

Kirsty Morrison: I agree with my colleagues. We have made advances in Scotland through the Save a Life for Scotland partnership and the out-of-hospital cardiac arrest action plan—the data shows that—but we need to go further. Chest Heart & Stroke Scotland has been discussing that with our colleagues internationally.

We are one of the leading partners on the CPR bystander support service that is part of the OHCA plan. The support service provides aftercare for people who witness or provide CPR to someone in a cardiac arrest. It is a traumatic event, as I think that we can all recognise, and part of the challenge is ensuring that people know about the full chain of support that they can have. People need to know how to do CPR, and they also need to know that they are going to be supported afterwards.

Earlier this year, we held a symposium on recovering after a cardiac event with colleagues from Scandinavian and other countries that are doing work on after-are. We are going to make that an annual event in order to explore that aspect. One of the outcomes of the symposium was the understanding that we need to look at how we spread awareness of the good offering that we have in Scotland.

So far, more than 200 people have come through our bystander support service, which they can call and get on-going support from. For something that has been running for two years, that is good—we are happy and it is picking up pace—but we know that more people can benefit from that, so we hope that the next iteration of the strategy in Scotland will not only continue to look at what we are doing well, but consider how we communicate that throughout the population.

Steven Short: The other group that it is incredibly important for us to target in raising awareness is our amazing young people in Scotland. It is well recognised that CPR training in schools has a lot of benefits, not least because kids do not forget stuff. Twenty years down the line, guidelines may have changed, but children and young people will still remember what they were trained to do in school 20 years ago.

There is also a huge multiplier effect with kids. The committee may be aware that we held an amazing “Restart a Heart” live event just a couple of weeks ago, where we spent 12 hours livestreaming training to whoever wanted to see it. It was targeted at schools and young people, and 132,000 people, albeit from all across the UK, tuned into the event, which was amazing. When kids do things like that, they do not just learn themselves. They go home and grab their teddies off the bed or stick a coat in a pillowcase and show everyone else around them how to do chest compressions and make people more aware of defibrillators. That is a hugely important piece of the jigsaw when it comes to awareness raising.

Kym Kestell: I will jump in here—please stop me if I am jumping ahead. On the issue of CPR training in schools, I highlight that Scotland is the only nation across the UK where CPR is not mandated in the curriculum and is not reportable. There is some anecdotal evidence that leans in the direction that we need to make it mandatory for schools to train every child in CPR skills.

We need to normalise it in the same way that using a fire extinguisher or knowing where the nearest fire exit have been normalised. Kids need to be socialised to see knowing how to do CPR and being confident in it as a normal part of growing up.

At the moment, the picture in Scotland is quite unclear; it is really hard to gather data on how many kids in Scotland are being trained in CPR skills and when and how that is happening. We think that there may be a bit of inequality there. We do not know what is going on. If CPR training were to be made mandatory and reportable, it would be a lot easier for organisations such as ours to monitor how many people in Scotland have those skills. We would hope that that would be quite strongly reflected in the bystander CPR rate, and in more people being socialised to see knowledge of CPR as a norm in our society. That is something to consider.

The Convener: I will come back to that shortly in the questions that I have, because it follows on from one of those.

David Torrance: I run a scout group, and I am just thinking about how effective the scouts are at doing CPR, first aid and things like that. I agree that those skills stay with kids for the rest of their life.

We touched on this earlier. How effective are the Scottish Government’s campaigns in reaching people, and how inclusive are they in reaching diverse communities?

Steven Short: I do not know the answer to that directly in terms of how effective we are. The campaigns help to raise awareness not just among the whole population, but among those people who are trying to do work within those campaigns. That is important, because it gives validity and support to what we are trying to achieve.

We are trying to reach out to people in the homeless communities in Scotland so that they are as likely as those in any other community to get bystander CPR if they need it, so having Scottish Government buy-in on out-of-hospital cardiac arrest is hugely valuable and very welcome for the whole Save a Life for Scotland partnership.

Kirsty Morrison: I do not have the answer either—it would be interesting to know whether there has been any evaluation of that so far. We know that certain groups are less likely to receive CPR training at work and through voluntary schemes; I have received it at work. People who are no longer working may not be keeping those skills live.

As Kym Kestell said, we do not know what is happening in schools. We have the commitment, but a few weeks ago, the Parliament heard a very moving speech from a young man, Cameron McGerr, who lost both his parents and did not know CPR, so we know that there is an issue.

There is more to be done, and that includes looking at the communities where people can be socialised well on CPR, and at those who may not receive training elsewhere, which is key.

A key message that has come out of some of the discussions that we have had is that people are scared of doing something wrong, but doing something is better than doing nothing. That is a really easy message to get behind, but we are not seeing it out there as much. I do think that we in the sector can collectively agree that that it would be worth while getting behind that—-the question is how we do so.

David Torrance: I have no further questions, convener.

The Convener: Thank you very much. We will move on to the provision of life-saving equipment and emergency preparedness, and Maurice Golden will take us through this section of questions.

Maurice Golden (North East Scotland) (Con): PE1989 and PE2101 both call for increased availability of defibrillators. I will park funding for the moment—that will be my final question—but on the issue of availability, can you provide some information on how defibs are mapped and how access can be improved?

The question of speed versus effectiveness is, I suppose, a bit of a conundrum. An obvious quick way of rolling out defibs would be to, say, put them outside every school, but I think—and I would be interested to hear your thoughts on this—that that might mean doubling up in a community. Moreover, a school might not be located in the right area. In Dundee, for example, Grove academy is right in the centre, with lots of houses nearby and having a defib there would be useful. The new Greenfield academy, on the other hand, is right on the outskirts of a community; it might take someone a 10-minute round trip to get there and one would hope that the ambulance would be there by that stage.

When it comes to thinking about a more effective and perhaps longer-term way of rolling out defibs, how would you map that? Where would you look at? What would be the priorities with regard to ensuring the most access, and how might that affect rural communities?

Kym Kestell: I am happy to start. It is a really important question, and I should say that we have never had better data on where defibs are or should be.

As to where defibs are, the BHF created the circuit—the United Kingdom's national defibrillator network. Those defibs are mapped out geographically across the UK, and you can go online and look at where your nearest defib is. The Ambulance Service has all that information, too, so when you call 999, it can point you to the nearest defibrillator.

However, the circuit can hold only registered defibs and that is still a problem. We cannot put a figure on it, unfortunately, because we do not know how many defibs are not registered, but we believe that the number in Scotland is in the thousands. Therefore, the first thing is to ensure that we have every available defib registered on the circuit, and, if we are to expand provision of PADs, to ensure that all of them are registered, too.

The circuit has been around for quite a while now, and it has matured, so we are getting an incredible amount of data from it. For example, we have statistics on areas of Scotland that we know do not have enough defibrillators. Moreover, this year, we have a new tool in Scotland called PADmap, which has been funded by the Scottish Government with involvement from the BHF, the Scottish Ambulance Service and St John Scotland. We have never had a better tool for telling us where defibs need to be, because it brings together the information on historical cardiac arrest incident rates and the information on existing defibrillators that we get from the circuit and manages to mathematically optimise defib placement.

PADmap is a free online tool. You can google it on your phone; it will show you a number of green dots, and you can break things down by local authority or postcode. It will show you, for example, the best places in those communities to place a PAD, how many times the PAD is expected to be deployed and how many shocks are expected to be delivered, and it will even give you an estimate of how many lives it could save.

With PADmap and the circuit data that we have, the BHF has identified 12 areas across Scotland that have really long retrieval times for defibrillators. In Saltcoats in North Ayrshire, for example, you are looking at a retrieval time of 17 minutes, which is way too long. One would really hope that an ambulance would have got there before then.

However, the data also shows that we have really good coverage in some areas. We have other really successful schemes, too; the BHF has funded a community defibrillator scheme and provided more than 400 defibs in Scotland over the past 10 years. There is still a way to go, but the good news is that we know where they should be.

I will also say that, although all this data is amazing, it needs to be coupled with community support. We need boots on the ground to ensure that communities are engaged. Sometimes, we have problems with getting guardians for defibrillators so that they are emergency ready. We need members of the community to ensure that there are replacement PADs if batteries need to be replaced, check on the equipment and report back to the circuit. There are barriers and obstacles, but SALFS is doing great work to understand what they are and how to get around them.

In relation to where we put defibs, they are most needed in more deprived communities. We know where we need to put them, so, if there is a commitment to a roll-out, we have never been in a better position to do that.

10:00

David Torrance: I have seen how PADmap works.

The majority of defibrillators are bought by community organisations, youth groups and so on, but, as you said, they are often not in the right place. How can we ensure that such organisations know where defibrillators should be? How can we advertise, when defibrillators are bought, where they should be placed?

Kym Kestell: There should be better socialisation of PADmap, the circuit and the tools that are available, and there should be robust signposting to those resources, because there are a lot of schemes and funds that community groups can apply for. As a sector, with the Scottish Government and the Parliament, we need to ensure that there is good awareness of those tools and maps.

We also need to ensure that community support is available for people. If people have questions about defibrillators, it can be quite difficult to know who to ask, so we need to ensure that things are joined up and that the system is robust. We are getting there. Amazing work is being done by partners across the sector to address that, so we are definitely moving in a positive direction.

Steven Short: We should not shy away from involving the industry. Ultimately, someone has to sell defibrillators to individuals. It is right that we have good, positive relationships with those in the industry, because they can be incredibly powerful in signposting people to PADmap when communities ask to buy a defibrillator from them. They are an important part of the jigsaw in many ways.

Everyone in the SALFS partnership, which includes some big organisations, does a phenomenal amount of work to support communities in always using PADmap to place defibrillators.

Kirsty Morrison: I echo the comments about Scotland being in a unique and positive position in relation to PADmap, which was launched only in the summer—that shows how cutting edge the technology is. A pilot has been done in Falkirk, where 104 defibs have been fitted. About 41 were fitted using PADmap, and those have been deployed twice as often, with a 66 per cent increase in the number of shocks that have been delivered.

I really welcome the question. It is about not just how many defibs there are, but where they are, and having the data to support that. We are now at the point of thinking how we roll that out. The sector is in a really good position, with support from the Scottish Government, to have those conversations. As has been said, there needs to be community buy-in and guardianship of defibs, so we need to utilise the data and have conversations with people about how the system will work in their communities.

Maurice Golden: I will follow up on what has been said and bring in Steven Short.

After almost a decade in the Scottish Parliament, I have seen the Scottish Government on many occasions want to create a headline rather than tackle a problem. You can see how appealing it would be for the Government to provide public funding for defibs in every school in Scotland—that sounds great—but I want to press you a little on whether you think that a more sophisticated approach is required. Schools might be part of that, but it might be appropriate for defibs to also be in other public buildings or community areas. If the Scottish Government made public funding available, how should an effective approach be rolled out to prioritise the areas that are most in need of that piece of kit?

Steven Short: When people think about public access defibrillators, they picture them in a cabinet on a wall somewhere. A lot of the time, that is the case, but that does not always work, depending on the community.

The two things in your questions that jumped out were about defibrillators near housing estates and in rural areas. If a member of the public attaches a defibrillator to you and delivers a shock before the ambulance service gets there, there is no question that you are much more likely to survive. Remember that not every cardiac arrest needs a shock. In Scotland, a defibrillator will only work on about a quarter of cardiac arrests.

Eighty per cent of cardiac arrests happen in the home, and often the only person with the victim of the cardiac arrest is the caller, so they are unable to leave to get the PAD off the wall that is 200 yards down the road, because they have to stay there and do chest compressions, which are guided by our call handlers. In more remote and rural parts, it is difficult to find places to put defibrillators where they will provide coverage.

There are two things here. We have the data on where PADs would be effective when more of them are put into the public space, and we can support that through PADmap. However, the other piece of support that we would welcome would be help to look at other ways to get defibrillators to people, such as community cardiac responders, community first responders or other types of co-response, such as with emergency service partners. When we know that ambulance response times are slower because of the rurality of the area, we need to work out how we can get people to the patient quicker.

We have had some success in that, and I will use Grampian as an obvious example. It has the Sandpiper wildcat project, which has a couple of hundred community cardiac responders all over the region and, on average, they get there six minutes quicker than we do. They are trained and equipped by the Scottish Ambulance

Service. We know that they do excellent CPR because we have been able to download the metrics from the defibrillators that they use and analyse it. That is one example.

You might have seen on the BBC last week that we have now rolled out a community cardiac responder scheme in the Dumfries and Galloway area and, within a few days of going live, a responder was successfully deployed and saved a life. That was in a particularly rural region, so we send the PAD with someone who can use it, rather than expecting a member of the public to retrieve it from a fixed place.

The answer to the question about improving survival through the use of PADs is not necessarily to flood the place with more public access defibrillators because that does not equate to extra survival. It means thinking about different ways of getting public access to defibrillators in areas that need a different way of doing it, and how we can roll that out.

Kym Kestell: A lot of those communities need a nuanced approach. We have a very rural nation so we need to ask how we can best serve those communities.

I want to highlight some new data on PADs in schools that the BHF has produced using the circuit. We modelled what would happen to the average retrieval time for a defibrillator across the local authorities in Scotland if we put a registered PAD in every school. The results are just indicative, because the model covers a large area. In some cases, the results show a positive reduction in retrieval time. For example, the average retrieval time for a defibrillator in the Glasgow City Council area, which is a densely populated area, drops from 5 minutes 12 seconds to 3 minutes 48 seconds if a PAD is put in every school and registered on the circuit. That is a marked reduction in retrieval time and the reductions are most significant in the most deprived areas. The reduction in retrieval time is about 25 per cent in the most deprived communities. We would need to run that data at a local and more granular level, but putting a PAD into schools could be a good solution. However, as Steven Short said, there are other examples, and that solution might not work so well in rural communities.

We want to put more PADs in residential areas, and schools can be good for that. There is some research that shows that one third of out-of-hospital cardiac arrests can happen within 300m of a school. Locating registered defibrillators within residential areas could increase their number from just under 10,000 to 11,730. That is a big increase in the availability of defibrillators across Scotland, but the big thing to say is that that benefit is not seen equally across all local authorities.

For example, Aberdeen City Council already has defibrillators in a lot of its schools. However, in certain areas, such as North Ayrshire and Renfrewshire, we saw the retrieval time reduce by only a few seconds. So, there are reasons why it could be a good idea to put PADs on schools, but the more nuanced approach is to say that schools in certain areas, such as Glasgow city, might be good places to put PADs but that we should use tools such as PADmap and the learning from the Sandpiper wildcat project to make those decisions. We need to pull that information together to ensure that we are not leaving certain communities behind; that we are not doubling up defibs by, for example, putting one on a school that is next to a building that already has a defibrillator; and that all the unregistered defibs are registered, because that might change the picture. We could rerun all that data in six months' time and find that we have quite a different picture. We need a nuanced approach to ensure that, in relation to the communities that need defibrillators the most, we look at the combination of all that information.

Maurice Golden: My final question is to cover off the matter of funding, although witnesses have touched on that. There are a number of options for Scottish Government funding. It might be a case of taking a bird's-eye view and targeting the funding directly or it could be done via councils or a community fund. The risk with a community fund is that it is generally the most established community groups that will apply. If it were done through a community fund, the Isle of Eigg would definitely have a defibrillator, if it does not already, because it does a fantastic job of applying for funding. Do you have any thoughts on public sector funding but also any examples that could be spread out, by linking to public funding of excellent third sector work in this area or even to private sector work?

Steven Short: There is excellent work going on, not least from the third sector, which does some phenomenal work in communities right across Scotland. Any targeting of funding comes with the nuanced approach that we have been speaking about, and we can definitely identify areas that would benefit from having a greater increase in those public access defibs in the traditional way that we think of them.

The most deprived areas of Scotland are where we are most likely to see the types of cardiac arrest that are most likely to respond to defibrillation. We see survival across all the indexes of deprivation in Scotland, but the gap is getting wider. Survival rates are not climbing as quickly in the more deprived areas, which is often because, although individuals who live in areas of high deprivation are now probably just as likely to get bystander CPR as people in other areas, they are not as likely to be defibrillated. Looking at those types of areas in those types of communities and funding defibrillators is a win, but that needs to come with the resource that is required to raise community awareness. That is the key aspect of PADs. You cannot just stick one on a wall. Any of my colleagues will tell you that they have been at a cardiac arrest within sight of a PAD that has not been used and is still sitting in its case. That is soul destroying. It is the community engagement that comes with the placement of the PAD that is important. Funding to support that kind of stuff is just as important as funding for PADs in areas of need.

If you look at examples of taking the PAD to the patient, you will see that it is quite a resource-heavy operation to set up, provide training for and equip a cardiac responder scheme, for example. That takes resource, so funding for that would be beneficial, and it would help more remote and rural communities, too.

Kirsty Morrison: We have two quite nuanced approaches that we can take to the two issues that my colleagues have identified in relation to areas of deprivation and rural areas. Studies have shown that, in Scotland, if you are in a most deprived area, you are more than 300 metres further from a 24/7 access defib than you are in the least deprived area. In England, the difference between the most and least deprived areas is only 90 metres, so we have a huge issue in Scotland. However, we know that, and we know the areas that we need to look at, now that we have the data. We need a cross-sector approach. The third sector can play a role in bridging the gap between the communities that need defibrillators but might not apply for funds, as you said, and in raising awareness of the use of defibrillators, as Steven Short said.

We have used the model—BHF has got its funds—and we see success in that regard, but we need something additional, along with looking at the areas that might need a different approach. I commend the work of the Sandpiper wildcat project that Steven just described, and the data is showing that, in Dumfries and Galloway and in Grampian, we are seeing things change because of that work. Public funding needs to take a strategic approach, and partners want to be round the table, as you can see today, to be part of the solution. People have bought into that already.

10:15

Kym Kestell: I agree with my colleagues. Scotland is the only UK nation that has not committed investment for defibs. In England, Northern Ireland and Wales, they have been placed in schools, but we have an opportunity in Scotland to invest effectively and strategically. They could be placed in schools but, as we have heard, there are many other ways to do it. We welcome the investment, which we think is needed. We have an opportunity to reduce the marked inequalities that we see in this space and have a real impact on survival, particularly in areas of deprivation and the communities of greatest need. This year, the BHF has taken a more targeted approach with our funded defib scheme, using data to ensure that we are actively targeting areas in the communities that are in the greatest need, and aiming to encourage targeted investment to those communities. The good news is that we now know where those areas are.

The Convener: Interestingly, just before the October recess I was able to raise the issues arising from these petitions directly with the First Minister at the most recent convener's group meeting. Two or three points were raised on the subject of our current conversation, which I will refer back to. The First Minister paid tribute to the work that has been done on roll-out, and he was keen to explore whether there is anything more that the Scottish Government can do to give impetus to the partnership—he has asked for feedback about that. However, he does not see a role for the public sector in the roll-out of defibrillators, which is where there is a distinction between other parts of the United Kingdom and Scotland. That also arose in the response that we received earlier from Jenni Minto, the Minister for Public Health and Women's Health.

The public access map shows serious clusters of non-availability, particularly in Glasgow and the west of Scotland. The First Minister says that he has asked for proposals to be submitted to him, because the Scottish Government has taken an interest in addressing that, as has the First Minister.

I have listened carefully to everything that has been said. The most recent figure, from 2023-24—I imagine that it will have increased a bit since then—shows that there are 8,723 PADs, so the number has tripled since 2019, which is excellent. However, Stephen Short said that it is sad to see them unused in a nice shiny case on the wall, having not been deployed. I suppose that it goes back to Maurice Golden's question: are we confident that the defibrillators are going to the right places? Are we confident that people are being trained in how to use them following their supply and installation?

Steven Short: There has been a graded approach to the work over the past decade. In the first out-of-hospital cardiac arrest strategy, there was a conscious decision to focus more on bystander CPR than on CPR and defibrillation, because our bystander CPR rates were so poor. For the first five years of the strategy, we decided not to focus as much on defibs, because, first and foremost, we needed to get people pressing up and down on cardiac arrest victims' chests. However, in the past five years, the situation has changed completely and we now have a much greater push for CPR and the use of defibrillators.

Are we confident that the defibs are in the right places? I think that we can say that some of them are, but, as we have highlighted, we still have work to do. You mentioned Glasgow and the west of Scotland, and the highest rates of shockable cardiac arrests, which are the types of cardiac arrests that the defibrillators work on, are in our deprived urban areas. They occur most commonly in our service industry workforce, predominantly among males in their 50s, yet they are the people who are not close enough to the defibrillators, as Kym Kestell has described. So, I think that we can be confident in saying that the defibs are not always in the right places yet, despite the amazing work that is being done. We need to find the right areas and put them there.

The Convener: Other parts of the United Kingdom have Government-led initiatives to provide defibs, whereas, in Scotland, we are still largely relying on charitable organisations and voluntary community initiatives. Is that work going to plug the gaps in the access map in Glasgow, in the west of Scotland or in other areas where, I imagine, fundraising initiatives to address the deficiencies are going to materialise?

Steven Short: Finding the funding to provide PADs to plug those gaps is the easy part. The challenging part is finding the guardians in the community who can maintain and check the defibrillators, be responsible for changing batteries when they run out after several years and all those kinds of things. Funding and placement are relatively easy to achieve; it is the community part of it that is difficult to achieve, in terms of both guardianship and raising awareness in the community, which is a key part of having the PADs.

The Convener: I am just exploring some of the themes from the fourth question, which is the one on leading preventative actions and the protection of vulnerable populations.

I was struck by something that you said earlier, which, at my own expense, I want to understand. You have done a terrific job with children in schools. You teach them those skills and, 20 years later, they still know what they are doing. MSPs were all sent for training in CPR. I remember it happening upstairs in Queensberry house, but I cannot remember a blessed thing about it. Is that a reflection of my impending senility? Is it that the older you are, the less you can deploy a skill? We were all quite good at it by the time we left the room, but, five or six years later, I have never been in a situation where I have had to deploy it, so I have forgotten how to do it, unlike the children you were talking about, who were taught the skill at school and who, 20 years later, can still walk right into doing the correct actions. Is it just me, or is it the case that those skills are best absorbed at an early age, because they will last longer, and it is harder to retain those skills in an older age group?

Steven Short: This suddenly feels like the first question where I am under pressure. In adult learning, we know that we forget stuff. There is decay of any skill, and, if you do not keep performing it, your memory of a skill will decay relatively quickly. However, while acknowledging that you do not remember it—and you probably do not—you have had training and you are aware of it, so, when our call handler who supports you through telephone CPR advice says to you, “Kneel next to the patient,” something in your head will go, “Oh, I need to kneel next to the patient’s chest, and I need to put my hands in the centre of their chest—that’s right.”

The Convener: There are prompts.

Steven Short: Yes. It is almost a multimodal approach. You have had awareness and, although you may feel like you have forgotten it, those prompts will trigger your memory when you are speaking to the call handler.

The Convener: In essence, it is okay to have those prompts in a situation where CPR might have to be deployed, rather than a continuous programme of refreshment.

Steven Short: We expect our clinicians to refresh the skills that they use, and that goes for any skill. Take our colleagues in the fire service—if you drive past any fire station, you will see firefighters out training all the time. They are practising the skills that they need to know, so that, when they have to use them in reality, it is much more automatic.

That is difficult to achieve in an entire population, because you cannot expect communities to train all the time, but the more that people get exposed to those skills—God forbid that they have to use them—the more confident they will feel. That is the important word for members of the public when it comes to performing CPR. It is not about competence; it is about having the confidence to have a go. We have spoken about the fear of doing harm, which is often the biggest fear, but training and awareness can allay some of the anxieties that people may have.

The Convener: I want to touch on an issue that came from Sharon Duncan, David Hill’s mother, in relation to evidence that we were able to obtain from the consulate general of Italy. For a very long time, Italy has had a screening programme for young people who are actively engaged in sport up to the age of 35, and evidence suggests that there has been an 89 per cent reduction in sudden cardiac death as a consequence of that. That brings me to the generic question about preventative care versus reactionary care. The simple prejudice that I sometimes feel lies above all of this is that preventative care has a cost up front, which you do not see the benefit of, and that people would rather deploy things that the accountants can see the return from. That statistic in the evidence for the reduction in sudden cardiac deaths is particularly poignant for the Hill family following David’s death.

Is there more that we should be learning or that we should be prepared to embrace when it comes to preventative initiatives? I know that my colleague Brian Whittle raises that issue in the chamber in relation to almost all areas of health. Would preventative action and being willing to be more open minded about the potential issues that arise from all of this make a difference, especially given that the Government does not have a particular strategy to tackle this area?

Kirsty Morrison: Chest, Heart and Stroke Scotland has been calling for prevention. We have had conversations with Brian Whittle and many of your other colleagues about it, and it has been nice recently to see a shift in understanding that we cannot continue just to plug the gaps and focus on the key metrics that we all see in the media about waiting times and hospital beds. Those are important, but studies show that, even if we ignore the tragic human impact of not focusing on prevention, economically we cannot sustain the direction that we are going in. The state of healthy life expectancy in Scotland is scary for us all.

We need a nuanced approach to what is prevention and the different stages of prevention. The study of the Italian screening programme is compelling, and I would love to know more about what the stages are once they have done that screening. We saw from the work of the national screening committee that we need pathways for people.

There are different levels of prevention. At the population level, there is eating well and looking after yourself. However, a lot of the cases of sudden cardiac death in young people that we are talking about have a genetic element—they cannot be prevented from occurring—so the question is about when they are detected and what the next steps of the pathway are. It is a compelling issue, and it would be good to have more conversations about pathway development for those cases.

The Convener: Kym, you touched on schools and the fact that the requirement to learn CPR is not an integral part of the curriculum. When evidence was submitted to us about that, some local authorities did not contribute, so we are not altogether clear what is happening. Can you talk further about what difference such a requirement would make? How could learning CPR be made slightly more compulsory, and in what age group would it be done? Is there a best practice model to articulate how it could become a more established compulsory requirement?

Could you and others expand on the standards and guidance in workplace settings? Is there a national standard for workplace training and understanding of the issues? Is there a best practice guide, or should more action be taken in relation to that as well?

Kym Kestell: On the schools issue, it is difficult to create a best practice model without having the data available to us to model what the provision looks like at the moment. All the local authorities in Scotland have committed to teaching CPR to all secondary school students, but, as you say, we do not know what the landscape of that is like at the moment.

If we want to make that teaching mandatory and reportable on, we and our partners in that space are committed to finding out, in collaboration with colleagues in education, how to design it so that it is as effective as possible. It might be taught in one school year, with a refresher course a couple of years down the line. I do not have any specifics about what the roll-out of that would look like, but we are committed to working across the sector to ensure that, if it were put in place, it would be really robust. It is on the curriculum in England, and we have colleagues in England who are looking at what a monitoring system looks like, what it could look like, what information we would get from it and what we could learn from it.

10:30

I think that this is a really important issue. As Steven Short said, when you learn these skills as a young person, they become a lot more normalised. You carry them with you for the rest of your life, and it means that you are probably more likely to do a refresher course. It is a case of "I've done first aid training at work, and we get a refresher course every year." It just becomes a normal part of life, and that is really important in breaking down the barriers and addressing people's unwillingness to perform CPR, especially on older or frail people, because they think that they are going to do harm. There are also misconceptions about, for example, needing to be trained to use a defibrillator. People do not need any training; in fact, defibrillators speak to you and tell you how to use the equipment.

There is still work to be done, but I think that there is a real opportunity here. There are also examples to look at. From memory, I think that CPR training is mandatory and reportable in schools in Denmark, and the Danes have higher survival rates. It is an interesting question that we really want to dig into a bit more. At the moment, we do not understand the landscape of CPR training in schools.

The Convener: Does anybody have any thoughts on workplace standards?

Steven Short: I do not know what those standards, or the legislation, would say—I have never run a business. However, I do know that there is a first aid at work programme, and there are initiatives to encourage workplaces to take up CPR and defibrillator training. SALFS has recently collaborated in a partnership with the Resuscitation Council UK and its "ResusReady" campaign. It is almost like a rubber stamp; your business is "ResusReady" if you have trained a certain number of individuals in your workplace.

There are things out there to encourage such activity. However, on your question about what workplaces have to do, I have to say that I do not know the answer.

The Convener: Thank you. We move to our final theme and questions from Davy Russell.

Davy Russell (Hamilton, Larkhall and Stonehouse) (Lab): My first question is on cross-sectoral policy involving health, education and other stakeholders. What are the key barriers to cross-sectoral collaboration between health and education in Scotland, and how might they be addressed through initiatives such as the Scottish Government's population health framework?

Steven Short: That is an important and interesting question. I was having this very discussion at a meeting last Monday.

When it comes to CPR training, I think that, through some great working with SG colleagues, we have come to realise what work is imagined in health and what is achievable in education. We have probably not understood each other as well as we could or should have done over the years, and we are looking to break down some of the barriers by having some joined-up thinking between health and education to say, from a health point of view, "This is what we think needs to be done," and to ask, from an education point of view, “How can we achieve that and ensure that it is done?”

There are other partners to consider, too. With education, it comes back to the local authority, and, as we know, what works in one local authority is not necessarily going to work in another. We are doing a little feasibility study with Dumfries and Galloway in which we are trying to join up a lot of this work, and we are looking at different levers at a local level through a sort of assets-based approach. Where we know that assets exist already, how can we join things up, say, to improve CPR awareness in schools and communities; to optimise PAD placement, which we have talked about already; and to find better ways of getting PADs to people through cardiac responders or people signing up to the GoodSAM app? We are proactively doing work in that space to join up different parts of the system in a better way.

Kirsty Morrison: Ahead of the next election, we have been calling for different public bodies—and, I guess, different policy areas—to see what role they can play in health creation. The population health framework that you mentioned is a starting point for making it clear that it is not just the health policy sector or health charities that play that role when it comes to prevention—we all do. That represents a shift, and it is a conversation that we need to have. We have all heard the stories about teachers’ workload, so we need to move away from that simple view and have that conversation. We need to include different sectors, too. The third sector definitely has a role to play, because it is often able to bring different policy angles together.

Kym Kestell: I agree with my colleagues. They have covered the points wonderfully.

I would just add that we welcome collaboration between health and education colleagues, especially on the issue of CPR training in schools. There needs to be collaboration on that and co-design of it, to ensure that it works for everyone. We are very committed to working in that space.

Davy Russell: How do community planning partnerships contribute to aligning health and educational priorities locally? What opportunities exist to strengthen collaboration across health, education and community sectors?

Steven Short: That is exactly what we are exploring just now in the Dumfries and Galloway care zones feasibility study. Health boards might know lots about the health metrics of their communities, but the local authority actually knows those communities. Steven Short from the Ambulance Service might say, “You need a defibrillator there”—that would be a really simple thing for him to say—but it is the local authority that, with all its community partnerships, knows who to tap into in its communities and say, “Look, we think that you need this there. Who in the community can support it?” That is one of the big pieces of learning that we are taking from the pilot that we are right in the middle of, but that joined-up collaboration and thinking are hugely important when it comes to what is happening locally on the ground.

Davy Russell: My next question links in with that idea of collaboration. The funding seems to be going fine, you have the right places, and you have the data and info. You are working hard on all of that, and community and public awareness and training are all going hand in hand, too. You touched on this vaguely at the start, but what about the maintenance and replacement of faulty equipment? Inspection and maintenance seem to be a bit haphazard. You are putting a lot of effort into all the big parts of this, but the fact is that equipment gets older and, even if only 1 per cent of these things fail, that is still quite a significant amount. Where is the co-ordination in that respect?

Steven Short: It is a huge, and real, challenge. Ultimately, a guardian owns, or is responsible for, that defibrillator—however you want to put it—and the responsibility lies with them to ensure that the piece of kit is rescue ready. They buy the kit in good faith and register it on the circuit so that our call handlers can signpost people to go and get it when someone is having a cardiac arrest. However, when that happens, the pads need to be replaced, and they are expensive—and by "pads" I mean the pads that you stick to the chest, not the public access defibs themselves. It is not that the guardians in the communities forget about that; it is just that they do not necessarily factor it in, because it is not in their thought process at that point. Again, there is awareness raising to be done there.

Although the defibs are designed to be left alone—they do their own self-checks and so on—their batteries have a finite life, with anything between three and five years being pretty much standard. Therefore, the batteries will decay over time, even they are not used, and will need to be replaced, which is another cost.

There is also a time commitment. For the defibs to stay in the circuit, someone needs to go around periodically and confirm that they are still rescue ready. After all, the last thing that we want to do is to send a bystander to a defib cabinet only for them to find the defib or its pads missing or not working.

So, yes, this is a real challenge for us. I guess that, as we are not the owners of the defibrillator, our responsibility in the Ambulance Service is to continue to raise awareness of some of the challenges.

Davy Russell: It just seems to be a weak part of the system—

Steven Short: For sure.

Davy Russell: —because, after all, you are working really hard on this.

Steven Short: We have some amazing partners out there who are doing brilliant work in this space, and there are some fairly large guardians managing multiple public access defibrillators in their areas. Indeed, they have come together as a group. You might have heard or be aware of the work of PAD Scotland, which is a bit of an offshoot of SALFS. Those involved are all partners in SALFS but they have their own working group to explore some of these challenges.

Davy Russell: Just to help you, I was thinking along the lines of what happens with fire extinguishers. A company comes around every year—or two years, depending on where it is—and gives them a wee check.

Steven Short: Absolutely.

Davy Russell: As I say, though, the issue is how you tie that in.

Kym Kestell: I would just add that, if there is to be investment in increasing PAD access across Scotland, it should also take into consideration maintenance costs over, say, 10 years. We have figures for how much those costs would be, and we think that it is a really important part of ensuring the longevity of any PADs that they are funded and that we have the guardians, the community buy-in and the community engagement in place to ensure that those PADs are used and are known to the local community.

We have heard from community groups and fundraisers that they have been left out of pocket when they have had to replace the pads or the batteries. Steven Short is right to say that it is not a cost that everybody knows about, so we need to ensure that there is really good communication as well as really good expectations of how those maintenance costs will be met. I hope that that will be considered in any investment that is made in PAD access.

Davy Russell: Thank you.

The Convener: We have run over our scheduled time quite a bit, but the discussion has been fascinating and productive. The issues arising from these petitions have been ones that the committee has been quite actively engaged with over the course of the Parliament, for a variety of reasons. They are very important, and I am very grateful for everything that you have been able to contribute this morning.

I will suspend the meeting briefly before we move on to the next item. Thank you again.

10:41 Meeting suspended.

Annexe C: Written submissions

Petitioner written submission, 24 February 2025

PE2048/S: Review the FAST stroke awareness campaign

Dear Members of the Committee,

At the meeting on Wednesday 19th February, it was mentioned that it would be good to analyse the research cited by the Stroke Association in their latest submission to the Committee. I have analysed this research and believe that it does not undermine my family's request to trial BE FAST in Scotland. To the contrary, it showcases the need for further studies of trialling BE FAST.

The first paper was "A Randomized Pilot Trial Comparing Retention of Stroke Symptoms Between 2 Mnemonics". It is correct that the conclusion of this paper reads:

"Significantly higher retention and ability to recall stroke symptoms, fully or partially, was found with FAST. Adding B and E to FAST resulted in lower retention of more common symptoms."

I believe, however, that the method of research used to come to this conclusion is weak.

The biggest weakness is that research does not resemble a public health campaign. The paper states:

"A brief 5-minute instruction was provided by a trained educator visually and verbally to best support retention. The educator read a script (Data S1) to provide brief stroke education to each participant. A coloured and laminated 8.5×11 educational card consisting of BE FAST (Data S2) or FAST (Data S3) was presented to the participant. The educational card included a visual and textual depiction of each mnemonic letter. The educator verbally instructed each letter on the educational card to participants".

This was the only education which the participants of the survey received. Afterwards, they were asked to recall the symptoms after 3-5 minutes; 60 minutes; and 30 days.

This is not reflective of a public health campaign, when the BE FAST message would be shared repeatedly on different formats.

As also highlighted by the research, "Mnemonic recall was similar at 30 days". The ability to learn and remember FAST and BE FAST were similar. The problem the research concluded was the ability to recall the symptoms of stroke after the introduction of Balance and Eyes, not the memorability of BE FAST itself.

With only five minutes of education of BE FAST, compared to nearly two decades worth of FAST public health messaging, I believe it is encouraging that the memorability of BE FAST and FAST were similar.

Whilst I acknowledge the conclusion that there was a lower retention of stroke symptoms after the adoption of BE FAST, I pose the question: could this be because there was only five minutes education in this research, and not a true functioning public health campaign which constantly reminds people of the symptoms of stroke?

Of course, I was deeply disappointed to hear the lack of enthusiasm from the Stroke Association and Chest, Heart, and Stroke Scotland at the committee on Wednesday 6th February regarding a pilot of BE FAST. This was especially disappointing as it contradicts the written submissions made by both charities to the Committee.

On 12th January 2024, the Stroke Association wrote:

“Amongst the issues that warrant such attention we would include... How we could clarify the situation, and make better informed decisions, by funding research into comparing FAST and BEFAST approaches in a practical setting in Scotland”.

On 26th February 2024, Chest, Heart, and Stroke Scotland wrote:

“This highlights the importance of gathering further information from health boards on pilot study results and investing in future research of practical, local applications of FAST and BEFAST in Scotland to identify potential benefits and risks…CHSS is committed to improving stroke prevention and detection in Scotland, and we believe that further research in practical settings is required before committing to the use of BEFAST as part of a national campaign.”

At the committee meeting on Wednesday 6th February, Dr Cook said:

“What is key with regard to the application of FAST in a healthcare setting—I made a point earlier about being clear on this to healthcare professionals, junior doctors and clinicians who are triaging patients—is that it is about inclusion, not exclusion. You do not say that someone is FAST-negative then say that therefore they are not having a stroke.”

Whilst I do not doubt the sincerity of Dr Cook’s remarks, they do not reflect the reality of what happened to my Dad.

As highlighted by the Significant Adverse Event Review into my Dad’s death, written by NHS Greater Glasgow & Clyde, my Dad’s treatment was altered because his symptoms were outwith FAST. The report reads:

“If symptoms are suggestive of a ‘FAST positive’ stroke, the Scottish Ambulance Service would treat the presentation as an emergency, and an ‘AMBER’ response would be initiated, i.e., the only divert from the tasking would be for a ‘PURPLE’ call e.g. cardiac arrest. The patient would be called as a STANDY (a pre-alert call to advise ED staff of an incoming high priority emergency presentation) by airwave radio to the receiving department and they would be taken immediately into the Resuscitation area for medical assessment, without a requirement for Triage (thus minimising any delays). This type of presentation would be treated as ‘time critical’. On the Hospital 1 site in daytime hours, a rapid assessment Stroke team is immediately contactable and available to assess and manage such patients…In the absence of FAST positive features, the Triage nurse in this case categorised Mr A as category 3 – this has varying definitions including ‘Urgent but Stable’ or ‘to be seen within 60 minutes’ (Manchester Triage System).”

The use of FAST, therefore, resulted in my Dad being put into a different, slower queue.

This is why NHS Greater Glasgow & Clyde wrote:

“This finding (Failure to identify the signs and symptoms of Posterior Circulation Stroke through the use of FAST) directly contributed to the Event (death of Anthony James Bundy).”

And in their reflections, NHS Greater Glasgow & Clyde wrote:

“The limited literature around BEFAST does however suggest a potential benefit in identifying approximately half of all missed Posterior Circulation Strokes… In broad terms it would be reasonable to say that approximately 15-20% of strokes are missed using the FAST-screening tool. The majority of these missed strokes are posterior circulation strokes.”

Summary

Stronger than ever, I believe that the evidence supports the case for a BE FAST trial in Scotland.

All people who presented evidence on Wednesday 6th February stated that the status quo is not good enough.

The research cited against BE FAST is methodologically weak and does not reflect a real public health campaign.

The Stroke Association and Chest, Heart, and Stroke Scotland previously supported calls to trial BE FAST in Scotland, making their recent opposition inconsistent.

The Significant Adverse Event Review into my Dad’s death proves that FAST resulted in my Dad getting slower treatment, contradicting evidence given to the Committee.

Given these points, trialling BE FAST is a reasonable and necessary step to improve stroke recognition and prevent avoidable deaths in Scotland.

I would also like to put on the record that I would be happy to attend a future meeting of the Committee to answer any questions in person that any Members would like to ask me to support their consideration.

Scottish Ambulance Service written submission, 6 March 2025

PE2048/T: Review the FAST stroke awareness campaign

Thank you for your correspondence of 21 February. As requested, the response is as below for your information.

The Committee agreed to write to you seeking further detail on the training programmes and resources referred to during the roundtable discussion, specifically on the guidance being provided to clinicians to increase awareness of atypical stroke symptoms.

Scottish Ambulance Service Clinicians facilitate pre-hospital stroke assessment through use of the ‘FAST’ stroke screening tool. It is recognised that while correct application of the tool is fundamental for diagnostic accuracy in the majority of suspected ischaemic strokes, the use of FAST does have limitations and is less sensitive in more atypical stroke presentations.

On-going training around the correct application of FAST and knowledge and understanding of atypical, or less common presentations of stroke, is critical for Ambulance Clinicians and therefore remains a key pillar of the ‘Stroke Improvement’ programme of work underway within the Scottish Ambulance Service.

To counter the competing priorities and limited capacity available in relation to the ‘Learning in Practice’ curriculum (mandatory training for all Ambulance Clinicians), on-going learning, awareness and principles of care associated with pre-hospital stroke are available through multiple platforms and partnerships.

In partnership with Chest Heart and Stroke Scotland, training resources and stroke awareness merchandise from the newly launched FAST campaign, were adapted to focus key messaging towards Ambulance Clinicians reflecting latest guidance and reinforcing FAST messaging.

As part of our partnership working with CHSS, on-line FAST and Stroke Awareness training sessions have been established with Stoke Education Facilitators. These training sessions are offered to all Ambulance Clinicians and are and will continue to be delivered across multiple dates with varying time slots available to ensure that as many Ambulance Clinicians as possible and can access the training and have access to the Stroke Specialist Educators to ask questions relating to stroke identification and care.

Finally, as part of the CHSS work, a short, targeted Stroke and FAST assessment video has been developed by CHSS and SAS, which is available on @SAS, the Board’s internal intranet available to all staff, clinical and non-clinical to access.

To further aid learning and awareness of both FAST and related stroke symptoms, specifically, acute neurological changes, focussed educational podcasts are available on @SAS for Ambulance Clinicians to listen to and learn from. Sitting alongside the Podcast on @SAS, Ambulance Clinicians can access the Pre-Hospital Clinical Guideline which has a section reinforcing the use of FAST and associated neurological changes that Clinicians need to be familiar with as part of their stroke assessment.

Various on-line programmes and modules are available for Ambulance Clinicians to access which are all specifically developed and aimed at increasing stroke awareness and identification. As an example, ‘STARS’ modules, developed by the University of Edinburgh, are available to SAS Clinicians which cover the principles of stroke care, common and less common signs and symptoms of stroke along with multiple case studies for Clinicians to work through.

As part of a pilot scheme, our internal ‘East Region Stroke Improvement Programme’ (including work with multiple health boards), SAS are in the process of establishing education days where our Clinicians are invited to work alongside and learn from the health board stroke teams as they assess and treat patients suspected to be or that have a confirmed diagnosis of stroke. While this work is logistically challenging for the boards to facilitate (availability is dependent on staffing levels and the requirements of medical students aligned to the stroke units) both SAS and the Health Boards are fully aware of the benefits that this will bring in improving awareness and treatment of pre-hospital stroke. With a workable model established, it is the intention of SAS to roll this work out across the remaining boards in NHS Scotland.

Underpinning all knowledge and available resources, Ambulance Clinicians have immediate access to current best practice and clinical guidelines for the treatment of suspected hyper acute stroke through access to NICE and SIGN clinical guidelines and Joint Royal Colleges Ambulance Liaison Committee (JRCALC) which, while reinforcing general stroke and FAST guidance, SAS have the ability to add additional information which ensures we can highlight and promote specific messaging and relevant information in relation to stroke care.

Finally, while FAST is the recognised and approved stroke screening tool across NHS Scotland, the Scottish Ambulance Service consistently promotes the messaging that patients should be considered to be suffering from stroke when they are ‘FAST+ve’ or where there is a suspicion of stroke through clinical decision making, i.e. where the patient presents as FAST-ve yet the crew have assessed acute neurological changes (which would include balance and visual changes as a wider sub-set of clinical presentations) and cannot rule out the possibility of stroke.

SAS continue to work with Health Board partners and the charity sector to ensure we can capitalise on and maximise the use of educational opportunities for our Clinicians in relation to stroke identification and treatment.

Future innovations which will further assist in the timely identification of stroke patients in the pre-hospital setting are focussed on ‘Enhanced Video Triage’ (EVT) and ‘Pre-Hospital Video Triage’ (PVT). A small pilot study has concluded with EVT in which an ambulance control centre based Paramedic used live video streaming technology to assess suspected stroke patients (coded as both stroke and non-stroke) to confirm the presence of FAST+ve symptoms/acute neurological changes prior to the ambulance arriving on-scene allowing for the response to be upgraded, if appropriate. PVT, active and successful in areas across NHS England, demonstrates the absolute benefit of live stream video assessment from the scene with a hospital-based Stroke Physician/Specialist. The expansion and introduction of both EVT and PVT are key objectives for SAS and are being explored in partnership with the Scottish Government.

SAS remain focused on delivering evidenced based and expert pre-hospital stroke care in partnership with the National Advisory Committee for Stroke and our partners and colleagues across NHS Scotland.

Minister for Public Health and Women's Health written submission, 25 March 2025

PE2048/U: Review the FAST stroke awareness campaign

Thank you for the response of the Citizen Participation and Public Petitions Committee (CPPPC) following its consideration of PE2048 at its meeting of 19 February.

I note in the discussion from the Official Report of the meeting, the concerns raised from the Committee's earlier meeting on the 5 February regarding the evidence heard and any change in messaging from FAST to BEFAST.

The Scottish Government does not currently plan to deviate from the use of FAST. It is the Scottish Government's position that there is still insufficient evidence to support replacing FAST with BE FAST. The National Clinical Guideline for Stroke states that "further evidence is required before the Working Party could recommend the use of other screening tools". This stance aligns with the positions of both Chest, Heart and Stroke Scotland and the Stroke Association.

The Stroke Speciality Advisor to the Chief Medical Officer has also liaised with their counterparts in the nations in the rest of the UK and Ireland and confirmed that there are currently no plans to adopt BE FAST in public awareness campaigns in these healthcare systems.

I thank NHS Ayrshire and Arran for providing the CPPPC with their submission of 22 November. Regarding any trial of BEFAST within NHS Ayrshire and Arran, I would reiterate, as I said in my letter of 12 November 2024, that the Scottish Government does not currently plan to run local trials of BEFAST in individual Health Boards. This would be a decision for an individual Board to make.

I hope this update is useful and thank you again for your correspondence

Yours sincerely,

Jenni Minto MSP

NHS Ayrshire and Arran written submission, 31 March 2025

PE2048/V: Review the FAST stroke awareness campaign

Within NHS Ayrshire and Arran (NHSAA) we have promoted stroke awareness via the FAST campaign for a number of years. Early recognition of stroke / TIA is essential in reducing mortality / morbidity and long-term outcomes. Being able to recognise the symptoms of stroke is key in getting urgent help by calling 999 and improving the change of better outcome.

Raising public awareness is key and the FAST campaign enhances this by recognising the signs below:

F - Face: Look for an uneven smile
A - Arm: Check if one arm is weak
S - Speech: Listen for slurred speech

T - Time: Call 999 right away

However approximately 40% of posterior circulation strokes are missed using FAST screening due to a lack of public awareness in relation to balance and vision issues being recognised as signs of stroke.

As such we very much within NHSAA, with the support of Dr Whitehead Stroke Consultant, were keen to raise awareness of the other symptoms of stroke. The current evidence is clear that BEFAST is helpful at identifying posterior stroke events that are missed by FAST and leads to greater treatment rates. However current evidence has demonstrated this can lead to a significant rise in false negative diagnoses. This has knock-on negative effects throughout the system.

Until there is further research to support BEFAST, within NHSAA, we are continuing with the FAST campaign with a reminder that stroke may present with other symptoms such as balance of visual issues. TIME is BRAIN and it is essential all symptoms are recognised by the public to promote early recognition of stroke and rapid access to treatments such as thrombolysis and thrombectomy.

F - Face: Look for an uneven smile
A - Arm: Check if one arm is weak
S - Speech: Listen for slurred speech
T - Time: Call 999 right away

Other symptoms of stroke include balance and visual issues.

A quality improvement questionnaire has been undertaken within NHSAA with patients to identify where patients receive information on stroke symptoms. The results were wide ranging including social media, GP surgery, TV, radio etc. Younger patients were more likely to access information via social media.

We hope to gain support to be able to use real patient stories with the support of the patient experience team and use these to enhance public awareness of stroke. We would like to use stories from patients who have had FAST symptoms as well as visual and balance issues and include patients from each decade to demonstrate stroke can also happen at any age. We want to be able to promote public awareness across NHSAA. Within the stroke unit we have FAST as well as the other symptoms of Balance and Eyes on our whiteboard for patients and families to recognise the wide range of symptoms.

NHS Shetland written submission, 11 April 2025

PE2048/W: Review the FAST stroke awareness campaign

Please accept my apologies for the extremely late reply to this request.

Whilst there have been no large-scale campaigns within Shetland, I can confirm the following awareness activities did take place:

Stroke Awareness month in May 2024 was promoted by NHS Shetland via Facebook, Instagram, X (Twitter), and the organisational newsletter.

There were representatives from Stroke Support who attended a Women's Health & Wellbeing Event held in August 2024 with the YASP (local physio) posting on Facebook that they were continuing their two online exercise classes for people with MS and Stroke.

World Stroke Day 29 October 2024 was promoted by NHS Shetland via Facebook, Instagram, X (Twitter), and the organisational newsletter.

The two articles below were featured within the local press –

- Stroke group praised in parliament, The Shetland Times Ltd, 23 November 2024
- Stroke group marks first 20 years, The Shetland Times Ltd, 19 October 2024

I understand FAST education to all Health Boards, is being delivered as of January 2025 onwards.

I hope the above examples are satisfactory and provides increasing local awareness, and maximising knowledge amongst the general public and our medical professionals.

Chest, Heart & Stroke Scotland written submission, 17 April 2025

PE2048/X: Review the FAST stroke awareness campaign

Thank you for the opportunity to give evidence to the Committee on Wednesday 19 February 2025 on the above petition. I am happy to provide the following supplementary information, which I touched on during the session.

Chest Heart & Stroke Scotland provides high quality, evidence based education and training for staff in patient facing roles, including on stroke awareness. Since the launch of our FAST campaign in October 2024, we have developed and launched an accompanying education package on stroke recognition and FAST awareness which is fully funded by the Scottish Government. We provide an online training session for patient facing staff in Emergency Departments, GP Practices, and Scottish Ambulance Service, across Scotland.

Our initial target was to reach 1000 attendees in 2025, and we are delighted to report that we reached this within the first four months. Between January and April 2025, we reached 1039 healthcare professionals over 9 sessions. Of these, 63% worked in primary care, 26% worked in the Scottish Ambulance Service, and 9% worked in an Emergency Department.

Our stroke education aims to:

  - Increase healthcare professionals’ knowledge and confidence of stroke symptoms, including the use of FAST
  - Have an impact on practice of healthcare professionals
  - Improve accuracy in stroke recognition

The training session includes:

- What FAST means – including Time, the importance of urgent action
- Why we use FAST as an acronym for stroke awareness, including the Royal College of Physicians assessment of FAST as the most effective screening tool
- The limitations of FAST, including in relation to posterior strokes
- Other symptoms of stroke, such as ataxia (balance issues) and visual field loss
- The importance of taking on board concerns of family and carers, including with FAST negative strokes.

Feedback from respondents so far has been positive. After attending our education session, 97% of evaluation form respondents were able to recall FAST signs, compared to 85% prior to the session. Furthermore, over 85% of respondents reported that our FAST Education had an impact on their practice. Evaluation forms have included numerous positive comments about the value of learning posterior or ‘other’ symptoms within the training session, demonstrating the need for a continuation of education on this topic.

The feedback provided demonstrates a clear appetite from healthcare practitioners for this training, increasing awareness of all kinds of stroke symptoms.

We are of course happy to provide more information to the Committee if there are more details you would like.

NHS Forth Valley written submission, 20 June 2025

PE2048/Y: Review the FAST stroke awareness campaign

NHS Forth Valley has been actively supporting local FAST awareness campaigns for many years. These have been held over several days to coincide with World Stroke Day on 29 October.

Some examples of activities undertaken locally include:

- Stroke information stands and leaflets where members of our local stroke team have provided information and advice to members of the public. This has included stands in local shopping centres, hospitals and the Bridge of Allan Highland Games

- Wallet cards with FAST awareness messages have been included with patient prescriptions
- Bags for Life have included FAST messaging
- A wide range of events and initiatives have been organised to help generate media coverage including local photo calls, briefings, interviews with local clinicians etc.
- FAST awareness message included in staff payslips
- The FAST messaging has also been projected onto the outside of Forth Valley Royal Hospital

Over the last 2 years, local FAST campaigns have included:

- Information stands staffed by members of local stroke team. This has included the restaurant at Forth Valley Royal Hospital (open to staff, patients and visitors), the Wallace Suite (for stroke rehabilitation) at Stirling Care Village and the Thistle Shopping Centre in Stirling. We have also been supported by volunteers from the Stroke Association at these events. The leaflets for these events are provided free of charge from our voluntary sector partners (Chest Heart & Stroke Scotland and the Stroke Association) and any promotional giveaways for the public heave been provided via NHS endowment funds.
- A FAST information board has been installed outside the Stroke Unit at Forth Valley Royal Hospital with support from CH&SS.
- FAST-related information and advice has been promoted on the NHS Forth Valley website, internet and social media channels.
- A FAST campaign information board was installed at Stenhousemuir FC ground. The local stroke specialist nurses also attend football games to help raise awareness of FAST and provide information and advice to supporters.
- Arrangements have been made to light up local landmarks purple for World Stroke day, including the Kelpies, the Wallace Monument and the Falkirk Wheel.

In addition, NHS Forth Valley’s Emergency Department has been using the “BE FAST stroke assessment tool” since early 2024.

Unfortunately, we have not been able to undertake any formal evaluation of the impact of these FAST initiatives locally however this is something that could be considered nationally for all of Scotland.

Stephen Kerr MSP written submission, 24 September 2025

PE2048/Z: Review the FAST stroke awareness campaign

Dear Convener,

When the Committee last considered petition PE2048 and heard evidence from stroke charities, members highlighted the absence of evidence about the use of BE FAST in live medical settings. That absence now appears less clear-cut.

Research on BE FAST—conducted by the petitioner, James Bundy, and published by Enlighten (formerly Reform Scotland)—has already shaped the debate. For the sake of transparency, James is a former employee of mine, and I can personally attest to the thoroughness with which he approached this work. His analysis provided a framework for testing the BE FAST model in Scotland, and it has already helped to inform public discussion on whether current systems for identifying and treating stroke are fit for purpose.

What makes the position even more compelling now is the practical evidence emerging from the NHS. In their submission to the Committee, NHS Forth Valley confirmed that BE FAST has been in use in their A&E since early 2024. That makes them the first health board in Scotland to adopt BE FAST formally, providing a live test case that the Committee cannot afford to overlook. Their latest performance data deserves serious attention:

- NHS Forth Valley is currently the best performing health board in Scotland for delivering thrombolysis within 60 minutes, which is a critical benchmark for positive outcomes.

- They have also achieved a statistically significant improvement in the proportion of stroke and TIA patients being reviewed at a specialist service within four days of referral.

The scale of improvement in these areas is not only measurable but material to patient outcomes. While it is too early to claim direct causation between BE FAST and these results, the correlation is strong enough to warrant closer investigation. At the very least, these outcomes suggest that NHS Forth Valley’s approach is creating conditions that support faster and more effective stroke care.

It would therefore strengthen the Committee’s consideration of this petition to hear directly from those on the front line. An invitation to a senior member of the NHS Forth Valley stroke team would provide the Committee with valuable first-hand testimony of how BE FAST has been integrated into clinical practice, the challenges encountered, and the benefits observed so far. Such evidence would allow the Committee to deliberate not on abstract theory but on real-world experience, in a Scottish health board context.

This is precisely the kind of practical insight that a petitions process should draw upon to reach balanced, informed conclusions. I hope you will agree that the timing is right for the Committee to hear from NHS Forth Valley, and that doing so would materially enhance the quality of scrutiny applied to petition PE2048.

Thank you for your consideration of this suggestion.

Yours sincerely,

Stephen Kerr MSP

Member for Central Scotland

Petitioner written submission, 5 November 2025

PE2048/AA: Review the FAST stroke awareness campaign

Thank you to the Committee for considering my petition.

This petition follows the tragic death of my father. Before I go further, it is worth reminding the Committee that the Significant Adverse Event Review conducted by NHS Greater Glasgow & Clyde concluded that the limitations of the FAST test "directly contributed" to his death. That conclusion is the foundation of this campaign.

I do not need to rehearse the positions of the Scottish Government or the stroke charities in response to this petition. What I urge the Committee to do is take a step back. Look beyond the usual sources. Take a more open, broader approach to the evidence. Consider real, academic evidence. Listen to the lived experience of those who have suffered because of the gaps in our current system.

The founding principles of this Parliament are openness, accountability, the sharing of power, and equal opportunity. Does openness not extend to listening to the lived experiences of the people of Scotland? Does the sharing of power not mean engaging beyond the insular approach to evidence currently taken? Does accountability not demand the humility to admit when the status quo is failing? Does equal opportunity not require that every Scot, regardless of age, time of day, or presenting symptoms, has access to life-saving care?

The Committee's rules for written submissions limit my ability to provide links to webpages with commenting sections, but I would urge members to read the comment sections of Facebook posts by Chest, Heart and Stroke Scotland, and the Stroke Association promoting FAST. These posts are filled with testimony from individuals who, or whose loved ones, suffered strokes with symptoms out with FAST. The scale of these comments is increasing, and it is happening beyond the influence of my family's campaign. The public is learning the hard truth: FAST misses up to one in five strokes.

Beyond lived experience, the expert community supports this message. Dr.Jason Tarpley, stroke neurologist and director of the Stroke and Neurovascular Centre at Providence Saint John's Health Centre in California, has said:

"If you're trying to get every stroke, it's important to put in 'balance' and 'eyes' because posterior strokes are less likely to be detected by FAST. BE FAST increases sensitivity and enables detection of more strokes in the back of the brain."

The message is clear: if you want to detect more strokes, BE FAST is superior. Real, academic evidence confirms it. Research published by the Australasian College for Emergency Medicine in January 2024 found that patient outcomes improved after the introduction of the BE FAST triage tool. More strokes were identified on presentation, interventions happened faster, and patients returned home sooner, with less disability.

Another study found that among 46 posterior circulation strokes, FAST would have missed 19. BE FAST missed only one. This is not theoretical. This is demonstrable, academic evidence showing BE FAST detects strokes FAST does not.

Yes, concerns exist about false positives. But in stroke care, where every minute counts, a false positive is preferable to a false negative. The cost of missing a stroke is measured in lost lives, lost independence, and families shattered. Ambulances are not dispatched. Patients wait in corridors for hours as vital intervention windows close.

We cannot wait for perfect. We cannot allow the pursuit of a flawless system to justify inaction. The arguments against BE FAST - overwhelming the NHS, public confusion - should be met not with dismissal, but with confidence in the Scottish people and the ingenuity of our health service. The public is not incapable of understanding BE FAST. And the NHS is not omnipotent: the system exists to serve the patient, not the reverse.

On this point, I want to recognise NHS Forth Valley for their leadership and innovation, attitudes sadly missing in other places where they ought to be. In early 2024, they adopted BE FAST in their A&E department: a bold step demonstrating the benefits of a more open, broader approach to stroke detection. Early evidence from Forth Valley is encouraging and shows what can be achieved when courage and forward-thinking guide patient care.

My campaign is personal. I watched my father die far too young, just as he was building his business, just as I was starting a family. Knowing that the test designed to detect strokes failed him, it is a wound that will not heal.

FAST has saved lives, but every tool must evolve. Updating FAST to BE FAST is evolution. It is progress. It is lifesaving.

I ask the Committee: do not be bound by Government habits or their insular approach to evidence. Consider the lived experience of thousands of Scots, the research from around the world, the leadership of those health boards willing to innovate. Encourage the Government to act with the humility to learn from out with, to do better, and to save lives.

Knowing FAST is not enough when it comes to stroke. You need to BE FAST.

Consulate General of Italy in Edinburgh written submission, 13 March 2025

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

The following briefing provides an overview about the mandatory screening programme for all young people involved in organised sport in Italy, the legislation and protocols in place, and a review of the most recent studies analysing the impact of the screening and its cost-effectiveness.

The briefing is based on the proceedings of a scientific symposium organised on 28th January 2025 by the Embassy of Italy in London, in collaboration with the Italian Society for Sport Medicine (FMSI), as part of the initiatives comprised in the *Memorandum of Understanding* signed by the Italian and the British governments in April 2023.

Based on the evidence that approximately two thirds of Sudden Cardiac Deaths (SCDs) in young athletes happen during competition or training and an additional 13% of SCDs are linked to sport-related activities, and that the incidence rate of SCD victims was significantly higher among young athletes compared to the general population, in the late 70s/early 80s Italian sport medicine physicians made recommendations to the Italian Parliament to introduce relevant legislation to prevent SCDs.

Italian legislation (Decree of the Minister of Health, 18th February 1982 for professional and competitive athletes; last, Decree of the Minister of Health, 24th April 2013 for non-competitive athletes) mandates that every participant engaged in sports activities must undergo a clinical evaluation and obtain an eligibility certificate. This certificate is reviewed at least every year.

Accordingly, a nationwide systematic screening program was launched in Italy in 1982. The screening protocol can be carried out exclusively by a physician specialised in Sport Medicine. The same guidelines for sports medicine define as “young competitive athletes” adolescents and young adults aged 12 to 35 years who participate in an organized sports program that required regular training and competition.

Each sport federation part of the Italian National Olympic Committee (CONI) defines the age at which screening becomes mandatory from (e.g. from 8 years of age for swimming athletes; from 12 years of age for rugby players, etc…) and any specific examination to guarantee the athlete’s health protection. In general terms, the protocol includes: athlete anamnesis (family history, previous personal health history); anthropometric measurements (weight, height); visual acuity examination; urine analysis; resting and stress 12-lead electrocardiogram (EKG); spirometry. Further examinations (physical examination for particular organ districts specifically involved) may be included in the protocol for different sport disciplines and, therefore, the certificate is specific for a particular sport.

Additional tests are requested only for those athletes who had positive findings during the first screening and following this second screening, the athlete can be certified qualified for sport activities, temporarily disqualified, or permanently disqualified.

The major result of the introduction of this mandatory screening is the significant decrease of SCDs among young athletes. Indeed, a study carried out on the population of the Veneto region (north-east of Italy) between 1979 (prior the introduction of the mandatory screening) and 2004 shows an 89% decrease in the incidence rate of SCDs among young competitive athletes aged 12 to 35 years (from 3.6 in every 100,000 people/year in 1979 to 0.4 in every 100,000 people/year in 2004).

Remarkably, the incidence rate result obtained among the athletes is even lower than the one obtained in non-athletes, where the SCD incidence rate is 0.7/0.8 in every 100,000 people/year, unchanged over the last decades.

The decrease of SCDs incidence rate is accompanied by the concomitant increase of the proportion of young competitive athletes who were identified and hence disqualified from competition because of cardiomyopathies during the same interval. Indeed, on average, only a bit more than 90% of the athletes are cleared for competition after a normal first-line evaluation. After the second-line evaluation, 2% of the athletes were diagnosed with a disease, with 0.3% temporarily disqualified and 0.3% permanently disqualified.

Notably, despite the screening being mainly focused on the cardiovascular system performance, 74% of the athletes are diagnosed with disease pertaining to the heart or the vascular systems; the remaining 26% relate to pneumology, allergology, neurology, or oncology fields.

Therefore, the screening has a particular relevance in the early diagnosis of a major disease, in finding possible risk factors or minor diseases, and in being a first preventive screening for the population.

It has been determined that the mean cost on the Italian Health System per athlete for the first-line evaluation screening is €64 (approximately £54), with additional €15 (approximately £13) when including additional investigations. The sport medical examination is officially recognised by the Health System: it is provided free of charge to minors and to people with disabilities, while all other people can access it by contributing €36.15 (approximately £30) towards its cost.

Relevant bibliography:

1. Decree of the Italian Ministry of Health, February 18, 1982. Norme per la tutela sanitaria dell’attività sportiva agonistica [*Rules concerning the medical protection of athletic activity*]. Gazzetta Ufficiale della Repubblica Italiana. March 5, 1982:63.

2. Decree of the Italian Ministry of Health, April 24, 2013. Disciplina della certificazione dell’attività sportiva non agonistica e amatoriale e linee guida sulla dotazione e l'utilizzo di defibrillatori semiautomatici e di eventuali altri dispositivi salvavita. [*Rules concerning non-athletic and leisure sport activities certification, and guidelines on the installation and use of defibrillators and other life-saving* devices]. Gazzetta Ufficiale della Repubblica Italiana. July 20, 2013:169.

3. Corrado D, Basso C, Pavei A, Michieli P, Schiavon M, Thiene G. Trends in sudden cardiovascular death in young competitive athletes after implementation of a preparticipation screening program. JAMA. 2006 Oct 4;296(13):1593-601. doi: 10.1001/jama.296.13.1593. PMID: 17018804.

4. Vessella T, Zorzi A, Merlo L, Pegoraro C, Giorgiano F, Trevisanato M, Viel M, Formentini P, Corrado D, Sarto P. The Italian preparticipation evaluation programme: diagnostic yield, rate of disqualification and cost analysis. Br J

Sports Med. 2020 Feb;54(4):231-237. doi: 10.1136/bjsports-2018-100293. Epub 2019 Jul 17. PMID: 31315826; PMCID: PMC7029244.

Cabinet Secretary for Health and Social Care written submission, 1 April 2025

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

Thank you for writing to me on the important issue of young sudden cardiac death and for highlighting the evidence that the Committee has received so far.

Firstly, the Committee has requested an update on discussions that have been had with the Chief Scientist Office (CSO) about commissioning or supporting research into the impact of diseases leading to sudden cardiac death in Scotland. I can confirm that, following a meeting on 18 April 2024 with Sharon and Gordon Duncan, I asked officials to explore with the CSO any opportunities to support research into sudden cardiac death in the young.

My officials sought further advice from CSO and, consistent with previous responses provided to this Committee by the Minister for Public Health and Women's Health, it was confirmed that the CSO is a response mode funder and does not commission research on specific topics. It was reiterated that applications on sudden cardiac death are welcomed and would go through CSO's standard independent expert review process to allow funding decisions to be made. Further information about the CSO funding schemes, the application process, and upcoming deadlines can be found at https://www.cso.scot.nhs.uk/grant-funding/.

Scottish researchers are also able to apply to the National Institute of Health Research (NIHR) schemes that CSO buys into. Information about these opportunities is available on the CSO website. Beyond these routes, there are other large scale funders of cardiovascular research in the UK, including the British Heart Foundation – information on applications for grant funding from BHF can be found here - What we fund - Cardiovascular Research Grants - BHF.

CSO also reached out to the Cardiovascular Research Network to encourage any academics in Scotland with an interest in this topic, to make a research application on sudden cardiac death via any of these routes.

With regard to the Committee's second question, asking what consideration the Scottish Government has given to commissioning a pilot study on voluntary screening. I would highlight the information provided above – that within the Scottish Government, the CSO has policy responsibility for health research and that funding opportunities are provided through a response mode scheme.

Further, the Committee has also asked what engagement the Scottish Government has had with the British Heart Foundation, Cardiac Risk in the Young (CRY) or Chest, Heart & Stroke Scotland on the commissioning of a pilot study on voluntary screening. The decision to provide funding for such a research project, or indeed to apply themselves for research funding to deliver a project on this topic, would be the individual responsibility of those organisations and therefore the Scottish

Government has not engaged with the three organisations on this particular ask of the petition.

You have also drawn my attention to the written evidence provided by CRY about the misunderstanding of the incidence of Young Sudden Cardiac Deaths, and asked whether Scottish Government officials have raised this matter during its engagement with the UK National Screening Committee (NSC).

I should reiterate for the Committee that the UK NSC is an independent, expert advisory group which advises all four UK nations on aspects of screening. While representatives from Scotland attend UK NSC meetings and remain in close contact to discuss any emerging issues, they must, at all times, respect and uphold the independence of the committee in formulating its advice, which is based on the best and most up to date evidence available.

As outlined in the UK NSC response to the Committee, dated 9th May 2024, the UK NSC does not make decisions regarding which conditions to screen for based on how rare a condition is or is not. Rather, it assesses evidence against a set of internationally recognised criteria covering the condition, the test, the treatment options, and the effectiveness and acceptability of the screening programme. The details of the criteria considered by the UK NSC with regard to screening those aged under 30 for cardiac conditions associated with sudden cardiac death can be found in the evidence summary provided here (summarised on pages 8-11); Sudden cardiac death - UK National Screening Committee (UK NSC) - GOV.UK

In summary, challenges included;

- A lack of a sufficiently predictive test for risk of sudden cardiac death
- Often low quality evidence supporting guideline statements relating to the treatment of individuals without symptoms.

The UK NSC plans to review the evidence relating to population screening for SCD within the next three years, in line with their current work plan. The evidence review process involves consultation and engagement with stakeholders and opportunities for internal and external stakeholders, such as CRY, to draw the UK NSC's attention to developments. This is set out more fully in the UK NSC stakeholder engagement strategy.

The CRY response reiterates the important issue raised by the original petition, which is that the epidemiology of sudden cardiac death remains uncertain and there is potential to improve this matter. To this end, we are working closely with the West of Scotland Inherited Cardiac Conditions Service, the Network for Inherited Cardiac Conditions (NICCS), genetics and pathology services, and the Scottish Cardiac Audit Programme, to enhance data quality and develop a robust national audit process in order that we might improve the understanding of sudden cardiac death incidence in Scotland.

Yours sincerely

NEIL GRAY

British Heart Foundation Scotland written submission, 14 October 2025[1]

PE1989/I: Increase defibrillators in public spaces and workplaces

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

PE2101/E: Provide Defibrillators for all Primary and Secondary Schools in Scotland

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 though 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 OHCAs.[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]

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[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

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 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 OHCAs 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

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[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

[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/

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 OHCAs 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 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.

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[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

[13] BHF Circuit data

[14] BHF Circuit data

[15] BHF Circuit data