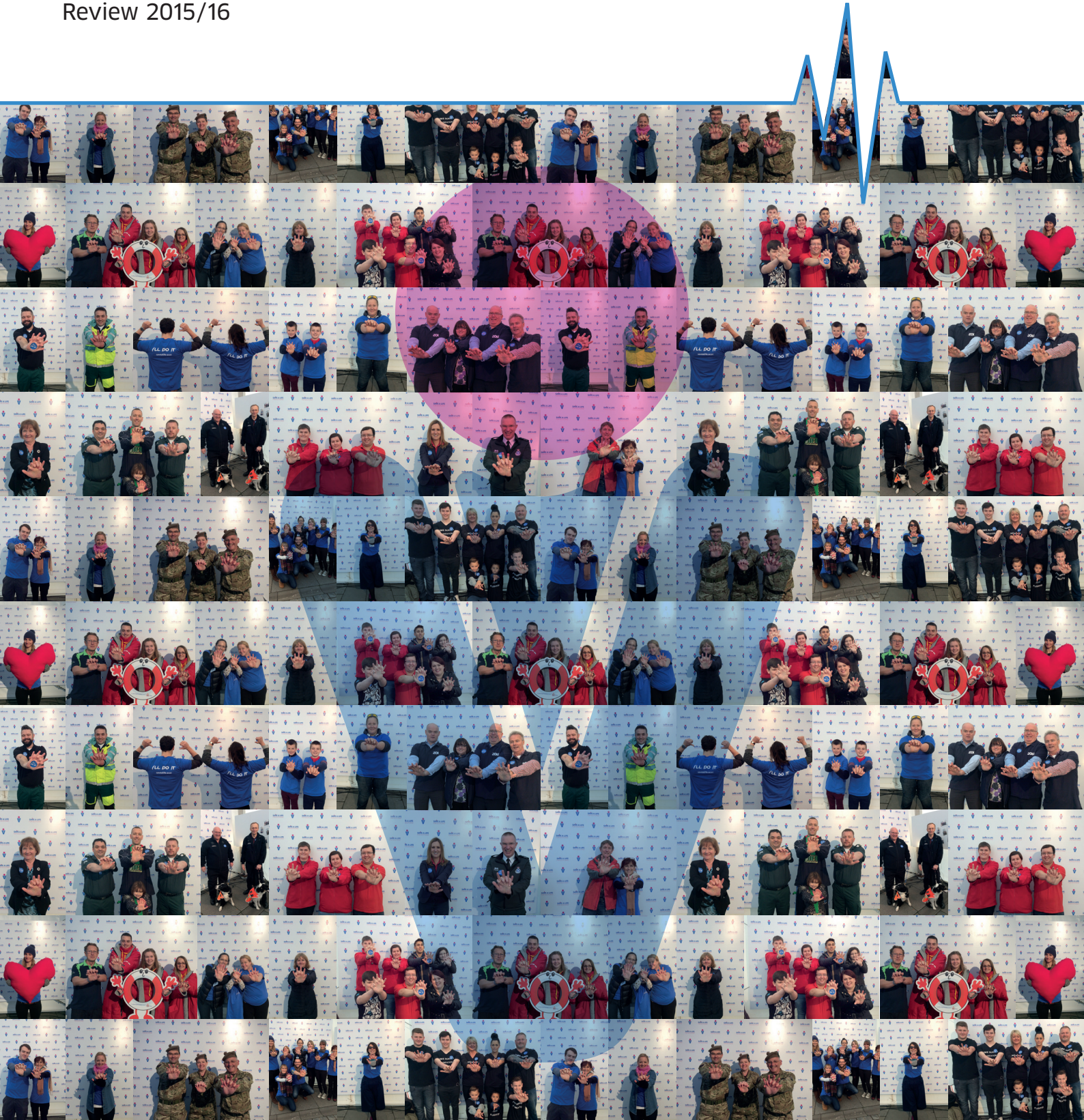


OUT-OF-HOSPITAL CARDIAC ARREST A STRATEGY FOR SCOTLAND

Review 2015/16



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FOREWORD



A year on from the public launch of 'Out-of-hospital Cardiac Arrest (OHCA): A Strategy for Scotland', I welcome this review of progress, which sets out

achievements so far and provides a stimulus for further activities.

The chances of survival following an OHCA are greatly increased if prompt Cardiopulmonary Resuscitation (CPR) and early defibrillation are provided. We know that people trained in CPR are more likely to intervene when someone has a cardiac arrest. So the priority in the first phase of the Strategy has been to increase the number of people equipped and prepared to give CPR.

I am delighted to hear the opportunities for CPR training have been enthusiastically taken up by so many people in Scotland during the first year of the Strategy. I want to thank the tens of thousands of you who seized such an opportunity and encourage many more of you to follow suit.

Much of this has been achieved through 'Save a Life for Scotland', which has brought organisations together to provide training and support. This has built on the strong existing network of first responders and other volunteers, supported by public and voluntary organisations, working with

dedication and commitment to save lives and support our emergency services. The work of these groups contributes to wider benefit for the people of Scotland in building resilient and strong communities.

The OHCA Strategy was devised in collaboration with a range of public and voluntary services, and is being delivered in partnership. Public services are working across traditional boundaries, hand in hand with voluntary organisations and communities, to improve outcomes after OHCA and make Scotland an international leader in the management of OHCA. Delivery of the Strategy is unlocking the potential and the creativity of people at all levels of public and voluntary service, empowering them to work together in innovative ways. All those involved are working together with communities to deliver these skills to save lives.

We greatly value all partners' contributions to delivering the ambitious aims set out in Scotland's Strategy for Out-of-hospital Cardiac Arrest and are committed to building on our progress to date. I would like to offer my thanks and appreciation to all those involved.

A handwritten signature in black ink that reads "Aileen Campbell".

Aileen Campbell MSP

Minister for Public Health

PREFACE



Every week across Scotland the equivalent of a full double decker bus load of people have resuscitation attempted after Out-of-hospital Cardiac Arrest (OHCA). Their heart

has suddenly stopped. Unless it can be restarted in a matter of minutes death will quickly follow. Unfortunately, only around four of these people will return home to their families alive. The good news is; it doesn't have to be this way.

Scotland's Strategy for Out-of-hospital Cardiac Arrest, launched in 2015, gives a clear commitment to improving survival after OHCA. By optimising the whole system of care – starting with public perceptions and bystander actions, and ending with the aftercare of survivors and their families – we hope to save an additional 1000 lives by 2020, making Scotland a world leader in OHCA resuscitation.

Successful implementation of this Strategy will depend on the active participation, commitment and support of all of the organisations involved in the 'chain of survival' after OHCA. This review describes how far we have come in the first year of implementing our plan. The work of the emergency services, joint forces command, third sector organisations, community groups, academics, Scottish Government

and industry partners are all represented here – including the newly formed Save a Life for Scotland.

It is early days. As we reflect on our first year there is much positive progress to report, but having a great plan is no guarantee of success. This report is an encouragement to clinicians, policy makers, community groups and the public that we are off to a good start. It is also a reminder of the challenge to continue to work purposefully together, focussed on the prize of better resuscitation outcomes after OHCA. We still have a long way to go.

I would like to acknowledge all those who have worked hard and contributed to the progress thus far. The individuals at the 'sharp end' of training, resuscitating and aftercare are too numerous to mention by name – but you know who you are. On behalf of those whose lives you save and the families you preserve – thank you. In addition, my own personal thanks go to the Strategy Delivery Group for their willingness to embrace organisational change, and to do the hard work to make it happen.

Dr Gareth Clegg

Chair, OHCA Strategy Delivery Group
Resuscitation Research Group lead,
University of Edinburgh

EXECUTIVE SUMMARY

This Review reports on the activities and achievements of the Out-of-hospital Cardiac Arrest (OHCA) Strategy for Scotland to September 2016.

The Strategy was devised and is being delivered in partnership with public services, voluntary organisations and communities, building on existing work by services, communities and individuals.

The Strategy set the ambition for Scotland to be an international leader in OHCA outcomes by 2020. This is underpinned by two high level aims:

- To increase survival rates after an OHCA to save 1,000 additional lives by 2020.
- To equip an additional 500,000 people in Scotland with Cardiopulmonary Resuscitation (CPR) skills by 2020 as an essential staging post to increasing rapid bystander intervention in OHCA.

The early priorities in the Strategy are actions to increase effective bystander intervention at an OHCA since it is here that the most improvement in survival and outcomes will be achieved.

Key achievements in 2015/16 are:

At least **60,000 people have been trained in CPR** since the public launch of the Strategy. This is a strong start and provides the base to build and accelerate the rate of CPR training.

Formation of **Save a Life for Scotland (SALFS)**, a partnership of organisations that has come together to increase CPR and defibrillation training amongst the population and heighten the awareness of

OHCA. This CPR training has taken place in a variety of places including:

- Teaching and engaging young people through working with primary and secondary schools
- Training social and sports club members in community and club halls
- Providing training and raising awareness amongst the general public in shopping malls and at major events notably the Edinburgh Tattoo.

Establishing the Save a Life for Scotland **website www.savealife.scot** and social media presence on **Facebook (Save a Life for Scotland)** and **Twitter (@savealifescot, #savealifescot)**.

These are used to raise awareness of CPR activity and signpost people to training opportunities

Co-responding trials, that involve simultaneous dispatch of both Scottish Ambulance Service and Scottish Fire and Rescue Service to an OHCA to reduce response times, have been run in ten areas.

The **OHCA Data Linkage Project** has linked OHCA data from the Scottish Ambulance Service with hospital data and deaths data. This is key to measuring progress towards the Strategy aims, as well as providing an evidence base to inform future plans. This Review contains the first published findings.

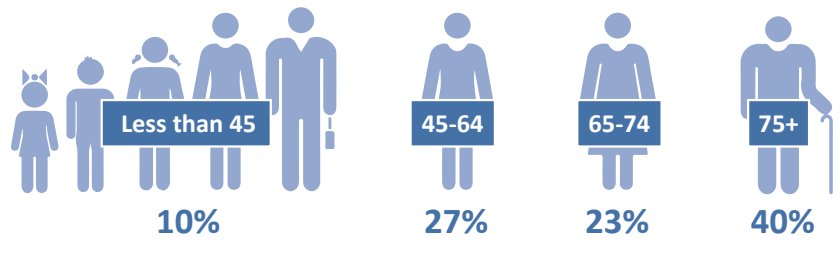
Improving Outcomes from OHCA
The Starting Point

Average number of OHCA
3,000 per year



38% 62%

OHCA can affect people of all ages at any time

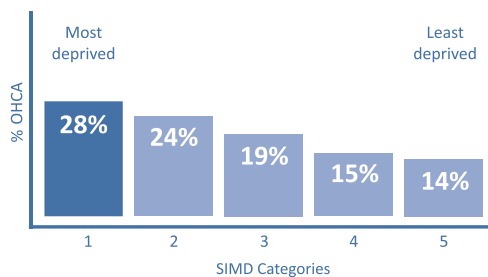


Only around
1 in 20
survive to leave
hospital

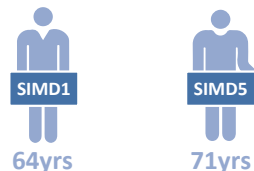


People who live in
rural areas are
32% less likely
to survive to leave
hospital

People in the most deprived areas
are **twice as likely** to have an OHCA.



The **average age** of the people who
have an OHCA in these deprived
areas is **7 years lower**.



People from most deprived areas are
43% less likely to survive to leave
hospital compared to those from
least deprived areas

Source: OHCA Data Linkage Project, University of Edinburgh / Scottish Government. Figures relate to combined data between 2011–2014/15

INTRODUCTION AND BACKGROUND

INTRODUCTION

In March 2015 a broad coalition of partners set out plans to improve survival after out-of-hospital cardiac arrest (OHCA). The main aims of the OHCA Strategy for Scotland are to save 1000 additional lives and train 500,000 people in Cardiopulmonary Resuscitation (CPR) by 2020. This will make Scotland a world leader in the management of OHCA.

The OHCA Strategy is very much a Strategy for Scotland. It is an example of public and voluntary services working together to achieve a common aim. It was devised in a collaboration between the Scottish Government, Scottish Ambulance Service, Scottish Fire and Rescue Service (SFRS), Police Scotland, British Heart Foundation (BHF), Chest Heart & Stroke Scotland (CHSS) and Resuscitation Research Group, University of Edinburgh. Delivery of the aims of the Strategy continues to involve these and many more partner organisations as outlined in this report.

BACKGROUND

When a person has a cardiac arrest the heart suddenly stops. They will die within minutes unless treated.

Immediate response by the people present is essential – every minute really counts.

Ordinary people save lives by taking effective action – calling 999; carrying out CPR; and using a defibrillator to restart the heart when available. This action keeps the person alive until the medical support, an ambulance, arrives.

This is the reason why working with the public in Scotland is key and the priority in the initial stages of the OHCA Strategy.

Recognising a cardiac arrest – calling 999 – CPR and defibrillation are central to saving lives.

OHCA is a significant health challenge in Scotland and survival rates are low compared to the European average. What is known is that it is possible to change this situation and achieve parity with those countries where OHCA survival rates are up to four times higher than Scotland.

The difference between a ‘heart attack’ and ‘cardiac arrest’?

A heart attack is a sudden interruption to the blood supply to part of the heart muscle. It is likely to cause chest pain and permanent damage to the heart. The heart is still sending blood around the body and the person remains conscious and is still breathing.

A cardiac arrest occurs when the heart suddenly stops pumping blood around the body. Someone who is having a cardiac arrest will suddenly lose consciousness and will stop breathing or stop breathing normally. Unless immediately treated by CPR this always leads to death within minutes.

A person having a heart attack is at high risk of experiencing a cardiac arrest.

Both a heart attack and a cardiac arrest are life-threatening medical emergencies and require immediate medical help. Call 999 if you think you are having a heart attack or if you witness someone having a cardiac arrest.

Source: <https://www.bhf.org.uk/heart-health/conditions/cardiac-arrest.aspx>

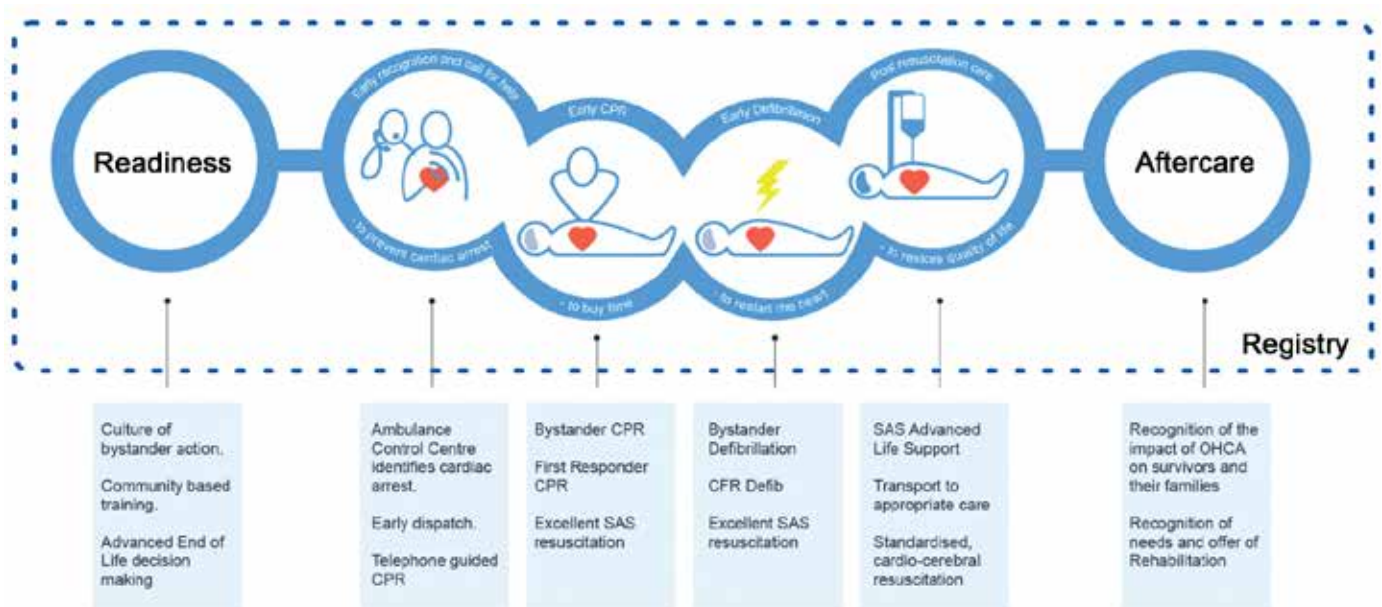
DELIVERING THE OHCA STRATEGY 2015/16

PURPOSE OF THIS REVIEW

This Review reports on progress in the OHCA Strategy and is intended to stimulate further actions. The number and scale of activities since the launch of the Strategy is such that this Review cannot comprehensively report all action. Rather the focus is on particularly significant and innovative activities which are illustrative of the broader achievements. Annex 1 sets out progress by partner organisations against their commitments made in the Strategy.

The ambition for Scotland to significantly improve OHCA outcomes requires a broad range of actions and improvements to address all six elements of the ‘augmented chain of survival’. These comprise: Readiness; Early Recognition and Call for Help; CPR; Early Defibrillation Pre-hospital resuscitation; Post Resuscitation Care and Aftercare. The OHCA Strategy set out aims to achieve each element.

The six elements of the ‘augmented chain of survival’ form the structure of this report. The main activities from 2015/16 are reported under the relevant intermediate outcomes from the Delivery Plan described below.



**Knowledge, behaviour & public attitudes:
Findings from the Scottish Opinion Survey,
August 2015**



1 READINESS

Aim: To encourage a greater public awareness of 'the right thing to do' and an increased willingness to help when present as a bystander at an OHCA.

1.1 Creating a culture of bystander action

The cornerstone to improving survival and outcomes from OHCA is ordinary people being equipped and ready to carry out bystander CPR. Achieving this public 'readiness' is being driven by a coordinated, national approach intended to stimulate the culture shift required. The experience in the first year of the OHCA Strategy has highlighted that there are many organisations already training people in CPR and ready to do more, and that the Scottish public are willing to get involved.

A first task for the Strategy was to establish the current position and find out the views of the people of Scotland on OHCA. A public opinion survey, Exploring the knowledge, attitudes, and behaviour of the general public to responding to OHCA provided insight and informed the planning of activities. The findings were encouraging, revealing (Dobbie, F. et al: 2016):

- Over half of the population has been trained in CPR.
- An overwhelming majority of people said that they would try CPR rather than do nothing at all.
- More than three out of four of the people surveyed agreed that everyone should be trained in CPR.



Picture Credit: Claire Fleck photography

This survey and a literature review (Scottish Government, forthcoming) identified key factors which may influence an individual's response to a cardiac arrest. Some of the most important barriers to doing CPR were: fear of doing more harm or making the situation worse; fear of catching something (generally in relation to carrying out mouth to mouth ventilation); and fear of being sued. This has informed the activities for the OHCA Strategy.

1.2 Raising awareness and willingness to help

Simply not knowing how to perform CPR is one barrier to intervening. Educating people in Scotland about CPR and equipping them with the skill to carry it out is integral to achieving culture shift. By demonstrating the crucial impact of intervening immediately, busting the 'doing harm' myth and increasing confidence to respond it is possible to elevate the rate of bystander CPR in Scotland. Progressing this has been the priority in the first year of the Strategy as is demonstrated throughout this report.

2 EARLY RECOGNITION

Aim: To ensure that those who witness an OHCA promptly call 999 and are enabled to carry out immediate Cardiopulmonary Resuscitation (CPR) and use a Public Access Defibrillator (PAD) where available.

To engender the belief amongst staff and members of the public that with effective action, OHCA can be a survivable event.

2.1 Increased public awareness of how to respond to an OHCA

All the CPR training activities provided by partners incorporate raising awareness of OHCA and the need to respond. In 2015/16 an explicit aim in delivering the OHCA Strategy was to increase public awareness at national and local community level.

2.1.1 Save a Life for Scotland

Save a Life for Scotland (SALFS) is a partnership that has come together to increase CPR training amongst the population. It coordinates activities that raise awareness of cardiac arrest and provides CPR training and education via the range of partner organisations.



The Save a Life for Scotland partnership includes a wide range of organisations from the public and voluntary sectors:

- The Scottish Ambulance Service
- Scottish Fire and Rescue Service
- Defence Medical Services
- Police Scotland
- The British Heart Foundation
- The British Red Cross
- St Andrew's First Aid
- Chest Heart & Stroke Scotland
- The Royal Life Saving Society Scotland
- Trossachs Search and Rescue
- Lucky2BHere
- The Resuscitation Research Group at the University of Edinburgh

and includes affiliated supporters including BASICS Scotland, NHS Scotland, Higher Education Institutions, Heartstart (BHF) and Council representatives.

The three main aims for Save a Life for Scotland in its first year were:

- To highlight and encourage the work of groups who are already teaching CPR within their communities.
- To develop local community networks to encourage cross service collaboration in identifying communities across Scotland who have less CPR training opportunity, and to offer support.
- To coordinate larger scale events, promoting the campaign to the whole cross section of the Scottish public.

Save a Life for Scotland has had a promising start. Community resilience has been placed high on the agenda of all partner groups. Scotland is increasingly becoming a country ready and able to respond to someone suffering a cardiac arrest.

Save A Life for Scotland has recorded that in excess of 60,000 people in Scotland have learned CPR since the launch in October 2015.

These numbers are encouraging. The Save a Life for Scotland campaign in its first year has been laying the foundation for building CPR activity across the country and it is expected to report a rise in numbers year on year.

Online presence

During the first year of the Strategy, Save a Life for Scotland has developed an active online presence to further its aims. The campaign website www.savealife.scot is the central portal for information and activity where the public can access information on bystander CPR and search for local CPR training. Partner organisations can post news on ongoing activity and share CPR resources and information.

Social media is key to communication and there is a growing public following via Facebook (Save a Life for Scotland) and Twitter (@savealifescot, #savealifescot). These are used to raise partners awareness of CPR activity nationally as well as signposting members of the public to forthcoming opportunities for CPR training. Vimeo, YouTube and Flickr sites are also actively used to publicise Save a Life for Scotland with videos and images

telling survivor stories, case studies and showcasing partner activities.

Awareness raising via the media is invaluable to educate people on OHCA and encourage bystander CPR, and indeed to save lives. Previous successful media campaigns have included the British Heart Foundation's 'Hands Only CPR / Vinny Jones - Push Hard and Fast'. Building on this, Save a Life for Scotland is raising the profile of groups already working in communities and building additional capacity for teaching CPR and defibrillation awareness to members of the public.

Save a Life for Scotland has also capitalised on public awareness-raising opportunities through collaboration with other organisations committed to enhancing community resilience. Organisations such as 'Positively Scottish' and 'Living it Up' have recognised and highlighted the campaign as have local press by reporting on the work of local community groups and their impact. These stories are especially powerful when lives have been saved through CPR being delivered promptly by members of the public.



Picture Credit: Claire Fleck photography

Larger scale events have also provided invaluable opportunities to relay the Save a Life for Scotland message to a broad cross section of the Scottish public. During the Royal Edinburgh Military Tattoo, Save a Life for Scotland had a stand to raise awareness of the campaign and provide CPR training. Volunteers from partners and supporter organisations worked together each night of the three weeks of the Tattoo to deliver this. In all over 1500 learned CPR. Cards highlighting the campaign and signposting opportunities to receive training were also distributed.

Castle Concerts were receptive and played a promotional video at the Edinburgh Castle event featuring Runrig in advance of their performance, with a great public reach. View the video here: <https://vimeo.com/175869017>.

A notable collaborative initiative is by Save a Life for Scotland and Westquarter Primary School, Falkirk. This produced three short videos to inform people of the importance of bystander CPR. These videos have been made available to be used within schools for CPR education but also have a wider audience appeal and have been shared across social medial platforms. They cover:

- Key messages around current survival.
- Mythbusting.
- 'You don't need to be a superhero to do CPR, you just need to be you' a CPR demonstration.

You don't need to be a superhero to do CPR, you just need to be you



<https://vimeo.com/189797015>

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

Key Messages around current survival



<https://vimeo.com/187666100>

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

Mythbusting



'Mythbusting' around the fears identified from the Omnibus survey were also addressed in a fun yet informative series of videos.

<https://vimeo.com/187655356>

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

2.1.2 CPR in SFRS Home Fire Safety Visits – Activities 2017 and beyond



The Scottish Fire and Rescue Service (SFRS) are taking forward a unique initiative to raise awareness and willingness to help in OHCA. The SFRS carries out approximately 70,000 Home Fire Safety Visits (HFSV) across Scotland annually, directly engaging with at least this number of people in their own homes. The majority of these visits focus on fire related risks and preventative measures, however an increasing number are assessing other risks in the home associated with wider health and wellbeing.

Building on this development, an extension of the HFSV, presents the opportunity to provide people with a range of measures which can equip them to assist someone experiencing an OHCA. In taking this forward it is proposed to carry out trials within the areas covered by the following three stations, one in each SFRS Delivery Area:

- Arbroath in the North.
- Galashiels in the East.
- Cumbernauld in the West.

Work to plan HFSV including OHCA and CPR awareness elements has already commenced and these will go live from early 2017.

2.2 Improved systems and training in Ambulance Control Centres

The Ambulance Control Centre (ACC) call handlers are at the frontline in recognising a cardiac arrest and giving the best guidance to bystanders on how to respond. The 2015 public opinion survey found that most people (82%) said they would be confident to administer CPR if a 999 call handler talked them through it. Other evidence shows that telephone CPR (T-CPR) by ACC handlers can increase and improve CPR administered.

When ACC receive a call identified as cardiac arrest a core action by handlers is to have a bystander commence CPR immediately. They continue to talk them through the process, providing reassurance and encouragement. This can be key to getting CPR started when a bystander does not take the initiative to do so. T-CPR can improve the quality of the CPR, by setting the rhythm to push. T-CPR requires skills: to communicate what is required and to persuade reluctant bystanders and support people anxious about responding.

The Scottish Ambulance Service's OHCA training and handling has improved the response and support. The Scottish Ambulance Service is also working to secure recognition as an accredited Centre of Excellence for the Ambulance Control Centres and the standard of compliance is supported through audit.

3 CPR

Aim: To increase the rate of bystander CPR and to equip an additional 500,000 people with CPR skills by 2020 and create a nation of life savers.

Rapidly initiated CPR and defibrillation are paramount to improving outcomes for people who have a cardiac arrest. It is internationally recognised that bystander CPR can improve the chances of survival by between two and seven times. People trained in CPR are more likely to know how to react to an OHCA and be willing to start CPR.

3.1 Increased CPR training offered to public

Equipping people with CPR skills has been a priority in this first phase in the delivery of the Strategy. The focus was on offering CPR training to those who have never had the opportunity to learn this lifesaving skill but also to those who sought the opportunity to have their skills refreshed.

3.1.1 Save a Life for Scotland

Save a Life for Scotland is leading on CPR training. They have harnessed and added to the a wealth of CPR training already being delivered through many organisations including public services, voluntary organisations and volunteers. The following illustrate this work.



Picture Credit: Claire Fleck photography

Save a Life for Scotland was officially launched on 16th October 2015 in Edinburgh, with simultaneous satellite events held across the country. The launch was held on the same date as the annual European Restart a Heart Day.

The launch event brought together all the partners under the one banner and achieved an estimated 3,500 members of the public learning CPR across Scotland on the one day. Most participants signalled their greater commitment to undertaking training in CPR and their willingness to perform basic life support by pledging 'I'll do it' across their photograph.

It was, 'The start of a movement to train 500,000 Scots in CPR by 2020 and save 1000 lives,' (Save a Life for Scotland (2015) SALFS Launch Report).

The events were:

In Edinburgh there were 50 CPR trainers from partner organisations such as Scottish Ambulance Service, Scottish Fire and Rescue Service, Army, St Andrews First Aid and Trossachs Search and Rescue. They trained over 1400 people in a marquee in Princes St. and including including Maureen Watt, MSP Minister for Mental Health.

Heartstart, BASICS and Community First Responder groups provided events in Aberdeen (50 attendees), Neilston (60 attendees), Orkney, Falkirk, Dalbeattie (11 attendees), Bathgate, Lanarkshire and Perth.

Over Scotland 70 Fire Stations across Scotland opened their doors to the public and provided 'hands-on' CPR training to local communities (North region had over 1000 attendances).

Scottish Ambulance Service held events at National HQ, the Scottish Borders, West Lothian (150 attendees) and Glasgow Centre (600 attendees).

Glasgow Science Centre with Glasgow Dental School provided training in the Glasgow Science Centre (175 attendees).

The launch report contains further details and is available from: <http://savealife.scot/resources/The-Launch-Report-16th-October-2015.pdf>.

See a short video of the launch at: <https://vimeo.com/176767370>.



Picture Credit: Claire Fleck photograph

CPR training provision has been by:

- First Responder and Community Resilience Groups, supported by the Scottish Ambulance Service.
- Scottish Fire and Rescue Service opening of 356 community fire and rescue stations to be used as training venues, using Call Push Rescue training kits provided by BHF.

- The British Heart Foundation provided Call Push Rescue training kits to 108 secondary schools and continues to support 279 Heartstart schools enabling them to train approximately 40,000 school children in the last 12 months across Scotland.
- Chest Heart & Stroke Scotland have also produced two excellent Health Sketch videos addressing fears around CPR and an animated demonstration.



These can be viewed and downloaded:
<https://vimeo.com/188696334>
<https://vimeo.com/188695608>.

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

Whilst much CPR training is in schools or community halls, St Andrew's First Aid have been visiting a number of shopping

malls across Glasgow with strong public engagement. Scottish Fire and Rescue Service also reached the public in Aberdeen Union Square Shopping Centre, teaching CPR. St Andrew's First Aid has been working in partnership with the Young Farmers and Mamas and Papas to deliver CPR sessions, and in 2016 CPR training has been delivered to a wide demographic from the central belt to the north of Scotland, reaching approximately 2,000 people.

Trossachs Search and Rescue provides free CPR & Automated External Defibrillator (AED) training, with ongoing work with local businesses.

At the Royal Highland Show, Save a Life for Scotland were represented by East Neuk First Responders, supported by Chest Heart & Stroke Scotland. For four days, members of the public stopped to learn CPR.

In June partners took the opportunity to train attendees at the annual NHS Scotland Conference in Glasgow. The training space was consistently busy and great links made for future activities.



One of the challenges of the first year has been in finding and reaching those already working hard to promote CPR training in their communities. Work continues to develop a clear picture of existing 'local champions' to continue to build this network. The continued aim is to develop existing CPR training resources available within Scotland at a local level. Real sustainable change can only occur when local communities come together to learn.



3.1.2 Teaching CPR in Primary and Secondary Education

Everyone can learn CPR. Even the youngest can learn to recognise when someone is unwell and seek help. In countries that have successfully improved OHCA survival, training and educating young people in CPR has been at the heart of their strategy. Working with schools to support CPR education is a key priority for Save a Life for Scotland.

In many schools across Scotland CPR training is embedded and is part of the school's culture. There are examples of innovative approaches such as peer learning – training older children to teach younger groups. These schemes have been developed under initiatives such as The British Heart Foundation's Heartstart and Call Push Rescue programmes, St Andrew's First Aid, The British Red Cross, The Royal Life Saving Society and Lucky 2 B Here. Save a Life for Scotland's aim is to link up schools seeking help with those groups already actively training in their area.

There are some schools where no CPR training is provided and over the five years of the Strategy the aim is to support as many schools in Scotland as possible to teach CPR to their pupils. To achieve this Save a Life for Scotland is already working with Education Scotland and has created a pack for schools outlining resources available from all partners. This will be a central starting point for schools and youth groups seeking CPR training. These resources are available on Education Scotland GLOW website and also via www.savealife.scot/our-resources/.



The Community School of Auchterarder:
In June 2016, the Community School of Auchterarder taught CPR to over 500 pupils, staff and members of the community in one day. It was organised by the Janitor and Community Responder, Alan Moffat.

3.1.3 Young People - Activities 2017 and beyond

In conjunction with the support for schools, Save a Life for Scotland is working with Young Scot to develop a social media CPR survey and campaign running from November 2016 - May 2017. The experience Young Scot holds in creating campaigns specifically for young people is invaluable. The first stage of this work is to find out about young people's knowledge and experience of CPR education and training, including how and where they would like to learn this essential life-saving skill.

The campaign running from January 2017 will include awareness and education via social media and link directly to the Young Scot awards system.

Aim: To reduce inequalities in survival after OHCA



A review by the Head Teacher, Stuart Clyde, can be viewed at: <https://www.youtube.com/watch?v=TyZoVhKQW9g>.

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

3.1.4 Reducing Health inequalities

International research shows that bystander CPR rates are higher in less deprived and more rural areas. Work from the British Red Cross has also identified lower response where there is a larger proportion of ethnic minority groups. There is work underway to actively engage communities where bystander CPR rates are lower in order to raise these.

St Andrew's First Aid project Bandage15 involved identifying young people in areas of high deprivation, obtaining funding, and providing first aid learning in particular CPR, which is then cascaded by peer facilitators. The overarching aim was to target young people who would be unlikely to access CPR training, and enabling them to be confident in using their skills in their communities.

Police Scotland have committed to training all their Youth Volunteers in CPD and defibrillation awareness. These young people are disproportionately recruited from areas of high deprivation. Work is ongoing to help develop this initiative further and link in with the wider Save a Life for Scotland strategy.

3.1.5 Reducing health inequalities – Activities 2017 and beyond

Inspiring Scotland runs the Link Up programme which helps people living in areas of multiple deprivation in Scotland develop groups and run activities by and for communities. Save a Life for Scotland, with Inspiring Scotland, will work via these

established groups to equip people with CPR skills during winter 2016/17. This venture will be supported by Scottish Fire and Rescue Services and Scottish Ambulance Service using equipment provided from the British Heart Foundation.

3.2 Community groups fully engaged in OHCA Agenda

3.2.1 First Responders

First Responders are volunteers who are trained by, and work with, the Scottish Ambulance Service to respond to medical emergencies while the blue light services are on their way. First Responders are equipped to deal with cardiac arrest in their local community. They increase the potential of a rapid and effective response to improve outcomes for people suffering an OHCA. First responders also deliver community-based CPR training.

Currently in Scotland there are 135 First Responder Schemes comprising 1,500 volunteers. The Scottish Ambulance Service continues to support and build the First Responder Network. First responders are central to community resilience and the ability of communities to help themselves, and do so as part of an integrated network of support and care appropriate to their needs.

3.3 Increase in partner training in CPR

The Strategy has encouraged some public sector partners to refresh the CPR training offered across their own organisations.

Police Scotland has trained all new recruits, 590 regular officers and 69 Special Constables to date, at the Police Scotland

college in CPR/AED awareness since October 2015. All serving Police Scotland officers have had refresher training using the BHF Heartstart Module that is enhanced at Annual Operational Safety Training recertification, with this completed by 8612 police officers this year.

The Scottish Government offer of CPR training was taken up by 437 staff in Edinburgh, Aberdeen, Glasgow and Inverness.

3.4 Improved reporting of number of people trained in CPR

Recording the numbers of people in Scotland who have learned CPR is essential to know progress in achieving the aim of equipping an additional 500,000 people with the lifesaving skill of CPR by 2020. In addition to tracking progress against this key aim this information can be used to highlight parts of Scotland where additional support for CPR training may be required.

Two methods to obtain information on numbers trained are being used:

(i) Submission of numbers trained are being used to Save a Life for Scotland.

During this first year, numbers have begun to be reported by partners as they become available. A specialised database has been designed and will be operational by November 2016 for all partners and supporters to log training activity which should improve accuracy.

(ii) Number and proportion of the population trained in CPR.

From 2017 the Scottish Health Survey (SHeS) will include questions on CPR training. The results available from 2018 will be the source for: number of additional people trained, the proportion of the population, and the geographic and socio-economic characteristics of people trained in CPR. This will meet the need for high quality national data on the spread and impact of training. The intention is to include these and further questions in the revised SHeS from 2018.

3.5 Increased bystander CPR

It is the rapid, correct intervention by bystanders at an OHCA where the greatest gains in survival and best outcomes will be achieved. Many elements in the Strategy are intended to support this happening – e.g. CPR training, willingness to intervene and culture change. It is therefore critical to know if these are having the desired impact. Work is underway to understand and improve the current quality of bystander CPR data from the Scottish Ambulance Service in order to establish a baseline for monitoring trends over time and evidence the impact of bystander CPR on survival rates.

4 DEFIBRILLATION

Aims: To rapidly deploy available assets which routinely carry defibrillators – ambulances and others where appropriate such as Scottish Fire and Rescue Service and First Responders.

To put in place effective arrangements to ensure that Public Access Defibrillators (PADS) are mapped, maintained and accessible to the public.

Defibrillation delivers a therapeutic dose of electrical energy to the heart. It is the only successful treatment available for the most common heart rhythm disturbance causing OHCA – Ventricular Fibrillation (VF). Defibrillation works with CPR and is most effective the earlier it is performed. There are three main ways of proactively getting a defibrillator as rapidly as possible to the person having the OHCA:

- Dispatching emergency services vehicles that carry defibrillators; ambulances and SFRS vehicles.
- Dispatching volunteers with defibrillators, e.g. Community First responders.
- Sending a bystander at the scene to a publicly available defibrillator (PAD) whilst CPR is delivered.

4.1 Increased co-responding to OHCA by Scottish Fire and Rescue Service and Scottish Ambulance Service

In November 2015 the Scottish Ambulance Service and Scottish Fire and Rescue Service commenced trialling co-responding to OHCA's from ten stations:

- Musselburgh, Hawick, Coldstream & Lauder.

- Falkirk, Livingston, Bathgate and Linlithgow.
- Turriff and Maud.

The trials involve simultaneous dispatch of both Scottish Ambulance Service and Scottish Fire and Rescue Service resources to OHCA incidents. These are informed by international evidence that improved outcomes are associated with early CPR and defibrillation. By building on the existing assets of public services to harness their strengths and resources the aim is to reduce response times to OHCA, particularly in rural areas. Co-responding builds on a history of these services working together to respond to incidents and, for the Scottish Fire and Rescue Service, it resonated with developments already in train.

Initial data indicates that response and intervention by the SFRS to OHCA incidents has contributed to a reduction in response times and improved patient outcomes. The evaluation is due later in 2016 and this will inform a plan for further co-responding roll out.



The full video co-responder video can be viewed at: <https://vimeo.com/172116742>

This link will take you to the video, which is hosted on Vimeo. The Scottish Government is not responsible for the content of this site.

4.1.1 Co-responding by Police Scotland - Activities 2017 and beyond

Police Scotland are also committed to involvement in co-responding to OHCA. Later this year a trial of defibrillators in roads policing units in Grampian will commence and further roll out will be considered following the evaluation of this project.

4.2 Location of all Public Access Defibrillators (PADs) in Scotland made available on Scottish Ambulance Service system

4.2.1 PAD mapping onto Scottish Ambulance Service System

Public Access Defibrillators (PADs) that can be used by bystanders in OHCA are already in place in a variety of locations across Scotland. The Scottish Ambulance Service are working to make this information available on the system used in Ambulance Control Centres by call handlers, so they can rapidly deploy PADs in the case of an OHCA.

Achieving this involves a number of linked and ongoing tasks by the Scottish Ambulance Service to identify, map and maintain PADs. A large number of PADs are already known to the Scottish Ambulance Service and are ready to be uploaded onto the new system. In addition, the Scottish Ambulance Service website has recently been updated with a section where members of the public can upload information about PAD sites.

The enhanced system data on mapped PADs in Ambulance Control Centres will be operational from April 2017.

Aim: To strive to ensure that communities in remote and rural locations have equity of treatment for OHCA

Sandpiper Wildcat



The Sandpiper Wildcat project is a two-year quality improvement project aimed at improving outcomes from OHCA in remote and rural Grampian. The project looks at ways of decreasing the time from 999 call to defibrillation. The project will focus on early CPR and defibrillation by strategically placing 100 additional defibrillators with community responders. The location of the defibrillators is based on analysis of the location of cardiac arrests in Grampian. Three Scottish Ambulance Service paramedics have been seconded to the project for its duration. The project is due to go live in winter 2016 following a programme of training and education.

5 PRE-HOSPITAL RESUSCITATION

Aims: To ensure high quality resuscitation is delivered consistently in the pre-hospital care environment.

To ensure that patients – either during or after cardiac arrest – are taken to a location with appropriate post cardiac arrest care.

To ensure that patients treated in hospital following OHCA receive optimal care.

5.1 Improved Scottish Ambulance Service response to OHCA calls

The Scottish Ambulance Service dispatch at least three responders to all OHCA calls where and when possible. Between February 2015 and August 2016, 6595 (88.1% of the total number of OHCA calls) saw at least three responders in attendance.

5.2 Enhanced training and skills of Scottish Ambulance Service crew attending OHCAs

Following the successful operation of the specialist Resuscitation Rapid Response Unit (3RU) model in Edinburgh sites, it will be rolled out in other urban areas. The model will commence in Glasgow this year and Aberdeen early next year.

The Association of Ambulance Chief Executives (AACE) currently recommend that all OHCA resuscitation attempts have a team leader. The 3RU training course and Standard Operating Procedures have been written to reflect this recommendation and are awaiting approval by Scottish Ambulance Service clinical advisory group. This will provide 3RU paramedics with the

knowledge and enhanced skills necessary to provide leadership and enhanced clinical care to the victims of OHCA. A programme of education, debrief and feedback will be rolled out concurrently to all staff in these areas during the 3RU implementation, with the aim of demonstrating improved outcomes.

5.3 Minimisation of inappropriate resuscitation

The updated NHS Scotland Do Not Attempt Cardiopulmonary Resuscitation policy was released in September 2016. This policy has been made available to all ambulance staff via the Scottish Ambulance Service intranet site. The OHCA Clinical Effectiveness Lead plans to develop an e-learning module in 2017 to ensure all staff understand how to apply the policy.

5.4 Scottish Ambulance Service Defibrillators replaced

The Scottish Ambulance Service's plan is for the procurement of replacement defibrillators to take place in 2018.

5.5 Strengthened and improved transfer of OHCA patients to hospital

In accordance with the AACE best practice recommendations, the Scottish Ambulance Service is developing a post-Return of Spontaneous Circulation (post-ROSC) clinical guideline to enhance patient care. The intention is that post-ROSC patients will only be transported to regional cardiac arrest centres.

6 POST RESUSCITATION REHABILITATION AND AFTERCARE

Aims: To ensure post event care and support is available to patients and their families/carers after OHCA.

To ensure that bystanders and others impacted by OHCA are supported after the event.

6.1 Improving support provided to individuals and their families after OHCA

With a projected increase in those surviving OHCA, comes a need to provide appropriate and timely aftercare and rehabilitation. The care delivered to those experiencing sudden heart related events such heart attack has improved significantly over the last 30 years. Key to the recovery process has been access to cardiac rehabilitation programmes. Historically, these have been restricted to specific patient groups. In order to address the needs of the wider heart population, a national cardiac rehabilitation 'champion' was employed in 2014, with the primary aim being to promote the modernisation of services across Scotland. As part of the OHCA strategy, the partners have begun working with cardiac rehabilitation and other relevant aftercare services to raise awareness of the needs OHCA survivors and enhance future care.

Survivors need more than just cardiac rehabilitation. When a person survives an OHCA the whole family is affected. Understanding and addressing the needs of the survivor and their families, requires effective multi-disciplinary working. Across the course of the Strategy, partners such as Chest Heart & Stroke Scotland and the Resuscitation Research Group at the University of Edinburgh will seek opportunities to develop and evaluate innovative care pathways, which integrate existing services including cardiology, psychology and community services.

Having conducted a variety of activities which highlighted the needs of the OHCA population, Chest Heart & Stroke Scotland agreed, in 2016, to begin the process of addressing gaps within current provision through the production of two online resources. The aim of these is to provide information, support and advice during the rehabilitation and aftercare phase. The online modules will be available from autumn 2017.

One of the modules will focus on the needs of survivors, their family members and those who have been bereaved. Although the principal focus of any resuscitation attempt must be the survival of the victim, it is essential to consider the long-term consequences that the event may have on the quality of life of the individual and their family. Care should extend to address the needs of those bereaved. The resource design and development will be led by individuals who have personal experience of OHCA.

6.2 Improving support for OHCA responders, co-responders and bystanders

A second online module will be specifically designed for those involved in the care and management of those affected by OHCA. The number of individuals and organisations involved in responding to OHCA has extended and expanded greatly, with Scottish Fire & Rescue staff, Police Scotland staff, First Responders and trained members of the public increasingly involved in events. With these changes comes the need to fully appreciate the effect that OHCA may have on responders and design appropriate support. During the resource design process, the role of peer support will be explored and built into the resources, where appropriate.

Further research into the impact of being involved as a bystander at an OHCA is being carried out by RRG. The First Responder Study, funded by the Resuscitation Council, UK is conducting a detailed survey of the impact and aftermath of being involved in OHCA, whether as a family member or complete stranger. This work is well underway and should be completed in early 2017.



Gregor Newton and Jeremy Southam both had OHCA in 2014 and recovered.

7 CULTURE AND CONTEXT

Aim: To collect, analyse and report accurate and complete data in order to inform decision making and improve outcomes after cardiac arrest.

7.1 Registry Data and reporting

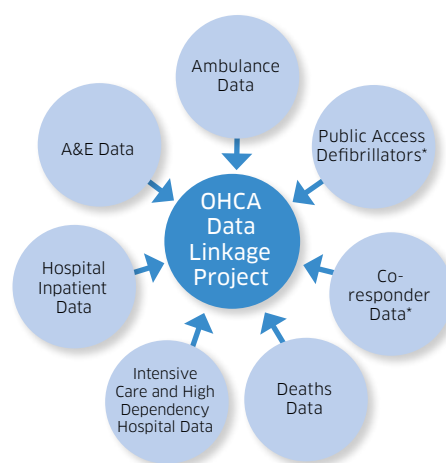
Data collection is widely recognised as an essential foundation to systematic improvement of OHCA outcomes. A range of evidence will be used to inform and monitor the OHCA Strategy.

The OHCA Data Linkage Project is linking OHCA data from the Scottish Ambulance Service with hospital data and deaths data to evidence the 'Chain of Survival'. This Review is the first time that the main findings from the OHCA Data Linkage Project are reported.

Subject to permissions from the various organisations involved in the project, it is hoped that from 2017 co-responder data from the Scottish Fire & Rescue Service and then Police Scotland will be incorporated into the OHCA Data Linkage Project. This will enable examination of evidence on the impact of the contribution from the Scottish Fire & Rescue Service and Police Scotland on the 'augmented chain of survival'.

This is a pilot project and the longer term aim is to work with OHCA Strategy partners and data providers to develop an ongoing OHCA Registry. The establishment of the Registry will enable researchers to analyse the patient-specific and system-specific factors influencing survival, and to identify areas for improvement in the 'Chain of Survival'. The formation of a OHCA Registry in Scotland is widely

recognised as an essential foundation to systematic improvement of OHCA outcomes, as has been demonstrated in other countries with their own OHCA Registries. This will also continue to provide the metrics for monitoring the progress and impact of the Strategy. A more detailed analytical report will be published in early 2017 and thereafter, at least annually.



* Data planned to be incorporated in due course, subject to permissions.

Aim: To improve and simplify the capture of data by Scottish Ambulance Service to support clinical care and contribute to the cardiac arrest strategy.

Scottish Ambulance Service staff collect the data for learning, improving and monitoring OHCA. They are committed to developing this to drive improvements.

Aim: To develop and maintain an environment which supports innovation and research leading to improved outcomes for OHCA.

Partners in the Strategy have led and been involved in a number of major events for learning and knowledge exchange.

These include:

- Scottish Cardiac Arrest Symposium.
- European Resuscitation Academy.

The Scottish Cardiac Arrest Symposium, held in June 2016, included a presentation from Save a Life for Scotland about the campaign and the Primary 1 class of Westquarter Primary School in Falkirk brought a confident and powerful challenge to those committed to improving outcomes from cardiac arrest. Watch their presentation here:

<https://www.youtube.com/watch?v=hx00EmHIsFM>.

The RRG have many research projects in collaboration with partners:

- Edinburgh University Psychology Dept: An investigation into the communication patterns of the resuscitation team.
- Scottish Ambulance Service: Using body worn video cameras to analyse team performance in OHCA. Funded by Chest Heart & Stroke Scotland.
- NHS Lothian. Resuscitation of OHCA in the Emergency Department. A video audit.
- Scottish Centre for Social Marketing.
- Scottish Government.
- International collaborators e.g. Steve Brooks.
- RRG and Scottish Ambulance Service partners in the Global Resuscitation Alliance.



Picture Credit: Claire Fleck photography

CONCLUSIONS

CONCLUSIONS

Together, the OHCA Strategy partners have progressed all of the OHCA Strategy Aims. It is known that the maximum impact on survival and best outcomes will be achieved by early and correct intervention in response to OHCA. This is the reason delivery of the OHCA Strategy is deliberately weighted to actions at the left side of the Chain of Survival. Most activity in the first year has been in these first four links in the chain: readiness; early recognition; CPR and defibrillation. CPR awareness and training activities have been developed and delivered by utilising and adding to existing work by partner organisations with new and existing community groups.

There has been a positive response from the public, with much progress made and the establishment of a firm basis from which to sustain, progress and expand on the success. The next phase will prioritise engaging with, and training young people in CPR, and a number of schools are already enthusiastic. Building links with communities who have disproportionately poorer outcomes from OHCA, in order to more rapidly increase skills and awareness, is a priority for 2017.

MEETING OUR COMMITMENTS

PARTNER ORGANISATIONS UPDATES

OHCA partners made specific commitments as part of their contribution towards delivering the OHCA Strategy's aims. The following provides a summary of progress towards delivering these individual and shared commitments.

SCOTTISH FIRE AND RESCUE SERVICE

- We will integrate health awareness such as cardiac arrest risk factors and provision of CPR lifesaving skills within our prevention work including our Home Safety Visits.

In May 2016 the SFRS developed a proposal to introduce CPR lifesaving awareness skills into the programme of Home Fire Safety Visits. Working closely with 'Save A Life For Scotland' this is now progressing, with a test of change due to commence in early 2017 in three pilot locations across Scotland.

- We will offer our network of Fire Stations as locations for training members of the public and voluntary groups in CPR and, if appropriate, will enable our staff to become CPR trainers.

The SFRS has made available 356 community fire and rescue stations for CPR training. Central to this is the supply to all stations of Call-Push-Rescue kits by the British Heart Foundation. These kits can be used by the public and the fire stations can be used by community groups as venues for CPR training.

- We will work closely with Scottish Ambulance Service to pilot a SFRS response to OHCA in agreed geographic areas, learn lessons from the pilot and expand as appropriate.

The SFRS began to trial co-responding to OHCA in November 2015. There are now 10 SFRS stations involved; Hawick, Coldstream, Lauder, Musselburgh, Falkirk, Livingston, Bathgate, Linlithgow, Turriff and Maud. This trial has involved careful preparation with Scottish Ambulance Service and SFRS staff. The learning and evaluation of the trials will inform next steps for the consideration of future service-wide implementation of co-response. There is ongoing work on Mull that will bring online three fire and rescue stations as part of the Health Foundation funded project.

- We will agree appropriate and validated training for SFRS responders with Scottish Ambulance Service under the ethos of shared clinical governance.

A collaborative and bespoke training programme for stations involved in the co-responding trial was developed and is being delivered in partnership between Scottish Ambulance Service and SFRS. This includes a Memorandum of Understanding, operational response parameters and training materials.

- We will work closely to ensure all our defibrillators are mapped on to the Scottish Ambulance Service database and are placed in locations where evidence suggests they can add most value.

The SFRS have updated and shared all defibrillator locations with Scottish Ambulance Service. There is now a wider asset management exercise being undertaken across the SFRS estate involving a review of the provision and deployment of defibrillators, which will

support remote and rural areas of Scotland in ensuring equitable access to resources.

- We will work with Scottish Ambulance Service to assess how we can support First Responders and promote enhanced Community Resilience.

The SFRS supports the Sandpiper Trust Wildcat project in Grampian Area with access to staff as volunteers for the scheme as well as the use of our community fire and rescue stations as training venues.

- We will ensure that our workforce and their representatives form part of the planning and implementation to support the OHCA strategy.

The Fire Brigades Union (FBU) is a key partner in the SFRS internal Strategic Steering Group and Local Delivery groups for OHCA. The FBU has consistently contributed to the ongoing development of OHCA co-responding trials. This approach has served the project well and the FBU have cited this as a best practice example within the spirit of partnership working and the SFRS Working Together Framework.

- We will aim to train 100% of our support staff in CPR.

The SFRS continues to support and deliver against its OHCA commitments, including partnership working with the British Heart Foundation.

General points

The SFRS has led on and assisted Save A Life For Scotland at several high profile CPR events across Scotland and continues to receive and assist with ongoing requests from the public, community groups, businesses and local authorities.

The SFRS demonstrated their commitment to the OHCA Strategy by co-hosting this year's national OHCA symposium. This involved staff from the SFRS OHCA project team, stations that have hosted community CPR training workshops and others.

The Scottish Fire and Rescue Services have also commenced discussions with staff in Best Bar None, a national bar licensing Scheme, with a view to delivering CPR training to a total of 400 licensed premises across Scotland as part of an existing training package.

SCOTTISH AMBULANCE SERVICE

The Ambulance Control Centre (ACC) is the centre of the co-ordination of all the resources involved in the pre-hospital care of out-of-hospital cardiac arrests. ACC call handlers need to be effectively trained and supported and then reliably use the best triage tools available so they can:

- Rapidly identify cardiac arrest and initiate telephone CPR.

ACC call handlers initiate telephone CPR guidance (T-CPR). The call handler must try to ensure that the caller or bystander rapidly begins chest compression. This may mean persuading someone who has had no training in CPR.

A 'Key Phrases' module will be introduced for ambulance control centre staff, enabling faster dispatch of ambulances to OHCA calls.

The Scottish Ambulance Service's OHCA training and handling has improved the response and support. The Scottish Ambulance Service is also working to secure recognition as an accredited Centre of Excellence for the Ambulance Control Centres and the standard of compliance is supported through audit. Work to capture data to understand and inform this is being progressed.

- Task/dispatch appropriate resources.

Scottish Ambulance Service dispatch at least three responders to all OHCA calls where and when possible: February 2015 to August 2016, 6595 (88.1% of the total number of OHCA calls) saw at least three responders in attendance.

- Map assets so ACC call handlers can access to up-to-date and accurate information about available resources including Scottish Ambulance Service assets and other available first responders, and the locations of public access defibrillators.
- Ensure that a register of PADs - mapped to the Ambulance Control Centre (ACC) - is developed and kept up to date.

PADs that can be used by bystanders in OHCA are already in place in thousands of locations across Scotland. A major project currently underway will give Scottish Ambulance Service call handlers the information to direct bystanders to the nearest PAD. This will improve the ability to use these assets in OHCA. Achieving this involves a number of linked and ongoing

tasks to identify, map and maintain PADs by Scottish Ambulance Service.

As of February 2016 over 1000 AED/PADs had been mapped, including 800 in dental surgeries and some within Police Scotland premises. In the course of mapping AED and PAD locations, further details such as accessibility, usability and visibility have been captured where possible.

The date for the mapped PADs to be operational is April 2017. Integral in this is the training of ACC staff to identify and utilise PADs are registered on the Scottish Ambulance Service system.

- Ensure effective governance arrangements for the mapping and maintenance of PADs and consider how best to encourage owners, purchasers and suppliers of PADs to ensure that PADs placed in the community are regularly serviced and maintained and registered with the Scottish Ambulance Service.
- Review the public information available about PADs, (including purchase, maintenance, location, access and signage).

In the course of mapping PAD locations, further details such as accessibility, usability and visibility have been captured where possible. A system for regular checking and servicing in partnership with resilience team and PAD owners, is in development by the Scottish Ambulance Service.

- Community Resilience

First Responders go from strength to strength and make a real difference in responding to OHCA, particularly in remote and rural areas. Currently Scottish Ambulance Service has 134 Community First responder schemes across Scotland, involving over 1,500 individuals. The Scottish Ambulance Service is supporting and strengthening the 'Community First Responder' networks across Scotland. Activities include engagement with delivery partners and community groups to provide advice on acquiring, locating and using PADs.

- Engaging with partner organisations to enhance education and training for co-responders and where necessary for the public.

Scottish Ambulance Service has made a consistent contribution to the awareness and CPR training activities through Save a Life for Scotland.

- Pre-hospital Resuscitation: Scottish Ambulance Service will work with partners to design and deliver appropriate pre-hospital resuscitation models, responding to the challenges of geography, demographics and resources of individual communities.

Scottish Ambulance Service has helped deliver OHCA workshops across Scotland, including in the Highlands and Islands. Recognising the difficulties of access, workshop learning materials have been made available online. This programme of workshops stemmed from the Edinburgh 3RU team's delivery of master classes at the Royal Infirmary of Edinburgh.

Paramedic students at Glasgow Caledonian University now complete workshop focussing on the non-technical skills of OHCA management.

- We will engage and work in partnership with individual communities and other partner agencies to develop and implement these models.

The delivery of high quality CPR and related training has been a focus for Scottish Ambulance Service over their 2015/16 operating year. Keen to share good practice, the Scottish Ambulance Service delivered presentations and learning workshops at both the London and Welsh Cardiac Arrest Symposia. Scottish Ambulance Service strengthened connections with Community First Responder scheme networks. A partnership with the Sandpiper Wildcat Project in Aberdeenshire, which was launched in May, is due to start operating in autumn 2016. Scottish Ambulance Service work on community based training - within established Community Resilience activities - continues, with the long-term aim of enabling those trained in CPR to become trainers in their own communities.

- Staff Support and Welfare

Scottish Ambulance Service and aligned staff often work under the most significant pressure, in all environments, to deliver care to people facing extremely difficult circumstances. It is a job that can take a physical, psychological and emotional toll.

Scottish Ambulance Service continuously aim to improve our processes to ensure that staff are supported through the challenging experiences they face.

Scottish Ambulance Service has enhanced its provision of training, education, support and feedback to call takers and dispatchers in ambulance control centres. At least three staff are now deployed to OHCA calls where and when possible. Rest management period policy has been reviewed collaboratively to maximise staff response. An OHCA Consultant Paramedic has been appointed and refreshed clinical guidance documents produced for use by Scottish Ambulance Service staff. OHCA training workshops continue to be delivered across the organisation, with the aim of enabling them to incorporate it into their daily practice and pass training on to colleagues. In October our newly appointed OHCA Clinical Effectiveness Lead took up post.

- We will put in place feedback mechanisms for all staff involved in OHCA to inform them of outcomes, of their own performance and provide appropriate recognition and support.

Scottish Ambulance Service has had positive engagement with staff organisations in order to secure changes to operating protocols. A key role of the new OHCA Clinical Effectiveness Lead will be to enhance the existing feedback provided to all staff including community first responders.

Scottish Ambulance Service was represented at the Scottish Parliament and NHS Scotland events to showcase staff delivering the OHCA strategy.

POLICE SCOTLAND

- We will continue to ensure that all Police Officers attend an annual Scottish Police Emergency Lifesaving Saving (SPELS) Course, which includes training in Cardio Pulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) usage.

The SPELS (Scottish Police Emergency Life Support – Heartstart Module) went live on Moodle on the 1st January 2016. This online learning will ensure that all officers are refreshed in CPR/AED awareness, which is enhanced by hands-on CPR training at the annual Operational Safety Training recertification. This year, 8612 police officers have completed this.

Since October 2015 Police Scotland's College has continued to train all new recruits at the Tulliallan Campus – 590 regular officers and 69 Special Constables, to date – in CPR/AED awareness.

Police Scotland has also made a commitment to train all Police Scotland Youth Volunteers (PSYVs) in CPR/AED awareness in all 20 PSYV groups, from Shetland to Stranraer.

- We will increase the number of officers and staff trained in First Aid at Work (FAAW), an enhanced course which also includes the use of defibrillators.

Police Scotland continues to train staff in the FAWW Course comprising 64 members of police staff since October 2015 and a further 10 police staff have completed an AED/CPR specific course.

- We will introduce and pilot an online defibrillator awareness package.

An online AED awareness package accessible to officers and support staff was launched in December 2015, and promoted further via internal communications.

- We will consider with the Scottish Ambulance Service whether Police Scotland defibrillators can be mapped onto the Scottish Ambulance Service database.

Police Scotland met with the Scottish Ambulance Service to discuss mapping static AEDs; this prompted a survey of AEDs across Police Scotland premises. This work was completed in summer 2016 and will, in the first instance, help bring into operation those AEDs which have been out of service for some time. Details of their locations will be shared with Police Scotland Command and Control Rooms. It is planned to map these AEDs onto the Scottish Ambulance Service system. This will enable Scottish Ambulance Service Area Control Centre staff to locate and direct responders to PADs which are registered on the Scottish Ambulance Service.

A census of AEDs across Police Scotland premises was completed in summer 2016. All custody staff have been trained in First Aid at Work, including AED awareness; in Lanarkshire, six AEDs were acquired from the local NHS Board for use in custody centres.

Police Scotland will complete the review of the availability and use of defibrillators in Police custody areas and vehicles (including Roads Policing Units and Armed Response Vehicles) with the aim of enhancing the contribution of Police Officers to OHCA calls.

- We will promote enhanced community resilience through our membership of local Community Planning Partnerships, Community Safety Partnerships.

Police Scotland's College Campuses at Fettes, Jackton and Tulliallan provided a total of five staff to the 'Save a Life for Scotland' stand at the Tattoo.

As part of the OHCA Strategy and in conjunction with the Lucky2BHere charity, two events have taken place at the Police Scotland Dalmarnock building. Staff were provided with CPR/AED awareness and the money raised has provided an AED of the Dalmarnock office. Given the success of these awareness days, similar events are being planned across the country.

SHARED COMMITMENTS

Improved Public Response to OHCA.

- Many more people who witness an out-of-hospital cardiac arrest possess the skills and confidence to know what to do.

The Save a Life for Scotland partnership

includes a wide range of organisations from the public and voluntary sectors:

- The Scottish Ambulance Service
- Scottish Fire and Rescue Service
- Defence Medical Services
- Police Scotland
- The British Heart Foundation
- The British Red Cross
- St Andrew's First Aid
- Chest Heart & Stroke Scotland
- The Royal Life Saving Society Scotland
- Trossachs Search and Rescue
- Lucky2BHere
- The Resuscitation Research Group at the University of Edinburgh

and includes affiliated supporters including BASICS Scotland, NHS Scotland, Higher Education Institutions, Heartstart (BHF) and Council representatives.

It has coordinated activities that raise awareness of cardiac arrest and CPR training, primarily through establishing and actively using:

- The campaign website www.savealife.scot
- Facebook (Save a Life for Scotland) and Twitter (@savealifescot, #savealifescot)
- Vimeo, YouTube and Flickr sites Save a Life for Scotland.

The message on OHCA and CPR was relayed to thousands of people at large scale events, such as rapid CPR training at the Tattoo and a promotional video at the Edinburgh Castle Runrig concert.

- Training in the use of CPR is more readily available through schools, work places and voluntary groups.

Save a Life for Scotland has recorded that in excess of **60,000** people in Scotland have learned CPR provided by partner organisations since it's launch in October 2015. The Save a Life for Scotland delivery partners and numerous others have helped deliver CPR and PAD training workshops across Scotland. In many instances this is to voluntary and community groups and in schools and even public places such as shopping centres across Scotland. This has laid the foundation for building CPR activity across the country

The British Heart Foundation is working in partnership with Glasgow Airport to achieve their commitment to train their 500 staff members in CPR using the 'Call, Push, Rescue Kits' purchased. The British Heart Foundation is also engaging with other businesses to raise awareness and RBS, Nationwide, Airbus and Barclays have all made commitments to provide CPR training to staff.

CPR training has been taken up by 440 staff in Scottish Government locations, in Edinburgh and Glasgow.

- Public Access Defibrillators (PADs) are more easily accessible and more people have an understanding of what they are for and a greater willingness to use them.

The Scottish Ambulance Service PAD mapping project will enable call handlers to direct OHCA bystanders to the nearest PAD. The partners, including Police Scotland, SFRS, community organisations and businesses, have already provided information on PADs for input to the ACC computer system. The enhanced system data on mapped PADs will be operational from April 2017.

BHF have provided part funding for 1200 PADs across Scotland in the last 12 years

- It is the norm for families, friends and even strangers to take prompt and effective action when faced with an OHCA.

The overarching ambition for the Strategy is a cultural shift to 'normalising' the public to respond to OHCA; including CPR and defibrillation. This will embed the Strategy's aims and sustain the successes.

The current situation in Scotland was established by research (Scottish Government, 2015) and has informed actions. This found there a strong base to improve the response to OHCA with:

- Over half the population already trained in CPR.
- An overwhelming majority of people stating they would try CPR rather than do nothing and would do so if they were the only person there.

There are many factors that can influence people's response; hypothetically and in an actual situation. Individuals report concerns about intervening, often misapprehensions, such as they would make the situation worse or fear of disease transmission. Contextual factors, such as where the OHCA happens and wider social dimensions influence responses to someone having a cardiac arrest.

The training and awareness raising activities are addressing these matters and progress so far has been encouraging. The real return on investment, an increased rate of public response to OHCA and associated actions will help enable people to live longer, healthier lives, will be measured going forward.

Better Care for Survivors and Families

- People who have survived a cardiac arrest and their families are offered individually tailored high quality information about their underlying condition and the potential physiological, psychological and social impact of cardiac arrest.

The causes and consequences of OHCA are diverse. In order to better understand the care, support and information required to facilitate and enhance recovery and adjustment, Chest Heart & Stroke Scotland have been working in partnership with survivors, families, and care providers, over the last year, identifying areas of good practice and exploring opportunities for addressing gaps in current care provision.

- Timely and appropriate care and advice is made available to the families of those who do not survive to discharge.

This should include where possible, an explanation of the underlying cause and referral of family members to screening services where necessary.

Several organisations presently offer guidance and support services to bereaved friends and family, although accessing these can be challenging. In some cases the potential risk of inherited conditions requires specific care and attention; there is scope for improvement in some areas such as access to information on genetic counselling and specialist support such as that offered by the Familial Arrhythmia Network Scotland. Key agencies are developing partnerships to explore opportunities which may lead to improved access to sources of support.

- All survivors are offered a formal systematic assessment of their needs, using validated and clinically appropriate methodology.

There is evidence of good practice within the NHS in relation to assessment of rehabilitation needs, but there are areas for improvement. A range of partners working in OHCA are seeking ways to highlight good practice and to share these nationally, through the development of the new online resource for health care professionals which will be available in Autumn 2017.

- Assessments are conducted within the early post-discharge phase, within an environment which is conducive to effective communication.

The background work conducted to shape the ambitions of the OHCA Strategy highlighted the high quality of care delivered to patients during their hospital stay, while suggesting that post discharge support appears to be lacking in some areas. In order to improve this, partners are working to ensure the transition between hospital and home is managed in an integrated and seamless way.

- Survivors are offered personalised support to meet their needs, including referral to specialist services, such as cardiac rehabilitation as appropriate.

Advances in heart-related care have seen a significant reduction in mortality. Cardiac rehabilitation services are established but some areas have experienced capacity issues leading to limited capacity to accommodate the needs of some people. A national cardiac rehabilitation 'champion' has been employed since 2014 to promote the modernisation of rehabilitation services. As part of the OHCA Strategy, the partners aim to work with cardiac rehabilitation and other relevant aftercare services to enhance the support being provided.

- Survivors and their families are offered opportunities for peer support.

An initial scoping exercise to assess the needs of survivors and their families, carried out by Chest Heart & Stroke Scotland, identified the benefit of peer support amongst survivors. Following a successful bid to the Scottish Government to joint fund a web-based resource for survivors, families and those bereaved, Chest Heart and Stroke Scotland plan to explore the role of peer support and use this, where possible during resource development.

- Additional information and support is provided to those requiring further investigation and/or therapeutic interventions, e.g. implantable cardioverter defibrillator (ICD).

All OHCA have an underlying cause and for some, this pathology may require complex treatment and ongoing intervention. NHS Scotland and third sector partners provide advice and support to survivors who may require detailed review and further interventions. Future work will focus on enhancement of this support to ensure all those in need receive the care required to regain quality of life.



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