

EQUALITY IMPACT ASSESSMENT - RESULTS

Title of Policy	Out of Hospital Cardiac Arrest (OHCA) Strategy 2021 - 2026
Summary of aims and desired outcome of policy	The overarching vision of the OHCA strategy is to improve survival rates from OHCA in Scotland. In addition, the strategy considers the welfare of bystanders and first responders.
Directorate: Division: Team	Health and Social Care Directorate: Healthcare, Quality and Improvement: Clinical Priorities Unit 1

Executive summary

Every year, over 3,000 people across Scotland experience an out of hospital cardiac arrest (OHCA). A cardiac arrest is when the heart stops pumping blood around the body, commonly because of a problem with the electrical signals in a person's heart. It is a significant healthcare challenge and addressing it is a priority for the Scottish Government.

In order to ensure as many people as possible survive an OHCA, the strategy follows what is known as the 'Chain of Survival'. The Chain of Survival describes the crucial elements required to save a life when someone is in cardiac arrest. These elements are: community readiness and early recognition that a cardiac arrest is happening; early cardiopulmonary resuscitation (CPR); early defibrillation to restart the heart; timely hospital care, and appropriate aftercare.

The key aims of the strategy are

- An additional 500,000 people in Scotland will be equipped with CPR skills.
- All school aged children in Scotland will be equipped with CPR skills.
- Our work is targeted towards addressing inequalities in OHCA outcomes.
- Bystander CPR rates will be increased to 85%.
- Public Access Defibrillators will be placed optimally and as accessible as possible.
- 20% of all cardiac arrests will have a defibrillator applied before the arrival of ambulance service.
- Survival from OHCA will increase to 15%.

- All individuals who experience an OHCA will be well supported afterwards, there will be support available for bystanders who witness an OHCA and the wellbeing of emergency service and volunteer community responders will also well be supported.
- We will support innovative solutions to the key challenges relating to OHCA, including addressing the challenge of timely communication of anticipatory care plans and decision support for front line ambulance service crews in dealing with complex end of life care decisions.
- We will use data to understand and address variation and improve outcomes after OHCA.

The implementation of the strategy requires collaborative working by SALFS partners and with local communities.

Background

The original *Out of Hospital Cardiac Arrest (OHCA): A Strategy for Scotland* was published in March 2015 by the Save a Life For Scotland (SALFS) partnership. The strategy had two main aims to make Scotland an international leader in OHCA outcomes by 2020:

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

Excellent progress was made with these aims during the lifetime of the strategy, with the second aim of equipping an additional 500,000 people with CPR skills being reached in Summer 2019, a year ahead of target. In a 2019 survey, a fifth of all adults in Scotland reported attending CPR training (original or refresher) within the past two years¹.

The strategy has seen bystander CPR rates increase, going from 41% of suspected OHCA cases before the strategy was launched in 2015 to 64% in 2020. Survival rates have also increased, from only 1 in 20 people surviving an OHCA in 2015 to 1 in 10² in 2020.

Whilst excellent progress has been made we know there is more that we can do to ensure that the issues we are focusing on continue to reflect current needs.

Scotland's refreshed OHCA strategy has been developed by the SALFS partnership, which includes the Scottish Government, the Resuscitation Research Council at the University of Edinburgh, Scottish Fire and Rescue Service, Scottish Ambulance Service and British Heart Foundation Scotland.

The Scope of the EQIA

Equality legislation covers the protected characteristics of: age, disability, marriage and civil partnership, gender reassignment, sex, pregnancy and maternity, race, religion and belief, and sexual orientation. The scope of this equality impact assessment (EQIA) has however been broadened to include wider socio-economic considerations including people living in low income households and people living in remote rural areas and island communities.

In making its assessment, the Scottish Government has considered relevant evidence relating to the protected characteristics, as well as the potential impact on health inequalities. Giving due regard to these factors is also intended to help the Scottish Government to meet its duties under the Fairer Scotland Duty, which requires public bodies to reduce inequalities of outcome caused by socioeconomic disadvantage.

Key Findings

Age

A person may experience an OHCA event or be diagnosed with heart disease, which can lead to a cardiac arrest, at any stage during their lifetime. Although the largest group of those who experience an OHCA are within the over 75 age group (36%), 64% of people who suffer a cardiac arrest are under that age³ and the average age a patient experiences a cardiac arrest in Scotland is 66 years old⁴. In 2018, 4% of those aged 16-24 reported any cardiovascular condition, increasing across the age groups to 41% of those aged 75 and over⁵.

There are both direct and indirect examples of age discrimination which can impact a person's experiences of health care. Examples include perceptions of people by GPs based on their age⁶, the use of digital medium (particularly for older people⁷).

We know that older people are more likely to experience an out-of-hospital cardiac arrest (OHCA) but less likely to know CPR;

Disability

We are aware that there are physical aspects of the strategy which may preclude some individuals from performing CPR. In addition, regarding training, there may be individuals such as those who lip-read who will be disproportionately affected by the wearing of facemasks during the pandemic.

It is not just physical disabilities that the refreshed strategy must be mindful of. Research completed by LeDeR in 2017 showed that the median age of death for those with learning disabilities is far lower than that of the general population⁸. Of the causes of death studied, 4% of the individuals living with learning disabilities included died from a cardiac arrest⁹. After adjusting for age and gender, it has been found that death rates for heart attacks and heart disease in people with learning disabilities were double those in the general population¹⁰.

Whilst effective communication is essential within all healthcare settings, communication can present a particular barrier for many people with learning disabilities and limit the ability to share information regarding their health concerns and health needs. Additionally, professionals can lack confidence and experience in communicating with and identifying the needs of people with learning disabilities in health care settings and require further education, training and support.

With the ageing and increasing population of older learning disabled adults, it can be anticipated that there will be a rise in morbidity and mortality from cardiac diseases in the future, and a corresponding increase in out of hospital cardiac arrest within this group of people.

Sex

In international studies, women have been found to be less likely to receive CPR in public than men¹¹. Reasons for this include the misconception that breasts make CPR more challenging, fear of harm, fear of inappropriate touching, fear of being accused of sexual assault and perceptions that women are “overdramatic¹²”. In addition, CPR classes tend to use male mannequins and focus on the technical aspects of CPR, rather than the psychosocial aspects of providing CPR¹³.

Pregnancy and maternity

While the refreshed strategy does not refer to pregnancy or maternity, it is acknowledged that there are additional constraints placed on the heart by pregnancy.

Although maternal cardiac arrest is rare in the UK (around a 1 in 36,000 risk¹⁴), in sudden onset severe maternal shock, the early initiation of external cardiac compressions may be life-saving¹⁵.

Gender Reassignment

There are still crucial gaps in our understanding of the social nuances and medical treatment of cardiac arrest in transgender people. It is not possible to find a precise estimate on the number of trans people in Scotland but a recent report estimated that the number stands at 0.5% of the population¹⁶, or around 27,000 people¹⁷.

Although Public Health Scotland does not report statistics for transgender people, we have wider evidence on the barriers to accessing health care for people who identify as transgender. Trans people report a number of barriers to accessing health care including prejudice and bias among health care staff, a lack of understanding of trans experience and health issues. In particular, trans people report particular challenges in engaging with primary care, who are often seen as ‘gatekeepers’ to other health services¹⁸.

Sexual Orientation

In a 2018 survey, the overall proportion of those in Scotland identifying as Lesbian, Gay, Bisexual (LGB) or Other was 2.6%¹⁹, with younger people more likely to identify as LGB or Other. Also in 2016 (the latest statistics we have) after age standardisation, the proportion of the 'LGB or Other' group reporting good or very good general health is significantly lower than the rest of the population (64% compared with 73.8%²⁰).

There is much evidence to suggest that people who are LGBTI experience disparity in health outcomes, including disparity in cardiovascular health²¹. The reasons for this are complex but can be related to increased psychosocial stressors (eg, discrimination and bias-motivated violence) across their lifespan which can have an impact on health.

Race

Around 4% of the population of Scotland are from minority or ethnic groups, up from 2% in 2001²². The largest minority ethnic group are from Asian backgrounds (3% of the population or 141,000 people), with African, Caribbean or Black groups at 1% of the population. Mixed or multiple ethnic groups represented 0.4% (20,000) and other ethnic groups 0.3% (14,000) of the total population²³.

Ethnicity is recognised as a risk factor for developing coronary heart disease which can lead to a cardiac arrest, although the evidence suggests that the relationship between the two is complex²⁴. For example, in the UK those of South Asian (Indian, Pakistani, Bangladeshi or Sri Lankan) origin are at higher risk of developing coronary heart disease than those of White European origin. A 2009 study showed that South Asians living in Scotland have a 60-70% higher incidence of heart attack than the general population²⁵. We also know that people from African or African Caribbean backgrounds are at higher risk of developing high blood pressure and having a stroke than other ethnic groups²⁶.

Although we do not have Scotland statistics about bystander CPR rates on ethnicity, we are able to gather some information from an international context, particularly from American publications, which show that Black and Hispanic neighbourhoods have lower rates of bystander CPR and worse outcomes than their white counterparts²⁷.

Religion or belief

ISD does not report OHCA specific statistics from equality data for religion or belief; however there is evidence available which gives us a wider picture.

In a 2016 survey, 60% of Church of Scotland members were over 60; half of Muslims were under 35²⁸. The same survey found that there were slightly lower levels of good or very good general health among those identifying with the Church of Scotland (68.8%) than those identifying as Roman Catholic, Muslim and Other, who reported at 71.9%, 71.0% and 70.4% respectively²⁹.

Incorporating spirituality or religion into health care requires the same skills that competent practitioners already use in the delivery of person-centred care. These skills are underpinned by the principles of respect and collaboration. Such an approach underpins the ethos of realistic medicine which is reinforced throughout the strategy.

Deprivation index

There is plenty of evidence to enable us to understand the differences in prevalence and effects of OHCA between Scottish Index of Multiple Deprivation (SIMD) areas. Around 26% of OHCA happen in the most deprived areas, compared to 15% in the least³⁰; arrests in the most deprived areas happen at a younger age (8 years younger on average) and are more likely to be fatal³¹. Regarding CPR, Those living in the most deprived areas were less likely to have attended any CPR training in the past two years³² and are 19% less likely to receive bystander CPR compared to the least deprived areas³³.

Gypsy/Travellers

A recent study by the University of Dundee found that the Gypsy/Traveller (G/T) communities are diverse and evidence of health needs is lacking due to unknown population size³⁴. People from the Gypsy/Traveller community have much poorer health outcomes leading to lower life expectancy than either the general population or other disadvantaged groups in the UK³⁵. In particular, people from the Gypsy/Traveller community have a high risk of premature death from cardiac disease, particularly for men. They have chest pain/discomfort; a higher prevalence of diabetes and lack of knowledge of risk factors, and lower levels of exercise and significantly poorer diet (particularly in respect of fresh fruit and vegetables³⁶).

Many of the known health inequalities can be linked to access; i.e. registration at a GP or dental practice requires an address and these communities encompass nomadic lifestyle. There are lower levels of literacy³⁷ within these communities meaning information can be easily missed and misinterpreted. Commitments in our strategy to ensure all school age children have the opportunity to learn CPR, may be difficult to implement for children from gypsy/traveller communities.

Severe Mental Illness

Mental health problems contribute to the burden of disease in Scotland. The rate of burden due to mental and substance use disorders in the most deprived areas was 4.4 times the rate in the least deprived areas.³⁸

Those with schizophrenia or bipolar disorder were reported to have a life expectancy of between 15–20 years³⁹ or 10-17.5⁴⁰ years shorter than the general population.

Addiction

In Scotland, harmful alcohol and drug use remains high compared with similar countries. The prevalence of problem drug use in Scotland during 2015-2016 was in the range of 55,800 to 58,900 ⁴¹. In total, there were over 1,136 alcohol-specific deaths and 1,187 drug-related deaths in Scotland in 2018.

A review of cardiovascular consequences of drug use highlights relationships between heavy alcohol consumption, coronary heart disease and alcohol cardiomyopathy. It quotes an analysis of 33 studies investigating marijuana use: 28 studies reported increased risk of acute coronary syndrome (ACS). Regarding cocaine, a multitude of studies have reported deleterious effects on the cardiovascular system.⁴²

Prisoners

The prison population in Scotland in 2019-20 was almost 8,200. Between 2010-11 and 2019-20, the 10% most deprived areas were over-represented in prison arrivals by a factor of three. ⁴³ The Prison Reform Trust have highlighted the overrepresentation of the black, Asian and minority ethnic (BAME) population in prisons in England and Wales: [race and prisons \(prisonreformtrust.org.uk\)](https://prisonreformtrust.org.uk)

Heart disease was the most common natural cause of death among prisoners.⁴⁴ An association between incarceration and cardiovascular risk factors, morbidity, and mortality was noted.⁴⁵

Rural areas

There is limited information available on the impact of living with heart disease or the long term effects of an OHCA in a rural location. We know that in rural areas those unable to drive are dependent on public transport to access services such as GPs, hospitals or CPR training and this form of transport can be more infrequent in rural areas.

At the start of the original OHCA strategy, people who lived in rural or remote areas were 32% less likely⁴⁶ to survive to leave hospital than those who lived in more urban areas. This may be down to numerous factors, including time taken for the emergency services to arrive on scene and time taken for the ambulance to arrive at a hospital. It continues to be the case that People living in rural areas are less likely to survive an OHCA⁴⁷ and therefore it is vital that, alongside the aim to create local emergency service provisions in rural areas, the SALFS partnership work to reach people in rural and remote areas and equip them with CPR skills.

Island communities are considered within the strategy Island Communities Impact assessment document.

Digital

Particularly during the covid-19 era, the majority of CPR training and awareness campaigns will be carried out using digital means.

In 2018, around 10% of Scotland's population were classed as internet non-users, meaning they have never used the internet or last used it more than 3 months ago⁴⁸. In 2017, 800,000 people in Scotland faced digital inequality⁴⁹.

According to a recent report, the Scottish Government estimates⁵⁰ that over a third of households in lower-income brackets do not have any internet access; 19% of Scottish people do not have the necessary digital skills and that approximately 400,000 people do not live in areas that have 4G coverage.

Recommendations

Targeted CPR Training

The OHCA strategy seeks to ensure that everyone can learn and feel confident in performing CPR, and makes specific commitments to addressing existing inequalities. It is vital that CPR training is fully accessible including for those with communication challenges, who do not speak English as a first language, or for people who cannot access digital models of training.

The process of carrying out this EQIA has identified that it would be appropriate to focus on improving access to training and awareness for

- older people
- people with learning disabilities
- people from the South Asian and African Caribbean communities.

The Resuscitation Research Group at the university of Edinburgh has been working with the Scottish Ambulance Service to pilot a "CPR training for people with Disabilities" course. If successful, partners would like this to be expanded.

It must be noted that for some time it is likely that there will be a need for face masks to be worn during CPR training. SALFS partners delivering training will need to consider how best to communicate effectively with those who are harder of hearing or BSL users.

The SALFS partnership have been approached as part of the National Gypsy/Traveller Action plan to bring CPR training to post-Covid site visits. They are working with Public Health Scotland to share the kid researcher resource on the relevant social media pages.

Awareness raising

One of the actions identified by the strategy is to educate the public around CPR and defibrillation. The EQIA has identified the importance of embedding the awareness that CPR is an age- and gender-neutral lifesaving technique.

In particular, there is a need to consider concerns about performing CPR on older people, women and pregnant women within awareness raising campaigns.

In particular there is a need to address, in a nuanced manner, some common concerns around delivery of CPR including

- concern around accusations of inappropriate contact when performing CPR.
- concern of providing CPR to pregnant women in case of causing harm.
- concern around providing CPR against someone's wishes (DNACPR)

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⁵ The Scottish Government, *The Scottish Health Survey 2018* (Edinburgh, 2020) pp. 39

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- ¹⁷ National Records of Scotland, 'Population of Scotland' [Population of Scotland | National Records of Scotland \(nrscotland.gov.uk\)](#) [accessed 16 February 2021]
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