Health and Sport Committee Call for Views – Preventative Agenda

British Heart Foundation Scotland

- The total annual healthcare cost of cardiovascular disease in Scotland is £800 million. Therefore, any preventative agenda should carefully consider the prevention of cardiovascular disease.

- The BHF has funded research by Professor David Newby at the University of Edinburgh which demonstrates a link between particles from diesel exhausts and cardiovascular disease. Air pollution is an area of prevention that the Health and Sport Committee should consider in detail.

- Two thirds of adults in Scotland eat too much salt. In 2012 the World Health Organisation agreed nine global voluntary targets for the prevention and control of non-communicable diseases, including a 30% relative reduction in salt intake by 2025. BHF Scotland believes that the upcoming diet and obesity strategy should take this into consideration.

- BHF Scotland believes that early diagnosis and effective treatment of all types of cardiovascular disease is an area that could be focused on by the Health and Sport Committee when considering preventative spend

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BHF Scotland
British Heart Foundation Scotland (BHF Scotland) is the nation’s leading heart charity. We are working to achieve our vision of a world in which people do not die prematurely or suffer from heart or circulatory disease. In the fight for every heartbeat we fund ground breaking medical research, provide support to people living with cardiovascular disease and advocate for change.

We would like to take this opportunity to thank the Health and Sport Committee of the Scottish Parliament for the opportunity to respond to this call for views. For the purposes of this response the paper will now focus on each question in turn as posed by the Health and Sport Committee.

Q1. Which areas of preventative spending/the preventative agenda would it be most useful for the Health and Sport Committee to investigate?

Cardiovascular diseases cause over one quarter of all deaths in Scotland. 670,000 people across Scotland are living with cardiovascular disease and the total annual healthcare cost of these diseases in Scotland is £800million. These statistics highlight that any agenda which aims to improve the health of the people of Scotland should carefully consider the prevention of these conditions.

Air pollution

Air pollution is an emerging public health issue. The BHF funds research into this topic, much of which is carried out at the University of Edinburgh by Professor David Newby. This research has demonstrated the impact of air pollution on cardiovascular health and has shown that both long and short term exposure to air pollution can make existing heart conditions worse and cause cardiovascular events within vulnerable groups. Association with cardiovascular disease is particularly strong for PM2.5. This is particulate matter with a diameter under 2.5µm, which is derived from diesel vehicle exhausts.

Short-term exposure to elevated concentrations of particulate matter has been linked with an increase in the risk of heart attacks within a few hours to one day after exposure. BHF-funded research also found a link between increased hospitalisation rates and poor short-term air quality in those with heart failure, with the highest effects a result of PM2.5 from traffic exhaust fumes.

In 2014, the European Study of Cohorts for Air Pollution Effects (ESCAPE) found that long term exposure to PM2.5 is strongly linked to heart attacks and angina. The researchers found that a 5 µg/m³ increase in PM2.5 was associated with a 13 per cent increased relative risk of coronary events and a 10µg/m3 increase in PM10 was associated with a 12 per cent increased risk of coronary events. The study involved over 100,000 participants with no prior history of heart disease over a ten year period (1997-2007).

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Public Health England estimated that the number of deaths in 2010 attributable to anthropogenic PM2.5 air pollution in Scotland were 2,094\textsuperscript{4}.

The policy levers needed to take action on this issue lie within local government, Scottish Government and Westminster. They are also multi-departmental and so thought should be given to how best to affect positive change in order to have an impact on Scotland’s health. Taking action in this area has the potential to position Scotland as a leader in what will become an ever more pertinent public health issue.

**Salt intake**

The Scottish Government committed to producing a new strategy on poor diet and obesity in the Fairer Scotland Action Plan (October 2016). There is opportunity here for preventative legislation which would have a significant impact on Scotland’s health. For this reason, attention should be focused on ensuring that this strategy is as robust as possible.

BHF Scotland would suggest that salt reduction be considered as part of this strategy. Eating too much salt can lead to hypertension (high blood pressure) which can damage arteries and put extra strain on the heart muscle. Hypertension contributes to more than a fifth of all heart attacks and half of all strokes and increases the risk of conditions such as renal failure and dementia. Nearly 30% of adults in Scotland have hypertension.

In 2013 the World Health Organisation agreed nine global voluntary targets for the prevention and control of non-communicable diseases, including a 30% relative reduction in salt intake by 2025\textsuperscript{5}.

The recommended daily allowance for salt intake is 6g. In 2014 the mean estimated salt intake for adults aged 19 to 64 years in Scotland was 7.8g/day; 8.6g/day for men and 6.9g/day for women. On average salt intakes were 29% higher than recommended, with two-thirds of adults eating too much salt.\textsuperscript{6} 75% of the salt we eat comes from pre-packaged food.

Many of the policy levers often discussed in relation to obesity would also help to reduce salt intake including clearer labelling, advertising limitations and industry reformulation.

**Early diagnosis and management of conditions**

BHF Scotland believes that early diagnosis and effective treatment of all types of cardiovascular disease is an area that could be focused on by the Health and Sport Committee when considering preventative spend. Some examples are listed below.

**Hypertension**


As described previously, hypertension contributes significantly to cardiovascular disease. It is often known as the 'Silent Killer' because there are no symptoms. It is however treatable if detected, through lifestyle changes or in some cases through prescribed medication.

Early diagnosis and management of this condition is an area for potential investigation by the committee.

**Atrial Fibrillation**

Atrial Fibrillation (AF) is the most common sustained adult cardiac arrhythmia. Around 96,000 people in Scotland have been diagnosed with AF and it is estimated that there are thousands more living with undiagnosed AF.

The prevalence of AF increases with age and it increases the risk of death, stroke, heart failure and vascular dementia. Within the UK it is a condition that is not always managed well and audits across the UK confirm that the use of anticoagulation to reduce the risk of AF related stroke is underutilised and patients often report poor explanation of their condition and treatment options.

The management of this condition in primary care services is set to present a rising resource challenge due to an ageing demographic and so warrants investigation as an area of the preventative agenda.

**Genetic conditions**

Around 50,000 people in Scotland are thought to be living with a faulty gene which causes a heart condition. The understanding of such conditions is relatively new and so there is potential scope for innovative ways of thinking about how we design services to meet needs. Early diagnosis and correct treatment of genetic conditions can reduce the individual's risk of heart disease or cardiac arrest and so this is a key area for preventative spending.

**How can health boards and integrative authorities overcome the (financial and political) pressures that lead to reactive spending/a focus on fulfilling only statutory duties and targets, to initiate and maintain preventative spend?**

Clear messaging around the aims of preventative spending is an important factor in minimising political pressures that lead to reactive spending. This will often overlap with overcoming the financial pressures because in both cases it will be necessary to demonstrate a strong financial and outcomes focused case for the funding of services.

Utilising examples of best practice might help health boards to make a strong case for particular spending priorities or services. The BHF website has a page dedicated to projects we have worked on that have demonstrated best practice (this can be found here [https://www.bhf.org.uk/bestpractice](https://www.bhf.org.uk/bestpractice)).

Partnership working is important in order to share risks when piloting projects. The BHF has worked closely with the NHS on a number of projects including Familial Hypercholesterolaemia, Atrial Fibrillation, treating heart failure patients in the community with intravenous diuretics and others. Many of these can be read about in more detail by following the link in the paragraph above.

One particular issue with preventative spend is that on occasions, the benefits of an intervention might be felt in a different area from where the intervention was made. For example, the cost of increased blood pressure testing would likely be on primary care budgets but any resulting savings
from reduced heart attacks would mostly benefit hospital budgets (secondary care). It is important to create a culture in which it is accepted that ‘best value for money’ might not necessarily be accrued in a direct way by those spending on services but that does not mean that it is not financially worthwhile overall. This relates to the integration of health and social care and the need to create more ‘joined up’ services.

**How could spend that is deemed to be preventative be identified and tracked more effectively? What is required in terms of data, evidence and evaluation to test interventions for producing best value for money?**

Many of the issues which are to be tackled by preventative spend can be considered ‘wicked’ problems in that they are multi-factorial and as a result are very difficult to attribute cause and effect or indeed best value for money. Such problems require broader, collaborative approaches and oftentimes respond to change over decades. It is therefore important to manage expectations related to achieving measurable outcomes in short time frames.

Preventative spending has been prioritised by the Scottish Government since the Christie Commission in 2011 and health and social care integration since 2016. It is important that in addition to evaluating interventions we also focus our attention on investigating the processes that will promote joined up and preventative services and ensure that these are as effective as possible.

The BHF has experience in working with the NHS on a variety of projects and collecting data in order to display evidence that they are effective or good value for money. Health economic modelling is used to demonstrate a business case for these services although it isn’t always easy to find the data necessary to do this. In particular, our Health Services Engagement team highlighted a lack of tariff data in Scotland (which provides estimated costs for hospital stays). This made it particularly difficult to estimate the financial benefits of a programme even where a reduction in cardiovascular events could be demonstrated.

Data sharing is crucial to the ability to display strong economic cases for such services but there are gaps and often a lack of culture around this. One issue is tracking patient data longitudinally. It is possible to track patients through a variety of services using their CHI number. However, often services are evaluated in silo. When patients move from either primary to secondary services or vice versa there isn’t always consistency between the data collected and this can make longer term evaluation difficult.

The coding of 30 day readmission dates is another area our Health Services Engagement team highlighted. They stated that a lack of clarity around reasons for readmission made specific evaluation of outcomes difficult.

**How can the shift of spending from reactive/acute services to primary/preventative spending be speeded up and/or incentivised.**

Findings from a recent BHF project identified that relationships were an important factor successfully taking forward services when the pilot ended. It was noted that successful areas often had a ‘champion’ of the services and much of the success could be attributed to their efforts. This could be something that is replicated more formally in areas if it does not already exist.

In shifting money to preventative services, small trial programmes can demonstrate cost and benefit analysis before scaling up. The sharing of data from such projects will help reduce duplication and allow other health boards to make decisions on services, allowing for local context. National mapping of best and good practice might help to speed this process up.