

## Prioritising the prevention of cardiovascular disease (CVD)

HEART UK were invited by the Parliamentary Under Secretary of State for Public Health and Primary Care to submit a proposal to be included in the forthcoming Green Paper on Prevention. This paper has been developed following a cross-stakeholder roundtable discussion which included representatives from the third sector, professional organisations, NHS England, Public Health England and industry.

The key themes of the discussion are outlined throughout the paper; however, all content and recommendations have been developed by HEART UK.

### Contents

<b>CVD in the UK</b> .....	1
<b>Preventing CVD</b> .....	2
<b>Prioritising CVD</b> .....	3
<b>A family of diseases</b> .....	4
<b>The importance of secondary prevention</b> .....	4
<b>Driving uptake of the NHS Health Check</b> .....	5
<b>Funding prevention</b> .....	6
<b>The role of employers</b> .....	7
<b>Embracing system transformation</b> .....	7
<b>Protecting CVD prevention incentives</b> .....	7
<b>A personalised approach</b> .....	7
<b>Effectively utilising digital health technology</b> .....	8
<b>Taking a collaborative approach</b> .....	8
<b>Appropriate food labelling</b> .....	9
<b>About HEART UK</b> .....	10

### CVD in the UK

Over the past 50 years, annual deaths from cardiovascular disease (CVD) have halved thanks to improved treatments and lifestyles.<sup>1</sup> However, CVD is still the cause of 1 in 4 deaths in England equating to 1 death every 4 minutes.<sup>2</sup> And what is more, recent years have seen a significant slowdown in progress against mortality rates. Most worryingly, the number of people dying prematurely from CVD (i.e. before their 75<sup>th</sup> birthday) is on the rise again for the first time in 50 years.

It is not just mortality rates that are concerning. Morbidity is also a major issue for the UK's health and social care system, with almost 7.5 million people living with at least one cardiovascular condition – roughly equivalent to 1 in every 10 people.<sup>3</sup> Furthermore, co- or

multi-morbidity is common amongst people with CVD, with 81% having at least one other health condition.<sup>4</sup>

Notably, CVD is one of the conditions most strongly associated with health inequalities as it disproportionately affects those from the poorest communities. Those living in England's most deprived areas are almost 4 times as likely to die prematurely from CVD than those in the least deprived. It is also more common where a person is male, older, has a severe mental illness, or their ethnicity is South Asian or African Caribbean.<sup>5</sup> Additionally, people within these groups live on average, shorter lives, which is exacerbated by the fact that in the most deprived communities, people are 30% more likely to have high blood pressure – the biggest single risk factor for heart attack and stroke.<sup>6</sup>

There are several other factors that contribute to the high prevalence of CVD within deprived areas. These include, however are not limited to:

- A person's CVD risk factor is less likely to be recorded by a GP whether or not it has been detected or diagnosed.
- This 'unrecorded' prevalence may be higher because populations in these areas tend to be more transient and are less likely to be registered with a GP in comparison to other less deprived areas.
- People may miss out on inclusion in disease registers due to 'exception reporting', where patients are excluded from chronic disease registers for reasons such as failing to attend an appointment or refusing treatment.
- GPs working in more deprived areas tend to show higher exception reporting, which may reflect a case-mix that includes the complex interactions of social and economic problems, beliefs about health and seeking help in these communities.

The extent of CVD-related mortality and morbidity described here also has a considerable impact on public finances and the economy. It is estimated that CVD costs the UK £8.75 billion each year in direct healthcare costs, with an annual cost to the wider economy of £19 billion.<sup>7</sup> That is why HEART UK are keen to see the importance of prevention stressed in the forthcoming Prevention Green Paper. This is of noted significance, given that those with CVD require care from a multi-disciplinary team of healthcare professionals and beyond. A focus on the prevention of ill-health will help to alleviate pressures on the health and social care system and begin to address widespread health inequalities throughout the country.

## Preventing CVD

Most CVD cases are preventable. Risk factors, such as high blood pressure, smoking, high cholesterol, diabetes, physical inactivity, obesity, poor diet and excessive drinking can all be reduced through lifestyle or medical interventions to reduce a person's risk of CVD. This means that there is a huge opportunity to make a difference in improving CVD mortality and morbidity rates and consequently reduce costs to the health service and wider economy.

Prevention of CVD comprises of three equally important levels:

- Primary preventative actions: These address the wider social determinants of behaviours that lead to CVD, for instance encouraging and facilitating an active lifestyle.
- Secondary preventative actions: Refers to the detection and treatment of common conditions that can cause CVD, such as atrial fibrillation, hypertension and high cholesterol. Although treatment of these conditions is very effective at preventing

cardiovascular events, late diagnosis and under treatment is common. Improving the detection and treatment of these conditions has the potential to unlock considerable health gains.

- Tertiary preventative actions: Relates to attempts to reduce the burden of an ongoing illness or disease, such as CVD. This is orchestrated through long-term condition management and at times major procedures, including surgery.

## Prioritising CVD

The NHS Long Term Plan highlights the need for wider action on prevention to help people stay healthy for longer and reduce pressure on the NHS. The Long Term Plan therefore sets out specific new evidence-based NHS prevention programmes, including programmes to cut smoking; to reduce obesity, partly by doubling enrolment in the successful Type 2 NHS Diabetes Prevention Programme; to limit alcohol-related A&E admissions; and to lower air pollution. All these preventative programmes will have a positive impact on CVD outcomes.

Furthermore, the Long Term Plan identifies CVD as one of its priority disease areas, noting that it is the single biggest area where the NHS can save lives over the next 10 years. It recognises that too many people are still living with undetected, high-risk conditions such as high blood pressure, raised cholesterol, and atrial fibrillation (AF). Timely detection and preventative treatment of these conditions will help patients live longer healthier lives. If the NHS is to achieve its ambition of helping to prevent 150,000 heart attacks, strokes and dementia cases over the next 10 years, it will require coordinated primary and secondary preventative action from the Department of Health and Social Care (DHSC), the NHS, local governments and of course organisations within the voluntary sector, such as HEART UK.

HEART UK are supportive of the 'ABC' approach outlined in the Long Term Plan in relation to the prevention of CVD. This approach encourages people to routinely understand their atrial fibrillation (A), blood pressure (B) and cholesterol (C) numbers. However, HEART UK believes that cholesterol is often overlooked when a CVD risk assessment occurs and urges the NHS to ensure that it is given equal priority with blood pressure and atrial fibrillation testing.

As stated above, CVD is a pressing public health issue. However, it has fallen off the priority list in relation to other conditions such as cancer which is rightly prioritised within the health service with a clear strategy, implementation plan and regular progress updates published by both the Government and NHS. It is this meticulous approach which must be implemented in relation to CVD prevention, management and treatment. Not since 2013 has the Department of Health and Social Care published a robust long-term strategy aimed at tackling CVD.<sup>8</sup> Whilst HEART UK are appreciative of Public Health England's excellent work developing action plans for CVD prevention on an annual basis, we believe that as a next step, and in alignment with the CVD ambitions within the NHS Long Term Plan, a clear and concise long-term strategy and implementation plan is required. This should include clear lines of accountability, to ensure the UK's health service is effectively preventing CVD to the best of its ability.

HEART UK have outlined our vision to improve the country's current CVD prevention, management and treatment environment in our 2018 State of the Nation [report](#). Our report explored a number of policy interventions which have been effective in driving CVD outcomes improvements. However, it also highlights a number of opportunities which have been missed to support meaningful change in the way we currently prevent, manage and care for CVD.

Our report recommendations closely align to our ambitions within this Policy Paper and address CVD challenges at a national, regional and community level.

## **A family of diseases**

Though CVD manifests itself differently in individual patients, it should be viewed as a single family of conditions linked by common risk factors and the direct effect they have on CVD mortality and morbidity. CVD, for reference, includes coronary heart disease, stroke, hypertension, hypercholesterolaemia, diabetes, chronic kidney disease (CKD), peripheral artery disease and vascular dementia. Many of those who live with one of the conditions noted above often live with another. Opportunities, however, to manage one of these conditions concurrently with another are often overlooked.

The management of co-morbidities was an ambition outlined in the aforementioned 2013 CVD Outcomes Strategy. This provided a case study illustrating the impact of failures to manage CVD in a holistic manner, which remains relevant today; that of a patient who had a range of pre-existing conditions including heart disease, hypertension, heart failure and AF, before having a stroke in 2010. Whilst in hospital the patient was also identified as having CKD. The failure to manage the conditions under the umbrella term of CVD led to the patient attending over 80 appointments with various healthcare professionals, yet they continued to feel unwell and their overall health deteriorated.<sup>9</sup>

Due to an incoherent approach to the patient's care, with no one clinician being given overall responsibility, the patient eventually visited their GP who diagnosed them with late stage lung cancer. Had a holistic and integrated approach to the patient's care taken place from the beginning of their treatment pathway they may have received a diagnosis earlier and may have received an improved prognosis.<sup>9</sup>

The current system results in a disjointed approach which leads to uncoordinated care, numerous and often costly hospital visits, which do not give patients clear information. A more coordinated and integrated approach is required in the detection and management of CVD to realise the national policy ambitions outlined within the NHS Long Term Plan and beyond.

## **The importance of secondary prevention**

The secondary prevention of CVD includes early diagnosis and intervention. This requires identifying risk factors, assessing their criticality and how the variation of these factors relate to CVD. Upon early diagnosis, patients can be directed to the required treatment, potentially giving them a better quality of life.

A wide variety of healthcare professionals can play a key role in the fight against CVD. Managing people with identified CVD is a priority within secondary prevention following identification. This is exemplified by the fact that many people who have a confirmed AF, high blood pressure or high cholesterol diagnosis are not currently taking treatment for their risk factor. Therefore, efforts should be focussed on ensuring those in the above category are managed quickly and effectively.

A key example of this, can be seen by research which stated that after an influenza infection, chronic heart disease patients incurred an additional £13,000 in hospitalisation costs over a five year period, when compared to the expected cost increases for any patient in this risk group. Meaning a significantly higher hospital burden for the NHS. In this instance, HEART UK recommend that those with chronic heart disease or CVD receive an influenza vaccination.

As such, the stakeholder community, Government and health service, should look to improve awareness and access of this opportunity and its ability to be delivered in a range of healthcare settings<sup>10</sup>

The impact of secondary prevention, as opposed to tertiary prevention which involves trying to improve a patient's quality of life and reduce the symptoms of the disease, is significant. The cost of secondary prevention is minimal compared with tertiary prevention, which may involve major surgical procedures. Secondly, tertiary prevention is likely to result in significant patient discomfort and a reduced quality of life. Secondary prevention's focus on smaller interventions, including medicines and lifestyle changes, causes minimal disruption to a patient's lifestyle.

Whilst NHS England will of course prioritise the role of primary prevention in CVD, there are opportunities to implement secondary prevention at scale and the DHSC should play a role in driving this. Whether that be through CVDPrevent and other initiatives such as Public Health England's Size of the Prize programme to provide early interventions or through the continued support of NHS RightCare's CVD Prevention Pathway.

One issue of concern for HEART UK relates to the current NICE quality and outcomes framework indicators on CVD prevention, do not currently measure secondary prevention. The current framework solely focuses on the impact of primary prevention. Therefore HEART UK suggest that secondary prevention indicators should be introduced as part of any future updates.

### Driving uptake of the NHS Health Check

The NHS Health Check is crucial to improving the health outcomes of people in England and preventing CVD. As an already well-established programme in England, it provides a key opportunity to drive improvements in CVD. A national evaluation of the NHS Health Check programme, published to mark its first five years in operation (2009-2013), indicated that it had been effective in identifying people at risk of developing CVD.<sup>11</sup>

For example, 1 in 20 Health Check assessments diagnosed high cholesterol levels – one of the most critical risk factors in CVD – and thus prompted the prescription of statins.<sup>12</sup> Through the NHS Health Check programme (and subsequent adherence to NICE guidance), it was estimated that the NHS Health Check was responsible for preventing approximately 2,500 cases of major CVD events, including strokes and heart attacks, over the first five years of its implementation.<sup>13</sup>

However, while the NHS Health Check has proven enormously valuable in identifying and preventing CVD, there remain challenges around its uptake. Only 45.9% of all people eligible for an NHS Health Check have gone on to attend their appointment when invited.<sup>14</sup> Some areas report Health Check uptake of the eligible population is at extremely low levels, including Sefton (0.2%) and Bournemouth (0.8%).<sup>15 16</sup> This means that a considerable proportion of local populations who are eligible for an NHS Health Check are needlessly missing out on the opportunity to have their health status, including the likelihood of CVD, assessed. This leaves them vulnerable to receiving a CVD diagnosis at a later stage when it is harder to manage or reverse.

One method of improving uptake may be the provision of the Health Check programme within non-clinical settings such as GP practices. A review of the programme which assessed

reasons why people do not attend NHS Health Checks cited that there was an actual or perceived difficulty in obtaining an appointment at a GP practice, particularly for those working normal office hours, and those with carer responsibilities.<sup>17</sup> Therefore the provision of the Health Check programme in alternative locations, such as community pharmacies and other local hubs, may provide a solution. However, in order to embrace the opportunities presented by community pharmacy settings, there needs to be a perception overhaul of their offer and value.

NHS England's current Community Pharmacy Contractual Framework consists of three levels of services: essential services; additional services; and enhanced locally commissioned services. Pharmacy owners are required to provide essential services such as medicines dispensing and signposting but have the option of choosing whether to provide advanced and locally commissioned services. Reclassifying the NHS Health Check programme as an essential service would provide the opportunity to deliver the service to a larger eligible population, making it more routinely available within a community setting.

Furthermore, the programme is only available to those between the age of 40-74, however, HEART UK believe the age threshold should be reduced to 30 in localities where there is a high CVD prevalence, in order to identify CVD risk at an early stage and implement preventative measures.

Given the NHS Health Check has been accredited with preventing major CVD events, HEART UK believes it is paramount that safeguarding measures and appropriate funding are introduced to enable its delivery and improve public participation. This will help the NHS achieve its goal to improve CVD outcomes within the Long Term Plan. HEART UK agree with Public Health England's 2018 review of the NHS Health Check programme which asked local authorities to consider the use of weighted remuneration to incentivise providers to prioritise individuals who fall into high-risk CVD categories. However, uptake will only increase if local authorities are provided with the financial backing to deliver such an incentive programme.

## Funding prevention

In order to realise the ambitions of the NHS Health Check, local authorities must be adequately resourced in order to encourage uptake amongst their eligible population. Investing in public health is a pragmatic preventive procedure. It is estimated that in the UK obesity costs the NHS £5.1 billion, smoking costs £3.3 billion, alcohol costs £3.5 billion and physical inactivity costs £0.9 billion.<sup>18</sup> These key influencers on the NHS economy are challenges which can be mitigated through increased investment in public health.

Evidence shows that local public health interventions are cost-saving and offer substantial returns on investment. Cuts to public health therefore present a false economy which is likely to generate billions of pounds of additional costs to the health service and wider economy.

Recent analysis shows that for every £1 spent, the monetary value of the benefit from such interventions is estimated to be around £14.<sup>19</sup> As the NHS and wider healthcare system moves towards capitated budgets through ICSs, there should be a greater focus on prevention to deliver efficiencies within that set budget. However, local areas (via local authorities and STPs) need to be resourced to drive this agenda.

However, any such additional support for local authorities should come with a strict accountability framework in order to ensure local authorities are meeting set NHS Health Check eligible population uptake targets. As stated previously, some local authorities have significantly low uptake numbers which means that a large proportion of those who may benefit from a Health Check are not taking advantage of the opportunity.

### **The role of employers**

HEART UK have been responsible for the delivery of cholesterol testing and diet advice in a number of workplaces throughout the country. Through this, we connect with the working population who are often too busy to attend GP practice appointments, and engage them to ensure they have an understanding of their 'numbers' in relation to cholesterol. As such, HEART UK believe that it should be a requirement for workplaces with over 200 employees to offer an annual on-site cholesterol and blood pressure testing to improve employee awareness of their CVD risk.

### **Embracing system transformation**

Existing and forthcoming NHS system transformation, which includes the gradual creation of integrated care systems (ICSs), will provide the opportunity to embed CVD prevention into the foundations of these new structures. The NHS Long Term Plan announced the creation of CVDPrevent, a national clinical audit tool for primary care. CVDPrevent analyses recorded GP data to show local area performance in detecting and managing CVD, highlighting where gaps exist. This new programme will allow Sustainability and Transformation Partnerships (STPs) and ICSs to understand what is required to improve CVD prevention outcomes for their patient population.

However, whilst HEART UK are appreciative of this new audit programme, we believe CVD prevention must be a cornerstone in forthcoming five-year plans which are set to be published later this year. These STP/ICS plans must detail specific targets for CVD prevention in local areas in order to maintain an accountability framework for those in leadership positions within these new systems. Only then will real change be possible.

### **Protecting CVD prevention incentives**

The Quality Outcomes Framework (QOF) is an annual reward and incentive programme detailing GP practices' achievement results. The QOF rewards practices for the provision of quality care and helps standardise improvement in the delivery of primary medical services. Introduced as part of the GP contract in 2004, QOF indicators created a direct link between a surgery's income and the need to meet care targets related to CVD including heart disease, diabetes and smoking. The QOF is instrumental to achieving the CVD prevention ambitions outlined within the NHS Long Term Plan. As such, HEART UK were pleased to receive confirmation that the scheme will be retained and urge the Government and NHS to provide ongoing support to the programme particularly in relation to the gathering of cholesterol data.

### **A personalised approach**

The rapid advancement of technology at a rapidly evolving pace has led to the creation of personalised approaches in relation to both prevention and treatment. There is a growing

ambition to provide people with the right intervention at the right time. This approach can be applied to CVD prevention by sorting people into precise groups according to their common conditions. New risk scores for CVD which are informed by whole-genome studies on large patient cohorts are beginning to perform better than existing scores.<sup>20</sup>

The introduction of seven Genomic Laboratory Hubs throughout the country offer the opportunity to begin the roll-out of assessing genetic CVD risk scores and incorporating them into clinical practice. This type of predictive and personalised intervention should not replace existing public health programmes, rather HEART UK believe that it should build on existing techniques to effectively encourage people to make healthier choices and take greater responsibility for their wellbeing. However, we are acutely aware that the documentation of genetic CVD risk will only be of true value should the subsequent risk be mitigated and outcomes improved.

### **Effectively utilising digital health technology**

The DHSC and NHS England's focus on harnessing digital technology across the whole of the health service presents excellent opportunity in the prevention of CVD. This opportunity has been recognised by the European Society of Cardiology who surveyed members on the future of digital within a clinical practice setting, with 80% of them agreeing that it would radically change their practice.<sup>21</sup>

The introduction of wearable technology, wireless mobile devices, artificial intelligence and electronic medical records will force a behaviour change in the NHS's CVD prevention methodology. However, patients must be aware of the importance of data-sharing to realise these ambitions. The effective collation of data will ensure patients receive greater continuity of care, with healthcare professionals and researchers provided with the ability to access and utilise a comprehensive collection of real-world evidence.

The health service is beginning to realise the role technology can play in preventing CVD, for example, the Heart Age Tool, which has been completed more than 1.9 million times across England, has played a key role in improving awareness of a person's stroke and heart attack risk.<sup>22</sup> HEART UK believe that accessible digital initiatives such as this are integral to achieving any future ambitions to reduce the incidence of CVD throughout the country. Though in order to truly utilise effective technology in the health service, in relation to CVD, it will be useful for funding streams for new innovations to become integrated into the CVD pathway which will avoid the current siloed approach to medical technology funding and uptake.

HEART UK are supportive of the DHSC's paper, 'The future of healthcare our vision for digital data and technology in health and care', which outlined the potential of innovative technologies to support preventative, predictive and personalised care.<sup>23</sup> We believe that partnership working between the Government, NHS and industry will be key to the development, testing and roll-out of innovative CVD prevention solutions and urge action in the form of investment in health technology and digital tools to facilitate the effective prevention of CVD.

### **Taking a collaborative approach**

In order to truly revolutionise the way CVD is prevented it will require cross-sector collaboration amongst all stakeholder groups. HEART UK were pleased to see the importance of health service and industry cooperation highlighted in a recent report by the NHS Confederation and



the Association of the British Pharmaceutical Industry which noted that the future of health services across the country will involve a greater focus on prevention. As such, the report recommended that the NHS should articulate clearly the health challenges it faces in a way that enables industry to respond with effective solutions.<sup>24</sup>

To this end, there are already a number of joint-working initiatives which are effectively working to prevent CVD, including Sanofi's collaboration with the Yorkshire and Humber Academic Health Science Network (AHSN) where they are working to improve the identification and treatment of patients with genetically inherited high-cholesterol condition, familial hypercholesterolaemia, or high CVD risk. The project consists of a baseline audit to identify patients who have or may be at risk of FH or CVD using a technological system approach. Patient reviews are then undertaken by specialist NHS personnel, within primary care and appropriate clinical intervention is implemented in line with local guidelines and pathways. Through the use of this technology Sanofi and the AHSN have been able to effectively identify at risk patients and ensure they receive medical intervention early in the pathway.

HEART UK are keen to see this type of joint-working continue into the future and hope that NHS and industry continue to look beyond treatment and focus on the implementation of preventative solutions to CVD.

### Appropriate food labelling

The implementation of policy measure such as the 'sugar tax' may have an impact on future CVD rates. However, additional measures such as implementing clear nutritional labelling on food products is also required. According to research, many consumers experience difficulty in understanding food labels, especially men and people at increased risk of heart disease.<sup>25</sup> Therefore, HEART UK believe that there is a pressing need to improve food labels with appropriate consideration given to those struggling with illiteracy or with colour and vision deficiency. Furthermore, public awareness and education of food label contents must be increased, starting from early-years education right through to the delivery of adulthood education through primary care, community settings and the media.

### Conclusion

HEART UK will support and work in a collaborative manner with both NHS England and Public Health England to achieve the ambitions set out within the Long Term Plan. We also believe, however, that there is a unique opportunity to highlight the need to drive improvements in CVD preventative measures through the DHSC's Prevention Green Paper.

To truly realise these ambitions, HEART UK believe the following action is required:

- ✓ CVD must be managed throughout the treatment pathway as a family of diseases in order to ensure co-ordinated and integrated patient care and link closely with pathways for co-morbidities such as diabetes
- ✓ Providers of NHS Health Checks should be incentivised to improve the uptake amongst the eligible population with clear uptake targets
- ✓ Reclassifying the NHS Health Check programme in the Community Pharmacy Contractual Framework as an essential service would provide the opportunity to deliver the service to a larger eligible population, making it more routinely available within a community setting.

- ✓ It should be a requirement for workplaces with over 200 employees to offer an annual on-site cholesterol and blood pressure testing to improve employee awareness of their CVD risk
- ✓ The age threshold for NHS Health Checks should be reduced to 30 in localities where there is a high CVD prevalence to help address health inequalities
- ✓ System transformation through the creation of new 5-year STP plans must prioritise both primary and secondary prevention of CVD in line with the ambitions of the NHS Long Term Plan
- ✓ The NHS should seek to embrace new technology which is proven to effectively prevent CVD such as wearables and artificial intelligence
- ✓ Cross-sector collaboration between the NHS and industry should be encouraged in order to develop effective CVD prevention mechanisms
- ✓ Nutritional labels on food should be noted clearly on packaging and take into consideration less literate groups and those with colour and vision deficiency

## About HEART UK

HEART UK is the UK's only cholesterol charity. We provide expert support, education and influencing services to healthcare professionals, people and families with concerns about cholesterol.

HEART UK exists to prevent premature deaths caused by high cholesterol and cardiovascular disease. We want for most UK adults to know and understand their cholesterol levels and to take action to improve their health and lower their risk of illness.

## Contact Us

For further information about this report or discuss further, please contact Simon Williams [sw@heartuk.org.uk](mailto:sw@heartuk.org.uk)

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