

## CARDIOVASCULAR DISEASE [CVD] IN EAST SUSSEX

### Introduction

This cardiovascular disease [CVD] summary profile focuses on coronary heart disease (CHD) and stroke.

### Why is cardiovascular disease [CVD] important?

Poor cardiovascular health can cause heart attacks, strokes, heart failure, chronic kidney disease, peripheral arterial disease, and the onset of vascular dementia.



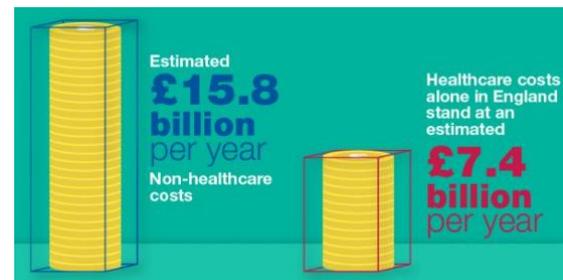
Falling mortality rates from heart disease were the biggest cause of increases in life expectancy between 2001 and 2016 in England, according to [PHE's Health Profile for England](#).

Since 2011 the rate of increase in life expectancy has slowed for both sexes as improvements in heart disease mortality have plateaued. This highlights the need for a renewed drive to prevent CVD deaths, which still account for one in four of all deaths in England- the equivalent to one death every four minutes.

Although CVD mortality rates have almost halved over recent decades, cardiovascular disease continues to play a major role in individual lives, communities and society as a whole.

Cardiovascular disease-related ill health [morbidity] places a considerable financial burden on the NHS and wider society, with CVD-related healthcare costs alone in England amounting to an estimated £7.4 billion per year, and annual costs

to the wider economy being an estimated £15.8 billion.



### What can be done to reduce cardiovascular disease [CVD]?

The majority [80%] of CVD cases are potentially preventable and there is an opportunity to make a difference in improving CVD outcomes.<sup>1</sup>

The [NHS Long Term Plan](#) includes a major ambition to prevent 150,000 strokes, heart attacks and dementia cases over the next ten years. There are national ambitions to improve the detection and management of:

- Atrial fibrillation (AF)
- High blood pressure
- High cholesterol

These common conditions can cause CVD, including heart attacks and strokes, and many cases of dementia. Although treatment of these conditions is very effective at preventing cardiovascular events, late diagnosis and under treatment is common.

Air pollution also makes a significant contribution to CVD, causing an estimated loss of 1.5 years of life expectancy in the UK.<sup>2</sup>

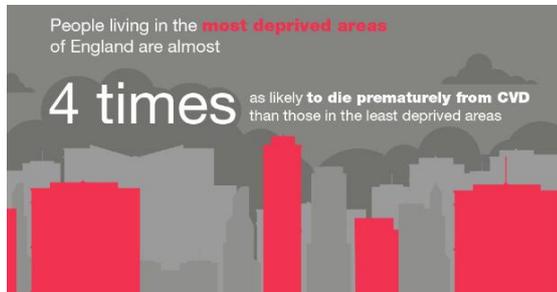
### Who is most at risk of cardiovascular disease [CVD]?

CVD is more common in men. Women also develop CVD but this may be less easily recognised.

People who are older, have a severe mental illness, or their ethnicity is South Asian or African Caribbean are all more prone to CVD.

## Health Inequalities

CVD is one of the conditions most strongly associated with health inequalities. If you live in England's most deprived areas, you are almost four times more likely to die prematurely than those in the least deprived areas.



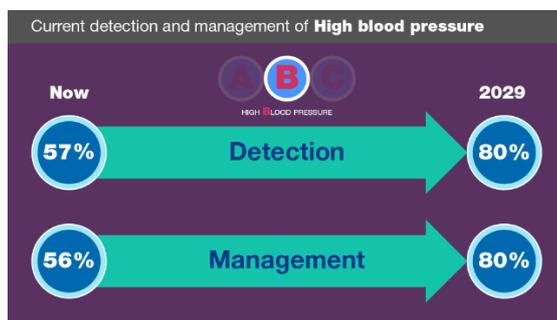
PHE analysis shows that *40% of amenable CVD deaths occur in the 3 most deprived deciles [tenths] of the population.*

## Hypertension

In England, high blood pressure [BP] is the number one risk factor for CVD mortality and morbidity. It affects more than 1 in 4 adults. The risk increases notably with age.

The national ambitions for managing high blood pressure [BP] are that:

- 80% of the expected number of people with high BP are *diagnosed* by 2029
- 80% of the total number of people diagnosed with high BP are *treated to target* as per NICE guidelines by 2029



There are significant inequalities attached to high BP, where the prevalence of raised blood pressure is 30% more likely in the most deprived areas of England compared to the least deprived.

Currently in England, only 57% of the estimated number of adults (16+) with hypertension have been detected, and only 56% of people under 80 who have been diagnosed with high BP have achieved the NICE recommended target clinic BP of 140/90 mmHg. However there is very limited evidence for treating high blood pressure in people who are otherwise at low risk and the potential for causing harm.<sup>3</sup>

## Raised cholesterol

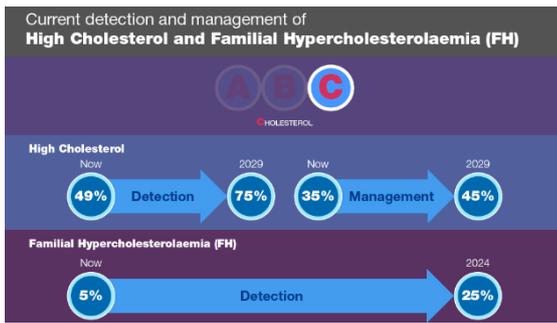
High cholesterol is characterised by the build-up of fatty deposits in arteries, so tends to increase as we age.

High cholesterol is one of the most significant risk factors for CVD. Globally, a third of ischaemic heart disease is attributable to high cholesterol. It is estimated to account for 7% of deaths and 4% of disability-adjusted life years (DALYs) in England.

Raised cholesterol can also be caused by genetic conditions, where cholesterol is elevated from birth, such as Familial Hypercholesterolaemia (FH). FH affects approximately between 1 in 250 to 1 in 500 people in the UK but people may be unaware that they have it.

The national ambition for managing high cholesterol is that:

- 75% of eligible people aged 40 to 74 *without established CVD [haven't had a previous heart attack or stroke]* have received a formal, validated CVD risk assessment and cholesterol reading recorded on a primary care data system in the last 5 years by 2029.
- 45% of people aged 40 to 74 *without established CVD identified as having a 20% or greater 10-year risk of developing CVD* are treated with statins by 2029.
- 25% of people with *Familial Hypercholesterolaemia (FH)* are diagnosed and treated optimally according to the NICE FH Guideline by 2024.



**Atrial fibrillation [AF]**

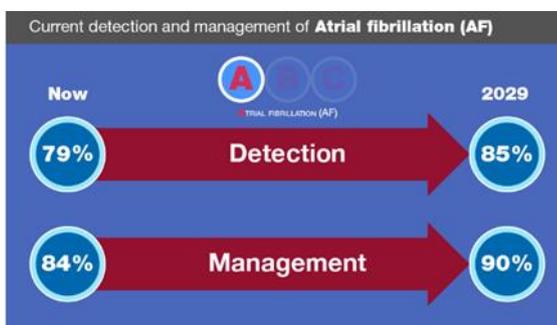
AF is characterised by a rapid, irregular pulse and is the most common heart rhythm irregularity. AF affects up to one-in-10 people over the age of 65 but does not necessarily show symptoms, with 10% of strokes occurring in people unaware they have AF.

The causes of AF are not fully understood but its prevalence increases with age. It is also more prevalent in men than in women. Certain ethnic groups and existing CVD conditions are also likely to increase the chance of someone developing AF.

There is substantial geographic variation in prevalence of AF across the country depending on the demographic profile [there are more cases where there is an older population].

The national ambitions for managing AF are that:

- 85% of the expected number of people with AF are detected by 2029.
- 90% of people with AF who are known to be at high risk of a stroke to be adequately anticoagulated by 2029.



**What is the East Sussex picture?**

**Primary prevention of CVD-NHS Health Checks in East Sussex**

The NHS Health Check is a check-up for eligible adults in England aged 40 to 74 designed to assess a person’s risk of developing CVD and their chance of having a stroke or heart attack in future.

The NHS Health Check offers an opportunity to assess the top seven risk factors driving premature death and disability in England in midlife. These include irregular pulse rhythm, raised blood pressure [BP] and raised cholesterol. As part of the check people are also supported to understand their risk of CVD and make positive behavioural changes that can prevent and delay the onset of CVD.

After the NHS Health Check everyone should benefit from personalised support and access to local services, such as:

- stop smoking services
- weight management services
- physical activity services
- alcohol reduction services
- NHS diabetes prevention programme

Evaluations show that the NHS Health Check is also an effective way of diagnosing people who already have CVD a bit earlier. People at high risk of CVD are offered appropriate clinical management.

The National Institute for Health and Care Excellence [NICE] guidelines on adult hypertension recommend using a formal method of estimating cardiovascular risk to discuss both prognosis and healthcare options for people with hypertension.

NICE recommend offering lifestyle advice initially and then periodically before starting pharmacological treatment in mild hypertension. NICE guidance also suggests lifestyle modification before offering statins to people who have a 10% or greater 10-year risk of developing CVD. [This is still subject to further discussion].

The national focus is on identifying and managing people at 20% or greater risk of developing CVD in the first instance.

The NHS Health Check is mostly provided in primary care settings [GP practices] in East Sussex. The NHS Health Check programme is also being targeted to ensure people at the greatest risk of CVD in the population are prioritised to receive a check. This will help to narrow the gap in health inequalities in future.

**Key facts about heart disease in East Sussex CCGs**

Key Facts	EHS CCG	H&R CCG	HWLH CCG	England
Coronary heart disease CHD prevalence (per cent)	4	4	3	3
Heart failure prevalence (per cent) <sup>1</sup>	1.1	1.1	1.1	0.8
CHD admissions (rate per 100,000)	380	464	390	502
Heart failure admissions (rate per 100,000)	114	130	119	162
CHD early mortality (rate per 100,000)	26	40	31	39

Source: National Cardio Vascular Intelligence Network NCVIN PHE Dec 2018.

**EHS CCG**

In 2017/18 the admission rate for CHD in NHS Eastbourne, Hailsham and Seaford CCG was 380 for every 100,000 people in the population (888 admissions). This is significantly lower than England (502 per 100,000).

In 2017/18 the admission rate for heart failure for all persons in NHS Eastbourne, Hailsham and Seaford CCG was 114 per 100,000. This is

<sup>1</sup> Prevalence is the number of people in a given population with a particular condition at a point in time.

significantly lower than England (162 per 100,000).

**H&R CCG**

In 2017/18 the admission rate for CHD in NHS Hastings and Rother CCG was 464 for every 100,000 people in the population (1,057 admissions). This is significantly lower than the England rate (502 per 100,000).

In 2017/18 the admission rate for heart failure for all persons in NHS Hastings and Rother CCG was 130 for every 100,000 people in the population (322 admissions), also lower than the rate in England.

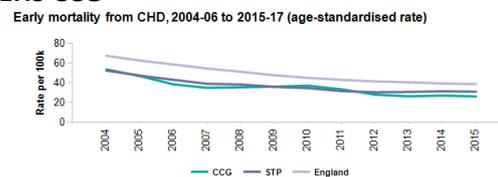
**HWLH CCG**

In 2017/18 the admission rate for CHD in NHS High Weald Lewes Havens CCG was 390 for every 100,000 people in the population (789 admissions). This is significantly lower than the England rate (502 per 100,000). In 2017/18 the admission rate for heart failure for all persons in NHS High Weald Lewes Havens CCG was 119 for every 100,000 people in the population (246 admissions), also lower than the rate in England.

**Early mortality from CHD**

The Public Health Outcomes Framework includes an objective for reducing numbers of people dying prematurely [under the age of 75] from cardiovascular disease. Coronary heart Disease [CHD] is the largest contributor to cardiovascular disease mortality (45%).

**EHS CCG**

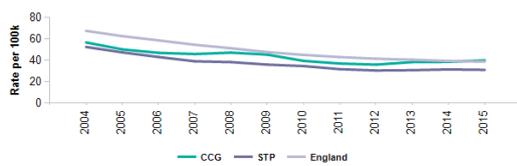


Sources: ONS Mortality data 2017

In the three year period 2015-2017, the early mortality rate for CHD in NHS Eastbourne, Hailsham and Seaford CCG was 26.1 per 100,000. This is a decrease of 51% since 2004-2006. In England, the mortality rate has decreased by 43% over this time period.

**H&R CCG**

Early mortality from CHD, 2004-06 to 2015-17 (age-standardised rate)

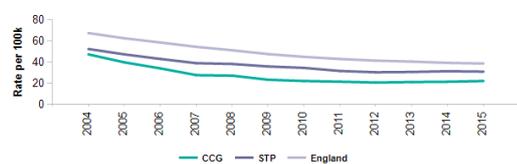


Sources: ONS Mortality data 2017

In the three year period 2015-2017, the early mortality rate for CHD in NHS Hastings and Rother CCG was 40 per 100,000. This is a decrease of 30% since 2004-2006.

**HWLH CCG**

Early mortality from CHD, 2004-06 to 2015-17 (age-standardised rate)



Sources: ONS Mortality data 2017

In the three year period 2015-2017, the early mortality rate for CHD in NHS High Weald Lewes Havens CCG was 22 per 100,000. This is a decrease of 53% since 2004-2006.

**Key facts about stroke in East Sussex CCGs**

The presence of the cardiovascular risk factors mentioned above predispose to stroke.

Atrial fibrillation is a heart condition which can result in an irregular, fast pulse. Atrial fibrillation can increase the chance of blood clots forming, leading to increased risk of stroke.

Treating *appropriate* patients with anticoagulants lowers their risk of stroke. In England, 47.5% of stroke admissions who had a history of atrial fibrillation were not prescribed anticoagulation prior to their stroke.

All eligible patients should receive a six month assessment after their discharge from hospital following a stroke. This assessment is key to assessing the outcomes of stroke care.

Key Facts	EHS CCG	H&R CCG	HWLH CCG	England
Atrial fibrillation QOF prevalence (%) <sup>2</sup>	3	3	3	2
Estimated prevalence of AF (%) <sup>3</sup>	4	4	3	2
Stroke QOF prevalence (%)	3	2	2	2
(%) Stroke admissions with a history of AF <b>not</b> prescribed anticoagulation prior to stroke	41	42	59	48
(%) Stroke patients who are assessed at 6 months	22	23	13	30
Stroke mortality rates, under 75 years (rate per 100,000)	13	12	10	13
Stroke mortality rates, over 75 years (rate per 100,000)	491	472	494	541

Source: National Cardio Vascular Intelligence Network NCVIN PHE Cardiovascular profiles Dec 2018.

**EHS CCG**

In 2017/18 there were **4,871** people who have previously been diagnosed with a stroke in NHS Eastbourne, Hailsham and Seaford CCG.

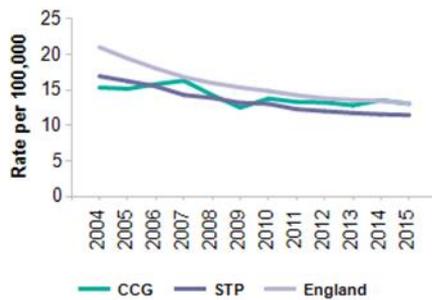
The diagnosed prevalence of atrial fibrillation (AF) in this CCG is 3% and the estimated prevalence is 4%. *There could be an additional 371 people with undiagnosed atrial fibrillation in the CCG.*

Early mortality rates (under 75 years of age) for stroke in NHS Eastbourne, Hailsham and Seaford CCG were 13 per 100,000 people. This was not significantly different from the England rate.

<sup>2</sup> The diagnosed prevalence of stroke and transient ischaemic attack (TIA) and atrial fibrillation (AF) is calculated from the returns submitted to NHS Digital as part of the Quality and Outcomes Framework (QOF) by each GP practice.

<sup>3</sup> The expected prevalence of are based on age-sex specific prevalence estimates for a general population in Sweden. These are then applied to GP practice populations in England. Estimates for each CCG are constructed by aggregating the GP practices within those CCGs.

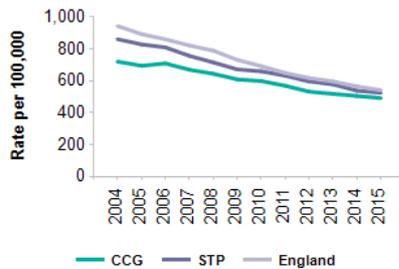
Early mortality (under 75) from stroke, 2004-06 to 2015-17



Source: ONS Mortality data, 2017

Later mortality rates (over 75 years of age) from stroke in NHS Eastbourne, Hailsham and Seaford CCG were 491 per 100,000 people. This was not significantly different from the England rate (541).

Later mortality (75 and over) from stroke, 2004-06 to 2015-17



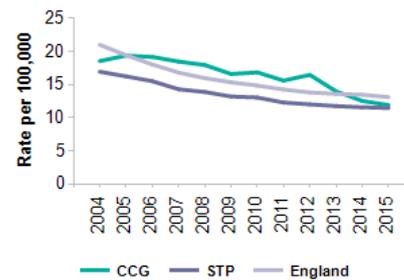
**H&R CCG**

In 2017/18 there were **4,600** people who have previously been diagnosed with a stroke in NHS Hastings and Rother CCG.

The diagnosed prevalence of atrial fibrillation (AF) in this CCG is 3% and the estimated prevalence is 3%. There could be an additional 662 people with undiagnosed atrial fibrillation in the CCG.

Early mortality rates (under 75 years of age) for stroke in NHS Hastings and Rother CCG were 12 per 100,000 people. This was not significantly different from the England rate (13).

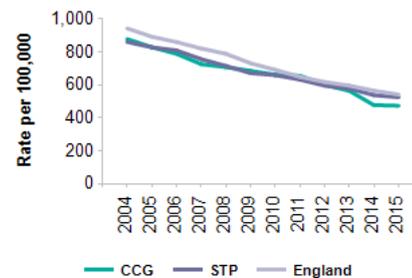
Early mortality (under 75) from stroke, 2004-06 to 2015-17



Source: ONS Mortality data, 2017

Later mortality rates (over 75 years of age) from stroke in NHS Hastings and Rother CCG were 472 per 100,000 people. This was significantly lower than the England rate (541).

Later mortality (75 and over) from stroke, 2004-06 to 2015-17



**HWLH CCG**

In 2017/18 there were **3,558** people who have previously been diagnosed with a stroke in NHS High Weald Lewes Havens CCG.

The diagnosed prevalence of atrial fibrillation (AF) in this CCG is 2.6% and the estimated prevalence is 3.1%. There could be an additional 777 people with undiagnosed atrial fibrillation in the CCG.

Early mortality rates (under 75 years of age) for stroke in NHS High Weald Lewes Havens CCG were 10 per 100,000 people. This was significantly lower than the England rate (13).

Later mortality rates (over 75 years of age) from stroke in NHS High Weald Lewes Havens CCG were 494 per 100,000 people. This was not significantly different from the England rate (540).

## Conclusions

Achieving the national ambitions to reduce cardiovascular disease [CVD] in the population requires a whole system effort.

East Sussex CCGs and general practices are implementing the NHS Right Care CVD prevention pathway. This ensures best use of NHS resources.

The uptake of the NHS Health Check in East Sussex is very good compared to the rest of England. Improving the uptake of CVD screening in hard to reach populations and implementing interventions to reduce CVD risk will continue to reduce inequalities in the East Sussex population.

NHS Health Checks can also be delivered by community pharmacies and local outreach programmes in workplaces and communities.

Community pharmacies can also deliver opportunistic pulse and blood pressure testing, as well as providing healthy lifestyle advice.

## Key sources

PHE cardiovascular disease profiles  
<https://fingertips.phe.org.uk/profile-group/cardiovascular-disease-diabetes-kidney-disease/profile/cardiovascular>

Sentinel Stroke National Audit Programme  
[www.strokeaudit.org/results/Clinical-audit.aspx](http://www.strokeaudit.org/results/Clinical-audit.aspx)

Stroke Association  
[www.stroke.org.uk/resources/state-nation-stroke-statistics](http://www.stroke.org.uk/resources/state-nation-stroke-statistics)

National Stroke Strategy  
[https://www.stroke.org.uk/sites/default/files/sa\\_strategy\\_2017-2019.pdf](https://www.stroke.org.uk/sites/default/files/sa_strategy_2017-2019.pdf)

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<sup>1</sup> World Health Organization. Global Health Observatory.  
<http://www.who.int/gho/en/> (18 October 2018).

<sup>2</sup> <https://academic.oup.com/eurheartj/advance-article-abstract/doi/10.1093/eurheartj/ehz135/5372326?redirectedFrom=fulltext>

<sup>3</sup> <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2708195>