

Cardiovascular disease

Headlines

Collectively, heart and circulatory diseases cause more than 1 in 3 of all deaths in the UK. Cardiovascular disease (CVD) could be avoided in 30% of cases, through people adopting healthy behaviours. In the UK, death rates from coronary heart disease (CHD) are highest in areas of greatest deprivation and Kirklees was no exception. Deaths from coronary heart disease are 0% higher in smokers than non-smokers.

Every year over 150,000 people have a stroke and it is the third largest cause of death, after heart disease and cancer. The brain damage caused by strokes means that they are the largest cause of adult disability in the UK.

Amongst those with hypertension, more than half (54%) of men and 2 in 5 (43%) women were not receiving treatment. Of those receiving treatment 57% had their high blood pressure controlled.

Men were more likely than women to have CHD and stroke.

The lower a person's income the more likely they were to have experienced a stroke or have high blood pressure.

Why is this issue important?

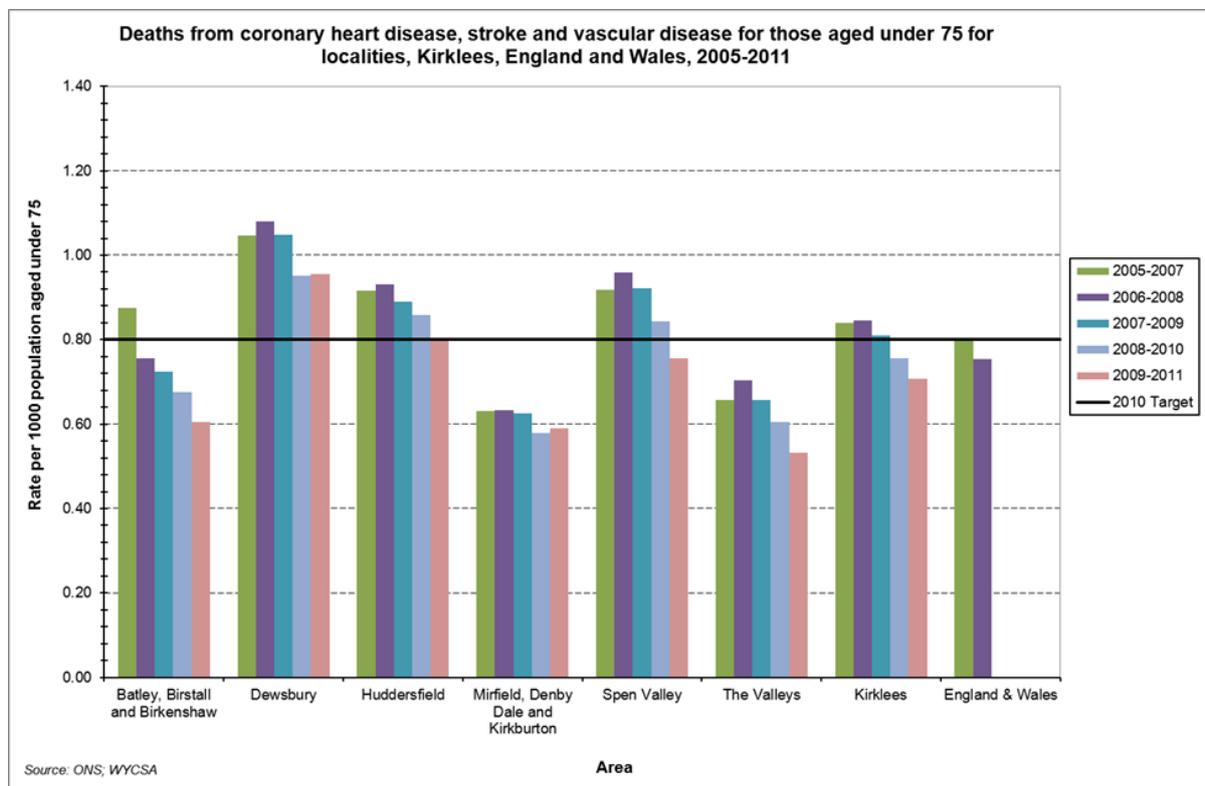
Cardiovascular Diseases (CVD) are a general term that describes diseases of the heart or blood vessels. There are four main types of CVD:

- CHD
- Stroke
- Peripheral Arterial Disease
- Aortic Disease¹

These conditions are frequently brought about by the development of blockages in the arteries. They are also linked to conditions such as heart failure, [chronic kidney disease](#) and dementia²⁰.

Cardiovascular diseases (CVD) are the UK's biggest killer^{2 p10}. Collectively, heart and circulatory diseases cause more than one in three of all deaths in the UK⁶. It is estimated that CVD is responsible for around 1 in 3 premature deaths in men and 1 in 5 premature deaths in women¹. Figure 1 demonstrates that in Kirklees there has been a decrease in deaths related to CVD from 2005–2011, although some areas appear to be higher than the 2010 national target.

This section will focus on the two main types of CVD; **Coronary Heart Disease** and **Stroke** (and the main risk factors for these conditions including biological, behavioural and wider factors) while other sections of the JSNA will consider linked conditions such as [Diabetes](#) and [Chronic Kidney Disease](#).



Coronary heart disease (CHD) is the term that describes what happens when your heart's blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries¹. In Kirklees, CHD accounted for 3.7% deaths under the age of 75 years in 2009-11. In Kirklees the proportion of all deaths attributable to CHD were 17% for males and 12% for females, which is the same as UK figures². CHD accounts nationally for 48% of CVD⁷. In the UK, death rates from CHD are highest in areas of greatest deprivation and Kirklees was no exception. It was also interesting to note the CHD deaths differed greatly across geographical location with [Dewsbury](#), [Spenn Valley](#) and [Huddersfield](#) South having the highest rates.

During 2010-2011 there were 625 admissions to hospital because of a heart attack⁵. According to the Current Living in Kirklees Survey (CLiK)⁸ 5.3% of those surveyed reported that they had Heart Disease and this varied greatly across area and demographic groups. Those with long term limiting conditions (13.4%), those who are workless (6.1%) and those who live alone (7.3%) reported higher rates of heart disease than the Kirklees average. No link with deprivation was identified in relation to the occurrence of heart disease; those in the most deprived areas however, are more likely to die from heart disease. It may be that

people with Heart Disease from deprived areas may need more help and support to manage their condition.

Stroke is a serious medical condition that occurs when the blood supply to part of the brain is cut off¹⁰. There are two main causes of strokes:

- ischaemic (accounting for over 80% of all cases): the blood supply is stopped due to a blood clot
- haemorrhagic: a weakened blood vessel supplying the brain bursts and causes brain damage

In England, strokes are a major health problem. Every year over 150,000 people have a stroke and it is the third largest cause of death, after heart disease and cancer. The brain damage caused by strokes means that they are the largest cause of adult disability in the UK¹⁰. Nationally it accounts for 28% of CVD⁷. Stroke occurs 25% more in men than women⁶. Around 1 in 4 (20–30%) of people who have a stroke die within a month. 1 in 3 people who have a stroke are left with long-term disability¹¹.

In Kirklees 1.4% of people aged under 75 died from Stroke in 2009-11. Also, according to the British Heart Foundation, death rates from stroke as a proportion from all deaths from 2008 – 2010 were 7% for males and 10% for females²

Dewsbury and Huddersfield South had greater Stroke death rates than the rest of the areas. Strokes were slightly higher in males, significantly greater in those aged 65 years and over and those in the most deprived areas. This reflects the findings of the 2009 BHF Stroke statistics²¹.

During 2011/12, there were 476 emergency admissions for stroke in Kirklees⁵, a reduction from the 570 in 2009/10. Locally, 1.2%⁸ reported having had a stroke. Again this differed by geographical location as well as demographic group and similar patterns to CHD were noted.

What significant factors are affecting this issue?

Most risk factors for cardiovascular disease (CVD) are linked, which means that if you have one risk factor you will probably have others as well¹.

High blood pressure

High blood pressure is just one of the risk factors for developing heart and circulatory disease, along with high cholesterol, diabetes and other lifestyle factors. As many as 5

million people in the UK are walking around, undiagnosed, with high blood pressure²².

There is often no clear cause of high blood pressure but individuals are at risk if they:

- are overweight
- have a relative with high blood pressure
- are of African or Caribbean descent
- consume a lot of salt
- don't consume enough fruit and vegetables
- don't partake in exercise
- drink a lot of coffee (or other caffeine-based drinks)
- drink a lot of alcohol
- are aged over 65

High blood pressure (hypertension) has an impact throughout the body, especially on the most sensitive organs such as the brain, causing a stroke, the heart, causing heart disease and the kidneys. High blood pressure rates in England have dropped slightly since 1998 for all ages, with the largest decreases occurring in the older age groups⁹.

In 2010 nationally, 1 in 3 (31%) of men and 1 in 4 (29%) of women had hypertension, or were being treated for hypertension³, a decrease of 1% in men since 2008³. High blood pressure increased with age in both sexes. Amongst those with hypertension, more than half (54%) of men and 2 in 5 (43%) women were not receiving treatment. Of those receiving treatment 57% had their high blood pressure controlled³.

Locally in 2012, 1 in 5 of adults (20%) reported having high blood pressure. This is lower than national figures but could reflect the fact that people in Kirklees may have undiagnosed high blood pressure. Dewsbury and Spen had the highest figures. Males, older age groups and those who were Black also had figures greater than the Kirklees average; as did those with a limiting condition, those who were workless and those who were living alone.

Personal behaviours

To significantly reduce the risk of developing CVD, individuals need to look at their lifestyle as a whole. In particular, individuals need to consider:

- diet
- weight
- amount of [alcohol](#) consumed
- amount of exercise and [physical activity](#) undertaken
- [smoking](#)²⁴

Up to 90% of the risk of a first heart attack is from unhealthy behaviours that can be changed¹². Death from coronary heart disease is 60% higher in smokers than in non-smokers¹³.

Different aspects of people's diet can increase the risk of cardiovascular disease^{14, 15}. High saturated fat raises cholesterol, high salt intake can raise blood pressure and a low intake of fruit, vegetables and fibre can increase the chances of obesity¹⁴. The physically inactive have a higher risk of heart disease¹⁶.

On examination of behaviours of those in Kirklees in relation to Heart Disease, Stroke and High Blood Pressure it was found that:

Of those with coronary heart disease⁸:

- 16% still smoked, this has increased from 12% in 2009
- Only 28% met the recommended level of physical activity
- 6.1% were obese (Kirklees average 18%) and 67.4% were overweight & [obese](#) (Kirklees average 53.5%)
- 11% reported eating fast food at least once a week
- More than a third reported that it was unlikely that they would eat 5 portions of fruit/vegetables a day
- 15.2% drank 6 or more units at least twice a week while over a quarter drank 6 or more units at least twice a month.

Of those who had experienced a stroke⁸:

- 1 in 5 (22.3%) still smoked
- Only 18% met the recommended level of physical activity.
- 2 in 5 (43%) were overweight and 1 in 5 (21%) were obese, i.e. more than half (64%) were at least overweight
- 14% reported eating fast food at least once a week
- 39% stated that it was unlikely that they would consume 5-a-day
- 12% consumed 6 units of alcohol at least twice a week.

Of those who had High Blood Pressure:

- (16%) still smoked and of these, an increase from 2009, 13%.
- 1 in 5 did not meet the recommended physical activity levels.
- 30% were obese and 43% were overweight, i.e. 73% were at least overweight.

It was interesting to note that those who reported that they had high blood pressure were 5 times more likely to report having a stroke and 5 times more likely to report having heart

disease which reflects that high blood pressure is an important risk factor for developing CVD.

Work

A range of work related issues such as jobs with high demands and low control, job insecurity, low job satisfaction and lack of supervisor and peer support are linked to various psychological and physical health impacts, including cardiovascular disease. Those who are unemployed are also at greater risk¹⁷.

Of those who had heart disease locally⁸:

- 85% reported their condition had limited them in the past 12 months
- Of those aged under 65 years, 36.3% were employed compared to 66.2% of those without heart disease

Of those who had experienced a stroke locally⁸:

- 89% reported their condition had limited them in the past 12 months.
- Of those aged under 65 years, 27% were employed compared to 66% of those without a stroke.

Resilience, Coping and Control

Resilience is the capacity to recover from and adapt to life events. Effective coping skills give people better control over their lives and add to their achievement of emotional wellbeing. The use of appropriate coping mechanisms contributes to resilience and has a protective effect when dealing with ill health¹⁸.

Using the Healthy Foundations segmentation tool we know that a large proportion of people with CVD are in the group least motivated to look after their health (defined as 'Unconfident Fatalists'). 39% of people with CVD fall into this category. These people:

- have a low sense of control over their health and low self esteem
- have low goal setting behaviour and are less likely to lead a healthy lifestyle
- are de-motivated
- are fatalistic
- experience low mood

Also:

- 1 in 6 (16%) of those who had a stroke felt lonely or isolated all or most of the time, compared to 1 in 16 (6%) without stroke.
- 1 in 11 (9%) of those with heart disease felt lonely or isolated all or most of the time, compared to 1 in 16 (6%) of those without heart disease

While Unconfident Fatalists see friends and partners as positive influence the number feeling lonely and isolated means this may not be an asset available to them to help them cope with life's stresses.

Local environment

Outdoor air pollutants, including those from engine exhaust fumes, increase the risk of cardio-vascular disease and the exposure is strongly linked to deprivation¹⁷.

Which groups are most affected by this issue?

Age

Locally in 2012, more than 1 in 5 of older people had heart disease (15.8%), compared with 2.7% aged under 65 years⁸.

Of those aged under 65 with heart disease⁸:

- 55% had high blood pressure compared with only 1 in 5 (22%) of the overall population.
- 31.4% had diabetes (which itself increases the risk of CVD).
- Only 36% were employed.

Older people were nearly 5 times more likely to have a stroke, i.e. 3.4% in comparison to 0.7%, an increase from 2009 where they were only 3 times as likely.

Gender

Locally, in 2012:⁸

- Men were three times more likely than women to have heart disease, 1 in 12 (8%) of men compared to only 2.6% of women. This was more than twice as likely aged over 65 years, with 1 in 6 (17%) of men compared to 1 in 8 (13%) of women.
- Men were more than twice as likely as women to have a stroke, 1.8% compared to 0.8%. This trend followed for both under and over 65s, Under 65 male 1.0%, female 0.4% & over 65 male 3.6%, female 2.8%.
- Men were more likely than women to have high blood pressure, under 65 male 1 in 5 (20%), female 1 in 10 (9.9%) and over 65 male and female 2 in 5 (42% male and 44% female).

Ethnicity

Locally, in 2012:⁸

- 4.4% of people of south Asian origin had heart disease compared to 1 in 18 (5.6%) of people of white origin.

- 1 in 5 (21%) of white people and 1 in 7 (15%) of south Asians had high blood pressure.
- 1.2% of white people had a stroke, the same as those of south Asian origin

	Heart Disease (%)		HBP (%)		Stroke (%)	
	White	South Asian	White	South Asian	White	South Asian
Under 65	2.6	3.5	14.7	12.3	0.6	1.0
Over 65	16.1	16.4	42.1	51.1	3.4	4.4

Income

There is a significant relationship between income and stroke and income and high blood pressure, particularly in those aged under 65 years. The lower a person's income the more likely they were to have experienced a stroke or have high blood pressure⁸.

	Heart Disease (%)	HBP (%)	Stroke (%)
Below £10000	8.0	25.0	1.9
- £20000	6.8	24.1	1.4
- £30000	4.0	17.6	0.7
- £40000	2.4	14.6	0.3
- £50000	2.3	11.5	0.1
More than £50000	1.3	11.9	0.1

Where is this causing greatest concern?⁸

[Dewsbury](#) had the highest rate of deaths from heart disease and the highest level of people living with heart disease aged under 65 years, 4%. [Mirfield](#) had the highest rate of deaths in those aged over 65 years, 1 in 5 (18%). Heart disease was highest in Dewsbury and Mirfield, 7%, and lowest in Denby Dale & Kirkburton.

[Batley](#) had the most people experiencing stroke in those aged over 65 years, 4%. Batley and Huddersfield South had the highest levels of stroke, 2% overall. Batley, Birstall & Birkenshaw along with [Spen](#) had the highest deaths from stroke. However, deaths from stroke in Dewsbury and Mirfield were increasing.

Batley had the most people with high blood pressure aged under 65 years, 1 in 5 (19%) and Dewsbury had the most aged over 65 years, 2 in 5 (44%).

Views of local people¹⁹

Locally, people who had experienced stroke discussed both the impact and the needs of people living with stroke. People said living with stroke caused them to feel:

- High levels of anxiety and stress and the “*constant fear of another stroke*”.
- Vulnerable, especially to threat of theft and other crime.
- That their lives and those of their families had been “*turned upside down*” and it was “*a struggle to get life back to normal*”.

They also reported:

- Having more medical issues.
- Difficulty with general mobility, particularly walking.
- Becoming tired more easily and having poor memory.
- Problems writing/chopping food/gardening.
- Extra stress and strain on [carers](#).

People living with stroke said the following would make it easier for them to manage living with stroke:

- More support for carers – and the chance of a “*little breather*” for them.
- More support for individuals and families.
- Help with decisions about adapting their home or new accommodation.
- Support to get back to reading, writing, driving and other everyday activities.
- More and better information about what stroke is and causes/effects of stroke.
- Someone independent to talk to and local support groups.

What could commissioners and service planners consider?

A third of circulatory disease could be avoided through a combination of reducing smoking rates, improving diet and increasing physical activity and so resources should be directed to these programmes⁴, both before people develop CVD and after.

Reducing tobacco use and weight is crucial to avoid further problems in those with CVD, as well as getting them more active.

A vascular screening programme has been commissioned across Kirklees in the form of NHS Health Checks and is an effective way of identifying those at risk of developing CVD.

A focus on addressing variations in primary care to ensure consistent management of the key risk factors and chronic diseases is essential and is being picked up by both Clinical Commissioning Groups as one of their priorities.

Maintain and develop the self-care programme to enable those with CVD to effectively manage and live with their condition.

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