Cardiovascular Disease

Introduction

Cardiovascular disease (CVD) is one of the major causes of death in under 75s in England. There have been huge gains over the past decades in terms of better treatment for CVD and improvements in lifestyle, but to ensure that there continues to be a reduction in the rate of premature mortality from CVD, there needs to be concerted action in both prevention and treatment.

Cardiovascular disease is defined as all the diseases of the heart and circulation including coronary heart disease (angina and heart attack), and stroke. Around one third of all deaths in the UK are due to these diseases.

Heart attacks and strokes are usually acute conditions and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason is a build‐up of fatty deposits on the inner walls of the blood vessels. Strokes can be caused by bleeding from a blood vessel in the brain or by blood clots.

CVD becomes increasingly common in people over the age of 60 and is rare below the age of 30.

Facts and Figure

Prevalence of Cardiovascular Diseases

For further information regarding the source of QOF prevalence data and its limitations please see Note on QOF Data.

Coronary heart disease is the most common type of heart disease and cause of heart attacks. The disease is caused by plaque building up along the inner walls of the arteries of the heart, which narrows the arteries and reduces blood flow to the heart.

In 2017/18 7,791 people had been identified by NHS Blackpool CCG GP practices as living with Coronary Heart Disease (CHD). It is estimated that this accounts for only 70% of the total population in Blackpool living with CHD and there are likely to be approximately 3,500 people with undiagnosed CHD.

NHS Blackpool CCG is shown as a purple marker in Figure 1, with all other CCGs shown in blue. Figure 1 shows that 4.4% of NHS Blackpool CCG’s registered population are recorded as living with CHD. The indicator is located outside the 3rd standard deviation meaning that Blackpool has a significantly higher prevalence of CHD than the average of English CCGs (3.2%).

Figure 1: CHD Prevalence Funnel Plot Analysis at CCG Level (2017/18 QOF)
Stroke is the loss of brain function due to a disturbance in the blood supply to the brain. Risk factors for stroke include old age, high blood pressure, previous stroke or transient ischemic attack (TIA), diabetes, high cholesterol, tobacco smoking and atrial fibrillation. High blood pressure is the most important modifiable risk factor of stroke.

In 2017/18, 3,934 people of all ages had been identified by NHS Blackpool CCG GP practices as having previously experienced a stroke or ischaemic attack. NHS Blackpool CCG is shown as a purple marker in Figure 2, with all other CCGs shown in blue. Figure 2 shows that 2.2% of NHS Blackpool CCG’s registered population are recorded as having experienced a stroke or ischaemic attack. The indicator is located outside the 3rd standard deviation meaning that Blackpool has a significantly higher prevalence of stroke than the average of English CCGs (1.8%).

The estimated prevalence of stroke for people aged 55-79 years is 4.3% in Blackpool; the England average is 3.7%. This means that approximately 1,700 people in this age group are estimated to have suffered from a stroke or ischaemic attack in Blackpool.

Figure 2: Stroke and Ischaemic Attack Prevalence Funnel Plot Analysis at CCG Level (2017/18 QOF)

Hypertension is a chronic medical condition in which the blood pressure in the arteries is elevated. Hypertension puts a strain on the heart, leading to hypertensive heart disease and coronary artery disease if not treated. Hypertension is also a major risk factor for stroke, aneurysms of the arteries (e.g. aortic aneurysm), and peripheral arterial disease and is a cause of chronic kidney disease. A moderately high arterial blood pressure is associated with a shortened life expectancy while mild elevation is not. Dietary and lifestyle changes can improve blood pressure control and decrease the risk of health complications, although drug treatment is still often necessary in people for whom lifestyle changes are not enough or not effective.

In 2017/18, 30,799 people had been identified by NHS Blackpool CCG GP practices as living with hypertension. NHS Blackpool CCG is shown as a purple marker in Figure 3, with all other CCGs shown in blue. Figure 3 shows that 17.3% of NHS Blackpool CCG’s registered population are recorded as living with hypertension. The indicator is located outside the 3rd standard deviation meaning that Blackpool has a significantly higher prevalence of CHD than the average of English CCGs (13.9%).

The estimated prevalence of undiagnosed hypertension is 12.9% in Blackpool; the England average is 12.2%. This means that between approximately 17,000 people are estimated to be living with undiagnosed hypertension in Blackpool.

Figure 3: Hypertension Prevalence Funnel Plot Analysis at CCG Level (2017/18 QOF)
Mortality from Cardiovascular Diseases

There were 465 deaths from CVD across Blackpool in 2015-17 in people aged under 75. The directly standardised mortality rate (in this case per 100,000 population) is calculated to allow comparison between geographies of different population sizes and with different gender and age make-ups. As displayed in Figure 4, Blackpool's mortality rate from circulatory diseases in those aged under 75 (119.7 per 100,000 pop.) is the second highest in the country and more than 50% greater than that of England (72.7 per 100,000 pop.).

Figure 4: Funnel plot of mortality from all cardiovascular diseases, people aged under 75 years, 2013-15 - Lower Tier Local Authorities

Figure 5 shows the trend in mortality from cardiovascular diseases in those aged under 75, comparing Blackpool to the North West and England averages. Nationally and in Blackpool there has been a decrease in mortality from cardiovascular diseases, although the mortality rate in Blackpool remains significantly higher than the national and regional rate.

Figure 5: Trend in CVD mortality - persons aged under 75 - 2001-03 to 2015-17
Figure 6 shows the difference in male and female mortality for those aged under 75 years. Of the 465 deaths in 2015-17 in Blackpool, 69% were male and 31% female which is similar to the England average split. However, it can clearly be seen that in Blackpool rates for both sexes are significantly higher than the national average.

Figure 6: Mortality from CVD, males and females aged under 75, 2015-17

Preventable mortality

The basic concept of preventable mortality is that deaths are considered preventable if, in the light of the understanding of the determinants of health at the time of death, all or most deaths from the underlying cause (subject to age limits if appropriate) could potentially be avoided by public health interventions in the broadest sense.

- In Blackpool, 311 (68%) of the deaths from cardiovascular disease in people aged under 75 are considered preventable
- This is slightly higher than the national average of 64%
- The difference between males and females in Blackpool is considerable, with 73% of male deaths considered preventable compared to 58% of female deaths

Figure 7 shows mortality from coronary heart disease in people aged under 75 years for all CCGs in England. There were 275 deaths in 2015-17, a Blackpool rate of 70.5 per 100,000 pop, significantly higher than the England average of 38.8 per 100,000.

Figure 7: Funnel plot of mortality from coronary heart diseases, people aged under 75 years, 2015-17 - Lower Tier Local Authorities

Figure 8 shows mortality from stroke in people aged under 75 years over for lower tier local authorities. Across Blackpool there were 65 deaths from stroke in people aged under 75.

Figure 8: Funnel plot of mortality from stroke, people aged under 75 years, 2015-17 - Lower Tier Local Authorities
Services

- The Sentinel Stroke National Audit Programme (SSNAP) publishes national and local level findings on the organisation of stroke services, including acute care organisation, staffing and pathway at discharge. It reflects the organisation of stroke services as at July 2016 and gives a comprehensive picture of current services. Results for Blackpool Teaching Hospital show it meets 4 out of the 10 key indicators on stroke service organisation.

SSNAP Acute Organisational Audit 2016 for Blackpool Teaching Hospital NHS Foundation Trust (270 KB)

- PHE summary profiles on CHD and Stroke provide a broad understanding of how these conditions are treated and how Blackpool compares with other areas. They show the impact on the local population, identify emerging issues and aim to help improve services.

CVD Profile - Coronary Heart Disease (367 KB)

CVD Profile - Stroke (260 KB)

National and local strategies

- DH, Cardiovascular Disease Outcomes Strategy (March 2013) provides advice to local authority and NHS commissioners and providers about actions to improve cardiovascular disease outcomes.

- PHE, Cardiovascular disease data and analysis: a guide for health professionals explains how commissioners and health professionals can use data and analysis for decisions about cardiovascular services and interventions.

- PHE, Health matters - Action on cardiovascular disease: getting serious about prevention looks at the work being undertaken to prevent cardiovascular disease (CVD).

- NICE guideline [PH25] Cardiovascular disease prevention (June 2010) covers the main risk factors linked with cardiovascular disease: poor diet, physical inactivity, smoking and excessive alcohol consumption. It aims to reduce the high incidence of cardiovascular disease.


- The Blackpool CCG: CVD primary care intelligence pack uses GP practice data on prevention, detection and management across a range of cardiovascular conditions. It provides a narrative that explains the case for prevention and suggests actions, shows variation between local practices and between demographically similar clinical commissioning group (CCG) areas and identifies the number of undiagnosed and inadequately treated people in the local area.

Risk Factors

Risk factors for CVD include:
Many of the above risk factors are linked. This means that if you have one risk factor, you're more likely to have others. 

[1] PHE, National General Practice Profiles
[2] PHE, Disease and risk factor prevalence
[3] NHS Choices, Cardiovascular disease