Cardiovascular Disease (CVD)

1. Introduction

Cardiovascular disease (CVD), also known as heart and circulatory disease, is the largest cause of death in the UK. CVD includes conditions such as coronary heart disease (angina and heart attack) and stroke. In 2009, the number of deaths from CVD (approximately 149,000) accounted for one-third of all deaths in England. About half of all deaths due to CVD are attributable to coronary heart disease, while around one quarter are from stroke.

Coronary heart disease (CHD) is caused by a gradual build-up of fatty deposits in the walls of coronary arteries, causing them to narrow and deliver less oxygen to the heart. This lack of oxygen can lead to angina, a pain or discomfort in the chest, and less commonly in the arms, neck, jaw, back and stomach. A heart attack occurs when the fatty deposits break away from the artery wall and form a clot, which starves the heart of blood and oxygen.

A stroke is caused when an artery which carries blood to the brain is blocked by a clot, or when an artery bleeds directly into the brain. The risk of stroke is increased if the arteries in the neck are narrowed due to a build-up of fatty material.[1]

The following factors are known to increase the risk of CVD:

- Smoking;
- High blood pressure or cholesterol;
- Physical inactivity;
- Being overweight or obese;
- Diabetes;
- Family history of CVD;
- Age – the risk of developing CVD increases with age; and
- Ethnicity – some ethnic groups are at higher risk (e.g. South Asians in the UK are 1.5 times more likely to die from CHD under 75 years than other groups in the UK.

Small lifestyle changes can reduce the risk of developing CVD, and for those already diagnosed, can reduce the risk of future problems. These changes can include stopping smoking, taking control of high blood pressure, lowering cholesterol levels, increasing physical activity, achieving and maintaining a healthy weight, having a healthy and balanced diet, drinking in moderation, and for those with diabetes, controlling blood glucose levels.

2. The Local Picture[2]

2.1 All Cardiovascular Disease (CVD)

While the rate of death from CVD is decreasing in Hounslow, it is still significantly higher than the national average. From 2007 to 2009, Hounslow's CVD mortality rate for persons under the age of 75 years was 80.3 per 100,000 population, 46% lower than the 1995–97

[1] British Heart Foundation (2011) http://www.bhf.org.uk/heart-health/conditions/cardiovascular-disease.aspx

[2] Unless where stated, all data is adapted from: South East Public Health Observatory (2010) Cardiovascular disease health profile – Hounslow. www.sepho.org.uk/NationalCVD/docs/5HY_CVD%20Profile.pdf

rate. Deaths from CVD in Hounslow remain significantly higher than those for England as a whole (70.4 deaths per 100,000 population).

In 2009, almost one-third (31%) of all deaths in Hounslow were as a result of CVD, a reflection of the national picture. For people aged less than 75 years, CVD accounted for 29% of male deaths and 20% of female deaths. The risk of developing CVD increases significantly over the age of 40 years. The proportion of the population aged 40 years and over in Hounslow is expected to grow by 2030, from 19.6% to 21.9% of men and from 20.1% to 20.7% of women. This will affect both the number of people in Hounslow with CVD and expenditure on the condition.

Compared with other areas, NHS expenditure on cardiovascular diseases in Hounslow is relatively high. In 2009/10, Hounslow spent £165.09 per head of population on CVD – higher than both the London average spend of £131.99 and the England average spend of £137.89. Compared with other PCT areas, Hounslow's CVD expenditure was much higher for hospital-related care than any other factor.[3]

2.2 Coronary Heart Disease (CHD)

2.2.1 Prevalence

Approximately 2.5% of Hounslow's population has been diagnosed with CHD – a significantly lower figure than that for England (3.4%), but higher than that for London (2.2%). (Table 1) However, modelled estimates suggest that around 4.7% of Hounslow's population aged over 16 years has CHD. Around 29% of people with CHD in Hounslow may currently be undiagnosed and not receiving treatment.

Hounslow has a higher indirectly standardised rate of CHD by GP practice, at 254.8 per 10,000 people, compared with both London (234.3 per 10,000) and national (179.1 per 10,000) practice averages. (Table 2)

Prescribing costs for CHD drugs are slightly higher than the London average, but below the national rate. (Table 5)

2.2.2 Mortality

During 2007–09, CHD accounted for 18% of all deaths in Hounslow. People that die from CHD in Hounslow are most likely to be between the ages of 70 and 85 years (60% of all CHD deaths). (Figure 5) For people under the age of 75 years, CHD accounted for 18% of male deaths, and 9% of female deaths. Despite this, mortality rates from CHD are on an overall downward trend in Hounslow. Mortality from CHD has fallen in the last eight years, from 243 per 100,000 men and 135 per 100,000 women in 2002- 2004, to 191 per 100,000 men and 98 per 100,000 women in 2008-10. (Figure 3) These figures represent a 21% and 27% reduction in male and female deaths from CHD, respectively.

2.2.3 Hospital Care

The rate of emergency admissions to hospital for CHD is higher in Hounslow compared with both the London and England averages. In 2009/10, the emergency admissions rate for CHD in Hounslow was 229 per 100,000 population. This was significantly higher than the rates for England (205 per 100,000 population) and London (216 per 100,000 population). However, rates of emergency CHD admissions have been falling over time in Hounslow – a

[3] NHS Hounslow analysis of programme budgeting data

drop of 29% was observed between 2003/04 and 2009/10. Similar declines have been seen across London (22%) and England (24%) during the same period.

The majority of people who had an emergency admission for CHD were between 50 and 85 years of age, with a spike in those aged 70-80 years. (Figure 2)

People who live in the most deprived areas of Hounslow were 1.6 times more likely to have an emergency admission to hospital for CHD during 2009/10, compared with those living in the least deprived areas.

Rates of CHD-related hospital operations are higher in Hounslow than other areas. In 2009/10, the coronary artery bypass graft (CABG) rate in Hounslow was 61 per 100,000 admissions – significantly higher than both England (32 per 100,000) and London (35 per 100,000). Despite this, the average length of hospital stay for CHD has reduced over the last four years from 7.7 days in 2007/08 to 5.0 days in 2010/11. (Table 3)

Hounslow generally has lower costs for CHD-related outpatient care, compared with the London PCT average, but higher costs than the national average. (Table 4)

2.3 Stroke

2.3.1 Prevalence

Around 1% of Hounslow's population has suffered a stroke – on par with London, but lower than the national figure (1.7%). (Table 1) Hounslow performs significantly better than London and England in referring stroke patients onto specialist assessment, but worse on measuring both blood pressure and cholesterol. By GP practice though, Hounslow is mostly in line with London on these indicators. (Table 2) Most people who have suffered a stroke in Hounslow are aged 70-90 years. (Figure 2)

Hounslow has a higher indirectly standardised rate of stroke by GP practice than both the London and English practice averages (128.8 per 10,000 people, compared with 122.3 and 73.7 per 10,000 people). (Table 2)

Prescribing costs in Hounslow for antiplatelet and lipid regulating drugs are slightly higher than the London average, but significantly lower than the national rate. (Table 5)

2.3.2 Mortality

Around 4% of all deaths in Hounslow are accounted for by stroke. For deaths of people under the age of 75 years during 2007–09, stroke was the cause of 4.2% of male deaths and 3.9% of female deaths in Hounslow. However, like CHD, mortality rates for stroke decreasing in Hounslow. Mortality for males has fallen by 30% from 114 per 100,000 men in 2002- 2004, to 82 per 100,000 men in 2008-2010. During the same period, female mortality rates fell from 98 per 100,000 women to 74 per 100,000 women, a 24% reduction. (Figure 3)

The 2007–09 stroke mortality rate for persons aged less than 75 years in Hounslow was 12.7 per 100,000. This was lower than both the England and London rates of 12.8 and 13.4 per 100,000 people aged under 75 (respectively).

2.3.3 Hospital Care

In 2009/10, the emergency admission rate for stroke in Hounslow was 108 per 100,000 people. This is higher than the England average of 104 per 100,000 people, but lower than the London rate of 113 per 100,000 people.

Analysis of local hospital data indicates that the rate of emergency stroke admissions in Hounslow has steadily increased over the last four years. (Table 3) Most of those who experience an emergency admission due to stroke are between the age of 75 and 90 years (71%).

Compared with those who live in the least deprived areas, people who live in the most deprived areas of Hounslow are 50% more likely to be admitted to hospital for stroke in an emergency. The emergency admission rate for stroke during 2009/10 for these persons was 140 per 100,000 population, compared with just 91 per 100,000 in the least deprived areas.

Between April 2007 and March 2011, 76 people (47 individual patients) were admitted to hospital in Hounslow for a fall following a stroke. These people stayed in hospital an average of 14.6 days, with a total cost of £256,900. (Table 4)

3. Strategic Leadership and Collaboration

The North West London Cardiac Network brings together clinicians, other health professionals and managers from a range of partner organisations to facilitate working together to improve patients' CVD services. The Network makes it possible for organisations to link together to develop consistent approaches to a patient's potential experience of services across a large geographical area.

The Network Board consists of both clinical and non-clinical representatives from across NW London, covering primary, secondary and tertiary care, commissioning, public health, patients and carers and the London Ambulance Service. Membership of the Network Board has been developed to ensure close relationships between the Network and each of the PCTs' Cardiac Local Implementation Teams (LITs). This approach focuses on delivering work which benefits from a sector-wide approach, whilst allowing the development of local services which meet the individual needs of their particular health economies.

Whilst many improvements in the delivery of care to people with cardiovascular diseases have been made, it is recognised that there is still much to be achieved. There remain significant variations in service delivery across the Network which must be addressed, and cost-effective, evidence-based treatments which provide safe and appropriate care need to be implemented across the sector.

4. Priorities

In 2011/12, the key areas of focus for cardiovascular disease in the Borough are:

- Implementation of the 5% CVD DAS (Desirable, Affordable, Sustainable) Challenge;
- Development of more community based services closer to patients;

- Development of Single integrated Care Pathways for Heart failure;
- Reinstate NHS Health Checks with emphasis on deprived areas;
- Direct access to diagnostics implementing guidelines of the National Institute for Health and Clinical Excellence; and
- Developing an Atrial Fibrillation strategy in conjunction with North West London Cardiac and Stroke Network (NWLCSL).

5. Summary of Need

The following table summarises the needs in cardiovascular disease in the London Borough of Hounslow.

SUMMARY OF NEED: CHECKLIST	
Is need increasing over time?	**Yes**
Is need greater than the London average?	**Yes**
Is there qualitative intelligence indicating that need is substantially unmet?	**Yes**
Is there an external inspection or report suggesting need is unmet?	**Yes**
Are quality indicators worsening over time?	**Yes**
Are quality indicators worse than the London average?	**Yes**
Is there an intervention of proven effectiveness to address the need which is not currently delivered in Hounslow (or not delivered enough)?	**Yes**