

Coronary Heart Disease: *Factsheet*

Tower Hamlets Joint Strategic Needs Assessment 2010-2011

Executive Summary

This factsheet considers Coronary Heart Disease, or CHD, a condition which encompasses both chest pain and heart attacks.

- CHD is a major problem in Tower Hamlets, with the fifth highest premature mortality rate in the country.
- CHD accounts for 70% of all cardiovascular deaths (conditions relating to the circulatory system).
- There is a wide programme of preventative intervention in place, covering the four major risk factors for the condition (smoking, diet, physical activity and alcohol). However, those at highest need (currently white males) are not necessarily taking up these interventions due to a number of perceived individual barriers.
- A care package is being delivered in primary care to support the prevention of CHD and deliver multidisciplinary care for people with CHD, whilst promoting self-management. This has been introduced in the last financial year and thus will need to have been fully implemented for at least a year before an evaluation of its effectiveness can be made.
- Early awareness of symptoms of coronary events are not fully understood in the local population, nor how most appropriately respond to them
- Work has taken place to refine the chest pain pathway and consider the cost effectiveness of developing this further.
- Emergency admissions to hospital for CHD have reduced considerably, though are still above the national and regional average.
- Patients with a heart attack are managed very quickly through the health service. Whilst speed of treatment is paramount, the service needs to be mindful of the confusion this can cause the patient and the implications this can have on their long term understanding of their condition. Patient experience and clarity of the care pathway needs fuller consideration.
- Cardiac rehabilitation is fundamental to the care of CHD patients and has been shown to have a significant positive impact on patients' health. It is important that this service continues to be closely monitored and efforts made to increase uptake above the national average.

Recommendations

- A strategy for addressing CVD prevention in white males should be developed based on the research that has already taken place locally.
- There is a need to increase both awareness of symptoms of CHD and where to seek appropriate treatment.
- The CVD care package in primary care needs close monitoring through its early implementation to feedback to GP networks on progress and provide areas of key learning.
- The pathway for people with heart attacks (myocardial infarction) requires further refinement, including reassessment of waiting times and patient experience.
- Continued efforts to increase uptake of cardiac rehabilitation and an assessment of the cost

effectiveness of different interventions need to be made.

1. What is CHD?

Coronary Heart Disease (CHD) is a term which describes what happens when blood supply to the heart is interrupted due to fatty deposits in the coronary arteries, (or atherosclerosis). If the arteries narrow due to fatty deposits and restrict blood supply it can cause chest pain, or angina. If the artery becomes completely blocked it causes a heart attack, or myocardial infarction.

CHD is the UK's biggest killer, with 1 in 5 men and 1 in 7 women dying of CHD. An estimated 2.6 million people have CHD across the UK. Managing the condition is important to reduce cardiovascular¹ complications, such as repeat heart attacks, stroke, heart failure and vascular dementia.

Risks of CHD:

Age – CHD increases with age.

Gender - CHD is more common among men though it is the leading cause of death in both sexes.

Deprivation - CHD is positively correlated with socioeconomic deprivation

Ethnicity - premature mortality from CHD is greater in South Asian populations.

Diabetes, high blood pressure, high cholesterol, obesity and psychosocial wellbeing increase chances of developing CHD and mean that an existing condition is more difficult to manage. Smoking – The World Health Organisation (WHO) estimate that 20% of all CHD is attributable to smoking. Mortality from CHD is 60% greater in people smoked than those who did not.

- Diet – As can be seen in Table 1, over or under- consumption of a number of foods can lead to an increased risk of developing CVD. NICE report that targeting certain dietary intake behaviours lead to cost savings, for example: A 3g reduction in mean salt intakes across the UK would lead to 14-20,000 fewer deaths from CVD annually and £350 million saved
- If the UK's trans fat^[1] intake was less than 0.7% total fat energy, we could save £2 billion

Table 1: Summary of NICE nutrition related recommendations for primary prevention of CVD in the adult population

Recommendation		Reason for Recommendation
Salt	Maximum 6g/day by 2015 and 3g/day by 2025	High levels of salt linked to high blood pressure which can lead to strokes and CHD

¹A broader term which relates to the entire circulatory system, rather than just the heart. In Tower Hamlets CHD makes up approximately 70% of all cases of CVD.

^[1] Industrially produced trans fatty acids are present in foodstuffs manufactured with hydrogenated or partially hydrogenated vegetable oil. Trans fats are also produced when foods are fried in oil that is repeatedly used where it is allowed to cool and be reheated

Saturated fats	< 11% of food energy	Increases postprandial serum LDL cholesterol which has been linked to CHD
Industrially produced trans fatty acids (see footnote 1)	Eliminate completely from the diet	Increases postprandial LDL cholesterol as well as decreasing HDL cholesterol. Linked to greater risk for CHD than saturated fats.

Exercise – The WHO estimate that 20% of all CHD is due to physical inactivity. The Chief Medical Officer recommends that adults exercise for 30 minutes at least five days per week. Increasing physical activity will also decrease risk of CHD.

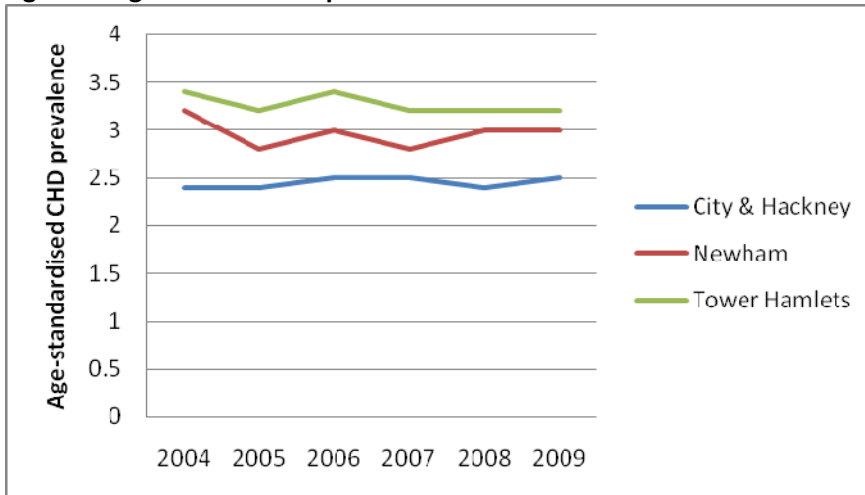
Alcohol – The WHO estimates that 2% of CHD in men is due to excessive alcohol consumption. Moderate consumption of 1-2 units per day seems to decrease risk of CHD. However, alcohol increases the HDL cholesterol and contributes to other risk factors for CHD, such as obesity.

High blood pressure and high levels of total cholesterol are key clinical indicators for both being at high risk of CHD, and of having poor control of one’s condition. In addition to lifestyle intervention they can be treated pharmaceutically with anti-hypertensives and statins respectively.

2. What is the local picture?

There are 4769 people who have CHD in Tower Hamlets. This represents an age-standardised prevalence of 3.1%, (March 2010). There are an estimated additional 2,800 cases of CHD that are not currently diagnosed. It is projected that by 2020, 8,700 people in total will have CHD in Tower Hamlets. Prevalence has been consistently higher than other inner North East London PCTs, though it is gradually reducing:

Figure 1: Age-standardised prevalence of CHD in inner North East London, 2004-09 (CEG)

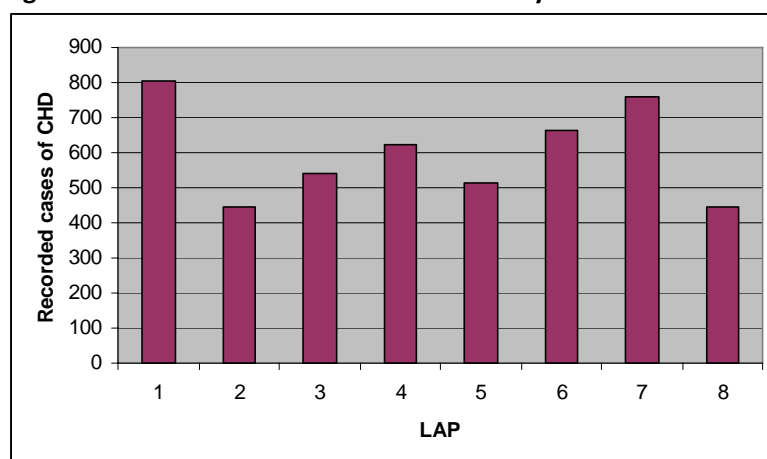


Approximately 81 people die from CHD in Tower Hamlets each year. This is a local rate of 68 per 100,000 people and compares to a London rate of 40 and an England rate of 39.

CHD and deprivation are closely linked, which goes some way to explain the high rates in Tower Hamlets. There is a high correlation between unemployment and CHD, which is strongest in the Bangladeshi population. Men account for two thirds of CVD cases locally, and there is a higher rate of the Bangladeshi population than other ethnic groups. However, local analysis has determined that of those who die from a heart attack, without having had any contact with secondary care in the two years prior to the event, the majority are white men.

Numbers of CHD cases are greatest in Local Area Partnerships (LAPs) 1 and 7, in the north west and south east, respectively.

Figure 2: Number of recorded cases of CHD by LAP



3. What are the effective interventions?

In 2000 the Department of Health published the National Service Framework for CHD². It set out twelve standards to ensure best practice care for people with CHD:

- 1) Develop and monitor policies that reduce risk factors for CHD and addresses inequalities.
- 2) NHS should work in partnership to reduce the prevalence of smoking
- 3) Identification of all people with cardiovascular disease by primary care and offer comprehensive advice and treatment
- 4) Identification of people at risk of cardiovascular disease and offer advice and treatment to reduce their risks.
- 5) People experiencing a possible heart attack should receive help within 8 minutes of calling for help
- 6) People thought to be suffering a heart attack should receive prompt treatment within 2.5 hours of calling for help
- 7) People admitted to hospital with a heart attack should be appropriately assessed and receive cost-effective treatment. Based on available evidence this means having an angiogram, which involves inserting a stent through keyhole surgery to open the blockage in the artery.
- 8) People with symptoms of angina should receive appropriate investigation and treatment
- 9) People with increasing frequency or severity of angina should be referred to a cardiologist
- 10) Secondary care trusts should have a system in place to investigate and treat people with suspected CHD
- 11) Patients with suspected heart failure should be offered appropriate investigation and treatment
- 12) Patients should be invited to participate in a multidisciplinary programme of secondary prevention and cardiac rehabilitation

²http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4057526.pdf

4. What is being done locally to address this issue?

CHD is being addressed with a multi-level preventative strategy that spans the length of the pathway. Through prioritising the prevention of developing CHD and supporting patients who have developed CHD to manage their condition, it is intended that that both CHD and CVD mortality will decrease at a greater rate than the national average.

The programme of prevention will focus on white, low-income men for the forthcoming year as they have been found to be the group at highest risk within Tower Hamlets. Social marketing research found the key areas for action to include rebranding NHS Health Checks to be more tailored to men, outreach work in pubs, supermarkets, etc. and forming links with mental health services.

Early awareness is a key priority. The London Ambulance Service is providing life support training to key community groups, as well as increasing the availability of defibrillators in high risk areas. There is also an acknowledged need to increase awareness of the symptoms of heart attacks.

Primary care has seen considerable investment in programmes to support CHD prevention (see NHS Health Checks and Hypertension factsheets). This is supported by a CVD secondary prevention care package, for both CHD and stroke patients, which gives tailored care to patients depending on their level of control over their condition. The package promotes self-management through individual care planning consultations, and supporting practitioners with regular multidisciplinary meetings. Additional support is available for patients in the six months following a heart attack to ensure a smooth pathway between secondary and primary care and to promote the benefits of cardiac rehabilitation.

Secondary care clinics include the chest pain clinic for referrals either directly from the patient, GPs or via A&E. A cost effectiveness assessment of the new NICE guidance on chest pain (CG95) found that whilst the new pathway would be cost effective in its own right, the incremental cost effectiveness ratio (ICER) resulting from moving from existing practice to following the new NICE guidance was around £72,000 per Quality Adjusted Life Year (QALY) which means that moving from current practice to following the NICE guidance was not cost effective based on the assumptions in the model.

Cardiac rehabilitation, provided to Tower Hamlets patients by Barts and the London Trust, has been expanding to incorporate a greater number of options for patients, including home rehab patients.

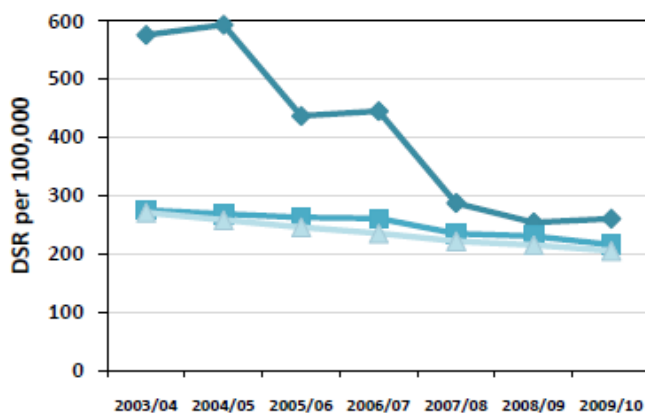
5. What evidence is there that we are making a difference?

Factsheets are available describing progress against the key risk factors for CHD: smoking, diet, physical exercise and alcohol. Levels of smoking and obesity in the CHD population have remained stable over the last two years. Levels of new diagnosis (diagnosed in the previous 6 months) have remained fairly stable over the last year at approximately 4% of the population

95% of CHD patients have received an annual review as of March 2011. 89.7% people with CHD had their blood pressure controlled below 150/90, which is the tenth highest proportion in London and 71/152 in England. 82.8% of people with CHD have their cholesterol controlled below 5mmol/l, which is the fourth highest rate in London and 48/152 in England (QOF, 2009-10). There is evidence that cholesterol control in the Bangladeshi population is better than the White population, and worst in the Black population³. The Clinical Effectiveness Group (CEG) for NHS Tower Hamlets, Newham and City and Hackney were finalists at the 2011 NICE Shared Learning Award for statin prescribing for ischaemic heart disease.

The emergency admission rate for CHD in Tower Hamlets has decreased by 53.7% between 2003/04 and 2009/10, compared to 21.5% in London and 24.2% in England. Rates are significantly higher for men in Tower Hamlets (393.1 per 100,000) than London (306.9) and England (287.4) but were comparable for women (125.8, 135.0 and 131.0, respectively). Inequalities in emergency admissions (difference between the 10% most deprived and 10% least deprived) are greater in Tower Hamlets than nationally but have fallen from 405.1 admissions per 100,000 in 2003/04 to 222 in 2009/10.⁴

Trend in CHD rates (DSRs), 2003/04 to 2009/10



Source: HES, The NHS Information Centre for health and social care, ONS

The national target for the time between calling for help for a heart attack (myocardial infarction) and receiving angioplasty treatment is 150 minutes. The median time in Tower Hamlets is 138 minutes, compared to 116 minutes in London and 112 in England.⁽⁴⁾ This longer delay is of concern, particularly given that the London Chest Hospital is located within Tower Hamlets.

Rates of angiography and revascularisation are consistently higher in Tower Hamlets than London and England, though they are decreasing⁽⁴⁾. Ratios of elective to non-elective angioplasty suggest that men in Tower Hamlets have double the proportion of elective interventions than women and compared to elsewhere⁽⁴⁾.

Table 2: Elective/non-elective angioplasty ratios in Tower Hamlets, London and England, 2009/10

	Tower Hamlets	London	England
Males	1.19	0.64	0.62
Females	0.64	0.70	0.65
Persons	1.20	0.62	0.63

Uptake of cardiac rehabilitation is currently 40%, in line with national average.

6. What is the perspective of the public on support available to them?

A large qualitative study was conducted with white, low income males aged 30-50 to explore their attitudes towards CVD risk. Awareness of CVD and its risk factors was high, but not necessarily acted on. Fatalistic attitudes were prominent in this group, and CVD was not considered relevant to them at their current age. Barriers to using health services included a mistrust of GPs and concern not to burden others with their problems. Health services were not considered a male environment and active outreach to places they used more often (such as pubs or shopping centre car parks) were welcomed.

Other findings for some, but not all, of this population included:

- Mental health issues, cancer or money worries were of greater concern than CVD
- Unhealthy behaviours were acknowledged but considered enjoyable and integral to their social life so there was a reluctance to change
- Some actively wanted to change their lifestyles but didn't know how
- Fear and lack of time were common barriers to understanding more about their own health
- It was important to make any behavior changes relevant to their current lifestyle and examples of people like them were important
- Mothers, rather than partners, had influence over their behaviour There was a desire for consistency in the professional delivering of health services in order to build a trusting relationship.

A number of discovery interviews were conducted with people who had had a heart attack to understand their experience of what had happened to them and the services they had encountered. Key findings were:

- There was a lack of awareness of symptoms of a heart attack and were often attributed to something else, such as over-exertion or heart burn)
- There was a considerable delay between onset of symptoms and calling for help due to this lack of understanding and not wanting to trouble others
- Some patients reported going to their GP or taking a bus to the hospital rather than calling an ambulance
- Experience of ambulance services were generally positive though there were some difficulties reported in describing symptoms
- The progression through hospital was considered to be very quick (patients are typically discharged within 48 hours) which led to confusion over whether they had had a heart attack and how seriously they should take the event
- There was considered to be a lack of support in hospital to help stop smoking
- There were contradictory views on the amount of information given, ranging from knowing very little about the procedures they had undergone to information overload
- Meeting with a cardiac rehabilitation nurse in hospital was often the first point at which patients were reassured about their anxieties. Patients spoke about the service positively overall despite some

individual concerns about coping with their condition

7. What more do we need to know?

- A series of discovery interviews are planned to help understand the differences in statin prescribing between different ethnic groups, and reasons for non-compliance with this medication.
- The CVD secondary prevention care package was implemented in April 2011, with the intention of improving management of CHD patients and improving the transition between secondary and primary care for patients who have had a heart attack. An evaluation against these objectives will need to be conducted one year after implementation.
- The chest pain pathway requires further evaluation following the finding that adjustments to the existing pathway, to ensure they are in-line with NICE guidance, were not cost-effective.
- The findings comparing elective/non-elective angioplasty admissions are surprising and inconsistent with other evidence. Reasons for this will need to be investigated more fully.

8. What are the priorities for improvement over the next 5 years?

- CHD is a major problem in Tower Hamlets, accounting for 70% of all cardiovascular deaths.
- There is a wide programme of preventative intervention in place, covering the four major risk factors for the condition (smoking, diet, physical activity and alcohol). However, those at highest need (currently white males) are not necessarily taking up these interventions due to a number of perceived individual barriers.
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Key Recommendations

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9. Key Contacts

- Natalia Clifford, Senior Public Health Strategist, NHS Tower Hamlets
- JSNA@towerhamlets.gov.uk
- The workstream that monitors the strategy for CHD reports into the Vascular Care Quality Group
- Further information on CHD can be found at:
<http://www.nhs.uk/conditions/coronary-heart-disease/Pages/Introduction.aspx>
<http://www.bhf.org.uk/>
<http://www.nice.org.uk/nicemedia/live/13024/49273/49273.pdf>

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Date signed off by Senior JSNA Leads:	<i>Date factsheet signed off by senior JSNA leads from Public Health and LBTH</i>	Signed off by (Public Health Lead):	<i>e.g. Director or Associate Director</i>	Date signed off by Strategic Group:	<i>Date factsheet signed off by Strategic Group</i>	Sign off by Strategic Group:	<i>Name the relevant Strategic Group</i>
		Signed off by (LBTH Lead):	<i>e.g. Director of Adults/CFS</i>				