

REACH
HIGHER

**NHS Brent
Public Health Annual Report
2009**



FOREWORD

This is the fifth Annual Public Health Report for Brent PCT. It focuses on primary care information and builds on the picture of health presented in previous reports. The report is primarily based on analyses of data from the new GP contract about people registered with a GP in Brent.

The development of primary care services is central to the PCTs plans to improve health and healthcare in Brent. This report provides an overview of the current status of primary care in Brent and highlights some of the challenges it faces and areas where improvement is needed

Continuing to support practices to improve the management of their patients will play a significant role in improving health in Brent. We hope that this report will help to achieve this aim. In the future we would like to be able to use primary care data to understand more about significant health behaviours such as smoking and to monitor and respond to health inequalities.

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Executive Summary

This is the fifth Annual Public Health Report for Brent PCT. It focuses on primary care information and builds on the picture of health presented in previous reports. The report is primarily based on analyses of data from the new GP contract about people registered with a GP in Brent.

The development of primary care services is central to the PCTs plans to improve health and healthcare in Brent as set out in the Commissioning Strategy Plan 2009 to 2014. This report provides an overview of the current status of primary care in Brent and highlights some of the challenges it faces and areas where improvement is needed. The report explores a number of key questions such as:

- What does good quality look like in primary care and how do we measure it?
- What impact does the way in which primary care services are organised have on quality?
- What is the relationship between quality and utilisation of secondary care services?
- And, to what extent are the health inequalities that exist in Brent reflected in the provision and quality of primary care services?

The initial chapters give an overview of the population and health in Brent, before focusing specifically on access to services and the prevalence and management of risk factors and long term conditions in Brent. The final three chapters cover diabetes, circulatory diseases and mental health in more detail.

THE PEOPLE OF BRENT

Brent is one of only two local authorities serving a population where the majority of people are from ethnic minorities, and these groups are increasing faster than any other. Our population is growing and dynamic. Brent's population forecast by the Greater London Authority (GLA) in 2010 was approximately 280,000, although Council-commissioned research suggests that this figure could be over 15,000 higher and is growing steadily.

Almost a quarter of residents are under 19 years old. The GLA predict that Brent's population will increase by roughly 10,000 people every ten years. Brent's population is predicted to be 284,412 by 2014. The highest growth is expected to occur in Tokyington as a result of the Wembley stadium development which is projected to increase by 10,000 by the year 2031.

HEALTH AND WELLBEING IN BRENT

Over the last ten years, rates of deaths from all causes have decreased for both men and women and are lower than the England average. Circulatory diseases, including heart disease and stroke, and cancers are the most common cause of death in Brent. There are significant health inequalities, linked to location, gender, level of deprivation and ethnicity. The most deprived wards in the South of the borough have a higher death rate, and lower life expectancy than the less deprived wards in the North of the borough.

Brent has one of the highest rates of diabetes (5.16%) and TB (93.6 per 100,000) in London and in England. Smoking is the single greatest cause of preventable illness and premature death. Obesity is the second most significant contributory factor to ill health and preventable disease. Brent has one of the lowest adult physical activity rates in England with 56% reporting they do not participate in any sporting or physical activity and only 18% taking exercise on 3 occasions a week for 30 minutes.

ACCESS TO SERVICES

There were 354,198 patients registered with Brent GPs as at the 1st January 2010. Patient turnover at approximately 20% per annum is high. The number of WTE GPs per 100,000 population weighted by age and need was 68.8 per 100,000 in 2006. This is higher than the England rate of 61.8 per 100,000 and the 15th highest in London. Analysis of primary care within Brent shows a higher percentage of smaller practices as compared with national averages. 70% of Brent Practices are one and two handed practices compared to 54% in London and 42% in England.

Satisfaction with access to a GP is below the national average. Brent ranks 135th out of 150 PCTs with respect to patient satisfaction of opening hours and for overall satisfaction, Brent ranks 142nd out of 150 PCTs. In a recent survey conducted by IPSOS MORI 83% of respondents said that they were able to get an appointment with a GP within 48 hours compared to 86% nationally and 77% said they were satisfied with opening hours compared with 84% nationally. Many patients would welcome increased opening hours. However, the GP Patient Survey response rate is low compared to the national average and could be improved through door-to-door canvassing, or linking survey completion to an incentive such as prize draw.

PREVALENCE OF KEY RISK FACTORS AND LONG TERM CONDITIONS

The prevalence of all long-term conditions, except diabetes, was lower in Brent than in England. There are relatively large differences in the prevalence of long-term conditions, as recorded by GPs.

The graph below shows box plots illustrating the variation in prevalence by practice and condition. The red box represents the inter-quartile range (IQR) (i.e., 50% of practices fall within the box). The median is the line that bisects the box. The “whiskers” on each box represent all remaining data that is not an outlier ($IQR \times 1.5$). The symbol o represents outliers ($>1.5 \times IQR$) the symbol * represents extreme values ($\geq 3 \times IQR$). The prevalence of some conditions such as smoking and depression were more than 20 times greater in the practice with the highest prevalence compared to that in the practice with the lowest prevalence.

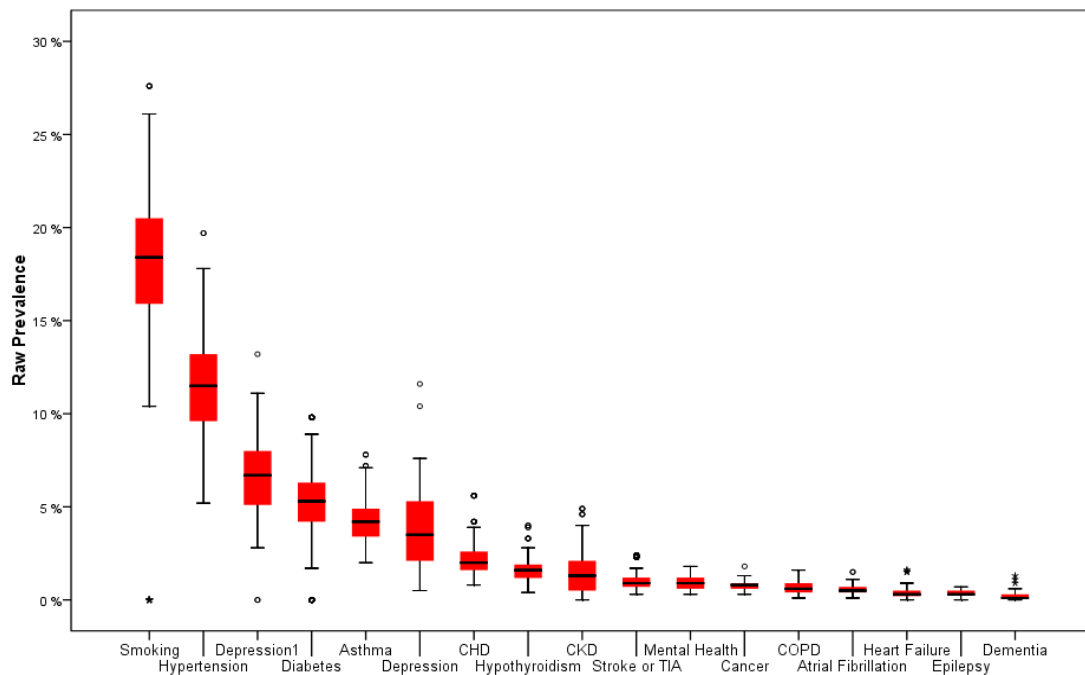


Figure A: Prevalence of key conditions reported by GPs in Brent (QOF, 2008-09)

The prevalence of most conditions was also lower than expected based on the socio economic characteristics of Brent. This difference in reported versus expected prevalence is significant, as illustrated in the funnel plot for hypertension below. Here, the majority of practices report a hypertension prevalence that is well beyond the limits considered to be due to chance alone.

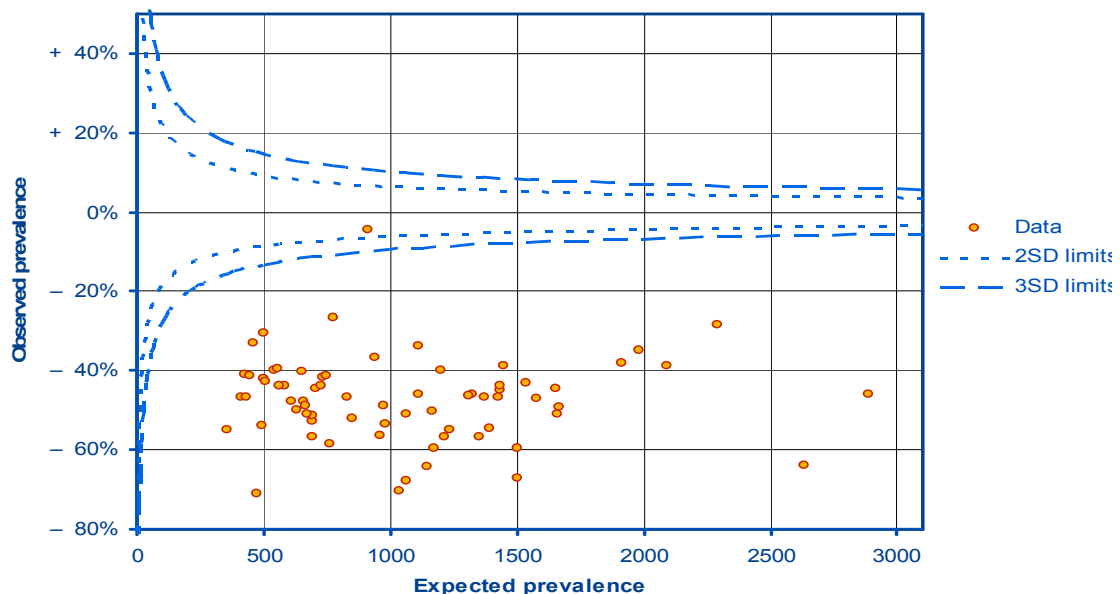


Figure B: Hypertension funnel plot observed compared with expected prevalence by Brent GP practice, QMAS 2009

There are a number of possible explanations for this:

- Young population
- True differences in disease burden
- List inflation and patient turnover
- Patients not yet diagnosed
- Over- or under-diagnosis of conditions
- Different diagnostic thresholds used in practices
- Diagnoses not recorded or coded accurately
- Differences in number of patients excluded from records

At least some of the low reported prevalence in Brent must be due to under reporting given the wide variation between practices and particularly in those practices that have no patients recorded for a number of relatively common conditions such as smoking. It is also likely that some patients will be undiagnosed. In the case of diabetes, for instance, although there are over 18,000 patients with diabetes on practices registers and the recorded prevalence of 5.12% is one of the highest in the country as many as one in four people with diabetes may be undiagnosed. In Brent this would mean that there are approximately 6000 people with the disease who are unaware and whose diabetes is unmanaged.

The NHS Health Checks programme which is being introduced in Brent in 2010 will help to identify patients with a number of conditions such as hypertension, diabetes, and chronic kidney disease, as well as smokers and obese patients. Detailed modelling undertaken locally demonstrated that this programme will save 24 deaths per annum by 2015.

Changes to the way in which practice payments are adjusted for prevalence introduced from the 1st April 2009 will mean that practices with lower than national prevalence will receive a reduced income. This will create a much greater financial incentive to accurately identify and record patients with existing disease and manage their conditions.

QOF POINTS ACHIEVED

Most practices achieved close to the maximum of 655 clinical QOF points. 5 practices achieved less than 550 points. The lowest number of clinical points achieved by a GP practice was 465 points. The average number of points achieved by practices in Brent was 622, this is slightly lower than the average across London (629) and nationally (635).

The highest percentage of available points achieved was for obesity (100%). The lowest percentage of available points achieved was for palliative care (86.9%). The highest number of available points not achieved was for depression and mental health.

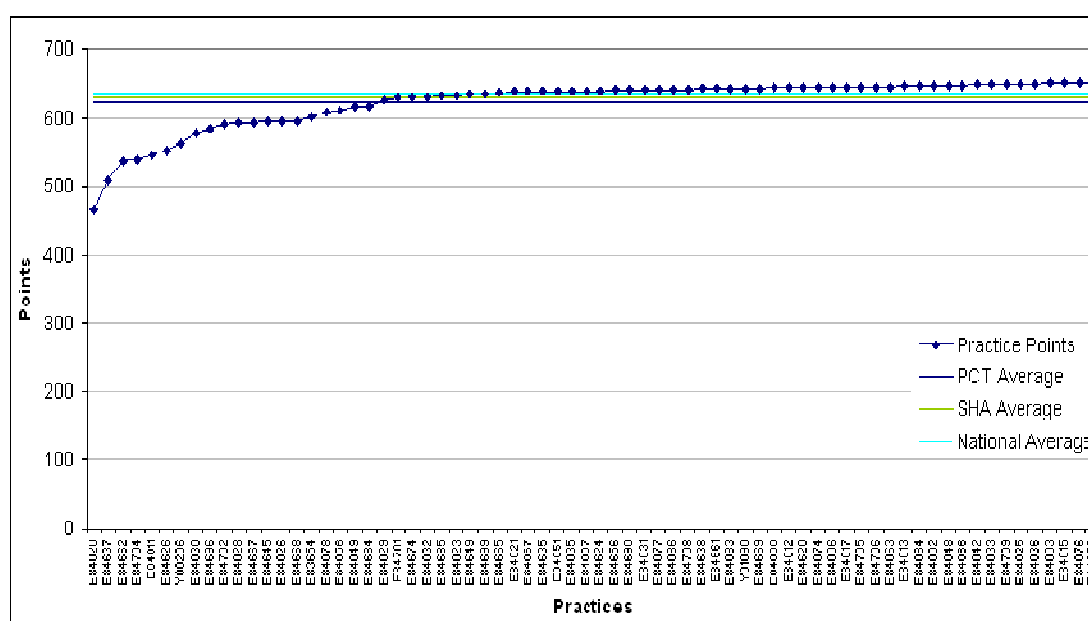


Figure C: Overall Clinical QOF achievement by GP practices in Brent (QOF, 2008-09)

The overall level of achievement masks a number of indicators where achievement is relatively low. Brent GP practices achieve significantly below the national average across a number of indicators, particularly in the mental health domain. The table below highlights the indicators where Brent is performing significantly below the national average. It is also important to note that for a number of indicators the thresholds used in QOF are lower than those set out in NICE guidelines and or best practice.

Table A: QOF performance for the lowest achieving indicators in Brent (QOF, 2008-09)

Indicator	NHS Brent	National
MH07 - follow up of patients with psychotic disorders	49%	93%
DM20 – management of HBA1c	64%	66%
MH05 – management of lithium levels	66%	91%
EPILEP08 – patients who are seizure free	68%	73%
MH04 - patients on lithium therapy with a record of serum creatinine and TSH	72%	97%
STROKE08 – management of cholesterol	74%	93%
CKD03 - management of blood pressure	74%	
CHD10 – CHD patients treated with a beta blocker	75%	73%
COPD12 – COPD confirmed by spirometry	76%	91%
BP05 – management of blood pressure	77%	79%
STROKE13 – new patients referred for investigation	78%	91%
COPD10 - COPD patients with a record of FeV1	78%	83%
DM17 – management of cholesterol	79%	83%
DM12 – management of blood pressure	79%	80%

An analysis has also been done looking at practices that are outliers on prevalence, clinical indicators, and exception reporting. The term “outlier” refers to a practice that has a value $\geq 2 \times \text{IQR}$ (Inter-quartile range) of the practices in Brent. Extreme values have a value $\geq 3 \times \text{IQR}$ of the data. Practices with the highest number of outliers on individual clinical indicators are presented in the report. Of the 62 indicators 12 practices were outliers on 5 or more indicators, 5 practices were outliers on 10 or more indicators and one practice was an outlier on 27 indicators.

PRIMARY CARE ORGANISATION AND OUTCOMES

There is considerable heterogeneity in the way in which practices in Brent are organised in terms of for example the funding per patient, the opening hours per week, and the size of the practice. The table below shows that structural characteristics of the GP practice are not strongly related to overall patient satisfaction. Although there is a positive relationship with the size of the practice in terms of WTE, this is not upheld with list size. The clinical performance of GP practices, as measured by total clinical QOF score, is associated with the size of the GP practice in terms of list size and number of WTE, suggesting that larger practices provide, overall, improved clinical care.

Table C: Associations between GP Practice characteristics and outcomes

	Explanatory variable	Significant Correlation	Spearman's Rho (Sig. Level)
Overall Satisfaction - GPPS 2008-09	List Size	No	0.158 (80.9%)
	£/patient	No	0.184 (87.4%)
	Opening hours per week	No	0.209 (91.3%)
	WTE	Yes	0.238 (95.2%)
	WTE per 1000 patients	No	0.138 (74.2%)
Clinical QOF Score	List Size	Yes	0.405 (99.9%)
	£/patient	No	-0.108 (62.5%)
	Opening hours per week	Yes	0.287 (98.2%)
	WTE	Yes	0.448 (>99.9%)
	WTE per 1000 patients	No	0.07 (43.1%)

PRIMARY CARE AND HEALTH INEQUALITIES IN BRENT

The extent to which the organisation of primary care services and the key outcomes that they achieve reflect and or reinforce the health inequalities in Brent has been a key question throughout the report. In some ways the answer to this is quite positive. Practices in the most deprived areas in Brent appear to receive a higher payment per patient and are open longer than practices in less deprived areas and their patients are no less satisfied with the primary care services as compared to practices in less deprived areas.

However outcomes in terms of total QOF score and A+E attendances were significantly worse in the most deprived areas. There appears to be some greater resourcing in the most deprived areas but either this resource is not being used effectively or it is not sufficient to meet the greater needs of the most deprived population in Brent.

Table D: Associations between IMD-2007 with GP characteristics and selected outcome measures

	Explanatory Variables	Significant Correlation	Spearman's Rho (Sig. Level)
Weighted Average Deprivation Score (IMD)	£ per patient	Yes	0.411 (>99.9%)
	WTE per 1000 registered population	No	-0.072 (44.5%)
	Opening Hours - weekly total	Yes	0.243 (95.5%)
	Overall Satisfaction - GPPS 2008/09	No	-0.12 (67.9%)

2007)	Total QOF Score	Yes	-0.238 (95.2%)
	Clinical QOF Score	No	-0.227 (94.1%)
	A+E Attendances per 1000 patients	Yes	0.702 (>99.9%)
	GPPS Response Rate	Yes	-0.64 (>99.9%)

UTILISATION OF SECONDARY CARE

Utilisation of secondary care services has increased significantly in Brent in recent years and better management of patients in primary care in order to avoid unnecessary attendances or admissions is a key priority for NHS Brent. Previous work in Brent speaking with patients and clinicians has highlighted poor primary care access as a key reason for using A+E.

The table below shows that primary care access variables are generally not closely related to A+E attendance, although the number of opening hours per week in GP practices is weakly correlated. It appears that underlying population needs as reflected by the Index of Multiple Deprivation, the proportion of the GP practice list that are on Incapacity Benefits, and the proportion of the GP practice list that are lone parent households, are much more strongly correlated with A+E utilization than the accessibility of the GP practice itself. This needs more in-depth analysis, in particular adjusting for confounding variables such as age, sex and ethnicity.

Table E: Associations between A+E attendance rate per 1000 registered population with access and population characteristics

	Explanatory variable		Significant relationship	Strength (Spearman's rho)
A+E attendance (Crude rate by list size, 2008-9)	Access	Opening hours per week	Yes	+0.303
		£/patient	Yes	+0.256
		Overall patient satisfaction	No	- 0.015
		Ease of getting through on the phone	No	- 0.168
		Able to book ahead	No	- 0.068
		Able to see preferred GP	No	- 0.015
		WTE	No	- 0.007
	Population	Index of Multiple Deprivation	Yes	+ 0.703
		% 65+ years of age	No	+ 0.001
		Lone Pensioner households	No	+ 0.012
		Incapacity Benefits	Yes	+ 0.664
		Lone parent households	Yes	+ 0.711

CONCLUSION

A number of key questions have been explored throughout the report. These include:

- What does good quality look like in primary care and how do we measure it?
- What impact does the way in which primary care services are organised have on quality?
- What is the relationship between quality and utilisation of secondary care services?
- And, to what extent are the health inequalities that exist in Brent reflected in the provision and quality of primary care services?

The report highlights that identifying good quality primary care services is complex given the many limitations of the data that is available. We therefore need to develop a sophisticated approach to the way in which we use and interpret information about the quality of primary care services in Brent. The report provides a range of methods and tools for understanding and interpreting performance at a practice level and highlights some of the indicators that tell us most about quality.

The principle conclusion is that continued dialogue and discussion within Brent is required on an ongoing basis to make best use of this information to improve healthcare and health outcomes in Brent. This dialogue needs to take place at two levels. Firstly a strategic dialogue is required to interpret and understand the information about performance within Brent and agree how to use this to improve outcomes. Secondly more detailed investigations are required at a practice level to assess and address the specific causes of low performance against a particular indicator or group of indicators.

There are many limitations of the data that is available for analysis, in particular small sample sizes and data of variable quality limit the possible interpretation of analyses that are performed. However we can make some key observations. The prevalence of all long-term conditions, except diabetes, was lower in Brent than in England. This is likely to reflect the relatively high list inflation and young population in Brent but is also likely to be due to under reporting and under diagnosis of long term conditions. Patients may be being sub optimally managed as a consequence. The NHS Health Checks programme, changes to the way in which practice payments are adjusted for prevalence, and efforts to reduce list inflation should result in improved recorded prevalence in Brent.

It is also the case that most practices in Brent are achieving at or near the maximum possible points for the QOF clinical indicators. Larger GP practices appear to be performing better in overall clinical indicators, than smaller practices. There are however considerable variations between practices in the level of achievement and there are a small number of practices whose performance is substantially lower than the average in Brent. There are also a number of specific indicators particularly relating to mental health where performance is poor across the patch

Analysis of access to GP services reveal that residents in more deprived areas are served by practices that are open longer and better resourced. Whilst this reflects increased need in these areas, this is not yet translating into improved patient satisfaction or more appropriate use of secondary care and A+E services. These are univariate analysis, providing insight into correlation not causation, they do provide a route map for further analysis. Multivariate analysis is being carried out to determine predictive models for secondary care and A+E utilization that can be used to benchmark GP practice performance in future years.

Finally, robust mechanisms need to be in place to analyse and understand the data reported by practices, check the accuracy of the data reported by practices and validate payment, and support improvement across all practices particularly focusing on the lowest performing practices.

RECOMMENDATIONS

Our recommendations cover three specific areas – quality control, data management and governance, and operations research.

1) Quality Control

- That focused support from the PCT should be targeted at those practices with the lowest reported prevalence, lowest achievement on the clinical indicators and highest levels of exception reporting.
- That specific guidance is sent to practices clarifying the reporting and management of mental health conditions.
- That polysystem commissioning clusters should develop a plan to improve quality and outcomes in their polysystem.
- That the PCT balanced scorecard is reviewed on the basis of the report including the way it is implemented in the PCT.
- That progress on these tasks should be regularly reported to the PEC and PBC.

2) Data management and governance

- That benchmarking data is sent to practices showing their performance in relation to the PCT as a whole.
- That performance data should not be anonymised.
- That locality profiles should be updated with information from this report.
- That a web based IT solution is developed to access anonymised individual level data from practices so as to better understand the way in which health care is provided and how it can be improved.

3) Operations Research

- That multivariate analysis is carried out to validate the univariate analysis carried out thus far and to assess the impact of confounding variables such as underlying population characteristics and burden of disease.
- That the impact on secondary care services of lone parent households and people on incapacity benefits is further explored.
- That a mental health needs assessment is undertaken.
- That a predictive model is developed to benchmark the A+E attendance rates that would be expected for each GP practice and use this information to guide improvements on a practice basis.

Chapter 1: Introduction

1.1 AIM

The aim of this Public Health Report is to study the data available from primary care services in Brent, and to examine the ways in which this data can be used to influence the development of primary care services in Brent.

Access to the range of primary care services in Brent will be assessed. The prevalence of long-term conditions recorded by GP practices in the PCT, and the quality of interventions provided will be analysed, using the Quality and Outcomes Framework (QOF), as well as data from the NHS Prescription Prescribing Authority, and data on screening, hospital admissions, procedures and mortality.

The extent to which there are inequalities in the provision of primary care services will be assessed. Analysis will be undertaken at a practice and locality / cluster level and compared with the PCT London and national position. The report will focus on access to services, health needs including the prevalence of long-term conditions and the quality of interventions provided. Potential problems in specific practices and areas, or related to specific conditions or interventions, will be identified and recommendations made as to how these could be mitigated.

1.2 OBJECTIVES

The objectives of this Public Health Report are:

- To describe access to primary care services in Brent and assess variations between practices and areas;
- To assess variations in health needs between practices and areas within the PCT, as well as between the PCT, North West London SHA and England;
- To describe the quality of relevant interventions offered and provided by GP practices and assess variations between practices and areas;
- To determine evidence based initiatives targeting priority issues
- To identify GP practices and areas in which improvements would be likely to have a large impact on improving health care and reducing inequalities in the PCT;
- To make recommendations on future action to improve the quality and usefulness of primary care in Brent
- To present the main findings from this work into a clear, concise and accessible report
- To present the report to the PCT Board, the Local Strategic Partnership and to other partners and forums.

1.3 STRUCTURE OF THE REPORT

The initial chapters give an overview of the population and health in Brent, before focusing specifically on access to services and the prevalence and management of risk factors and long term conditions in Brent. The final three chapters cover diabetes, circulatory diseases and mental health in more detail.

Chapter 2: The People of Brent

Key Facts: Population

- 280,000 resident population (GLA), 354,198 GP registered population
- 55% of residents are from black and minority ethnic communities
- Over 130 different languages are now spoken in our schools
- The population is relatively young with 43% of residents under 30 years of age
- Over 30,000 people are over the age of 65
- Brent has become more deprived and is now the 53rd most deprived borough in England

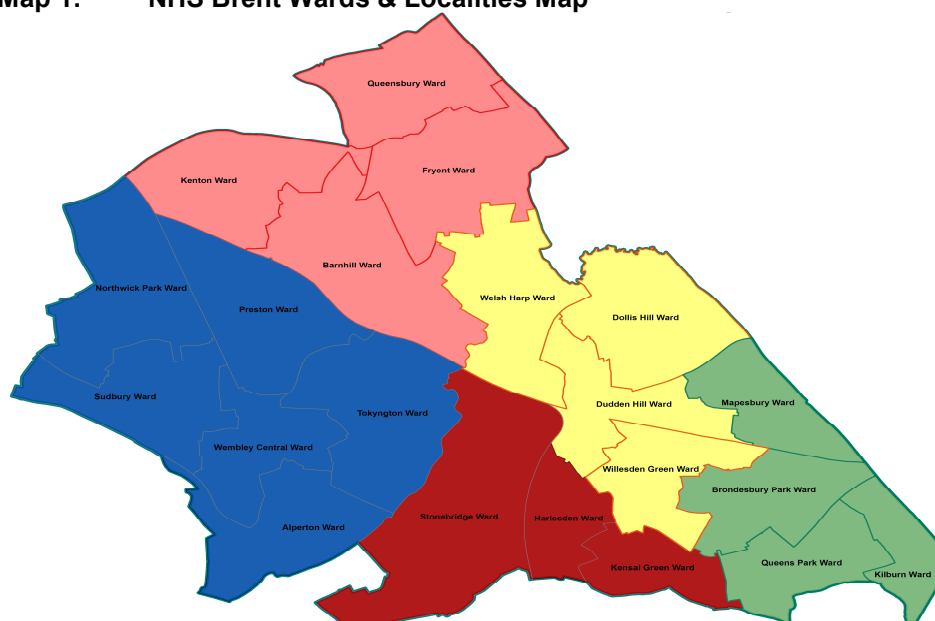
Brent is one of only two local authorities serving a population where the majority of people are from ethnic minorities, and these groups are growing faster than any other. Our population is growing and dynamic, with recent figures indicating significant numbers of people moving into the borough creating new emerging communities, as well as significant numbers of transient people within the borough. Brent's population forecast by the Greater London Authority (GLA) in 2010 was approximately 280,000, although Council-commissioned research suggests that this figure could be over 15,000 higher and is growing steadily.

Almost a quarter of residents are under 19 years old and, within our six priority neighbourhoods (Brentfield, St Raphaels, Harlesden, Stonebridge, South Kilburn, Church End) a third of residents are under 16 years old, compared with a fifth in London more generally. The GLA predict that Brent's population will increase by roughly 10,000 people every ten years (see table below). Brent's population is predicted to be 305,575 by 2018.

2.1 NHS Brent Geographical Boundaries

Brent is located in the North West of London. Although an outer London borough, it has many of the characteristics of an inner London borough.

Map 1: NHS Brent Wards & Localities Map

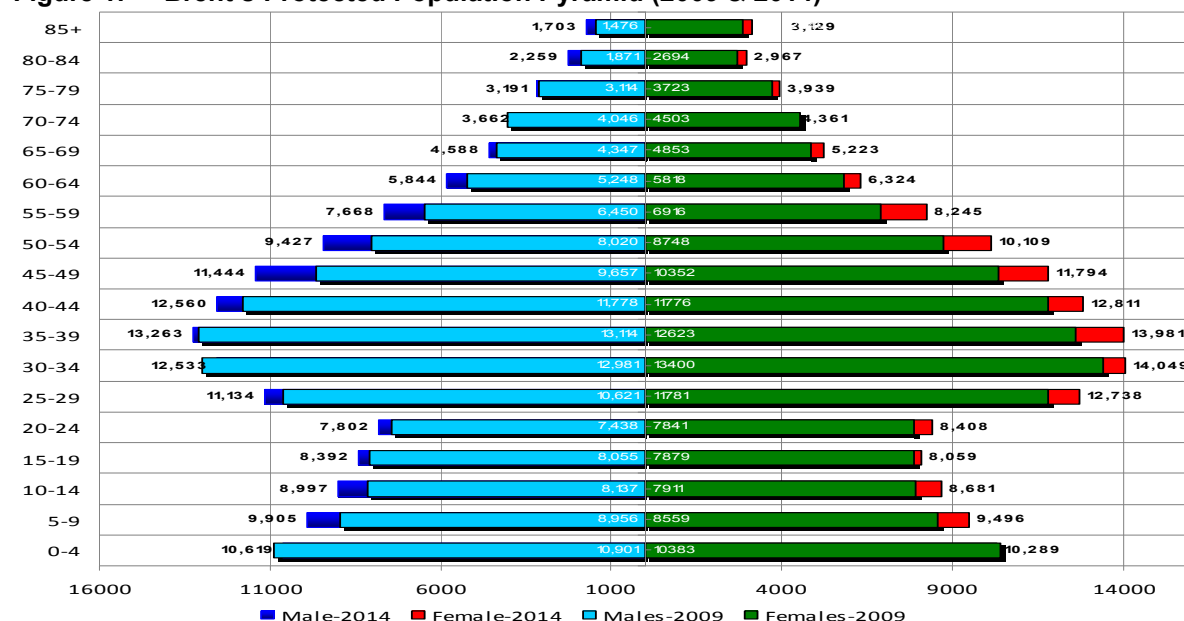


(Produced By Dr. Sella Anant, Public Health Intelligent Unit, Directorate of Public Health, NHS Brent (17 October 2009))

2.2 Demography

Almost a quarter of residents are under 19 years old. The GLA predict that Brent's population will increase by roughly 10,000 people every ten years. Brent's population is predicted to be 284,412 by 2014. The highest growth is expected to occur in Tokyngton as a result of the Wembley stadium development which is projected to increase by 10,000 by the year 2031.

Figure 1: Brent's Protected Population Pyramid (2009 & 2014)



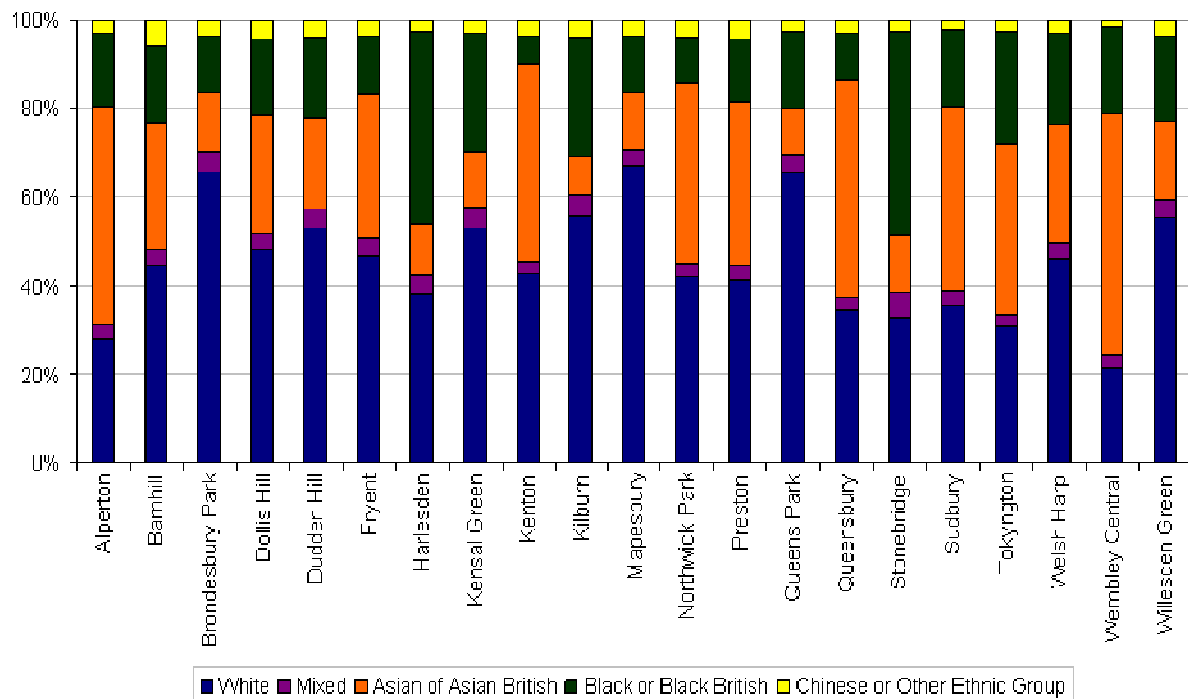
Diversity

Dynamic population movements have resulted in Brent becoming the most ethnically heterogeneous borough in the country. This means that the chances of 2 people in Brent being from different ethnic groups are higher than anywhere else in the country. Black and Minority Ethnic (BME) groups make up the majority of the population at 54.7% including 18.5% Indian, 10.5% Black/Black British Caribbean and 7.8% Black/Black African¹. Approximately 130 languages are spoken in schools in Brent and it has the highest proportion of people born outside the EU in England and Wales.

In the next 10 years the BME population is expected to increase to 60% of the population. The largest increase is expected to be in the Asian population which is expected to increase to just under a third of the population (32%) by 2014. Substantial increases are expected in the numbers of people in BME groups aged 30-65 years and smaller increases in people aged 65 years or over. This will have implications for the demand for health care as Asian groups tend to have higher rates of diabetes and heart disease and develop these diseases about 10 years earlier than white groups, whilst black groups have higher rates of diabetes, hypertension and stroke and also develop these diseases earlier.

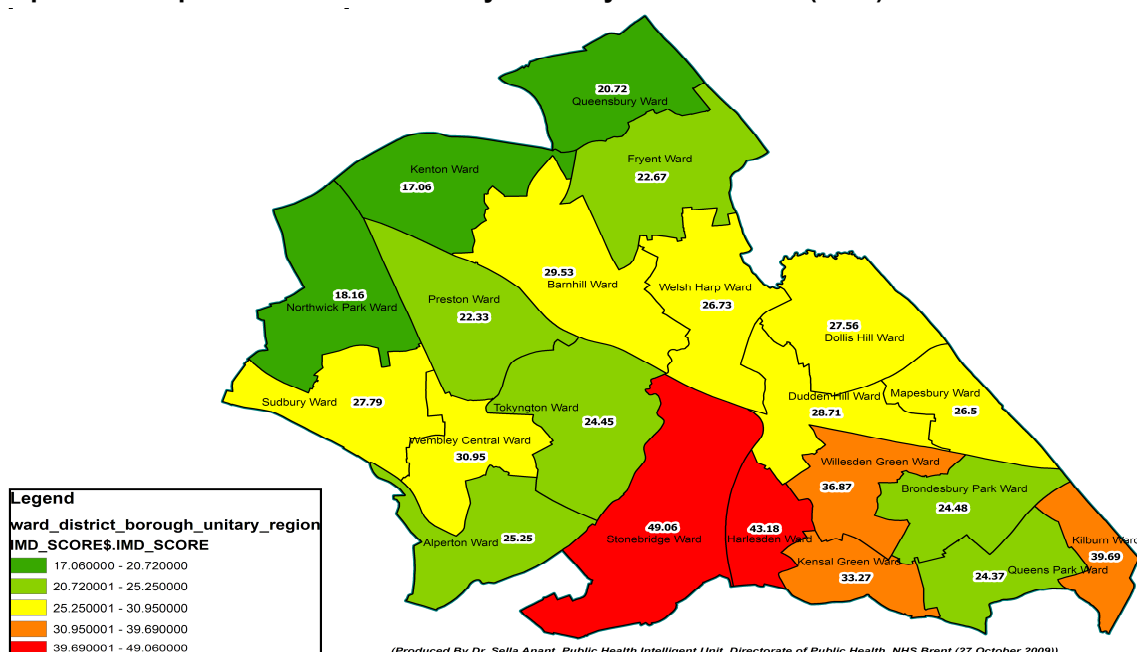
Different ethnic groups are concentrated in different parts of the borough. The highest concentrations of black residents are in Stonebridge and Harlesden wards. Asian residents tend to be located towards the west of the borough and the white population towards the east. Kilburn, Mapesbury and Dollis Hill wards have the highest numbers of white Irish residents.

¹ ONS, 2001, UK Census

Figure 2: Ethnic distribution by Ward

Deprivation

Brent has large sections of our community which are relatively affluent, however, we also have areas which experience high levels of deprivation. Brent has an IMD score of 29.22, which means that it ranks 53rd out of the 354 boroughs in the country ie. it is in the 15% most deprived local authorities in the country. The neighbourhoods experiencing the highest deprivation are largely located in the south of the borough. Our most deprived residents also have the lowest income levels, highest unemployment levels, poor and overcrowded housing and the worst health outcomes.

Map 2: Deprivation – IMD Summary Score by Ward in Brent (2007)

Chapter 3: Health and Wellbeing in Brent

Key Facts: Health and Wellbeing

- Nine-year gap in male life expectancy
- Circulatory disease and cancer are the biggest killers
- One in four people in Brent smoke
- 20% of Brent's adult population are estimated to be obese
- 50% of our adult population do not take part in any form of physical exercise
- Approximately 2/3rds of Brent's population are estimated as not eating the recommended amount of fruit and vegetables per week
- Teenage pregnancy levels are decreasing but from a comparatively high level
- High prevalence of diabetes and tuberculosis
- High and increasing rates of HIV
- Low uptake of some preventative services, such as smoking cessation and breast screening

Over the last ten years, rates of deaths from all causes have decreased for both men and women and are lower than the England average. Circulatory diseases, including heart disease and stroke, and cancers are the most common cause of death in Brent. Significant health inequalities, linked to location, gender, level of deprivation and ethnicity exist. The most deprived wards in the South of the borough have a higher death rate, and lower life expectancy than the less deprived wards in the North of the borough. The prevalence of diabetes in Brent is high compared to the national average with 4.6% of the population being diagnosed with the condition, although the proportion that are undiagnosed may be closer to 6%. Brent has one of the highest rates of TB in London and in England.

Smoking is the single greatest cause of preventable illness and premature death. While smoking rates for the borough as a whole are estimated to be below the rest of England at 18.6% this varies between 40% of residents in Stonebridge estimated to be smokers and 16% in Kenton. Obesity is the second most significant contributory factor to ill health and preventable disease. Overall estimates of adult obesity levels in Brent are below the England average at 21.6% of people compared to 23.6% of the population nationally. Brent has one of the lowest adult physical activity rates in England with 56% reporting they do not participate in any sporting or physical activity and only 18% taking exercise on 3 occasions a week for 30 minutes.

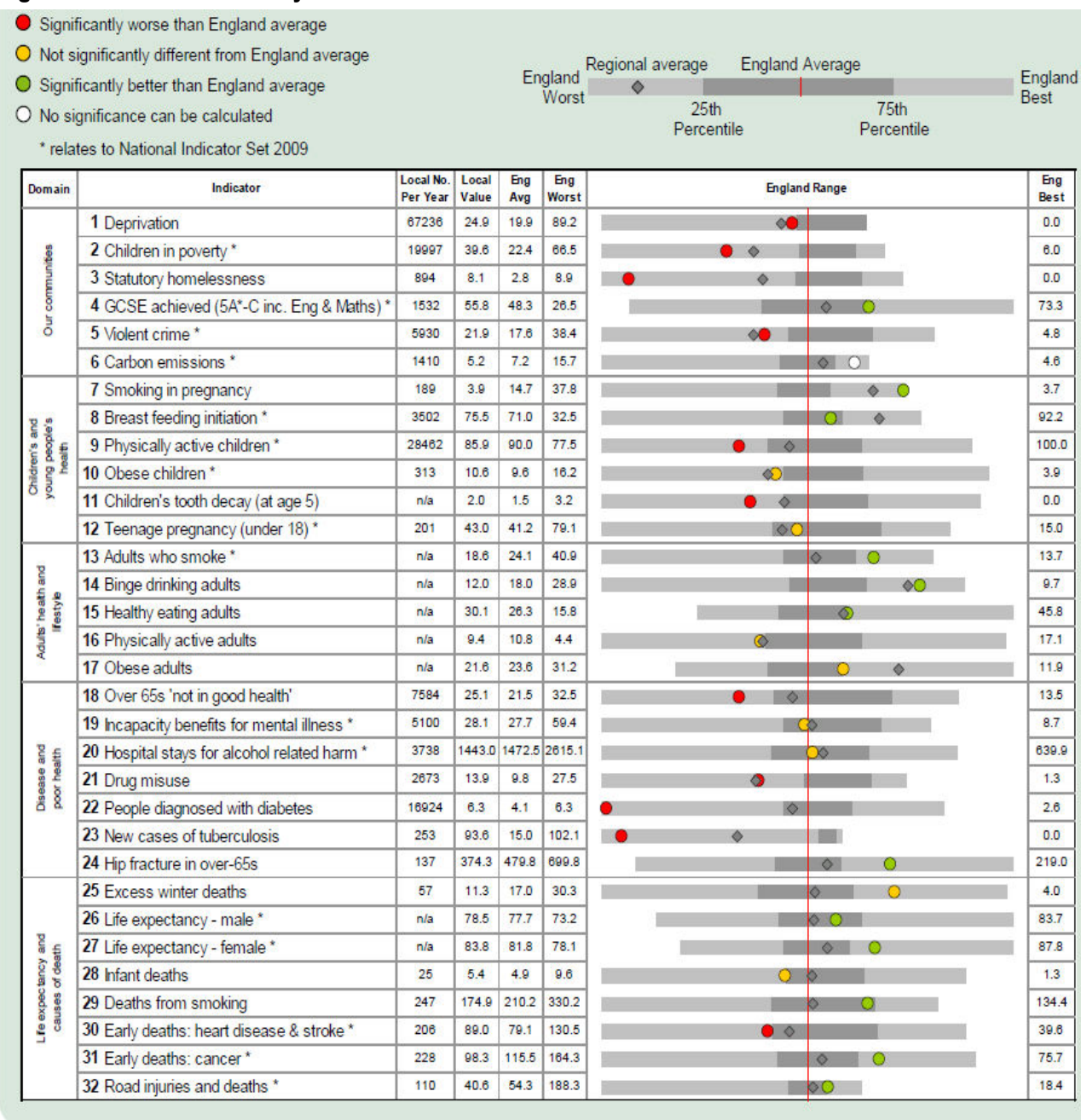
The chart on page 6 summarises how people's health in Brent compares to the rest of England. The local result for each indicator is shown as a circle, against the range of results for England which is shown as a bar. A green circle may still indicate an important public health problem.

3.1 Life Expectancy

Life expectancy is an estimate of the number of years a new-born baby would live in a particular ward, given the particular area's age-specific mortality rates. Life expectancy for woman in Brent is 83.4 years, this is significantly greater than the England average of 80.9 years and London at 82.0 years (2004-2006). Life expectancy for men is 78.2 years which is approximately equal to the England and London average of 77.4 years (2004-2006). Since 1991, average life expectancy in Brent has increased by 4.6 years for males and 3.4 years for females¹.

¹ LHO, 2006, Life Expectancy, male and female

Figure 3: Health Summary for Brent



Notes (numbers in bold refer to the above indicators)

1 % of people in this area living in 20% most deprived areas of England 2007 2 % of children living in families receiving means-tested benefits 2007 3 Crude rate per 1,000 households 2007/08 4 % at Key Stage 4 2007/08 5 Recorded violence against the person crimes crude rate per 1,000 population 2007/08 6 Total end user CO2 emissions per capita (tonnes CO2 per resident) 2006 7 % of mothers smoking in pregnancy where status is known 2007/08 8 % of mothers initiating breast feeding where status is known 2007/08 9 % 5-16 year olds who spent at least 2 hours per week on high quality PE and school sport 2007/08 10 % of school children in reception year 2007/08 11 Average number of teeth per child age 5 which were actively decayed, filled or had been extracted 2005/06 12 Under-18 conception rate per 1,000 females (crude rate) 2005-2007 13 %. Modelled estimate from Health Survey for England 2003-2005 14 %. Modelled estimate from Health Survey for England 2003-2005 15 %. Modelled estimate from Health Survey for England 2003-2005 16 % aged 16+ 2007/08 17 %. Modelled estimate from Health Survey for England 2003-2005 18 % who self-assessed general health as 'not good' (directly age and sex standardised) 2001 19 Crude rate per 1,000 working age population 2007 20 Directly age and sex standardised rate per 100,000 population 2007/08 21 Crude rate per 1,000 population aged 15-64 2006/07 22 % of people on GP registers with a recorded diagnosis of diabetes 2007/08 23 Crude rate per 100,000 population 2004-2006 24 Directly age-standardised rate for emergency admission 2006/07 25 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths 1.08.04- 31.07.07 26 At birth, 2005-2007 27 At birth, 2005-2007 28 Rate per 1,000 live births 2005-2007 29 Per 100,000 population age 35+, directly age standardised rate 2005-2007 30 Directly age standardised rate per 100,000 population under 75 2005-2007 31 Directly age standardised rate per 100,000 population under 75 2005-2007 32 Rate per 100,000 population 2005-2007

Source: APHO and Department of Health. © Crown Copyright 2009.

There is a 9.3 year gap in life expectancy between the lowest (Harlesden) and highest wards (Northwick Park) is. Differences in health within Brent are dramatically illustrated by examining male life expectancy along the Bakerloo line. A journey of 3.5 miles takes you from Harlesden, which has the lowest life expectancy for men, to south Kenton, where male life expectancy is approximately 9 years higher.

The gap in life expectancy in Brent has persisted over a number of years. Recent figures show a slight reduction in the gap, however, this is because of a reduction in life expectancy in Northwick Park rather than an improvement in Harlesden.

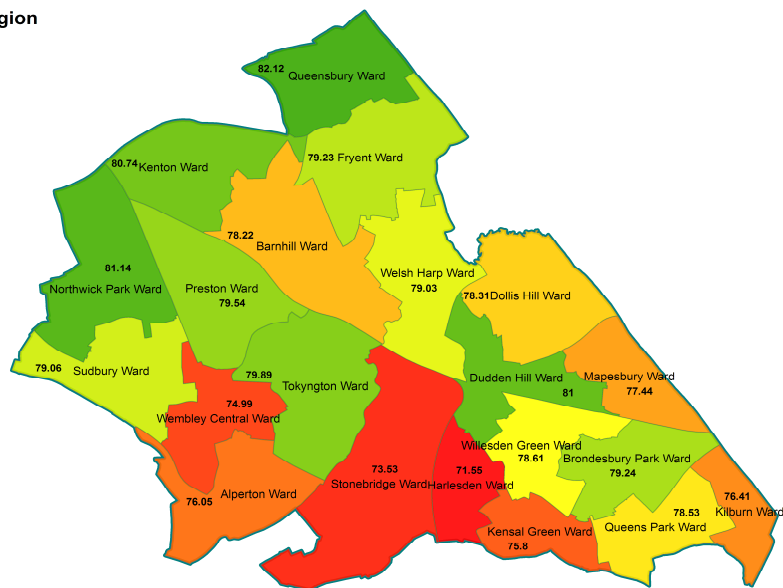
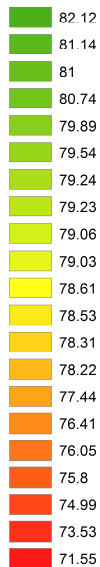
Map 3: Health Inequalities: Male Life Expectancy by Wards in NHS Brent (2003-2007)

Legend

ward_district_borough_unitary_region

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Male



(Produced By Dr. Sella Anant, Public Health Intelligent Unit, Directorate of Public Health, NHS Brent (21 October 2009))

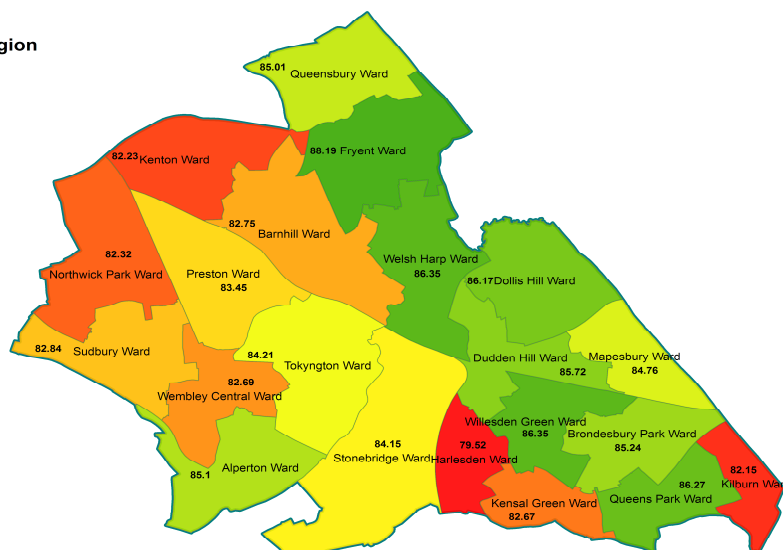
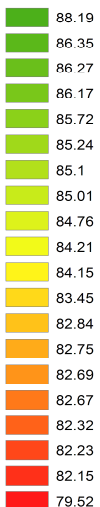
Map 4: Health Inequalities: Female Life Expectancy by Wards in NHS Brent (2003-2007)

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Female



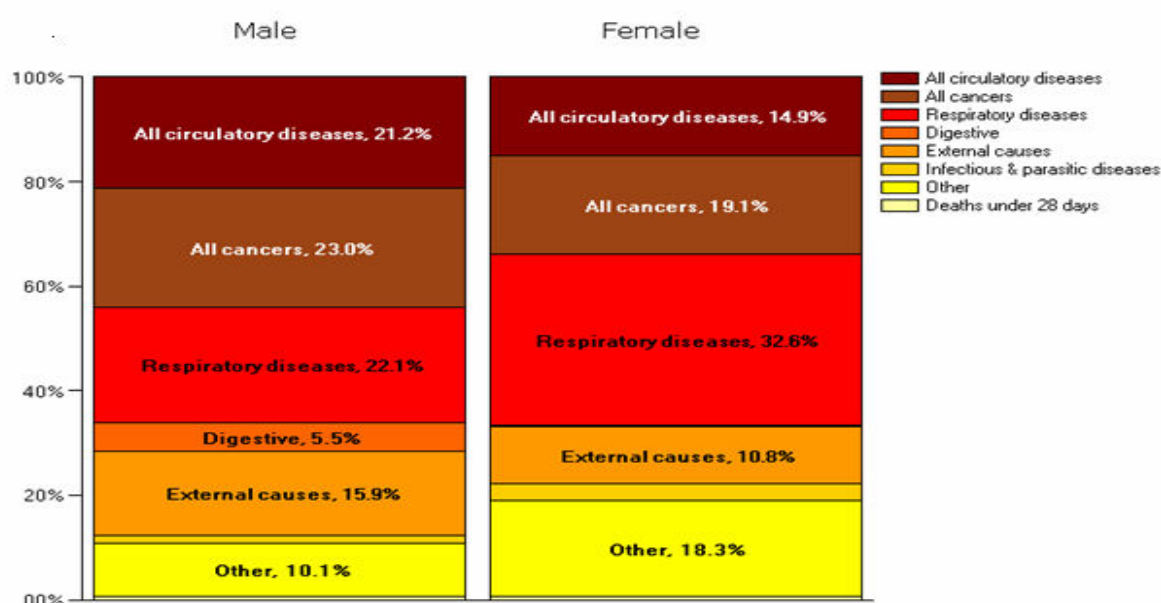
(Produced By Dr. Sella Anant, Public Health Intelligent Unit, Directorate of Public Health, NHS Brent (21 October 2009))

3.2 High impact changes to reduce health inequalities

The diagram below is based on national modelling of the life expectancy gap and the interventions to narrow it by 2010. The bars shows which diseases are causing the gap in mortality between the most deprived quintile in Brent and the borough average for males and females respectively.

To meet the life expectancy health inequalities target, the commissioning focus should be on middle age whilst not forgetting the importance of the over-75 age group. Cardiovascular disease (CVD), cancer and respiratory disease account for about two-thirds of the gap between Brent and the national average.

Figure 4: Breakdown of life expectancy gap between the Most Deprived Quintile (MDQ) of Brent LB and the local authority average by cause of death



3.3 Mortality

Analysis of mortality data (Table 1) shows there were 1375 deaths recorded in Brent during 2008. Circulatory disease, including heart disease and stroke, is the leading cause of death in Brent and rates are highest in our most deprived neighbourhoods.

Table 1: Mortality for disease categories by Brent Localities (ONS, 2008)

Diseases or Conditions	Locality					
	Harlesden	Kilburn	Kingsbury	Wembley Central	Willesden	Brent
Circulatory system	62	55	139	114	78	448
Respiratory system	41	56	86	94	53	330
Neoplasm	64	38	66	74	49	291
Certain infectious and parasitic diseases	14	12	28	16	10	80
Digestive system	8	9	11	20	7	55
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	14	5	9	12	11	51
Genitourinary system	2	6	8	4	10	30
Injury, poisoning and certain other	3	5	7	8	7	30

consequences of external causes						
Nervous system	5	7	4	4	6	26
Certain conditions originating in the perinatal period	2	4	2	4	2	14
Mental and behavioural disorders	2	1	2	3	1	9
Endocrine, nutritional and metabolic diseases	2	0	0	1	1	4
Congenital malformations, deformations and chromosomal abnormalities	0	0	1	0	2	3
Skin and subcutaneous tissue	0	0	0	1	0	1
Musculoskeletal system and connective tissue	0	1	0	0	0	1
External causes of morbidity and mortality	0	0	0	1	0	1
Blood and blood-forming organs and certain disorders involving the immune mechanism	1	0	0	0	0	1
Total	220	199	363	356	237	1375

Standardised Mortality Ratios

Standardised mortality ratios (SMRs) are a measure of how more or less likely a person living in a particular ward is to die compared to that of the standard population, in this case England and Wales. This measure takes in account differences in the age and sex structure of a population. A value of 100 indicates that there is no difference in mortality compared to the rest of England, a higher value suggests that mortality is higher than England and vice versa.

The Brent SMR for all causes of death, at all ages is 84 which is significantly lower than both England and London rates. SMRs for both males and females have improved considerably over the past decade. Males, aged 15-64, SMR has decreased from 146 in 1993 to 106 in 2008. The SMR for females, ages 15-64, has decreased from 131 in 1993 to 98 in 2008. There has also been a significant reduction in mortality rates from circulatory diseases and cancers as shown by Figure 7 and Figure 8 below.

Figure 5: Trends in SMRs among Males (15-64 Years) (1993-2008)

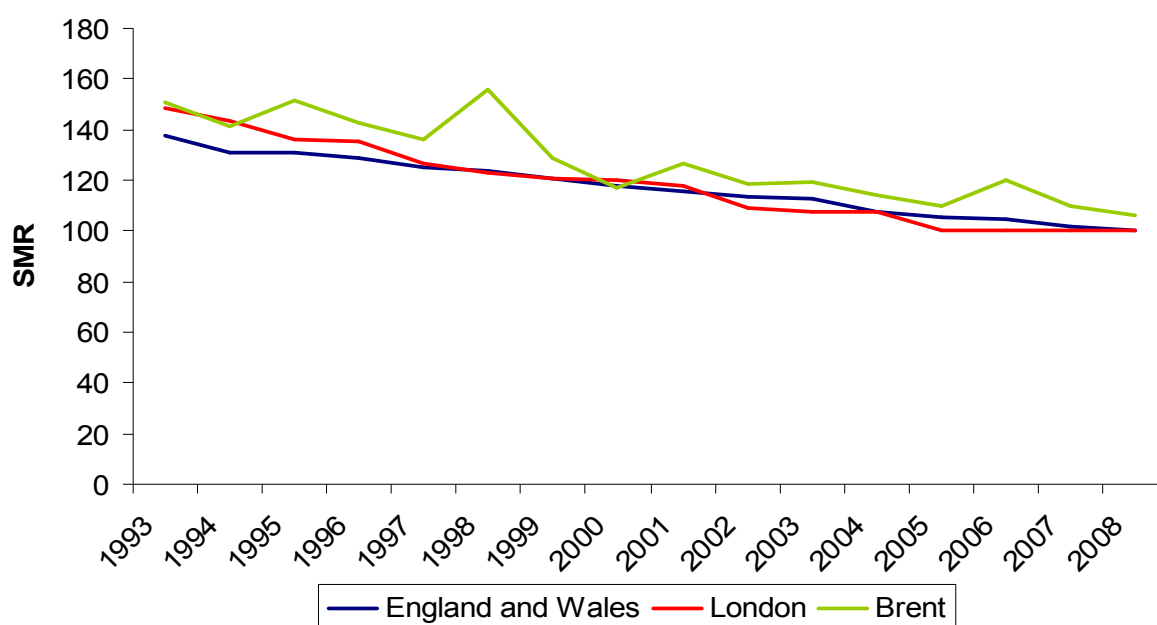


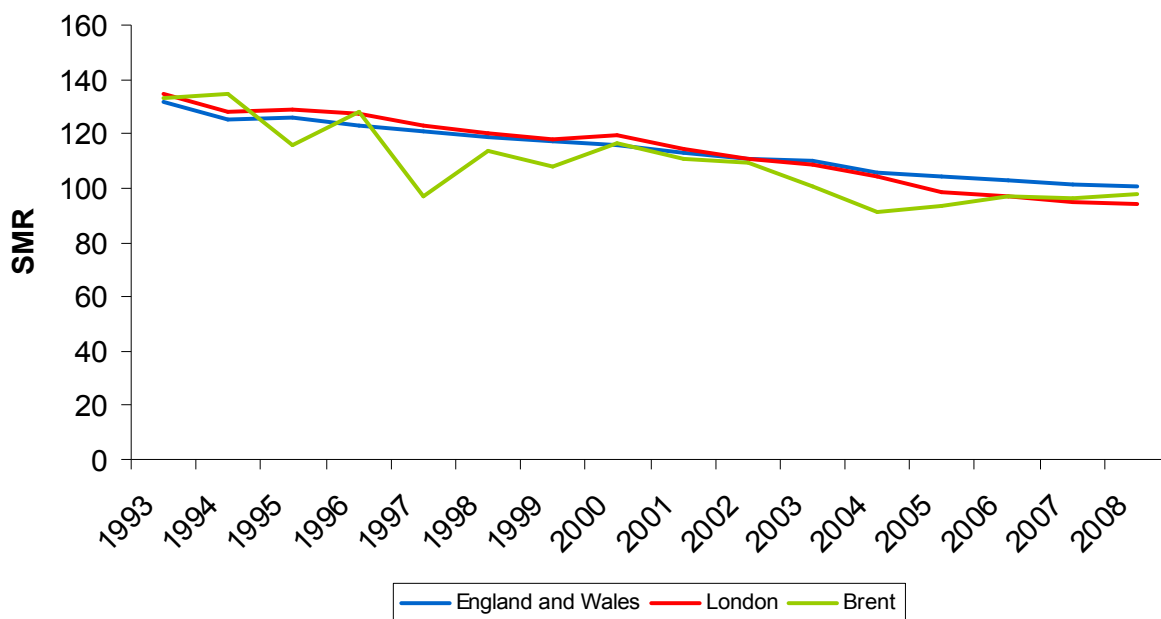
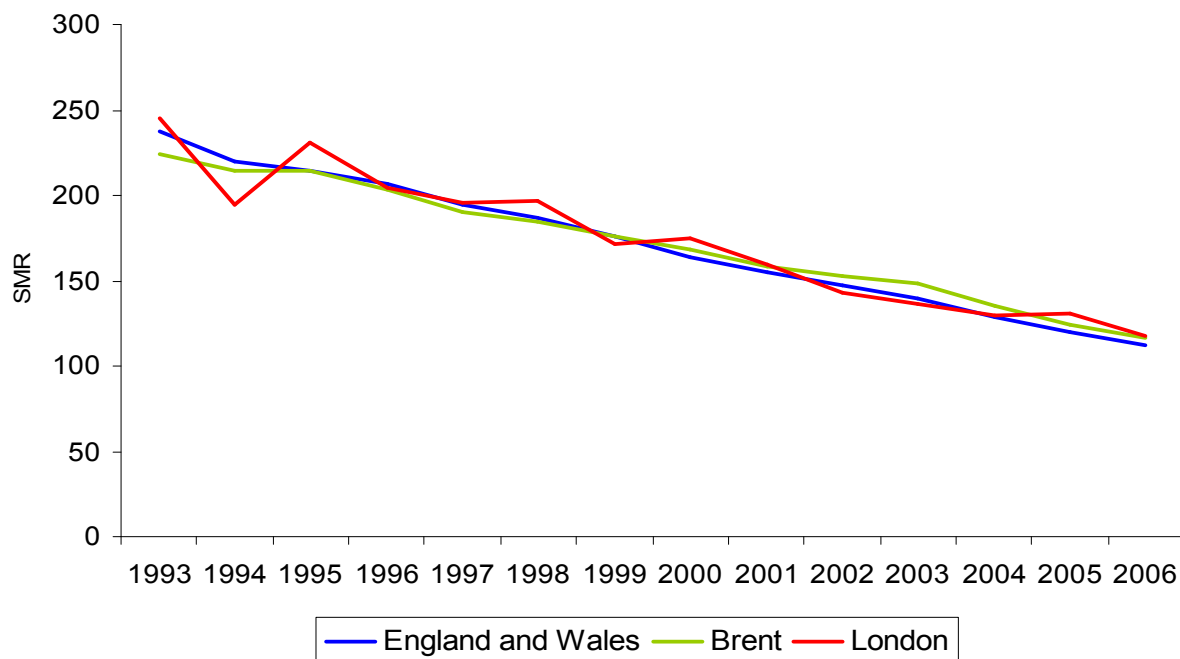
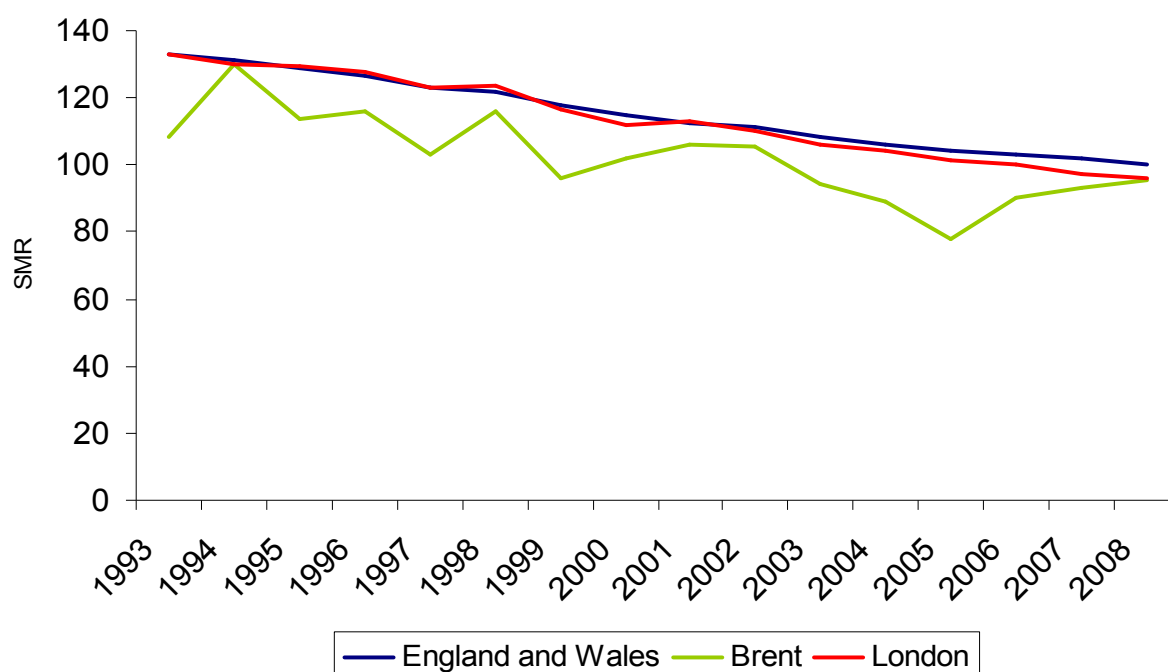
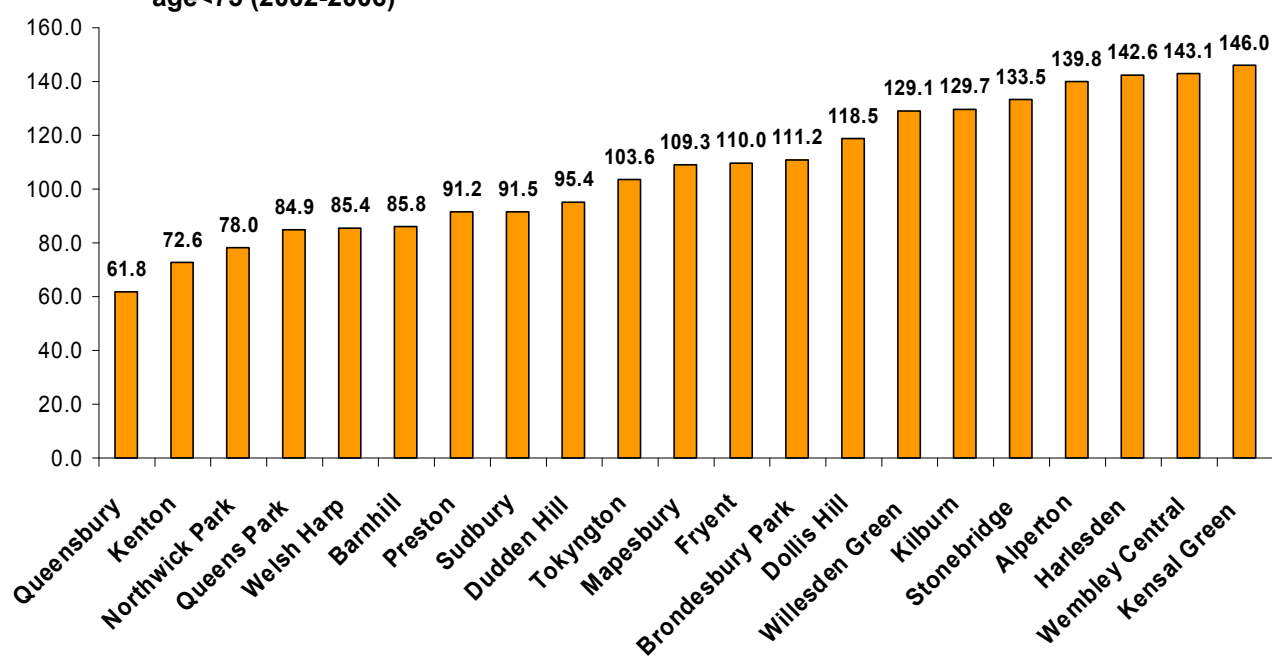
Figure 6: Trends in SMRs among Females (15-64 Years) (1993-2008)**Figure 7: Trends in Mortality Due to Coronary Heart Disease and Stroke in Brent (1993-2008)**

Figure 8: Trends in Mortality Due to Cancers in Brent (<75s) (1993-2008)

There is marked variation in CHD death rates between the 21 wards in Brent. There are higher mortality ratios than national averages for CHD in Wembley Central (SMR 128.2) and Kensal Green (SMR 130.5) for men of all ages with and SMR respectively (SMR 100 is national average). Harlesden and Stonebridge are the worst performing wards for people under 75 years with SMRs of 150 and 150.8 respectively; this is greater by half than the England average.

Figure 9: Standardised Mortality Ratios (SMRs) from circulatory diseases in Brent by ward for age<75 (2002-2006)

3.4 Lifestyle and Behaviours

The lifestyle factors that have the greatest impact on health are smoking, diet and physical activity. Routine data on these areas is not available, however, the National Centre for Social Research (NCSR) has produced estimates of these important lifestyle choices based on the Household Survey of England, 2003 - 2005. Brent compares favourably with England.

Table 2: Healthy Life-Style & Behaviours Related Risk Factors in Brent (2001)

Behaviour	Brent	England and Wales
Current cigarette smoking	18.6%	24.1%
Binge drinking	12.0%	18.0%
Adult Obesity	21.6%	23.6%
Childhood Obesity		
Adult Fruit & Vegetable consumption	30.1%	26.3%
Physically active adults	9.4%	10.8%
Physically active children	85.9%	90.0

Source: National Centre for Social Research

Chapter 4: Health Care Services and Access to Services

Key Facts: Primary Health Care Provision

- 354,198 patients were registered with a Brent GP at the start of 2010
- 70% of Brent practices are one or two handed practices, 22 practices out of 72 with more than 2,500 patients per GP
- Patient turnover is high (20% per annum)
- Satisfaction with access to a GP is below the national average, but would improve greatly by targeting just a few GP practices with poor satisfaction scores
- Many patients would welcome increased opening hours and many patients use A+E as an alternative to primary care
- 60% of A+E attendances could be dealt with at the primary care level
- The PCT is working to implement the National Polysystem strategy to improve comprehensive access to primary care
- There are many reasons why A+E is used as an alternative to GP services – improving access to GP services might reduce unnecessary A+E attendance

Lord Darzi's Report on the UK's Healthcare in the 21st Century tackled a number of significant and longstanding failures/weaknesses in the provision of healthcare in the UK. His review set out a vision for a world class healthcare service that included a vision for a personalised service tailored to meet the needs of the individual, especially the most vulnerable by providing access to services at the time and place of their choice. Physical accessibility - that health centres should be situated in easily accessible locations that offers a range of services to all members of the local population – is of crucial importance in this.

This chapter explores the structure of health services in Brent, with particular emphasis on Primary Health Care (i.e. GP centres). It begins with a description of the existing services available to Brent residents, examining in detail access to GPs (opening hours, distance and time to travel). It follows with an analysis of patient satisfaction with GP access and a description of plans to improve access to GP services in Brent over the coming years.

4.1 Structure of and access to Primary Health Care services

Primary health care is a crucial component of the local healthcare economy. Primary health care is composed of GP services, pharmacies, dentists and community nursing services. In addition to meeting the basic healthcare needs of the Brent population, they serve as key components of the healthcare system, acting as gatekeepers to secondary, tertiary and more complex healthcare services. Equitable access to these services has implications for health inequities as a whole throughout the borough. Some groups however may have less access to primary health care services compared with others, for example due to language, cultural or geographic barriers. In particular, the homeless or migrant population might be particularly affected.

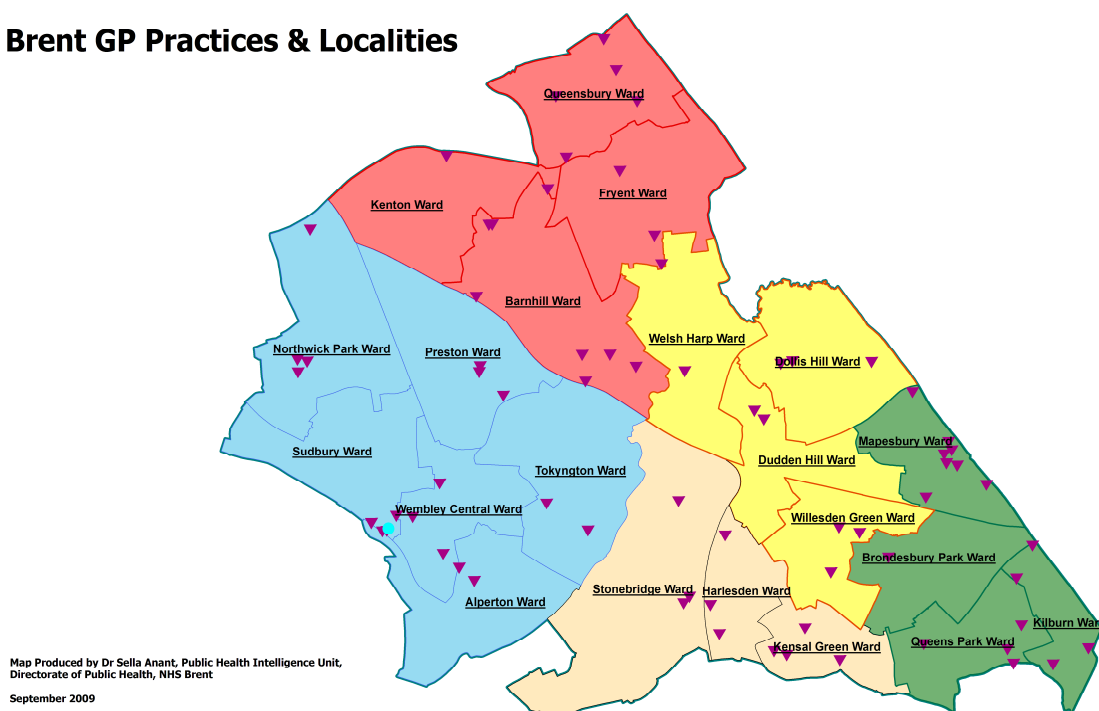
With respect to the provision of healthcare facilities, Brent PCT hosts the following facilities within the borough:

- 2 Acute sites;
 - Northwick Park / St Mark's Hospital;
 - Central Middlesex Hospital;
- 4 Other Acute sites;
- 34 Mental Health / Other sites;
- 72 GP Surgeries;

- 72 Pharmacies;
- 69 Dental Practices
- 60 Optometrists and Opticians services

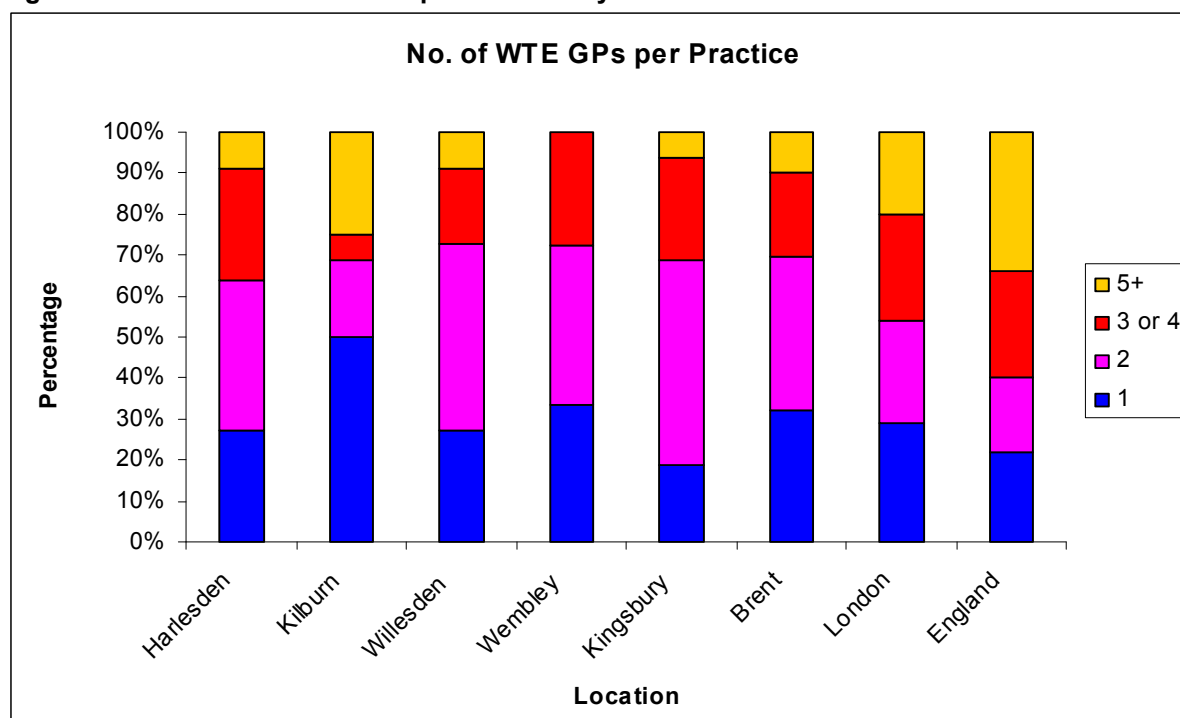
Map 5: NHS Brent GP Practices & Localities

NHS Brent GP Practices & Localities



Included within the 72 GP practices are 19 single handed practices, 4 PCT salaried practices and 12 PMS practices providing a range of specialty services, including services for refugees and asylum seekers, the homeless population and those who are unregistered. Altogether Brent has 166 full-time (176 WTE) GPs.

Figure 10: Number of WTE GPs per Practice by Localities in Brent



The analysis of primary care within Brent shows a higher preponderance of smaller practices as compared with national averages. 70% of Brent Practices are one and two handed practices compared to 54% in London and 42% in England. Single handed practices have some advantages in terms of patient care, particularly the consistency with which one can see an individual practitioner; however there are a number of consequences. Infrastructure in small practices is sometimes not as well developed as in larger practices and they generally lack the ability to offer multi-disciplinary approaches to healthcare, usually available in larger practices. Kilburn is the locality with the highest proportion of single-handed GP practices.

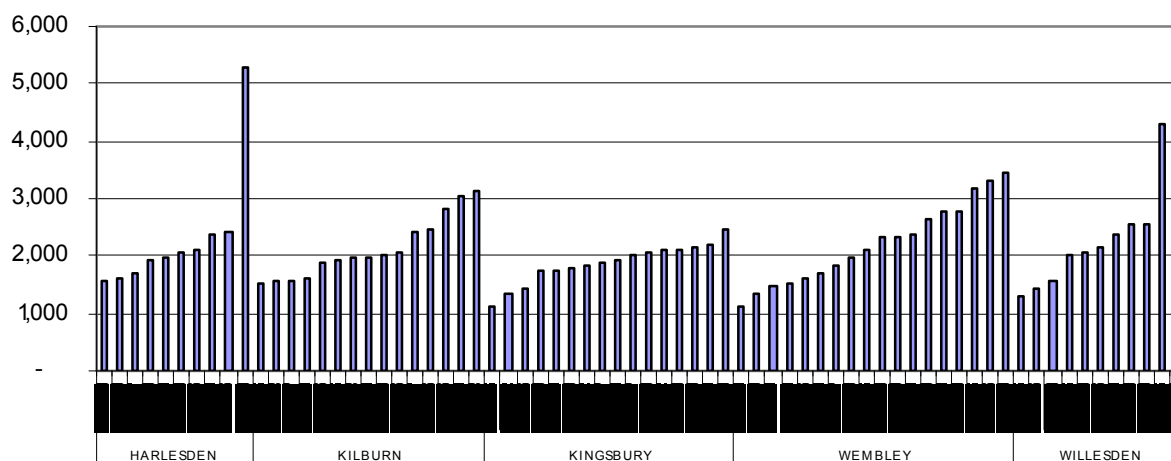
Density of GPs per square kilometre is highest in Kilburn (7.3) and lowest in Wembley (2.79). Overall list size is approximately 60,000 more than the resident population, which suggests considerable list inflation throughout the borough.

4.1.1 Structure of GP services

There were 354,198 patients registered with a Brent GP as at April 2010. Patient turnover is approximately 20% per annum. However, 270,100 people live in Brent so there is a large difference between our resident and registered population. Possible explanations include: high list inflation, high population turnover and that Brent is a net importer of patients. GP practices list sizes vary from just under 2000 to about 15,000 patients. Overall, the highest list size is in Kilburn (the Lonsdale practice). Most of the smaller practices have about 2000 or less patients. Most of the GP practices except in Kilburn have a maximum of between 8000 to 11,000 patients.

On average, the patient-GP ratio in NHS Brent is 2250 per Whole Time Equivalent (WTE) GP. As shown in the graph below, the highest patient-GP ratios in NHS Brent were from a practice in Willesden locality. This is over three times higher than the average ratio in Brent. The lowest patient-GP ratio was observed in a practice in Kingsbury (the Fryent practice - about 1000 patients/GP).

Figure 11: Number of patients per WTE, by GP practice and Localities (2008-09)



Source: Brent Balanced Scorecard, 2009

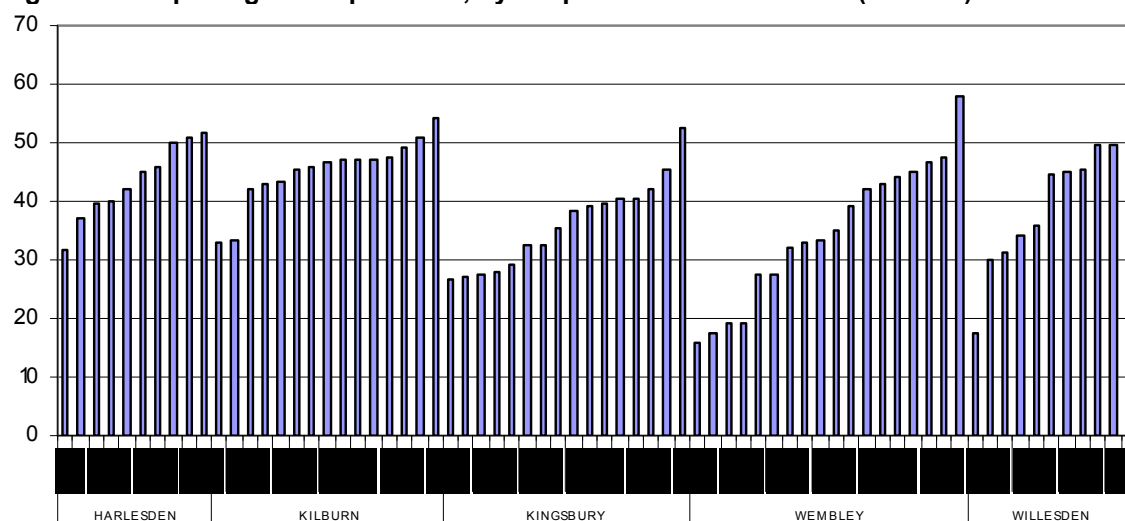
Whilst there have been a small number of retirements over the last few years there has also been successful recruitment of new GPs into the area. The provider base has remained unchanged, with services mainly delivered from large houses or small purpose built GP practices.

4.1.2 Access to GP services

The accessibility to GP surgeries depends on more than the number of GPs alone. These ratios do not give any indication whether the supply of GPs for the population was adequate to meet the needs of that population. Further work is required to weight the populations for age and need before drawing conclusions about the level of provision by locality. However, accessibility can also be considered in terms of geographical distance, barriers to attendance and satisfaction with the service. Furthermore, Geographical Information Systems and the Patient Satisfaction Surveys inform our knowledge of whether GPs are equitably accessible across the borough.

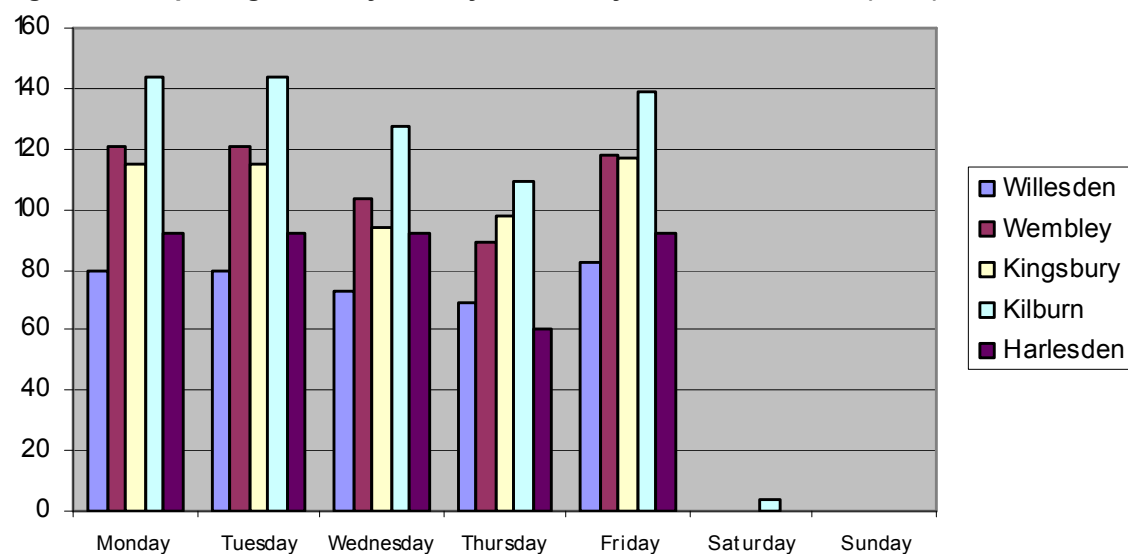
Proxy indicators of access can be described, such as opening hours, the ability to book an appointment by telephone, and distance of the population from the GP practice. These are all functional indications of whether, in practice, patients are likely to be able to access GP services adequately. There is a very wide variation in opening hours between all the GP practices in Brent, ranging from just 15 hours per week, through to 60 hours per week. Although, contractually, there is no minimum requirement for the GP service to remain open, this wide variation does suggest that some communities may be negatively affected with respect to the access to primary care services. This links in with planned changes to the way Brent commissions primary care in the future, the focus of section 4.3 below.

Figure 12: Opening hours per week, by GP practice and Localities (2008-09)



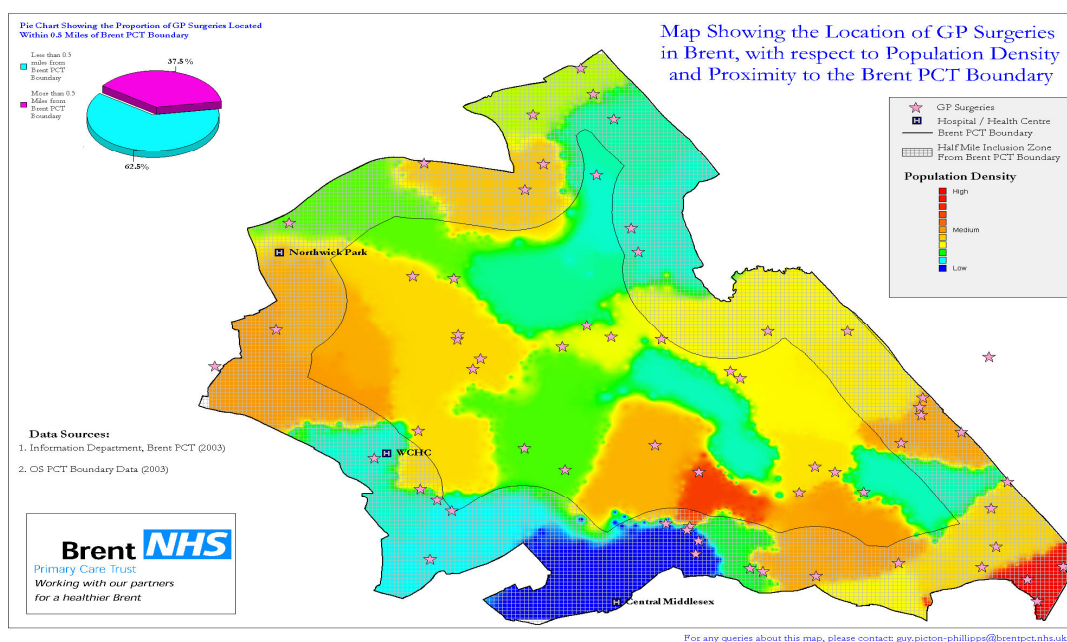
Source: Brent Balanced Scorecard, 2009

As the graph below shows, there is also some variation in opening hours to GP practices throughout the working week. Shorter hours are worked on Wednesdays and Thursdays and practices are rarely open on the weekends. When availability of GP consultation hours and list size is accounted for, the picture is slightly changed – Wembley and Willesden have the least access, and Harlesden, Kilburn and Kingsbury have the best.

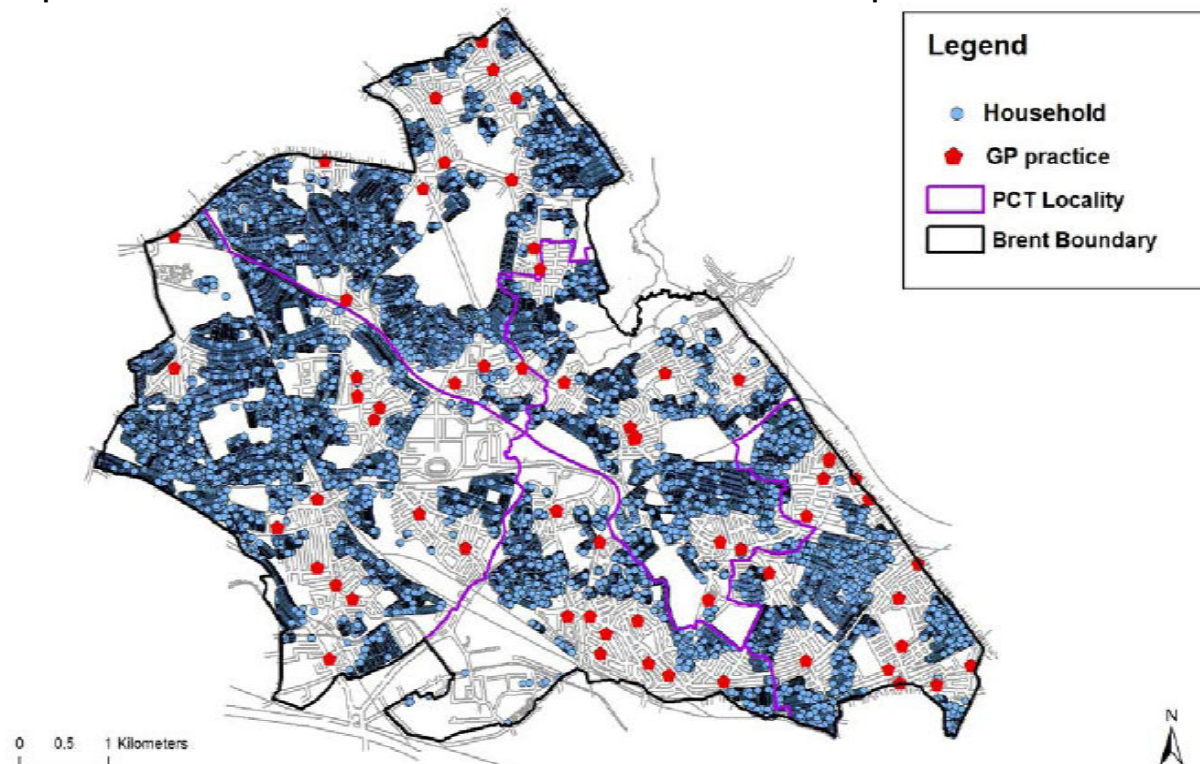
Figure 13: Opening hours by the day of week by localities in Brent (2009)

Source: Mayhew Harper Assoc.

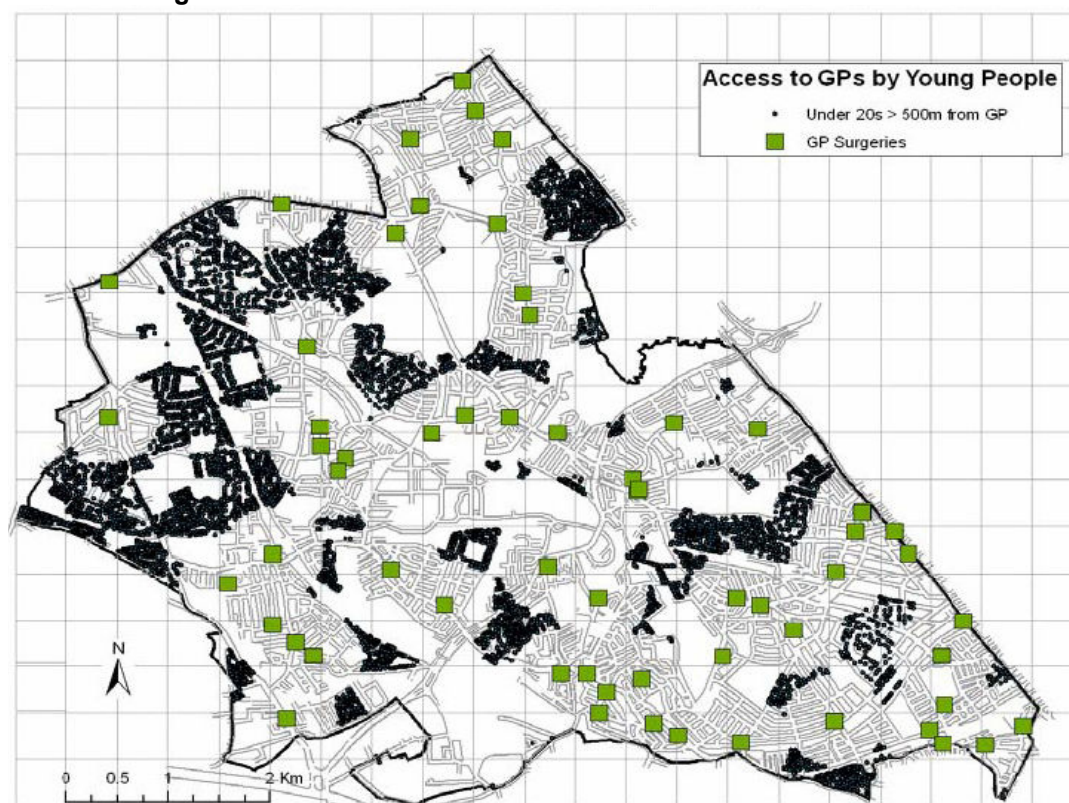
The maps below show that GP surgeries are located, generally, in medium to low population density areas.

Map 6: Access to GP Surgeries by population Density in Brent

The map below shows that in the north of the borough a greater proportion of households live more than 10 minutes walking distance from the nearest GP practice, however more households own cars in this area of the borough.

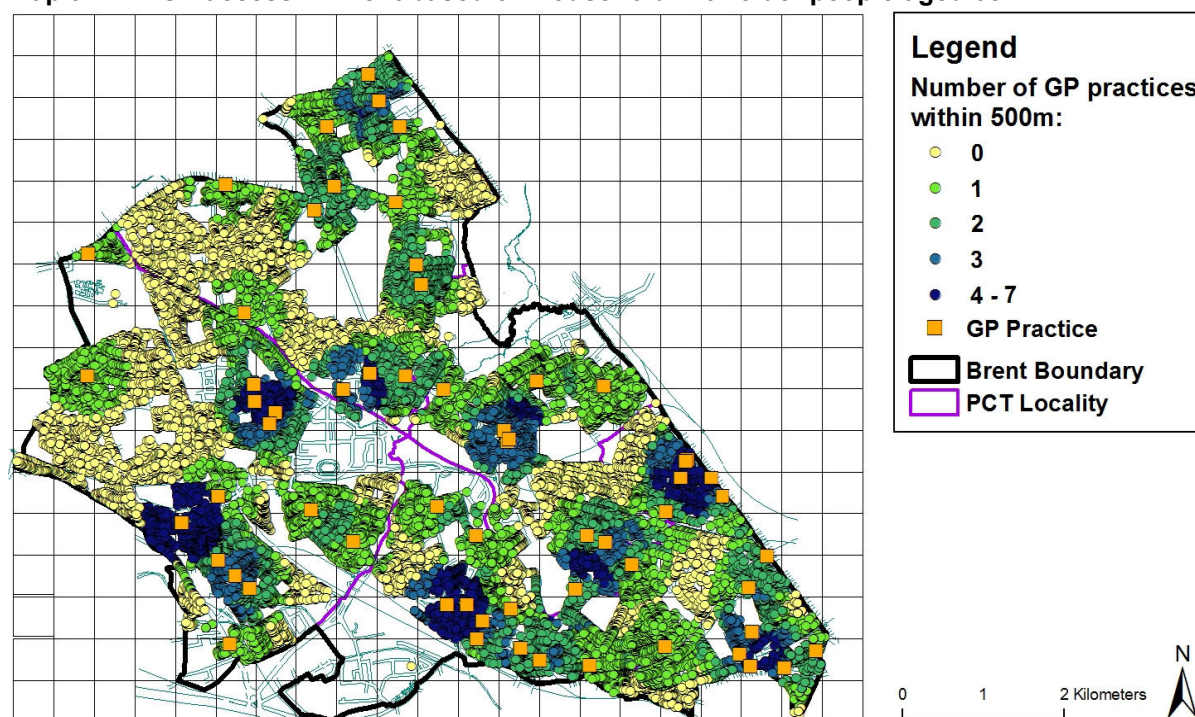
Map 7: Brent Households less-than-10Minutes from nearest GP practice

Furthermore, in these areas, surgeries are relatively distant from young members of the population in some areas, notably Kenton and Barnhill, Northwick Park and Sudbury, and finally Dollis and Dudden Hill (see map below).

Map 8: Access to GP practices in Brent based on households with children under 20 years of age

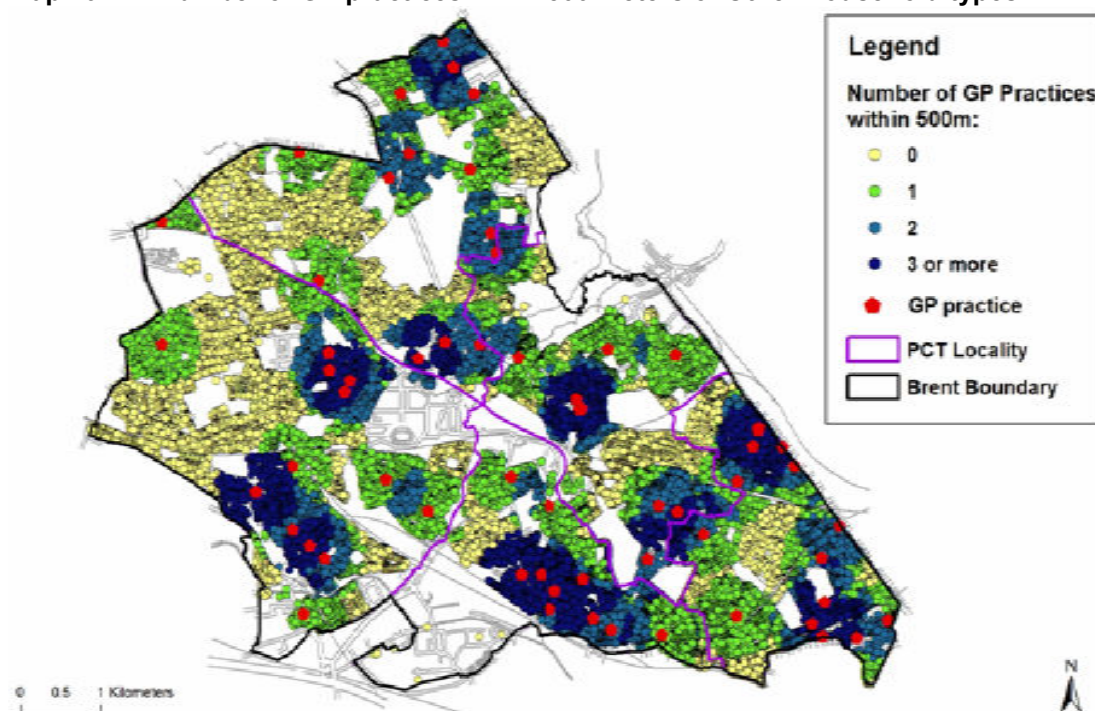
The map below shows a similar picture. In addition to the wards mentioned above, there are several other areas without a GP practice less than 500m from households with elderly inhabitants, including Brondesbury Park, Fryent and Stonebridge wards.

Map 9: GP access in Brent based on household with older people aged 65+



A similar picture is found by mapping the distances of other household from the nearest GP practices as found in the map below.

Map 10: Number of GP practices within 500 meters of Other Household types

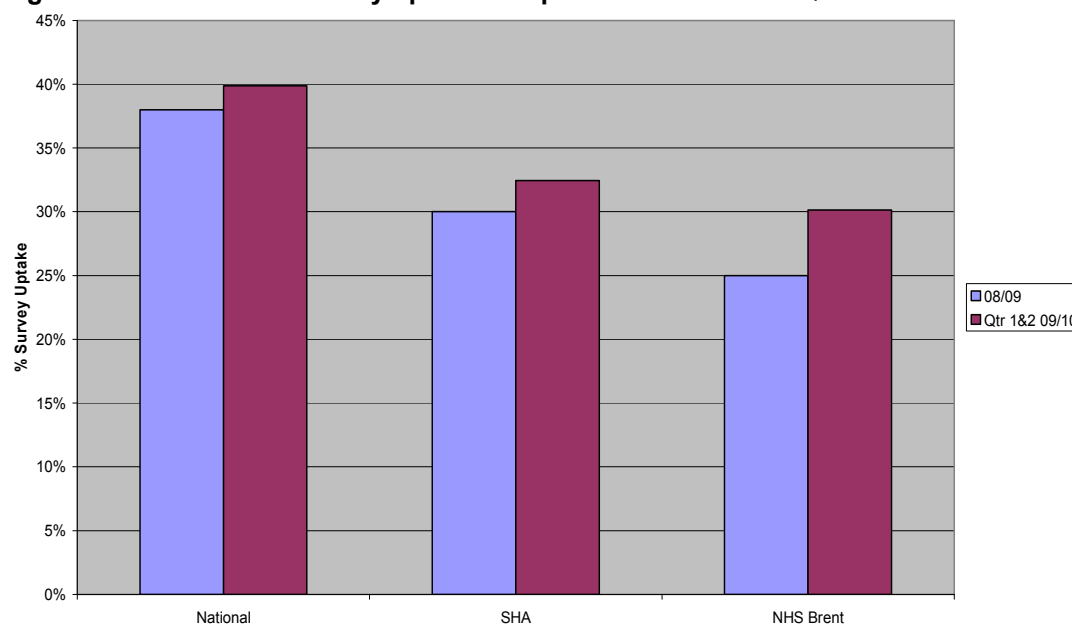


The key points to note are that when GP practices are clustered together local residents will have a greater choice of GP, but also that there is a large variation in household access depending on the neighbourhood. Clustering practices into bigger centres would not necessarily impact on local access but would enable a wider range of services to be delivered from a small number of larger practices. In areas with poor access, new practices would be desirable¹.

4.2 Patient experience of GP services

In Brent, about 30% of patients use their nearest GP, 15% their second nearest and 10% their third nearest. However 11.4% of the population living in Brent are registered with GPs that are not based in Brent, mostly if they live near the Brent boundary². An important way to determine whether GP services are accessible to their patients is via the GP Patient Survey. This is a National Report, based on data collected annually, in January-March and conducted for the Department of Health by Ipsos MORI. The GP Patient Survey (GPPS) was developed to collect information to reward GP practices in England for performance on patient access to GP services and choice of hospital services. From the 32,685 surveys sent out in 2009, 9,852 were completed by NHS Brent patients for Qtr 1 & 2. In 08/09 69,520 surveys were sent out with a 17,701 surveys returned. Below is a graph showing a 5% improvement in NHS Brent's response rate in uptake for Qtr 1&2 09/10, compared with qtr's 1, 2, 3 & 4 in 08/09.

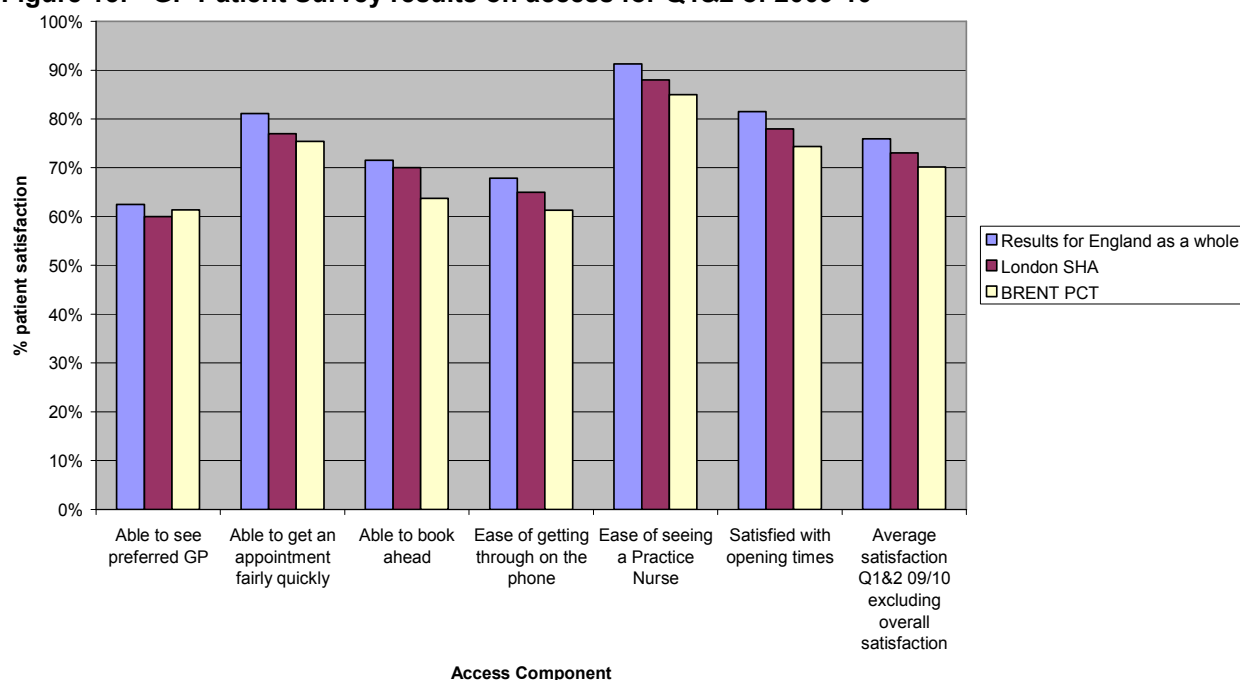
Figure 14: GP Patient Survey uptake comparison 2008-09 Vs. Q1&2 of 2009-10



However, even though the response rate has slightly improved the satisfaction scores from Qtr-1&2 09/10 are below those of 08/09. We would hope that the effects of the more recent work in improving access i.e. extended hrs, raising the profile of access, the intended delivery of Community Engagement Access presentations to patients will have a positive impact in Qtr 3&4 and therefore show an improvement, however slight, in overall satisfaction. Bearing this in mind any improvement in access may not be realised until Qtr-1&2 10/11.

¹ Primary Care Services in Brent – Mayhew Harper Associates Ltd 2009

² Primary Care Services in Brent – Mayhew Harper Associates Ltd 2009

Figure 15: GP Patient Survey results on access for Q1&2 of 2009-10

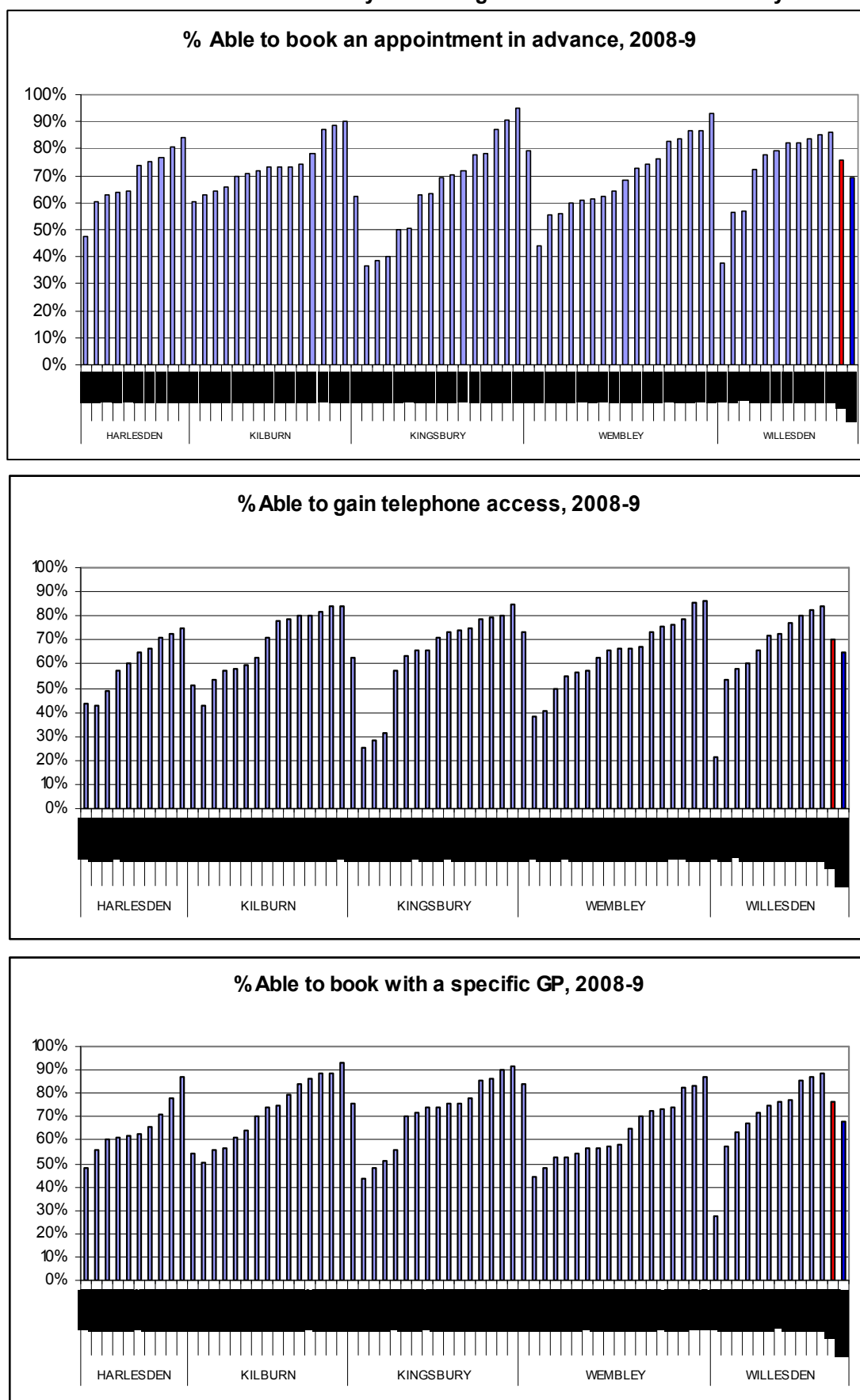
As it covers an entire year, and is therefore somewhat of a more complete representation, the summary of the key measures from the 2008-9 GP Patient Satisfaction Survey is presented below. It can be seen that despite the wide variation in opening hours, the majority of those surveyed are satisfied with opening hours – however this proportion was less than the UK average. Indeed, Brent ranks 135th out of 150 PCTs with respect to patient satisfaction of opening hours. Other notable results are that patients are relatively more satisfied with telephone access, advance bookings and the ability to book an appointment with a specific GP than the London average however for overall satisfaction, Brent ranks 142nd out of 150 PCTs.

Table 3: Results from the Brent GP Patient Satisfaction survey, 2007-08 and 2008-09 as compared to the national average

	2007/8		2008/9	
	Brent	England	Brent	England
% satisfaction with telephone access	82%	87%	65%	70%
% able to book an appointment in advance	73%	77%	69%	76%
% able to book appointment with a specific GP	80%	88%	68%	77%
% satisfied with GP practice opening hours	75%	82%	75%	82%

A more detailed examination of patient satisfaction with GP access reveals wide variation between GP practices. The highest performing practices achieve satisfaction rates as high as 90%. However, in five practices, satisfaction with telephone access, advance bookings and ability to book an appointment with a specific GP is as low as 40%. This helps to focus specific attention for certain GP practices and develop strategies to improve performance. Improving the performance of just the bottom three or four practices in each locality will dramatically improve the average performance of the PCT as a whole, particularly as certain practices perform less well across all these indicators compared to their neighbouring practices. For example, if the five practices with the lowest current satisfaction levels showed levels similar to the Brent average, this average would increase to close to the national average.

Figure 16: GPPS results on details of access satisfaction with Brent GP Practices clustered by Localities and ordered by increasing satisfaction for each Locality



Source: NHS Information Centre, GP Patient Survey 2008-9

The GP Patient Survey National Report (2008) noted some broad associations between characteristics of the patient and their perceived satisfaction with GP services. Employment status, residence and ethnicity were linked with a patient's ability to gain satisfactory access to their GP:

- Full-time workers were less likely to be able to book appointments within two working days (48 hour access), book advance appointments and book appointments with a particular doctor, compared with those who do not work.
- Patients who are not parents or guardians tend to be more satisfied with telephone access and their surgery's opening times.
- Those who live more than an hour away from work report lower levels of satisfaction with telephone access (82%) and surgery's opening hours (63%), than those whose journey time is less than an hour. They are also less likely to be able to book appointments within 48 hours, book advance appointments and book appointments with a particular doctor, particularly compared with those who live on site or within 10 minutes of their place of work.
- Patients who work and who can take time away from work to see their GP tend to be more satisfied with telephone access, and with their GP surgery's opening hours, than patients who cannot take time away from work to see their GP. Just over four in five (83%) of those who can take time away said they were satisfied with their surgery's opening hours, compared with 58% of those who cannot take time away. Patients who cannot take time away from work are also less likely to be able to book urgent and advance appointments, and appointments with a specific GP.
- White British and Irish patients are more likely to be satisfied with telephone access, compared with Bangladeshi, Pakistani and Indian patients. Those of Bangladeshi, Pakistani and Indian backgrounds also reported lower levels of ability to book urgent appointments (48 hour access) or within two working days, compared with White British patients

The significant proportion of Black and Ethnic Minority groups in Brent suggests that there is scope to do more in-depth analysis to determine whether this finding is reproduced locally.

The table below shows the relationships between various variables relating to access and patient satisfaction of Brent GP practices. A variety of explanatory variables have been analysed, grouped by those that are proxy indicators for access to GP practices, GP practice structure and organization, and those that represent underlying population characteristics. The strength and significance of the relationship is shown in the last two columns. A relationship that is very strong would approach the value 1. A negative strength indicates that there is an inverse relationship.

The table below shows that there is a positive association between opening hours and the index of multiple deprivation, suggesting that GP practices with longer opening hours are located in the more deprived areas. However, increasing the number of hours that the GP practice is open does not seem to correlate with increasing patient satisfaction or ability to gain access to the GPs. Whilst larger practices, in terms of list size and WTE, do seem to have longer opening hours, this is not reflected strongly in the amount of resources that they receive as part of the GMS/PMS contract. The relationship between deprivation and the resources that the GP practice receives is also interesting (Spearman's Rho +0.430). Those that receive the most tend to be in the more deprived areas. Presumably, this is because those in the most deprived areas need greater resources to achieve the same amount.

Table 4: Associations between the Practice opening hours with access and population characteristics

	Explanatory variable		Significant relationship	Strength (Spearman's rho)
Opening Hours per week	Access	List size	Yes	+0.333
		£/patient	No	+0.112
		Overall patient satisfaction	No	+ 0.230
		Ease of getting through on the phone	No	+ 0.002
		Able to book ahead	No	- 0.202
		Able to see preferred GP	No	- 0.076
		WTE	Yes	+ 0.392
	Population	Index of Multiple Deprivation	Yes	+ 0.256
		% 65+ years of age	No	+ 0.002
		Lone Pensioner households	No	+ 0.103
		Incapacity Benefits	No	+ 0.213
		Lone parent households	Yes	+ 0.191

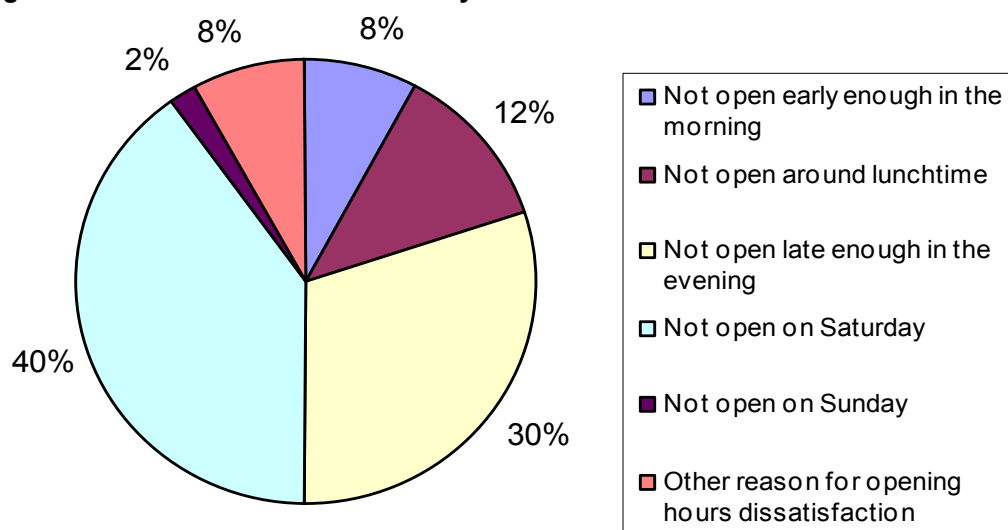
The table below shows that overall patient satisfaction is not particularly well related to the structural characteristics of the GP practice. Although there is a positive relationship with the size of the practice in terms of WTE, this is not upheld with list size. List size is not a particularly robust variable because there is considerable list inflation throughout the borough and more analysis is required to explain this association. The table also shows that although GP practices appear to be open longer in areas of high deprivation, this is not translating into improved patient satisfaction overall.

Table 5: Associations between GPPS overall satisfaction and aspects of GP Practice structure and population characteristics

	Explanatory variable		Significant relationship	Strength (Spearman's rho)
Overall satisfaction	GP practice structure	List size	No	+0.223
		£/patient	No	+0.175
		Opening hours per week	No	+ 0.230
		WTE	Yes	+ 0.360
	Population	Index of Multiple Deprivation	No	- 0.129
		% 65+ years of age	No	+ 0.005
		Lone Pensioner households	Yes	+ 0.290
		Incapacity Benefits	No	- 0.109
		Lone parent households	No	- 0.192

As this analysis is not available for the more recent 2008/9 Patient Survey, we have used the 2007/8 survey to unpack the reasons for unsatisfactory access to GP services in Brent. The following pie-chart shows the main reasons for unsatisfactory access to GP services in Brent. Dissatisfaction with opening hours was most likely to be due to not being open on a Saturday (40%), or in the evening during the week (30%).

Figure 17: Reasons for unsatisfactory access to GP services in Brent 2007-08



Although statistical differences need to be determined, breaking down the reasons for dissatisfaction with access amongst different groups in Brent, does indicate some differences. The table below shows the survey results broken down by age, gender, ethnicity, deprivation, frequency of use of the GP service, dependents, the existence of a long-term conditions and employment details.

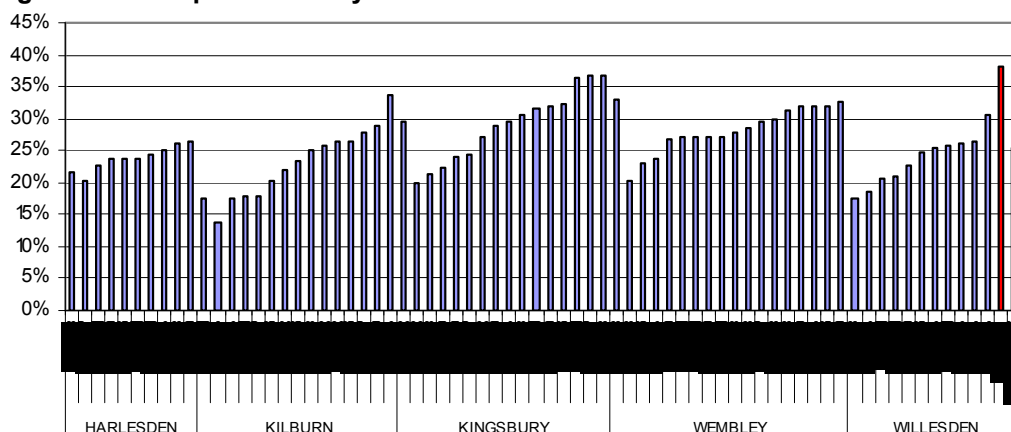
Table 6: GP Patient Survey results by demographic characteristics (2007-08)

	% not open early enough in the morning	% not open around lunchtime	% not open late enough in the evening	% not open on Saturday
<45	8%	15%	32%	34%
45-64	9%	8%	31%	44%
>65	6%	13%	17%	55%
Men	8%	11%	31%	40%
Women	8%	12%	30%	40%
White British	9%	12%	30%	39%
Non-White British	8%	12%	30%	40%
Most Deprived	8%	14%	30%	37%
Moderately Deprived	8%	9%	30%	44%
Least deprived	6%	17%	39%	36%
<2 appointments	8%	12%	33%	35%
3-5 appointments	8%	12%	29%	43%
>6 appointments	8%	12%	26%	43%
Parent/Guardian	8%	13%	26%	41%
Not Parent/Guardian	8%	11%	32%	39%
Long term condition carer	6%	9%	26%	49%
Not Long term condition carer	8%	12%	31%	38%
Work full time	10%	9%	38%	37%
Work part-time	9%	13%	23%	41%
Full time and short commute	9%	12%	35%	34%
Full time and long commute	10%	7%	39%	38%
Full time and office hours	11%	7%	40%	36%
Full time not office hours	7%	14%	30%	37%
Full time and time to see GP	11%	10%	34%	37%
Full time and no time to see GP	8%	7%	42%	36%

Those working full-time and during office hours preferred GP services to open earlier in the morning and later in the evening; patients from the least deprived areas were most likely to prefer GP services to be open during lunchtimes; people over 65 years were mostly likely to see GP services open on Saturdays;

There are several limitations with the results of the survey. Firstly, the response rate is low, and varies considerably between GP practices (see figure below). The response rate in Brent (26%) was well below that achieved nationally (37%) with only 3 practices in Brent achieving a rate equal to the national rate. Survey response rate should be increased through door-to-door canvassing, or linking survey completion to an incentive such as prize draw.

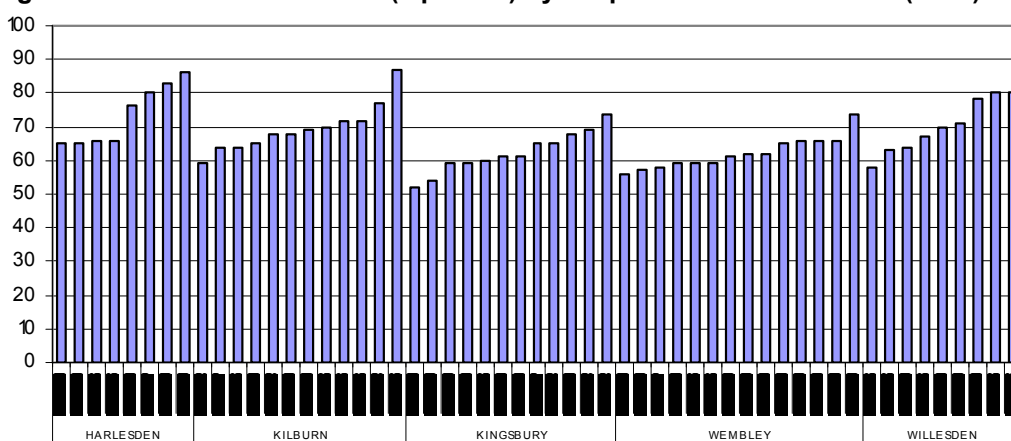
Figure 18: Response rate by Brent Clusters for GPPS 2008-09



However, it should be noted that the sample of respondents may not be representative of the population as a whole. The sample only included those who have accessed the GP service in the previous 6 months. Those patients that are dissatisfied with the GP practice may not have accessed its services within the time period for being surveyed. This is a selection bias, and may have distorted findings in favour of those who find the GP practice satisfactory. Finally, patients attending larger practices may be underrepresented and GP practices can choose to opt out of the survey.

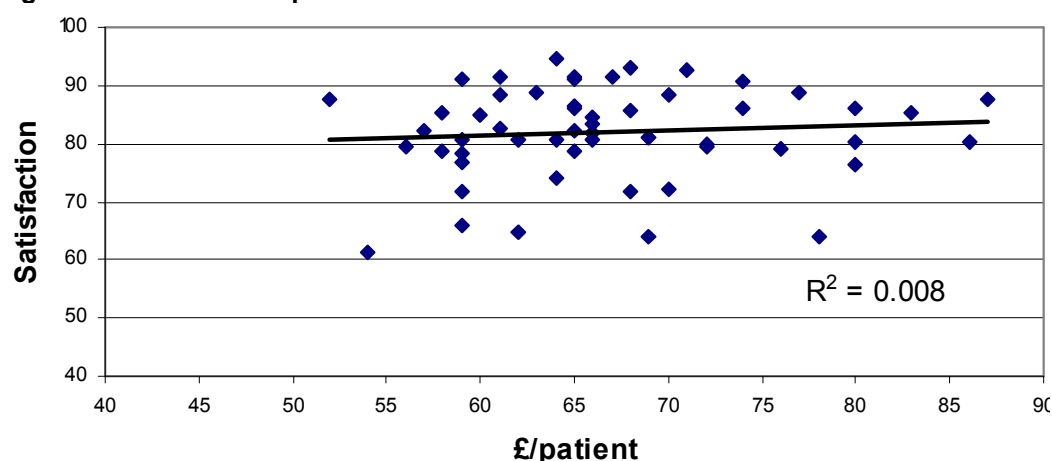
GP practices are commissioned to provide primary care services to Brent residents through the General Medical Services contract. Each practice is remunerated according to the list size, and the services that it offers, amongst other things. The graph below shows the variation in resources received by GP practices through the GMS contract. The average, in terms of pounds per patient, is £67 (ranging from £52 to £80 per patient).

Figure 19: GMS/PMS contract (£/patient) by GP practice and Localities (2009)



However, there is very little relationship between the amount that a practice receives per patient and the overall satisfaction. It could be said that the broad variation in satisfaction with GP access is not similarly reflected in the amount of resources that practices receive as part of the GMS/PMS contract. Practices vary less in what they receive than they do in the satisfaction of their patients. As the graph below shows, less than 1% of the variation in overall patient satisfaction is explained by the amount of resources GPs receive through the GMS contracts. This means that although some practices receive nearly twice as much per patient, their patients are as satisfied with the service provided by other GP practices that receive much less.

Figure 20: Relationship between overall satisfaction and GMS contract 2008-09

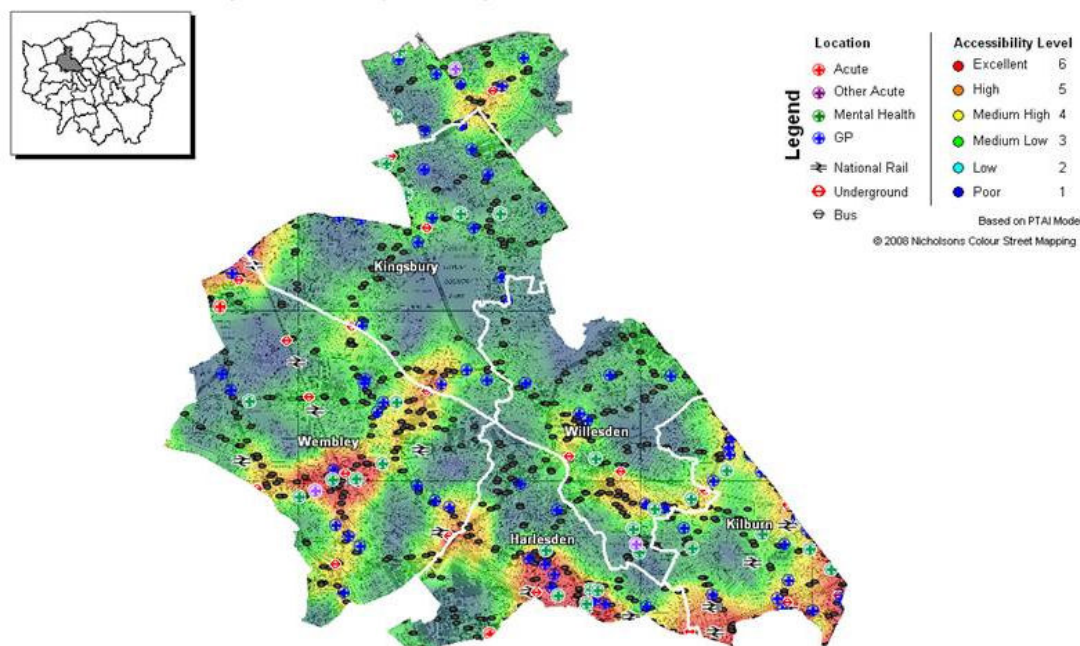


4.3 Improvements in access to Primary Care services in Brent

The latest Commissioning Strategic Plan (2009-2014) for Brent sets out strategic priorities that are underpinned by concerns for access to primary care services. The relationship between the way patients utilize GP services and acute care is complex, however we know that the unnecessary use of acute services in Brent is inefficient, expensive and promotes poor patient experience and outcomes. A+E is often used as an alternative to primary care, and this is rising on average by 8% per year. Furthermore, an estimated 60% of A+E attendances are for conditions that could be managed in primary care³.

The need for change in primary health care provision in the borough is driven by these and a number of other factors – demographic changes including population growth, changing health needs of a diverse population and the need to provide modern and fit-for-purpose healthcare facilities. However, access to GP services depends also on relative accessibility i.e. travelling times for patients. The time taken to travel to the health service can be plotted graphically and public transport links distort access to health services - those living further away may still take less time to get to the health service than those living nearby.

³ Brent Commissioning Strategic Plan 2009-2014

Map 11: LB Brent – Public transport accessibility ‘Heat’ map and health service locations

The Polysystem – changing primary health care in Brent

The Brent Commissioning Strategic Plan (2009-2014) has identified access to be important not only for patient experience, but to deliver improvements through better case management, prevention, decommissioning and productivity gains that will provide sufficient disinvestment and efficiencies to maintain financial stability as well as invest in driving up quality⁴. The goal is to improve the patient experience of services, so that by 2014 health and social care providers commissioned by NHS Brent will achieve patient experience scores at least as good as the London average but also to commission services differently – changing the models of healthcare delivery and transforming the ways in which care is accessed.

Table 7: Percentage of patients reporting satisfaction with GP Access

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Target	65.7%	69.3%	71.2%	73%	74.9%	76.8%
% Change vs. baseline	0.0%	5.5%	8.4%	11.1%	14.0%	16.9%

The polysystem model was conceived and developed as an integral part of the Primary and Community Strategy, using as its starting point the cooperative ways of working already in place within each of the five Practice Based Commissioning Clusters⁵. There has been growing support for more integrated ways of working where ease of service navigation becomes integral to GP access. Every polysystem, located in each of the five Brent localities, will deliver transformed pathways in primary and community care.

Firstly, integrated multidisciplinary teams of primary, community and social care staff will improve the management of people with long term conditions. Secondly, through polysystem community pharmacists, extended hours in GP practices and access to 8-8 GP access centres there will be improved access to primary care for people with urgent care needs. Finally, elective care pathways will be redesigned to include direct access to diagnostics and one stop care such as access to specialist advice and treatment⁶

⁴ Brent Commissioning Strategic Plan (2009-2014) p.23

⁵ Brent PCT Commissioning Strategic Plan 2009-2014

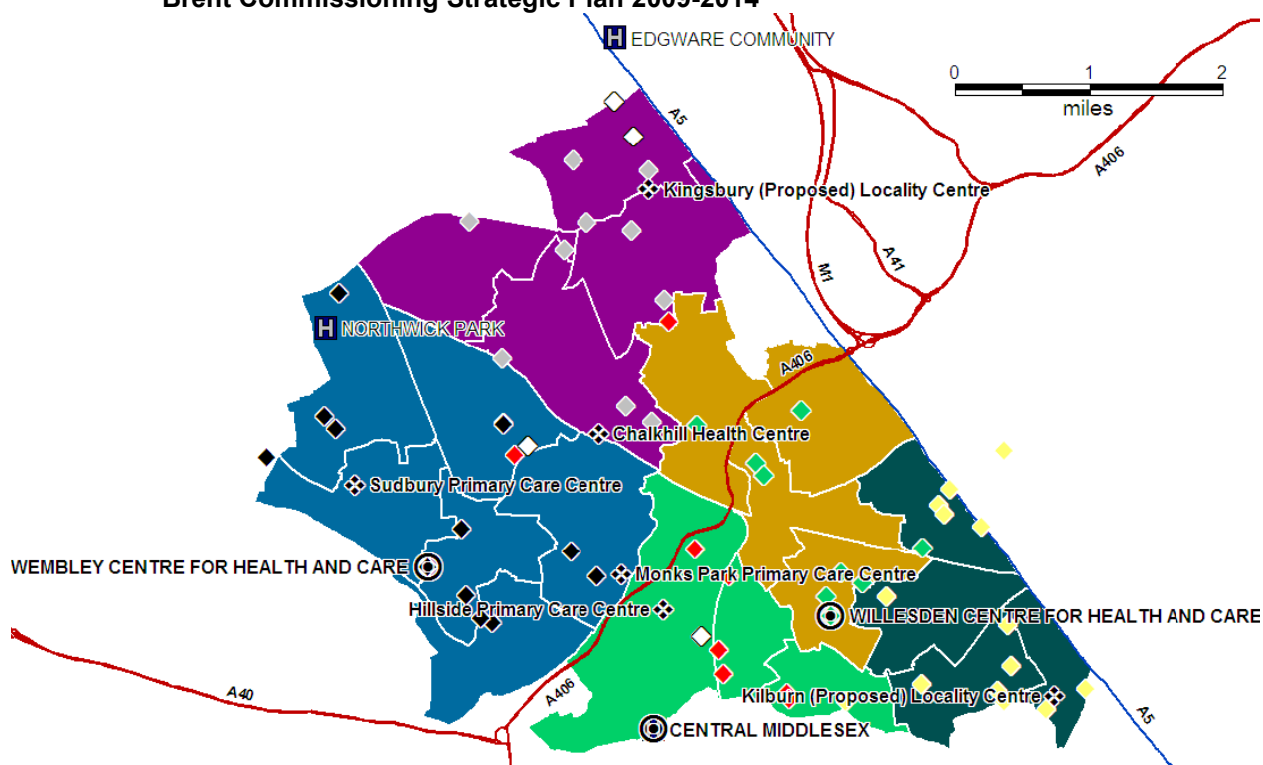
⁶ Brent PCT Commissioning Strategic Plan 2009-2014

The five polysystems will offer 100% practice coverage:

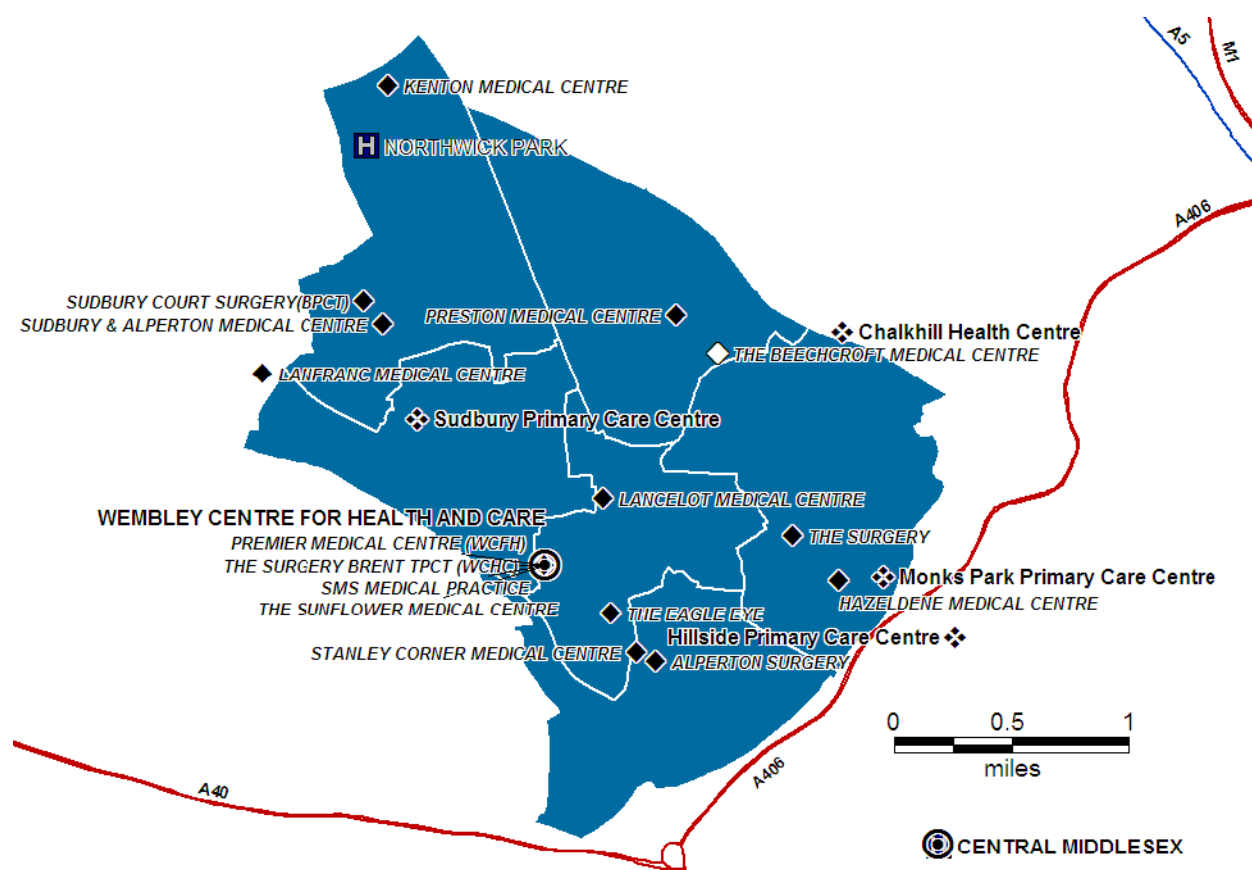
- Harness 16 practices 77,862 population
- Willesden 10 practices 56,013 population
- Kilburn 15 practices 83,111 population
- Wembley 15 practices 65,517 population
- Kingsbury 15 practices 70,247 population

Included within the Commissioning Strategic Plan (2009-2014) are the proposed locations of Polyclinics – referral centres with diagnostic capabilities that each serves the specific polysystems outline above. To identify the most appropriate location of these polyclinics, capacity modelling was undertaken by external consultants and appraised on quality, productivity and geographical coverage criteria, attending to the issues of accessibility highlighted above and efficient utilisation of existing community buildings. Future polyclinics will be located in Wembley, Central Middlesex and Willesden (see maps below). All GP practices and pharmacies will provide core and enhanced services in line with contractual requirements and to agreed standards of quality and access. It is anticipated that over the time of the strategy the number of GP practice spokes will reduce as practices consolidate onto fewer sites however GP practices will offer more extended hours, from 8am to 8pm.

Map 12: Maps showing the proposed locations of polyclinics and poly-systems as part of the Brent Commissioning Strategic Plan 2009-2014



(the expanded map on next page shows the detail of the Wembley Locality with existing GP practices)



4.4 Relationship between access to Primary Care services and A+E attendances

GP supply factors have not been previously shown to affect Hospital Admission or attendance rates for long-term conditions^{7 8}. Indeed, intensive primary care actually led to increased hospital readmission⁹. Previously undetected medical problems, having a channel to voice complaints and improved communication were reasons for readmission and referral to tertiary care. Other research has shown that patient factors such as recent migrants, unskilled population, single-parent families and the chronically ill accounted for more of the variation in emergency admission and attendance rates than anything else¹⁰. Previous research on out-of-hours GP services showed that in urban areas, like Brent, patients have a preference for hospital care in acute cases¹¹.

In 2006, NHS Brent carried out an audit of A+E attendance to identify the pattern, range and reasons for referrals by Brent GPs to Northwick Park and Central Middlesex Hospitals, and establish an understanding of GPs decisions regarding their referrals to A+E. Key findings included the following:

- The median number of attendants per GP practice was 174; 25th and 75th percentile was between 66 and 276.
- Attendance varied according to ethnic group

⁷ Saxena S, George J, Barber J, Fitzpatrick J, Majeed A (2006) - Association of population and practice factors with potentially avoidable admission rates for chronic diseases in London: cross sectional analysis. *Journal of the Royal Society of Medicine* 2006;99:81–89

⁸ Majeed A, Bardsley M, Morgan D, O'Sullivan C, Bindman A (2000) - Cross sectional study of primary care groups in London: association of measures of socioeconomic and health status with hospital admission rates. *BMJ* 2000;321:1057–60

⁹ Weinberger P, Oddone E and Henderson W (1996) – Does increased access to primary care reduce hospital readmissions? *N Engl J Med* 1996;334:

¹⁰ Reid et al 1999

¹¹ Whynes DK and Baines DL Explaining variations in the frequency of night visits in general practice. *Family Practice* 1996; 13: 174-178.

- A very high proportion of patients presenting at A+E did so during the hours of 9am-12pm. The busiest day of the week in A+E is Monday.
- Unregistered patients account for 10-14% of A+E attendances.

The audit also showed that there is a common perception that many GP referrals are 'inappropriate' and that this is a major factor contributing to lengthy waiting lists. However, there is no accepted or standard definition of what is an appropriate or inappropriate referral. Neither high nor low GP referral rates are satisfactory indicators of quality or cost effectiveness and many factors other than GP behaviour influence demand on secondary care¹².

Table 8: Reasons given by Brent patients for attending A+E (2006)

Response	%
<i>For Diagnostic Purposes</i>	43
<i>Failure to get an appointment on the day</i>	27
<i>Second opinion/ reassurance</i>	27
<i>Better facilities</i>	14
<i>Proximity of service</i>	5
<i>Convenient</i>	5
<i>Were sent from work</i>	5
<i>Lack of confidence in GPs</i>	5
<i>Preferred hospital doctors</i>	3
<i>Poor experience with GP services</i>	3

Qualitative research was carried out as part of the A+E audit revealed that perception of A+E attendance varied between GP practices and patients themselves. Interviews with GPs showed:

- There was confusion around what constituted "out of hours service"
- GPs were sympathetic about the problems caused by self-referrals, but did not consider it their problem.
- GPs consider the underlying reasons for excessive A+E attendance to be complex and not due to access to primary care
- A large number of recent migrants tend to feel that GP services are not proper 'hospitals'.
- There were three types of patients who self-refer that were classified as 'unhelpables'- patients who have too high expectations of GPs, often patients with social problems, chronic health problems such as asthmatics and those that were unwilling to cooperate. These patients will see GPs innumerable times and will not accept any advice. They may also have underlining mental or personality disorders.
- Recent migrants to the UK have different expectations of the health service. They may have been culturally conditioned into believing that GPs services are inferior to those of a 'proper hospital'.

The audit also revealed preferences from the patients' perspective and found that:

- Difficulty getting through the general practice telephone system results in frustration that may lead some to go to A+E
- Expectation to be seen immediately, without consideration for the needs of others or the constraints on the system was frequently cited as a source of conflict that leads patients to 'threaten' general practice staff by going to A+E.
- Those who do not understand the UK system, for instance refugees, think that quality care involves investigations that are better done at the A+E.

¹² Rosalind Eve et al.2001

- Limited ability for self-help results in patients seeking help for things that should be managed through informal caring - calling an ambulance for a headache was cited as an example of this.

In Brent, we are carrying out a study that explores the relationship between access to GP services and its relationship to the utilization of A+E.

Table 9: Relationship between access characteristics of GP practices, population characteristics and utilisation of A+E services in Brent (2008-09)

	Explanatory variable		Significant relationship	Strength (Spearman's rho)
A+E attendance (Crude rate by list size, 2008-9)	Access	Opening hours per week	Yes	+0.303
		£/patient	Yes	+0.256
		Overall patient satisfaction	No	- 0.015
		Ease of getting through on the phone	No	- 0.168
		Able to book ahead	No	- 0.068
		Able to see preferred GP	No	- 0.015
		WTE	No	- 0.007
	Population	Index of Multiple Deprivation	Yes	+ 0.703
		% 75+ years of age	No	- 0.038
		Lone Pensioner households	No	+ 0.012
		Incapacity Benefits	Yes	+ 0.664
Lone parent households		Yes	+ 0.711	

The table above shows the relationships between a variety of potential explanatory variables and A+ E attendances in Brent, 2008-9. The table shows the variables that might explain the variation in attendance rates experienced by the patients registered to GP practices. Rates have been standardised by GP practice list size. A variety of explanatory variables have been analysed, grouped by those that are proxy indicators for access to GP practices, and those that represent underlying population characteristics. The strength and significance of the relationship is shown in the last two columns. A relationship that is very strong i.e. appears to explain strongly the variation in A+E attendances, would approach the value 1. A negative strength indicates that there is an inverse relationship between the variable and A+E attendance.

The table shows that access variables are generally not closely related to A+E attendance, although the number of opening hours per week in GP practices and the pounds per patient that they receive are weakly correlated. It appears that underlying population characteristics i.e. the Index of Multiple Deprivation, the proportion of the GP practice list that are on Incapacity Benefits, and the proportion of the GP practice list that are lone parent households, are much more strongly correlated with A+E utilization than the accessibility of the GP practice itself. This correlation is similarly observed in the pattern of Emergency Admissions. This needs more in-depth analysis, in particular adjusting for confounding variables such as age, sex and ethnicity. However, it might indicate that avoidable utilization of A+E is an issue that is more to do with the behaviour of patients, than the accessibility of the GP practices.

Of note, the pattern of Outpatient appointments was not correlated with underlying patient and population characteristics. Instead, the access indicators such as the ability to get through to the GP practice on the phone, the ability to book an appointment in advance and the ability to see a preferred GP, were negatively associated with Outpatient attendances (Spearman's Rho - 0.324, -0.34, -0.105 respectively). This suggests that outpatient services are utilised less by practices that demonstrate improved practice management and accessibility, which may suggest these are proxy indicators of quality.

These analyses examine these variables individually. By performing multiple linear regression we can develop predictive models to benchmark the A+E attendance rates that would be expected for each GP practice and use this information to guide improvements on a practice basis.

4.5 Summary of Access to Primary Care in Brent

In general, access to primary care in Brent appears good with adequate numbers of GPs populating a large number of practices in the borough. However, list sizes per GP vary considerably throughout the borough with relatively fewer GPs per 100,000 resident population in Willesden and Wembley and there is a broad range of opening hours across all localities. There is considerable variation in geographic and other types of access. Overall Harlesden, Kingsbury and Kilburn have the best access to general practice and Wembley and Willesden the least. When access to GP services is mapped by older people and children, parts of Kenton, and Sudbury have the worst access. GP consultation and opening hours of GP surgeries vary threefold across the borough with the lowest consultation and opening hours in Wembley and Willesden. These two localities have the least number of GPs.

This translates into relatively poor patient satisfaction with access in our population – there are low rates of satisfaction compared to the national average. Whilst specific groups exhibit certain access preferences i.e. for access to be tailored to their work, and home environment, there is a case for change in the structure and distribution of GP services in Brent. The proposed sites for polysystems and polyclinics take into account access in terms of geographical distance, population density and public transport routes and will, it is planned, lead to a more efficient and more satisfactory provision of primary care in Brent over the coming years.

There is still work to be done around improving the uptake of Patient Satisfaction surveys in Brent so that the most complete picture of access can be obtained. The increasing use of A+E for minor illnesses/injuries may reflect difficulties in accessing GP services. Preliminary statistical analysis indicates that inappropriate use of A+E services might be due more to underlying population characteristics such as deprivation and social support structures. Some work is required to understand this association in more depth if improvements in GP access are to lead to cost savings in the long run. Finally, there is a need to continue monitoring the equitable access to healthcare during new phases of primary care development.

Chapter 5: Prevalence and Management of Key Diseases

5.1 Background

The Quality & Outcomes Framework (QOF) is part of the new GP contract, and is a set of optional standards for which significant financial incentives are available. Although QOF is designed to be used for performance analysis purposes, it also provides important data on the recorded prevalence of various long-term conditions and the quality of treatment provided for patients with these conditions.

This report will mainly focus on clinical indicators, which are related to 10 long-term conditions: CHD, left ventricular dysfunction (LVD), stroke or transient ischaemic attacks (TIAs), hypertension, diabetes, chronic obstructive pulmonary disease (COPD), epilepsy, hypothyroidism, cancer, severe long-term mental health, and asthma. These long-term conditions are those for which the principal healthcare responsibility lies with primary care health practitioners, and for which there is good evidence of the health benefits of improved primary care.

The first indicator relating to each long-term condition is a crude prevalence, based on a disease register within each GP practice. Subsequent indicators show the achievement of certain clinical standards during the primary care of patients on this disease register. These subsequent indicators relating to the management of patients with long-term conditions are not exhaustive, covering often only a small proportion of the healthcare required for these conditions. These indicators are merely designed to encourage structured care of patients with long-term conditions. A maximum of 1050 points are available within the clinical domain (points are converted to payment), and the number of points achieved for each indicator depends on the degree to which the indicator has been achieved. The number of points available for each indicator is reflective of the importance of the achievement of that indicator to improving the health of patients with long-term conditions.

QOF data is submitted monthly by GP practices onto a web-based national system, the Quality Management & Analysis System (QMAS). The QOF data used in this report was taken from the 2008-9 end-of year data (March 2009) entered onto QMAS on or before 15th April 2009. It is acknowledged that some changes may have occurred since this date.

5.2 Interpretation of QOF data

When interpreting QOF data, the following data quality issues must be considered. It is likely that differences in the prevalence of long-term conditions between GP practices, as measured by disease registers, are not an accurate reflection of true differences between practices. Variation could be due to:

- Young population
- True differences in disease burden
- List inflation and patient turnover
- Patients not yet diagnosed
- Over- or under-diagnosis of conditions
- Different diagnostic thresholds used in practices
- Diagnoses not recorded or coded accurately
- Differences in number of patients excluded from records

Similarly, differences between practices in the achievement of primary care management indicators are not necessarily indicative of true differences in the quality of care provided. As QMAS became operational in October 2004, data quality and recording issues are likely to continue to improve. As this occurs, any variability between practices should be increasingly indicative of true variability in prevalence and the quality of primary care management of long-term conditions. A major limitation of the QOF data is that ethnicity, sex and age are not recorded, and thus health inequalities cannot be identified

Comparative analysis of practice or PCT level QOF achievement, or prevalence needs to take account of the underlying social and demographic characteristics of the populations concerned. The delivery of services will be related, for example, to population age/sex, ethnicity or deprivation characteristics that are not included in QOF data collection processes. Comparative analysis should therefore take account of local circumstances, such as numbers on practice lists of student populations, drug users, homeless populations and asylum seekers.

In addition, QOF records information about single disease entities. Co-morbidity is that additional disease beyond the condition under treatment which increases a patient's total burden of illness, and is one dimension of health status. Co-morbidity assessment may be a useful and important means of accounting for differences in patients' underlying health status. However, QOF has a potential problem in that it neglects co-morbidity. The coexistence of multiple chronic diseases in the same individual or multi-morbidity has led to increasing concerns that QOF may be ignoring these complex care needs.

5.2.1 Exception Reporting

As part of QOF, practices are able to use exception reporting, so that the achievement of indicators is not affected by, for example, patients who do not attend practices or cannot be prescribed certain medication due to a contraindication or side-effect. There are 9 criteria for exception reporting:

- patients who have been recorded as refusing to attend review who have been invited on at least 3 occasions during the preceding 12 months;
- patients for whom it is not appropriate to review the chronic disease parameters due to particular circumstances, e.g. terminal illness, extreme frailty;
- patients newly diagnosed within the practice or who have recently registered with the practice, who should have measurements made within 3 months and delivery of clinical standards within 9 months, e.g. blood pressure or cholesterol measurements within target levels;
- patients who are on maximum tolerated doses of medication whose levels remain sub-optimal;
- patients for whom prescribing a medication is not clinically appropriate, e.g. those who have an allergy, another contraindication or have experienced an adverse reaction;
- where a patient has not tolerated medication;
- where a patient does not agree to investigation or treatment (informed dissent), and this has been recorded in their medical records;
- where the patient has a supervening condition which makes treatment of their condition inappropriate, e.g. cholesterol reduction where the patient has liver disease;
- where an investigative service or secondary care service is unavailable.

In the case of exception reporting on either of the first 2 criteria, this would apply to the disease register and these patients would be subtracted from the denominator for all other indicators for that condition. Practices may also exception-report patients for single indicators.

5.3 Prevalence of key conditions in Brent

The graph and table below shows the unadjusted disease prevalence from QOF for April 2008 - March 2009. The prevalence of all long-term conditions, except diabetes, was lower in Brent than in England. Hypertension, depression 1 indicator, diabetes mellitus, stroke or transient ischaemic attacks and mental health conditions are higher in Brent than the London average.

Figure 21: Number of patients on GPs Diseases Registers and their prevalence (2008-09)

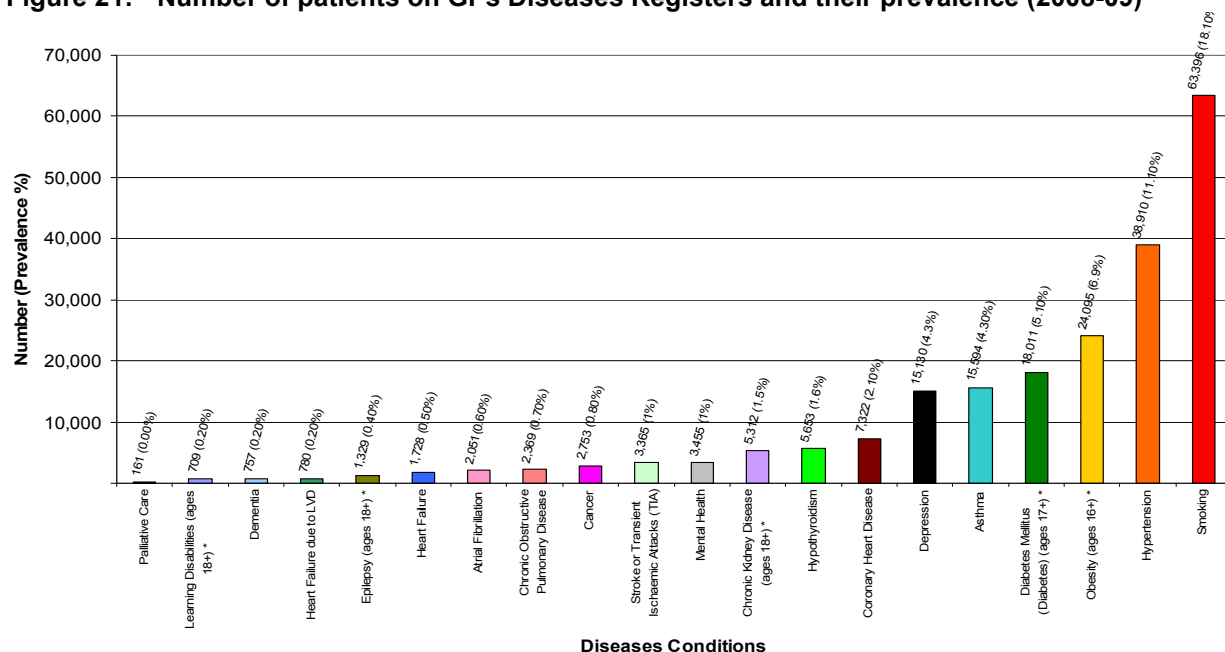


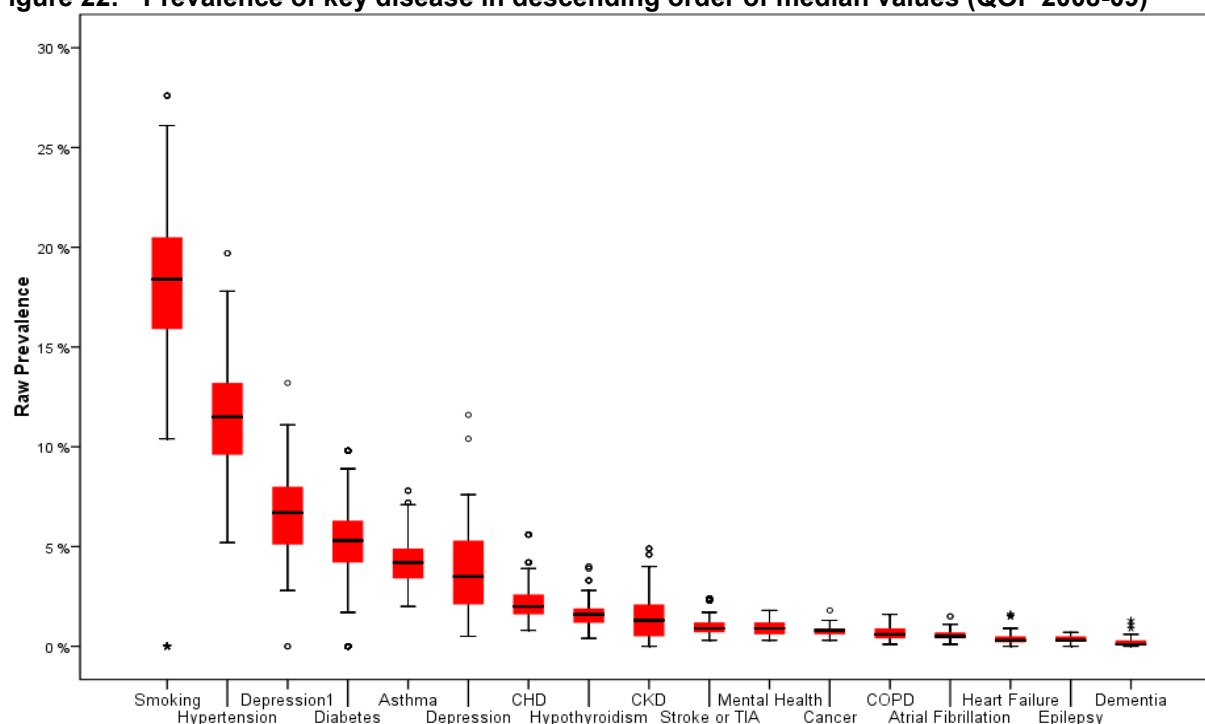
Table 10: Comparison of prevalence of key disease (2008-09)

	National		London		Brent	
Number of Practices	8,229		1,513		69	
Sum of List Sizes	54,310,660		8,462,084		350,850	
Diseases Conditions	Number Patient on Diseases Register	Diseases Prevalence	Number Patient on Diseases Register	Diseases Prevalence	Number Patient on Diseases Register	Diseases Prevalence
Palliative Care	53,857	0.1%	6,293	0.1%	161	0.0%
Heart Failure due to LVD	210,557	0.4%	19,614	0.2%	780	0.2%
Learning Disabilities (ages 18+) *	160,165	0.4%	17,612	0.2%	709	0.2%
Dementia	232,430	0.4%	24,859	0.3%	757	0.2%
Heart Failure	397,040	0.7%	42,574	0.5%	1,728	0.5%
Mental Health	406,075	0.7%	78,719	0.9%	3,455	1.0%
Epilepsy (ages 18+) *	326,841	0.8%	37,341	0.4%	1,329	0.4%
Cancer	680,749	1.3%	79,573	0.9%	2,753	0.8%
Atrial Fibrillation	732,508	1.3%	69,876	0.8%	2,051	0.6%
Chronic Obstructive Pulmonary Disease	834,312	1.5%	82,468	1.0%	2,369	0.7%
Stroke or Transient Ischaemic Attacks (TIA)	901,323	1.7%	901,323	1.7%	3,365	1.0%
Hypothyroidism	1,538,827	2.8%	179,326	2.1%	5,653	1.6%
Coronary Heart Disease	1,886,406	3.5%	189,988	2.2%	7,322	2.1%
Chronic Kidney Disease (ages 18+) *	1,739,443	4.1%	170,324	2.0%	5,312	1.5%
Diabetes Mellitus (Diabetes) (ages 17+) *	2,213,138	5.1%	337,561	4.0%	18,011	5.1%

Asthma	3,197,726	5.9%	398,130	4.7%	15,594	4.4%
Depression	4,373,974	8.1%	479,406	5.7%	15,130	4.3%
Obesity (ages 16+) *	4,389,964	9.9%	614,501	7.3%	24,095	6.9%
Hypertension	7,132,856	13.1%	915,531	10.8%	38,910	11.1%
Smoking	-	-	1,542,699	18.2%	63,396	18.1%
Data source: QMAS database - 2008/09 data as at end of June 2009						

There are relatively large differences in the prevalence of long-term conditions, as recorded by GPs. The graph below shows boxplots illustrating the variation in prevalence by practice and condition. The red box represents the Inter-quartile range (IQR) (i.e., 50% of practices fall within the box). The median is the line that bisects the box. The “whiskers” on each box represent all remaining data that is not an outlier ($IQR \times 1.5$). The symbol o represents outliers ($>1.5 \times IQR$) the symbol * represents extreme values ($>=3 \times IQR$).

Figure 22: Prevalence of key disease in descending order of median values (QOF 2008-09)



5.3.1 Prevalence of Disease by Locality

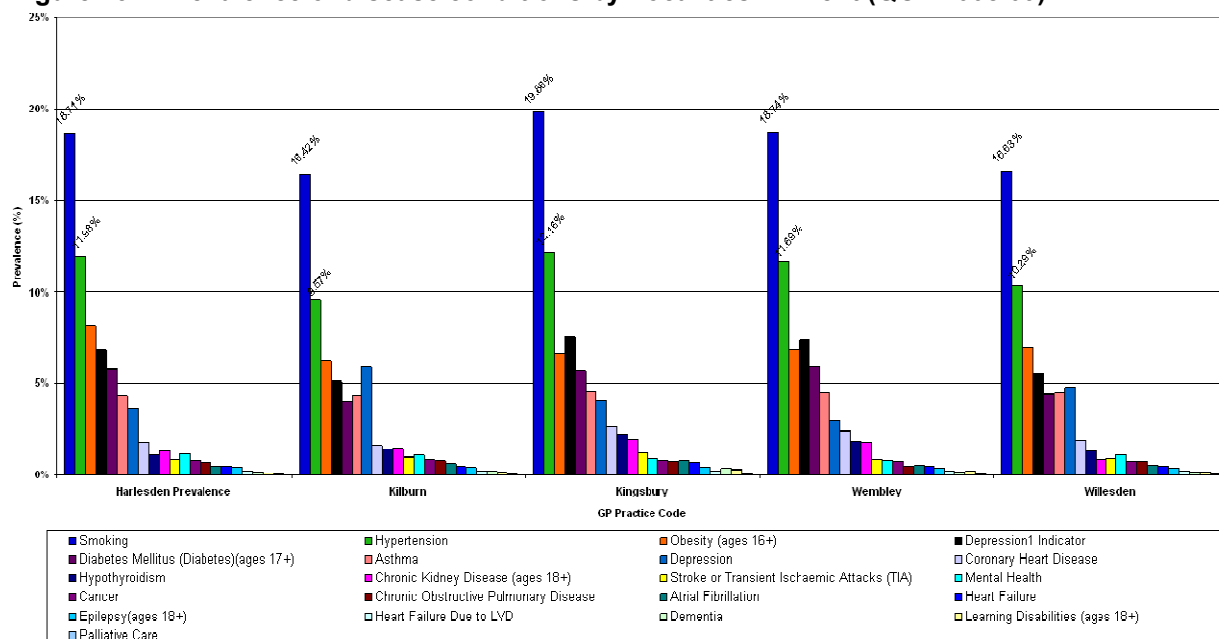
The table and graphs below shows the prevalence of disease by locality in Brent. Kingsbury locality had the highest prevalence of CHD (2.71), hypertension (12.48), and smoking (19.86%) and the second highest prevalence of diabetes mellitus. Wembley locality had the highest prevalence of diabetes mellitus the second highest prevalence of hypertension and CHD and the lowest prevalence of depression (3.02%). Harlesden locality had the highest prevalence of depression 1 (6.87%) and adult obesity (8.17%). Willesden had the highest prevalence of depression. Kilburn had the lowest recorded prevalence of CHD, heart failure, stroke, hypertension, diabetes mellitus, asthma and smoking.

Table 11: Prevalence count and percentage for key diseases by Brent Localities

Locality	Harlesden		Kilburn		Kingsbury		Wembley		Willessden	
Disease Name	Count	Prevalence	Count	Prevalence	Count	Prevalence	Count	Prevalence	Count	Prevalence
Smoking	9,437	18.71%	13562	16.42%	15502	19.86%	14607	18.74%	10288	16.63%
Hypertension	6,044	11.98%	7905	9.57%	9488	12.16%	9109	11.69%	6364	10.29%

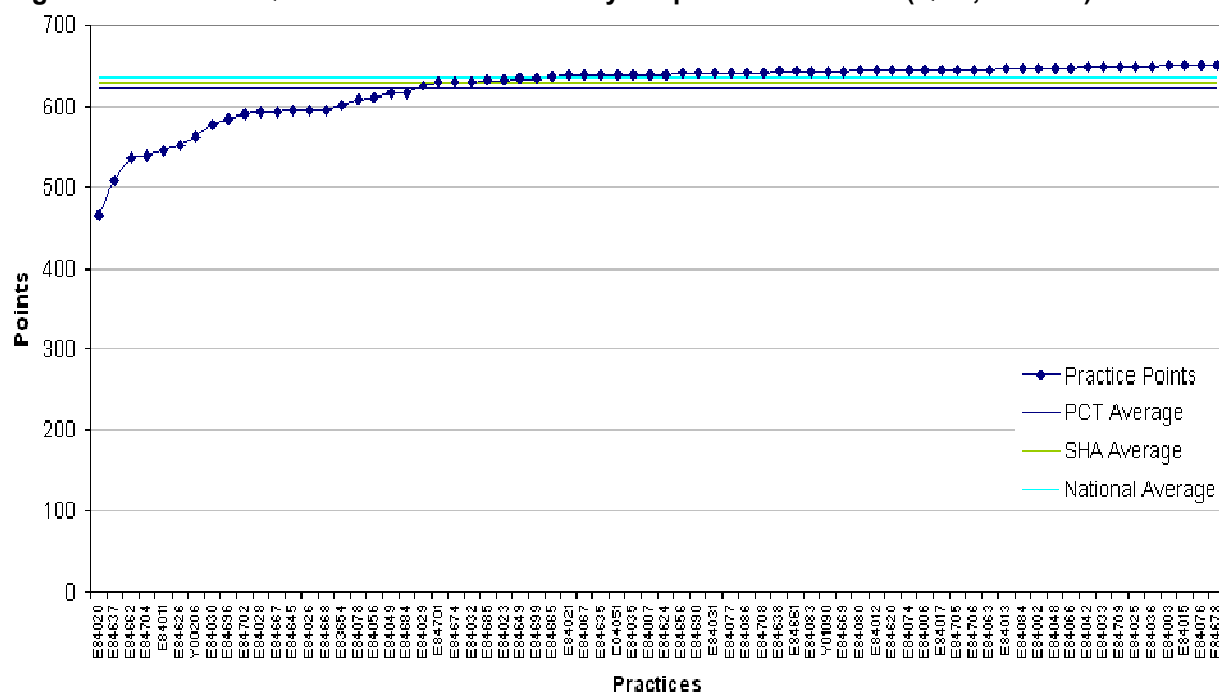
Obesity (ages 16+)	4,119	8.17%	5173	6.26%	5881	7.54%	5757	7.39%	4307	6.96%
Depression1 Indicator	3,467	6.87%	4856	5.88%	5133	6.58%	5363	6.88%	3435	5.55%
Diabetes Mellitus	2,907	5.76%	4221	5.11%	4488	5.75%	4607	5.91%	2956	4.78%
Asthma	2,212	4.39%	3581	4.34%	3544	4.54%	3475	4.46%	2782	4.50%
Depression	1,833	3.63%	3279	3.97%	3134	4.02%	2351	3.02%	2730	4.41%
Coronary Heart Disease	891	1.77%	1364	1.65%	2048	2.62%	1873	2.40%	1146	1.85%
Chronic Kidney Disease	658	1.30%	1235	1.50%	1708	2.19%	1434	1.84%	802	1.30%
Mental Health	583	1.16%	1159	1.40%	1496	1.92%	1385	1.78%	672	1.09%
Hypothyroidism	550	1.09%	877	1.06%	912	1.17%	659	0.85%	553	0.89%
Stroke or TIA	435	0.86%	806	0.98%	696	0.89%	627	0.80%	538	0.87%
Cancer Register	398	0.79%	700	0.85%	631	0.81%	572	0.73%	456	0.74%
Chronic Obstructive Pulmonary Disease	339	0.67%	674	0.82%	606	0.78%	384	0.49%	452	0.73%
Heart Failure	242	0.48%	503	0.61%	556	0.71%	344	0.44%	327	0.53%
Atrial Fibrillation	231	0.46%	357	0.43%	516	0.66%	341	0.44%	272	0.44%
Epilepsy (ages 18+)	204	0.40%	327	0.40%	305	0.39%	269	0.35%	224	0.36%
Heart Failure Due to LVD	106	0.21%	195	0.24%	254	0.33%	189	0.24%	134	0.22%
Dementia	94	0.19%	186	0.23%	218	0.28%	169	0.22%	104	0.17%
Learning Disabilities (ages 18+)	63	0.12%	135	0.16%	185	0.24%	122	0.16%	92	0.15%
Palliative Care	16	0.03%	53	0.06%	36	0.05%	36	0.05%	20	0.03%

Figure 23: Prevalence of disease conditions by Localities in Brent (QOF 2008/09)



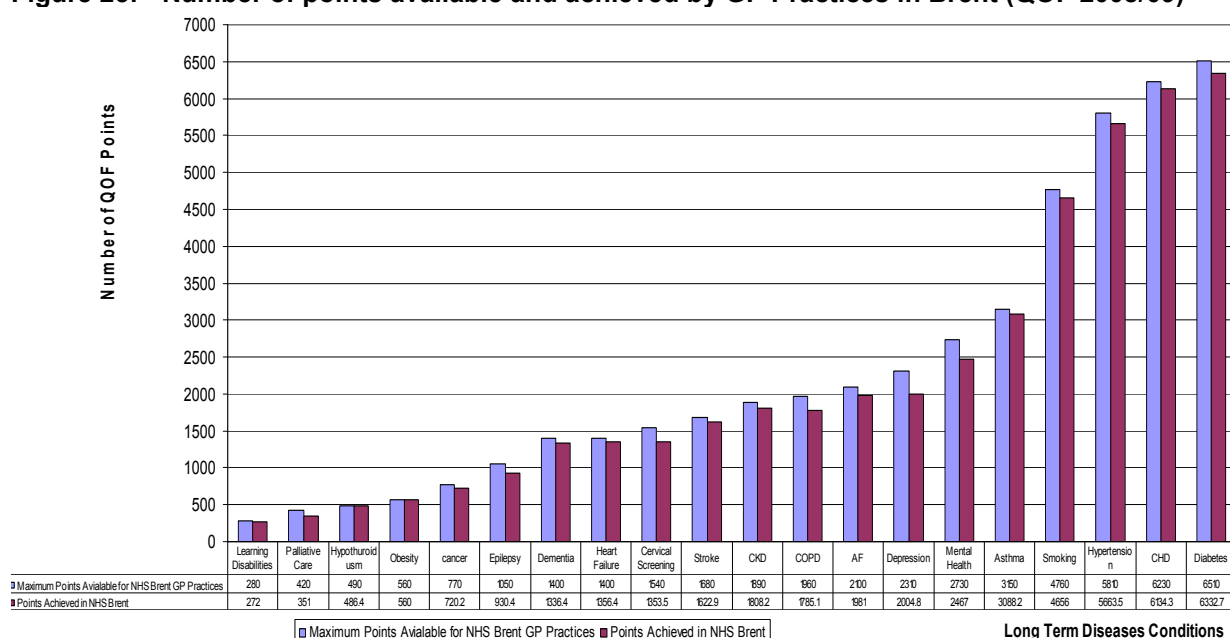
5.3.2 Overall QOF Points Achievement by GP Practice in Brent

Most practices achieved close to the maximum of 655 clinical QOF points. 5 practices achieved less than 550 points. The lowest number of clinical points achieved by a GP practice was 465 points. The average number of points achieved by practices in Brent was 622, this is slightly lower than the average across London (629) and nationally (635).

Figure 24: Overall QOF clinical achievement by GP practices in Brent (QOF, 2008/09)

5.4 Overall QOF Points Achievement

The highest percentage of available points achieved was for obesity (100%). The lowest percentage of available points achieved was for palliative care (86.9%). The highest number of available points not achieved was for depression and mental health.

Figure 25: Number of points available and achieved by GP Practices in Brent (QOF 2008/09)**Table 12: Percentage achievement of clinical points by Localities in Brent (QOF 2008/09)**

Diseases Conditions	Harlesden	Kilburn	Kingsbury	Wembley	Willesden
Coronary Heart Disease	96.70%	99.10%	98.00%	100.00%	97.60%
Stroke or Transient Ischemic Attacks (TIA)	94.00%	97.20%	95.60%	98.70%	96.30%
Hypertension	93.10%	98.50%	97.70%	98.50%	98.10%

Diabetes Mellitus (Diabetes)	95.00%	96.60%	96.40%	99.50%	98.10%
Chronic Obstructive Pulmonary Disease	88.30%	91.90%	87.00%	94.40%	93.10%
Epilepsy	87.10%	87.70%	91.80%	88.20%	87.10%
Hypothyroidism	98.10%	98.10%	99.70%	100.00%	100.00%
Cancer	83.60%	96.70%	93.00%	100.00%	89.30%
Mental Health	89.60%	92.20%	88.00%	93.00%	88.20%
Asthma	98.10%	99.60%	96.60%	99.30%	96.10%
Heart Failure	87.30%	97.70%	97.80%	99.30%	99.20%
Palliative Care	80.00%	86.70%	84.40%	88.20%	75.00%
Dementia	100.00%	93.30%	92.40%	100.00%	92.00%
Depression	76.50%	92.10%	87.40%	89.80%	83.60%
Chronic Kidney Disease	90.50%	94.90%	97.80%	96.90%	96.30%
Atrial Fibrillation	95.50%	91.00%	97.20%	94.10%	94.00%
Obesity	100.00%	100.00%	100.00%	100.00%	100.00%
Learning Disabilities	100.00%	93.30%	100.00%	94.10%	100.00%
Smoking	97.90%	99.40%	96.20%	98.70%	96.60%
Overall Locality Achievement	92.20%	95.10%	94.60%	96.50%	93.70%

The overall level of achievement masks a number of indicators where achievement is relatively low. Brent GP practices achieve significantly below the national average across a number of indicators, particularly in the mental health domain. The table below highlights the indicators where Brent is performing significantly below the national average. It is also important to note that for a number of indicators the thresholds used in QOF are lower than those set out in NICE guidelines and or best practice.

Table 13: QOF indicators with the lowest level of achievement in Brent compared to the national averages

Indicator	NHS Brent	National
MH07- The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who do not attend the practice for their annual review who are identified and followed up by the practice team within 14 days of non-attendance.	49%	93%
DM20 -The percentage of patients with diabetes in whom the last HbA1c is 7.5 or less (or equivalent test/reference range depending on local laboratory) in the previous 15 months.	64%	66%
MH05 -The percentage of patients on lithium therapy with a record of lithium levels in the therapeutic range within the previous 6 months.	66%	91%
EPILEP08 - The percentage of patients age 18 and over on drug treatment for epilepsy who have been seizure free for the last 12 months recorded in the previous 15 months.	68%	73%
MH04 - The percentage of patients on lithium therapy with a record of serum creatinine and TSH in the preceding 15 months.	72%	97%
STROKE08 - The percentage of patients with TIA or stroke whose last measured total cholesterol (measured in the previous 15 months) is 5mmol/l or less.	74%	93%
CKD03 - The percentage of patients on the CKD register in whom the last blood pressure reading, measured in the previous 15 months, is 140/85 or less.	74%	
CHD10 - The percentage of patients with coronary heart disease who are currently treated with a beta blocker (unless a contraindication or side-effects are recorded)	75%	73%
COPD12 - The percentage of all patients with COPD diagnosed after 1st April 2008 in whom the diagnosis has been confirmed by post bronchodilator spirometry.	76%	91%

BP05 - The percentage of patients with hypertension in whom the last blood pressure (measured in the previous 9 months) is 150/90 or less.	77%	79%
STROKE13 - The percentage of new patients with a stroke or TIA who have been referred for further investigation.	78%	91%
COPD10 - The percentage of patients with COPD with a record of FeV1 in the previous 15 months.	78%	83%
DM17 - The percentage of patients with diabetes whose last measured total cholesterol within the previous 15 months is 5mmol/l or less.	79%	83%
DM12 -The percentage of patients with diabetes in whom the last blood pressure is 145/85 or less.	79%	80%

5.5 GP Practices with outlying or extreme values

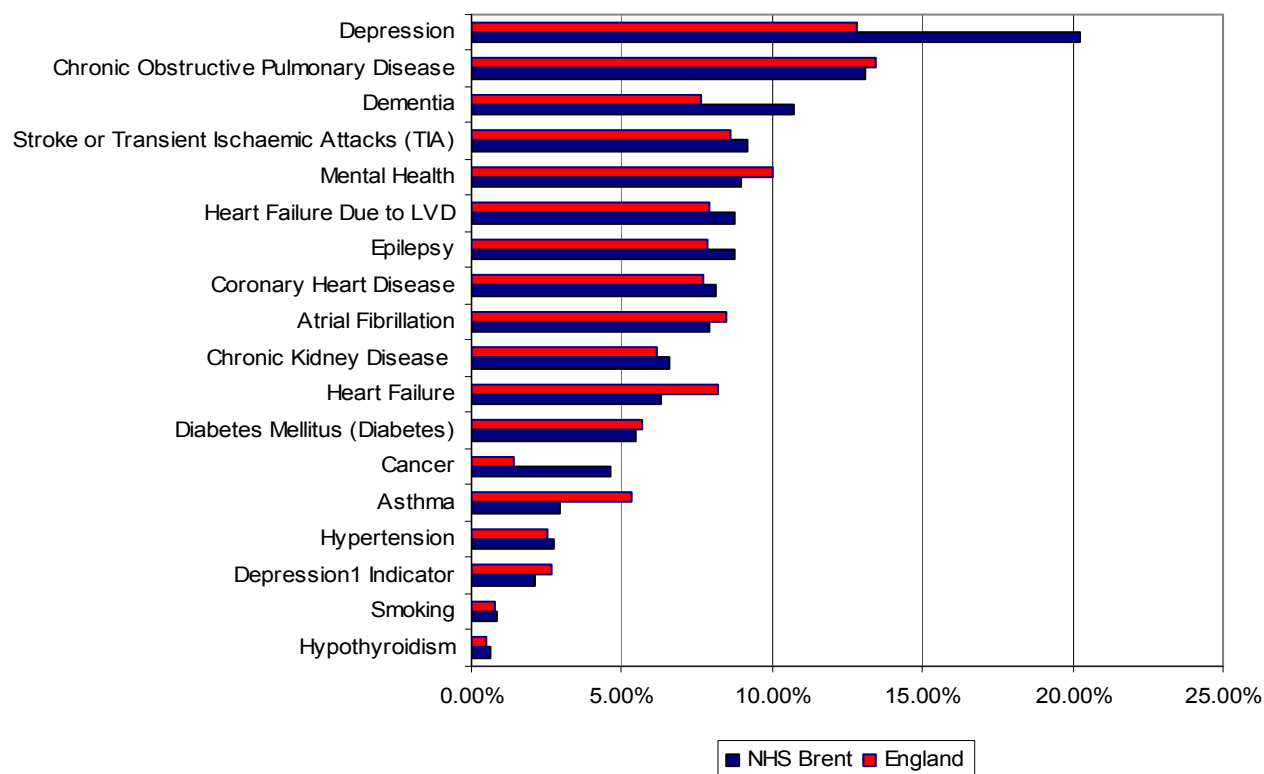
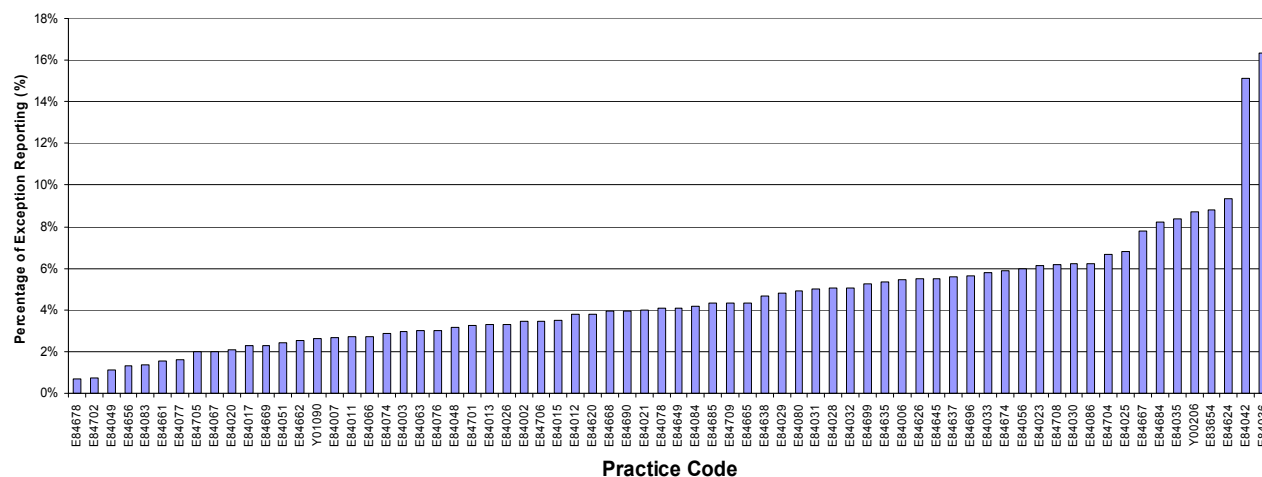
An analysis has also been done looking at practices that are outliers on prevalence, clinical indicators, and exception reporting. The term “outlier” refers to a practice that has a value $\geq 2 \times \text{IQR}$ (Inter-quartile range) of the practices in Brent. Extreme values have a value $\geq 3 \times \text{IQR}$ of the data. Practices with the highest number of outliers on individual clinical indicators are presented below. The achievement of the practices shown is **low** compared to the rest of the practices in Brent. Given that data is now publicly available at GP practice-level, practices with particularly low or high achievement have been named in this report.

Table 14: Top-Ten practices with the greatest number of outliers on clinical indicators (QOF 2008/09)

Practice Name	Cluster	>2-Sigma & <3-Sigma	>3-Sigma	Total Outliers
STAG-HOLLY ROAD PRACTICE	Independent	11	21	32
HILLTOP MEDICAL PRACTICE	Opted out	3	11	14
St ANDREWS MEDICAL CENTRE	Willesden	12	1	13
St GEORGES MEDICAL CENTRE	Willesden	8	3	11
THE STONEBRIDGE PRACTICE	Harness	10	1	11
AKSYR MEDICAL PRACTICE	Harness	10	0	10
GIRTON PRACTICE	Kingsbury	3	6	9
BURNLEY PRACTICE	Willesden	4	4	8
BRAMPTON HEALTH CENTRE	Kingsbury	6	2	8
STAG LANE MEDICAL CENTRE	Kingsbury	7	1	8

5.6 Exception Reporting

Overall exception reporting for clinical conditions in Brent (4.57%) was slightly lower than London (4.66%) and nationally (4.87%). The level of exception reporting ranged from 0.7% to 16.36%. The highest level of exception reporting was for depression (20.27%) compared to a national rate of (12.78%). The lowest level of exception reporting was for hypothyroidism (0.62%).

Figure 26: Exception Rates by Condition (all clinical indicators) in NHS Brent, QOF 2008/09**Figure 27: Exception Rates by Practice (all clinical indicators) in NHS Brent, QOF 2008/09**

5.7 Association between QOF scores and Organisational factors

Chapter four described the heterogeneity in the way in which practices in Brent are organised in terms of for example the funding per patient, the opening hours per week, and the size of the practice. The clinical performance of GP practices, as measured by total clinical QOF score, is associated with the size of the GP practice in terms of list size and number of WTE, suggesting that larger practices provide, overall, improved clinical care.

Table 15: Associations between Clinical QOF Score and GP Practice structure characteristics

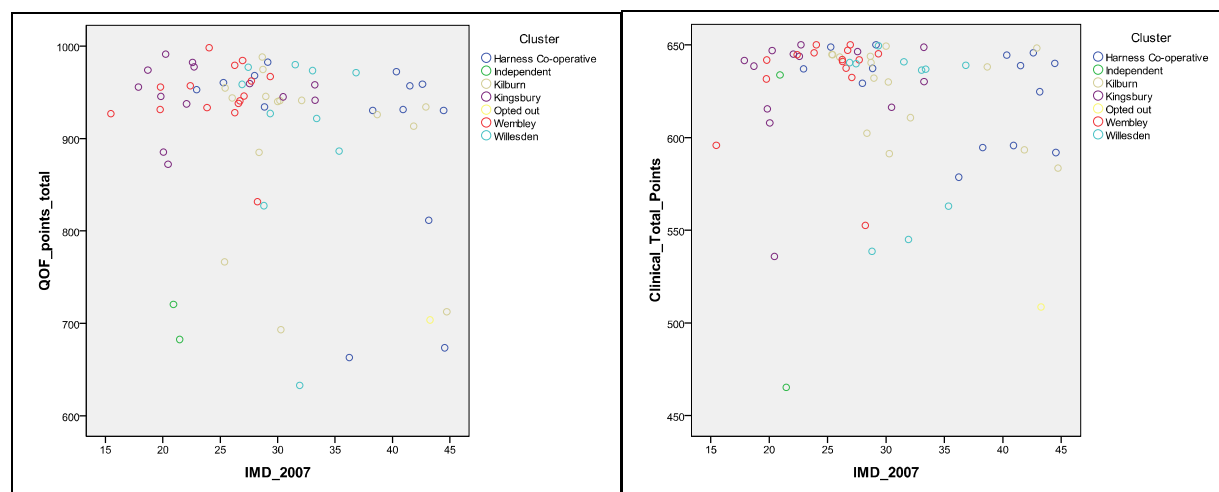
	Explanatory variable	Significant Correlation	Spearman's Rho (Sig. Level)
Clinical QOF Score	List Size	Yes	0.405 (99.9%)
	£/patient	No	-0.108 (62.5%)
	Opening hours per week	Yes	0.287 (98.2%)
	WTE	Yes	0.448 (>99.9%)
	WTE per 1000 patients	No	0.07 (43.1%)

5.8 Association between QOF scores and Deprivation

The extent to which the organisation of primary care services and the key outcomes that they achieve reflect and or reinforce the health inequalities in Brent is a key question within this report. The table and scatter-plots below shows that outcomes were moderately worse in terms of total QOF score in the most deprived areas. Outcomes were also worse in terms of clinical QOF score but the result was not significant.

Table 16: Associations between IMD-2007 and QOF performances on total and sub-domains

Variable 1	Variable 2	Significant Correlation	Spearman's Rho (Sig. Level)
Weighted Average Deprivation Score (IMD 2007)	Total QOF Score	Yes	-0.238 (95.2%)
	Clinical QOF Score	Possible	-0.227 (94.1%)
	Organisation QOF Score	No	-0.194 (89.3%)
	Patient Experience QOF Score	No	-0.173 (84.8%)
	Additional Services QOF Score	No	-0.186 (87.6%)



Chapter 6: Diabetes

Diabetes mellitus is a condition that results in too much glucose in the body. There are 2 main types of diabetes. Type 1 diabetes accounts for approximately 10% of the prevalence of the disease. This is an autoimmune disease, where the insulin-producing islet cells in the pancreas are destroyed and the body does not have any insulin to control the glucose levels. Type 2 diabetes accounts for 90% of the people with diabetes and mainly affects the older age groups and those who are overweight. The body is unable to produce enough insulin to control glucose levels combined with the fact that there is some cell-resistance to the insulin itself.

The treatment of diabetes and the subsequent conditions it causes costs the NHS £9 billion per year. This accounts for approximately 10% of the NHS annual budget. Most of the spending is on hospital admissions (55%)¹. For 2008-09 the net ingredient cost for prescribing for diabetes in England was £599.3 million (~7%)².

6.1 Prevalence

The UK has over 2 million people affected with diabetes and the prevalence is expected to rise in the future³. Life expectancy is reduced by 25% (five years for males and seven years for females) if diabetes develops at age 55 years, and more if it develops at a younger age⁴. The rapid increase in prevalence is thought to be due to the rising numbers of overweight people and an ageing population. The prevalence is increased in those of South Asian and Black origin, especially as they develop the condition earlier in life and are more likely to suffer from the complications of the disease.

In Brent, there were 18,011 patients with diabetes on the in 2008-09 GP disease register for diabetes. The prevalence of the disease in Brent is 5.12%. The age-specific prevalence of the disease in people over the age of 17 is 6.4%. The prevalence of diabetes in Brent is higher than the National or London average, 4.07% and 3.99% respectively. It is thought that in London one in four people with diabetes are undiagnosed, which could mean in Brent alone there are approximately 6,000 people with the disease, who are unaware.

The graph below shows the estimated prevalence of diabetes, taking into account the obesity rates for Brent and London. It predicts that the prevalence of diabetes in Brent is 7.8% compared to that of London 5.4% for 2010.

Scenario 1 Assume obesity / diabetes index increases to 2016, population, including ethnicity adjustment change and deprivation.

Brent has a very diverse population, Black and Minority Ethnic (BME) groups make up the majority of the population at 54.7% (of which 18.5% Indian, 10.5% Black / Black British Caribbean and 7.8% Black / Black African)⁵. These groups are at a higher risk of developing diabetes and could account for the higher prevalence of the disease in Brent.

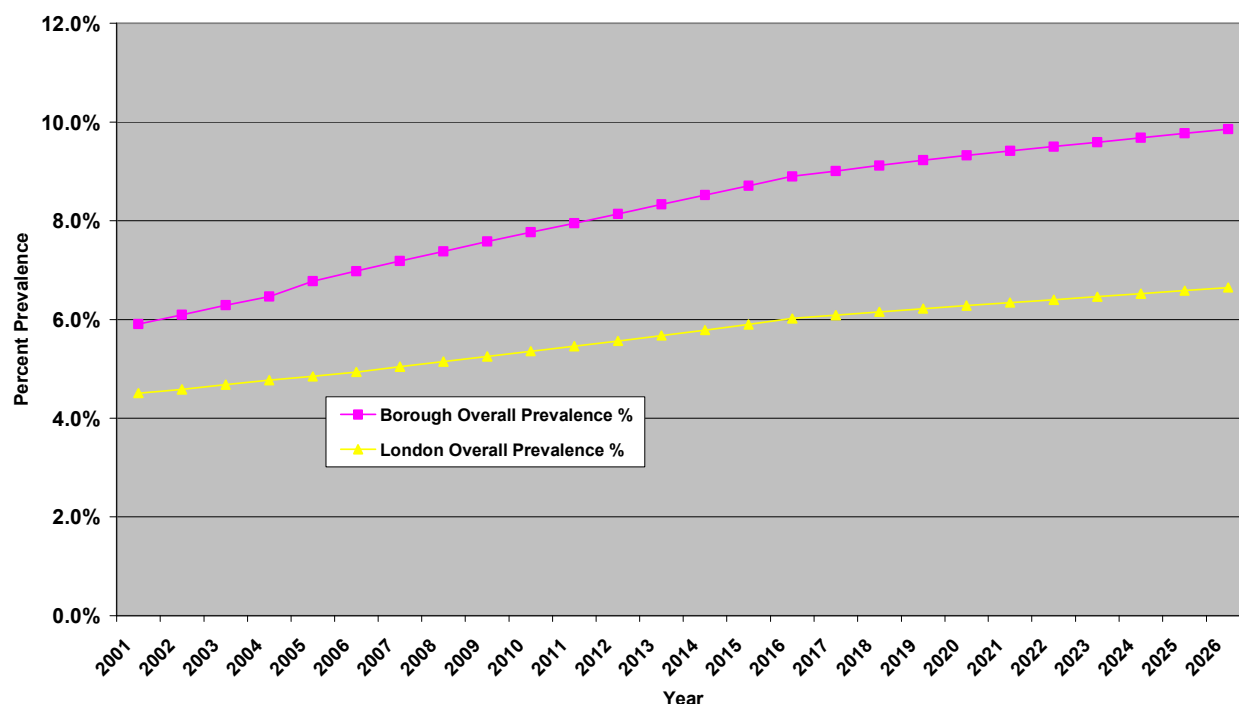
¹ brent JSNA 2008

² ePACT & NHS information centre Prescribing for Diabetes in England: Supplement – January 2002 to March 2009

³ Diabetes UK, Diabetes. Beware the silent assassin, October 2008

⁴ Yorkshire and Humberside Public Health Observatory 2006/07

⁵ ONS 2001, UK census

Figure 28: Expected Diabetes Prevalence, Obesity Scenario 1

6.2 Evidence of health benefits from good control of diabetes

The UKPDS trials have shown that there is good scope for reducing the impact of diabetic complications through good control of the disease.

There are essentially three take-home messages that can be extrapolated from the UKPDS⁶:

1. Tight control of blood glucose levels is crucial for the prevention of diabetic complications, but this result might be further improved by a correct choice of drugs;
2. Tight control of blood pressure is crucial for the prevention of diabetic complications;
3. Control of glucose metabolism and blood pressure have additive or synergistic effects in the prevention of diabetic complications.

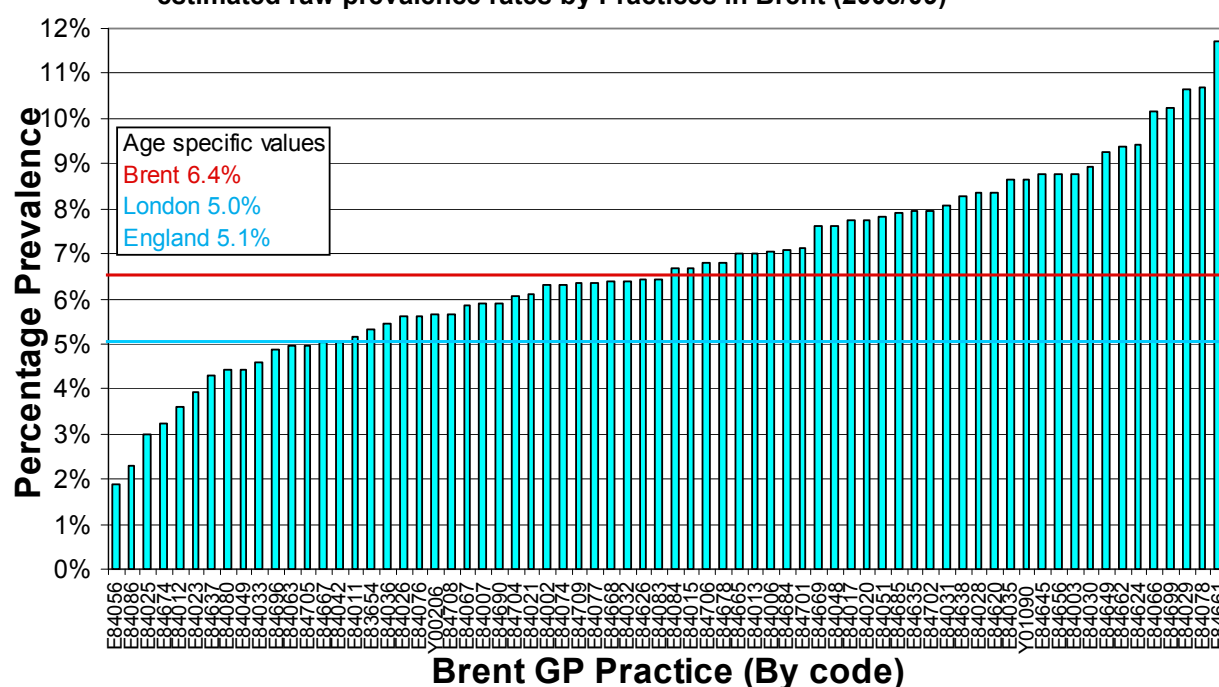
The MRC/BHF Heart Protection Study⁷ of cholesterol-lowering with simvastatin in patients with diabetes provides direct evidence that cholesterol-lowering therapy is beneficial for people with diabetes even if they do not already have manifest coronary disease or high cholesterol concentrations. Taking simvastatin (40mg) daily reduced the rate of first major vascular events by about a quarter in a wide range of diabetic patients studied.

They concluded that statin therapy should be considered routine for all diabetic patients at sufficiently high risk of major vascular events, irrespective of their initial cholesterol concentrations.

⁶ A. E. Pontiroli · F. Folli. Is it worth treating diabetes? Lessons from the UKPDS. Acta Diabetol (1998) 35: 170–171

⁷ Collins R, Armitage J, Parish S, Sleight P, Peto R; Heart Protection Study Collaborative Group. MRC/BHF Heart Protection Study of cholesterol-lowering with simvastatin in 5963 people with diabetes: a randomised placebo-controlled trial. Lancet. 2003 Jun 14;361(9374):2005-16

Figure 29: Diabetes Prevalence by numbers on age-specific QOF disease registers and estimated raw prevalence rates by Practices in Brent (2008/09)



Source: NHS Information Centre

There is a 6-fold variation in results between practices in Brent, with a range from 1.9% to 11.7 %. Of the 15 practices that have a low rate of prevalence (lower than 5%), 10 practices come under the Kilburn area. The reasons for this may include that in this area there is a lower BME population, a younger more mobile population and there may be under-reporting by GP practices and numbers could be affected by list inflation. The practices with the highest prevalence falls over 3 areas Kingsbury, Wembley and Harlesden.

The data for reported versus expected prevalence of diabetes has not been standardised for ethnicity, hence Brent has more cases than expected. Of the practices with the lowest prevalence, 6 out of the bottom 10 practices are in the Kilburn area. The practices with the highest prevalence mainly fall in the Kingsbury and Wembley areas.

Table showing reported to expected cases of diabetes in 2007-08:

Organisation	Ratio	Reported Count Population (Age≥17)	Expected Count Population (Age≥17)	Difference	Population (Age≥17)
National	0.84	2087976	2488657	-400681	43327552
London SHA	1.01	320577	316010	4567	6764858
Brent Teaching PCT	1.37	16924	12352	4572	282187

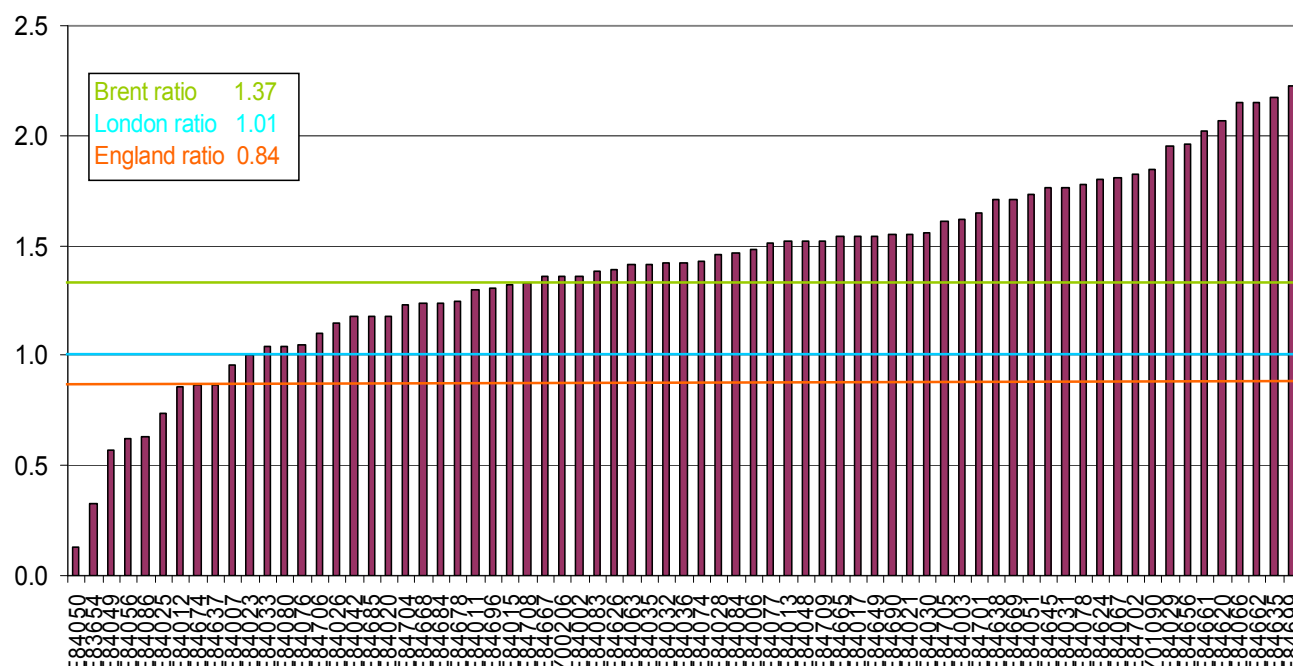
Trend over time has remained stable in Brent:

Year	Ratio	Reported Count ≥17	Expected Count ≥17	Difference
2007/8	1.37	16924	12352	4572
2006/7	1.36	16068	11777	4291
2005/6	1.38	15928	11542	4386

The PBS model was developed by Brent PCT, the School of Health and Related Research (ScHARR), Sheffield and the Yorkshire and Humber Public Health Observatory to calculate the expected prevalence of diabetes in a geographical area. The model applies age, sex, and

ethnic-group specific estimates of diabetes prevalence rates, derived from epidemiological population studies. The most detailed estimates are given for 2005.

Figure 30: Diabetes Reported Vs. Expected Prevalence (Population aged >16) for 2007/08



Source: NHS Comparators

For 2005, the estimated prevalence of diabetes in Brent is 6.17%, compared to 4.48% in the rest of England. This figure includes undiagnosed, as well as diagnosed diabetes.

PBS estimates in 2005 by sex:

Type 1&2 DM	Persons(%)	Male (%)	Female (%)
Brent pct	16,687 (6.17)	7,681 (5.67)	9,006 (6.68)
London sha	341,918 (4.59)	146,664 (3.98)	195,254 (5.18)
England	2,262,484 (4.48)	940,502 (3.80)	1,321,983 (5.14)

PBS estimates for prevalence 2005 by age:

	All	0-29 yrs	30-59 yrs	60+ yrs
Brent Teaching	6.17%	0.46%	6.42%	20.94%
London	4.59%	0.39%	4.33%	16.27%
England	4.48%	0.34%	3.52%	13.73%

PBS estimates for prevalence of diabetes in 2005 By ethnicity:

	White	Black	Asian	Other
Brent Teaching	4.06%	7.77%	9.44%	2.48%
London	3.89%	6.11%	7.85%	2.29%
England	4.33%	5.95%	6.93%	2.03%

Diabetes in Brent is more common in females than males. This is in keeping with findings elsewhere in the UK and worldwide⁸. In Brent, one in five people, aged over 60 years are estimated to have diabetes. Diabetes in Brent is commoner among the Black and Asian population than among the White population. Among the Asian population diabetes is more

⁸ King, H; Ronald, E; Herman, W, Global Burden of Diabetes, Prevalence, numerical estimates, and projections 1995–2025 Diabetes Care, 21:1414–1431, 1998.

than twice as common as in the White population (9.44% compared to 4.06%) and prevalence in the Black population is almost twice that among the White population (7.77% compared to 4.06%).

6.3 Management of Diabetes in Brent PCT

6.3.1 HbA1c Control

HbA1c is a clinical indicator that allows us to monitor how well diabetes is controlled. NICE recommends that HbA1c should be measured at :

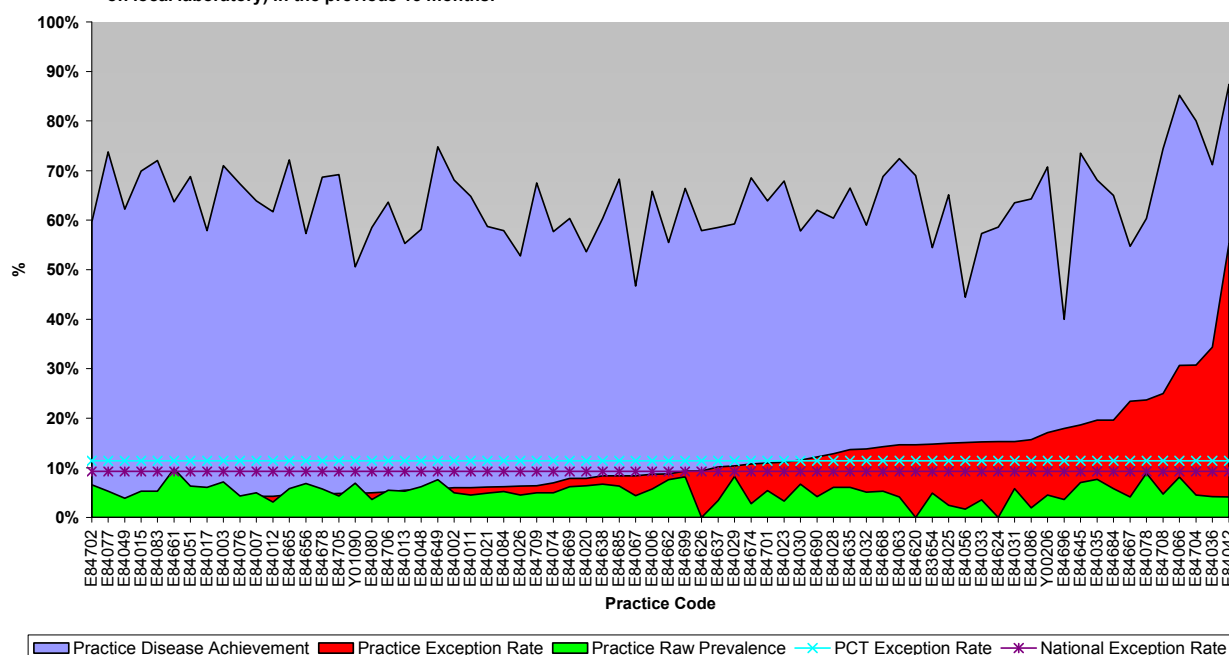
- 2–6-monthly intervals (tailored to individual needs), until the blood glucose level is stable on unchanging therapy; (a measurement made at an interval of less than 3 months would be used as an indicator of direction of change, rather than as a new steady state value)
- 6-monthly intervals once the blood glucose level and blood glucose lowering therapy are stable.
- The current NICE guidelines suggests to aim for an HbA1c value of 6.5%, but to not intensively control to a lower value.

The Quality and Outcomes Framework (QOF) recommends that HbA1c should be measured at least every 15 months and should aim for an HbA1c target of less than 7.5%. The practice will get the full points available if they reach a specific threshold (resulting in maximum payment), in this case, if at least 50% of patients in the practice meet the HbA1c target of <7.5%.

The graph below shows that only 3 practices are not meeting QOF targets (of 50% shown by bold black line). The Brent average is 63.6%, it has a similar average to London and National levels. There is a wide range of results throughout the practices in Brent, over a 2-fold difference, with the lowest practice only achieving 40% of patients with an HbA1c <7.5% to the top practice achieving 87.4%.

Figure 31: GP QOF Performance for DM20

DM20: The percentage of patients with diabetes in whom the last HbA1c is 7.5 or less (or equivalent test/reference range depending on local laboratory) in the previous 15 months.



Source: QMAS database – 2008/09, as at end of June 2009

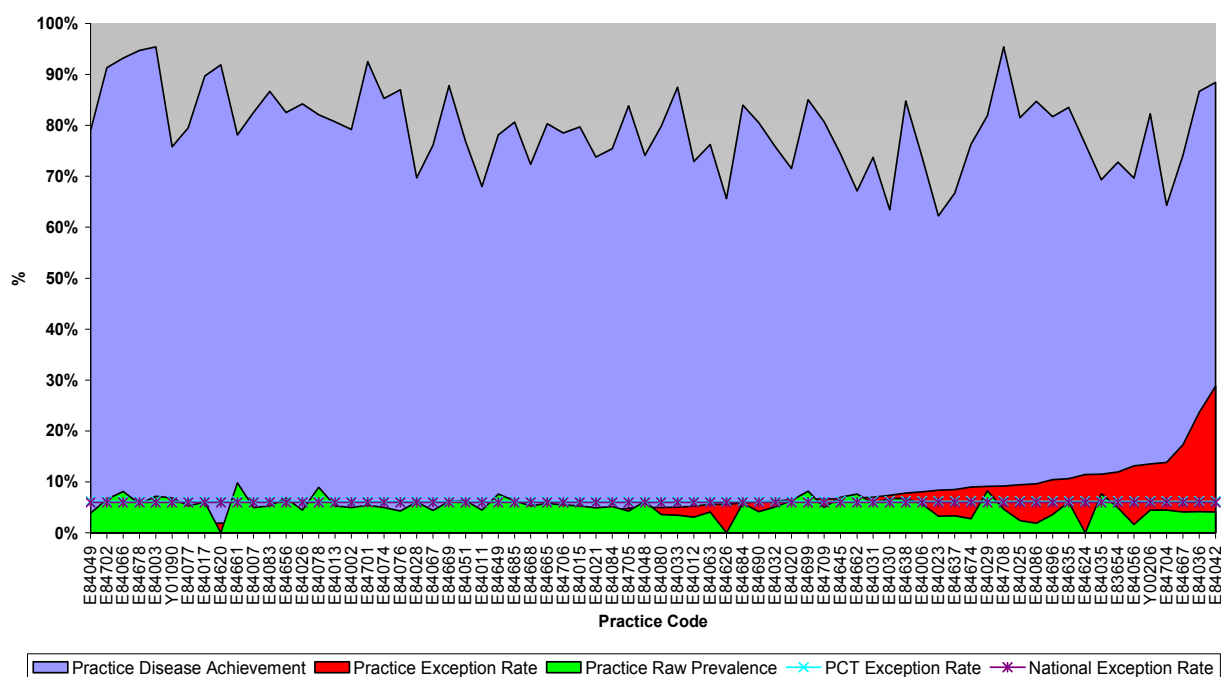
6.3.2 Blood Pressure

Patients with diabetes are at a higher risk of cardiovascular complications, retinal damage and renal disease. These adverse outcomes have been shown to be reduced by controlling blood pressure⁹. NICE have set targets for blood pressure based on a simple risk approach, for most people with type 2 diabetes a target of <140/80 and for those at higher risk a target of <130/80. They have found it difficult to set targets when most evidence suggests 'the lower the blood pressure the better (without adverse effects)'.

The QOF targets recommend that in patients with diabetes the blood pressure should be measured at least every 15 months and to aim for a blood pressure level <145/85. For full points and therefore payment this target should be reached in at least 60% of patients at a GP practice. The graph below illustrates that the Brent average of 79.6% is similar to London and National averages, and that all practices in Brent are meeting the QOF target (of 60% represented by bold black line). There is a wide range of achievement varying from 62.2% to 95.4%.

Figure 32: GP QOF Performance for DM12

DM12: The percentage of patients with diabetes in whom the last blood pressure is 145/85 or less.



Source: QMAS database – 2008/09, as at end of June 2009

6.3.3 Cholesterol

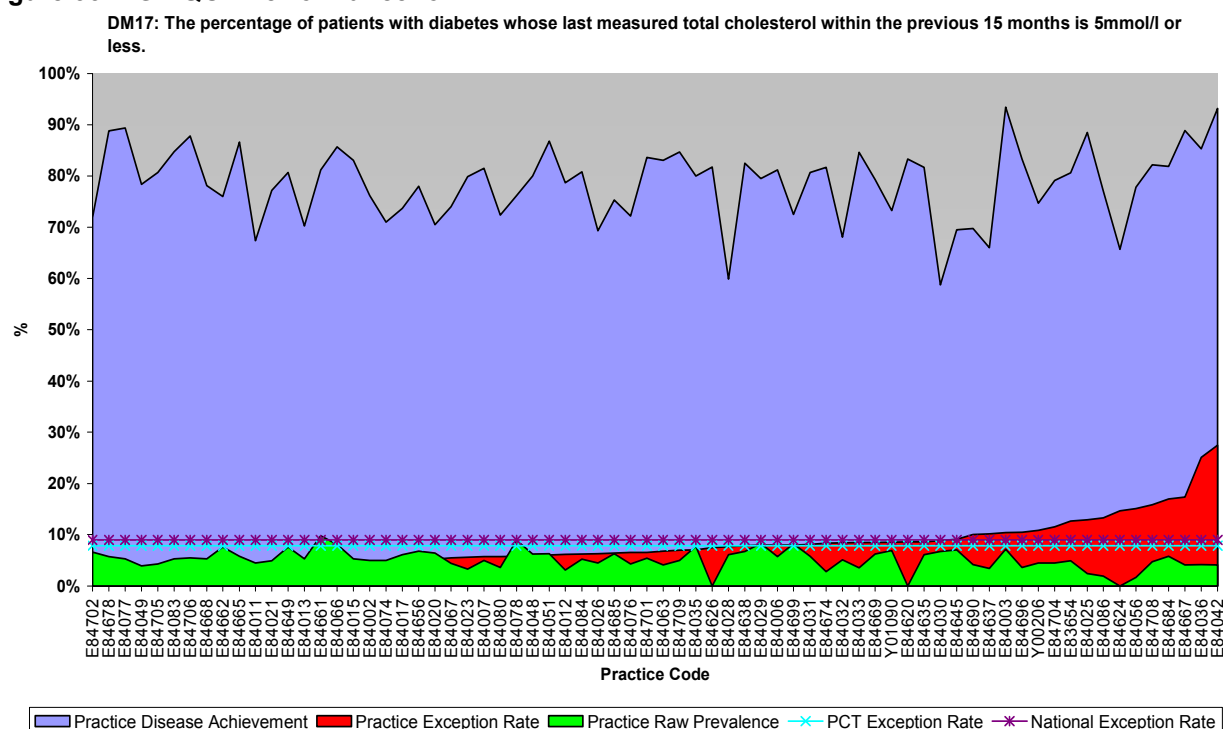
Patients with diabetes are at an increased risk of cardiovascular disease and as well as controlling blood pressure, other factors known to affect the risk of cardiovascular disease should also be monitored and controlled. Cholesterol is one such factor and NICE recommend a target value of 4mmol/l for total cholesterol and 2mmol/l for LDL-cholesterol.

The QOF target (bold black line in graph below) recommends a total cholesterol level <5mmol/l. to achieve full points and payment this target level should be achieved in at least 70% of patients with diabetes in the practice. The Brent average is 78.4%; it is not performing as well as the rest of London or National averages. Throughout the GP practices in Brent there is a

⁹ Turner R, Holman R, Stratton I et al. Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes (UKPDS 38). British Medical Journal 1998;317:703–713.

wide range of achievement of this cholesterol target from 58.8% to 93.4%. In Brent, 13% of practices are not achieving the QOF target of 70%.

Figure 33: GP QOF Performance for DM17

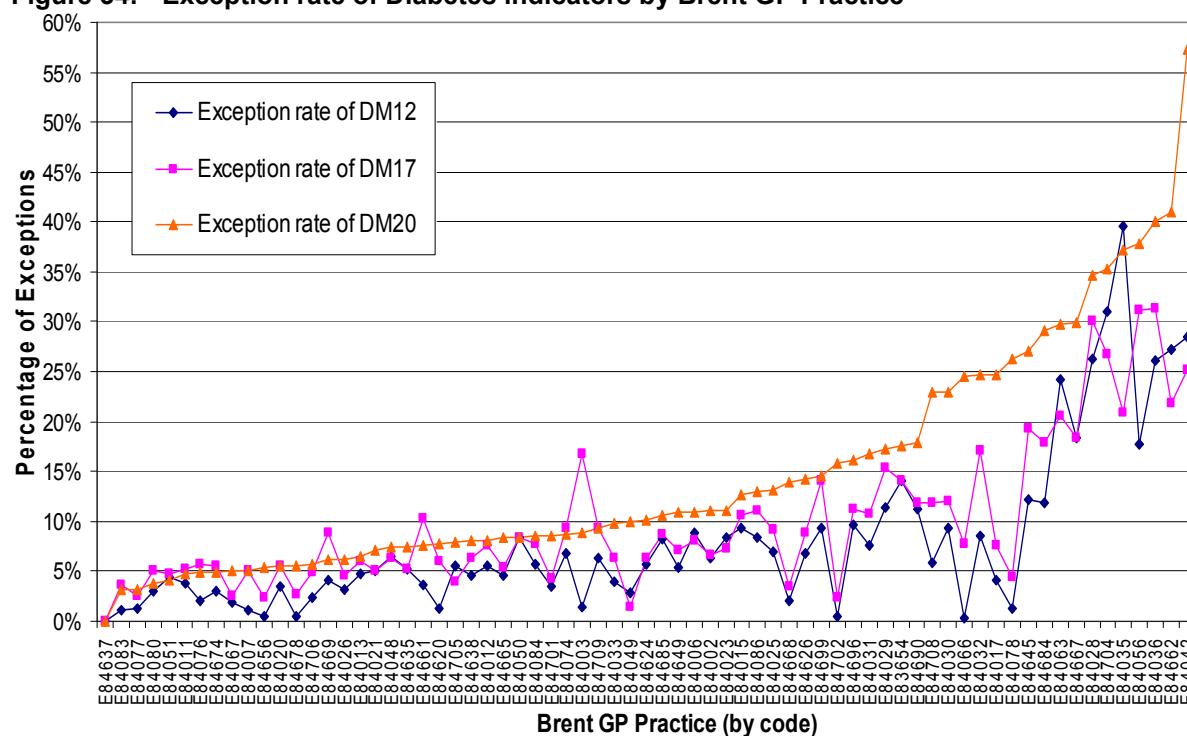


Source: QMAS database – 2008/09, as at end of June 2009

6.3.4 Exception reporting by GP Practice 2007-8

The QOF includes the concept of exception reporting. This has been introduced to allow practices to pursue the quality improvement agenda and not be penalised, where, for example, patients do not attend for review, or where a medication cannot be prescribed due to a contraindication or side-effect. There is variation in exception rates across indicators; in general, the highest exception rates relate to indicators that measure outcomes. The range is 39.5% with DM12, 31.4% with DM17 and 57.4% with DM20.

Some practices may have high exception reporting rates in order to achieve better values for the QOF targets.

Figure 34: Exception rate of Diabetes indicators by Brent GP Practice

	England exception rate 2007-8	Brent exception rate 2007-8
DM12 (Last blood pressure <145/85)	6.54%	8.0%
DM17 (Last cholesterol <5mmol/L)	9.22%	9.9%
DM20 (Last HbA1c <7.5%)	10.01%	14.7%

Source: NHS Information Centre

The graphs below do not show any positive correlation between achievement and level of exception reporting for any of the markers. There may even be a negative correlation between achievement for DM12 and exception reporting. However, there are a few outlying practices that do exception report at high levels and also show high rates of achievement.

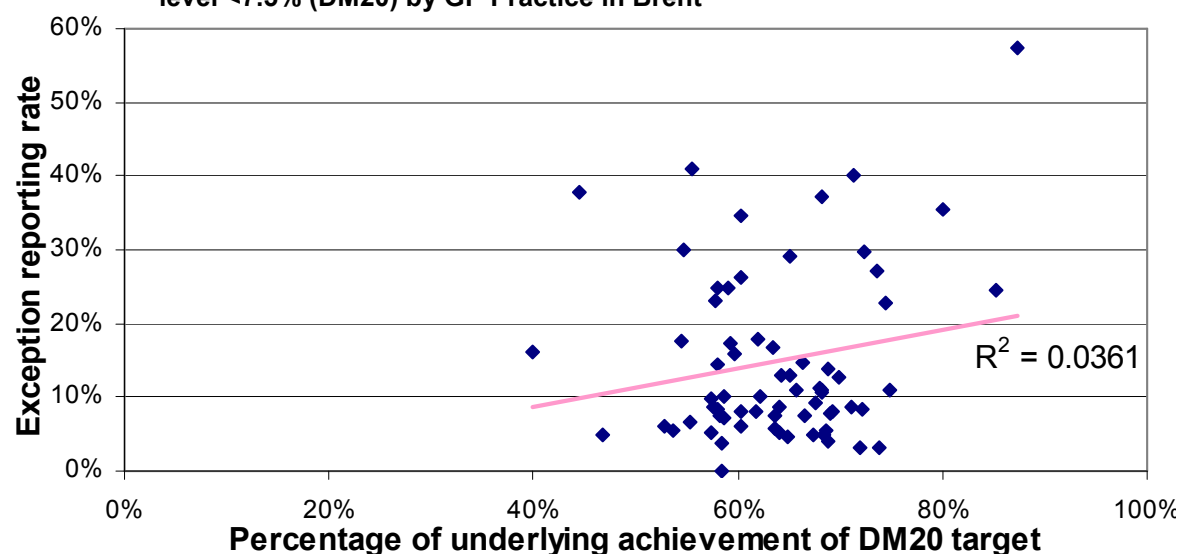
Figure 35: Correlation between achievement of target and level of exception reporting for HbA1c level <7.5% (DM20) by GP Practice in Brent

Figure 36: Correlation between achievement of target and level of exception reporting for blood pressure <145/85 (DM12) by GP Practice in Brent

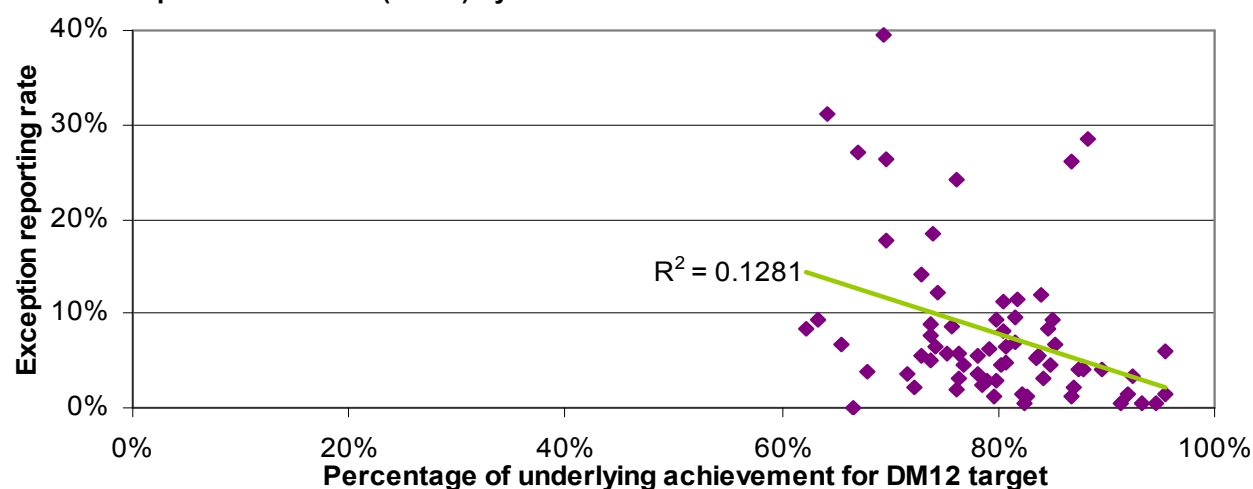
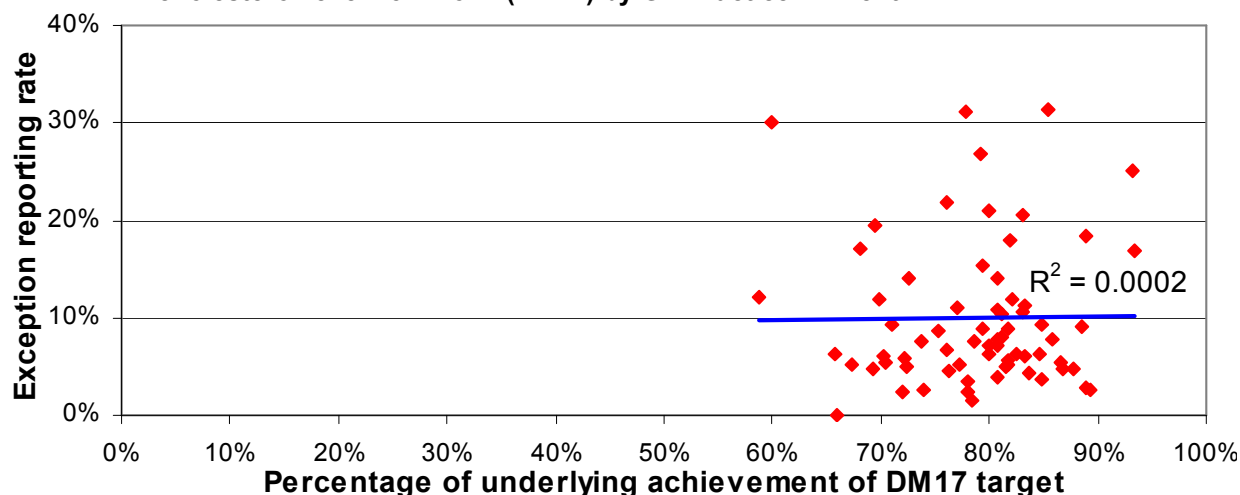


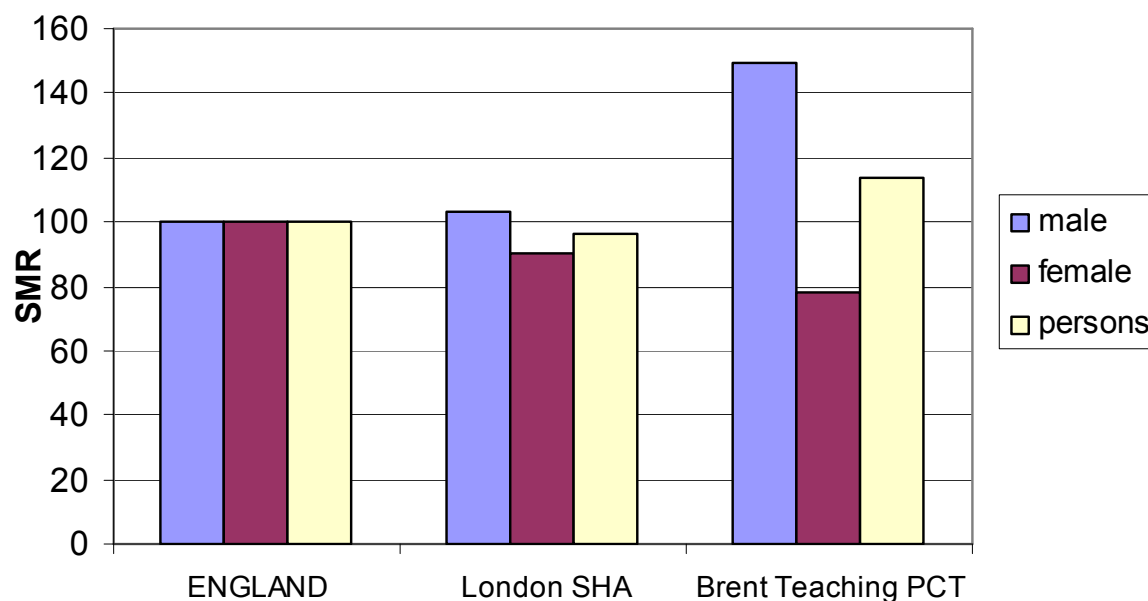
Figure 37: Correlation between achievement of target and level of exception reporting for cholesterol level <5mmol/L (DM17) by GP Practice in Brent



6.4 Mortality

Almost 12% of all premature deaths (aged 20-79) in London are attributable to diabetes (from YHPHO data). This is one of the highest rates in England.

The latest data on mortality from diabetes directly is from 2007; in Brent there were 20 deaths. The data has been pooled from 2005-07, in this period Brent had 66 deaths from diabetes; the SMR is 114 and the DSR is 7.35. Mortality rates from diabetes in Brent (from 2005-07) are higher than National rates overall and, in particular, for men.

Figure 38: Indirect Standardised Mortality Rate (SMR) for 2005-07 for Diabetes

Source: NCHOD

Figure 39: Direct Standardised Mortality Rate for 2005-2007 for diabetes

Source: NCHOD (Data are based on the original underlying cause of death)

The DECODE (Diabetes epidemiology: collaborative analysis of diagnostic criteria in Europe) study data helped to calculate a hazard ratio of death with diabetes versus without diabetes.

Table showing Hazard ratios of death with diabetes versus without diabetes from DECODE study:

	20-39 years	40-59 years	60-70 years
MALE	2.54	2.17	1.91
FEMALE	3.76	2.54	2.53

This means for a 25 year old male with diabetes, his risk of death is 2.54 higher than a male of the same age without diabetes. There are many assumptions which have been made in this calculation. The hazard ratio data can be combined with information on diabetes prevalence,

population estimates and all cause mortality data to identify diabetes attributable deaths. When applied to the PBS data for estimates of diabetes in 2005, Brent Teaching PCT has the second highest percentage of deaths in England attributable to diabetes (in 2005 147 deaths; 16.84%)¹⁰. These data were combined to estimate the number of excess deaths in people with diabetes. Excess deaths were deaths that would not have occurred if the people with diabetes had the same mortality rate as people without diabetes within a given area.

The observed number of deaths, where diabetes has been the original underlying cause of death, in 2005 for Brent was 24¹¹ (1.5% of all deaths in Brent). This means that diabetes, as defined by ICD-10 codes E10-E14, was recorded as the 'underlying cause of death' on the death certificate. This number is lower than expected and the true impact of diabetes is much greater as it contributes heavily to cardiovascular and cerebrovascular diseases.

In 2005, 5.9% of deaths (96 cases) had diabetes coded, in any field, on the death certificate; this means diabetes was felt to have contributed to the death.

Years of life lost (YLLs) take into account the age at which deaths occur by giving greater weight to deaths occurring at younger ages. YLLs are calculated from the number of deaths multiplied by a standard life expectancy at the age at which death occurs.

Table 17: Years of life lost due to mortality from Diabetes (ICD10: E10-E14)

	Persons DSR	Males				Females			
		Deaths	DSR	95% Confidence Limits		Deaths	DSR	95% Confidence Limits	
				Lower	Upper			Lower	Upper
ENGLAND	4.01	2815	4.78	4.53	5.03	1979	3.28	3.06	3.49
London SHA	3.97	396	5.10	4.48	5.73	247	2.92	2.41	3.43
Brent Teaching PCT	3.63	17	6.09	2.70	9.48	6	1.36	0.00	2.80

NCHOD 2005-2007 data pooled. Rate per 10,000 European Standard population

6.5 Morbidity

Morbidity of diabetes is difficult to measure. It includes any complications which are associated with diabetes, this includes, cardiovascular events, cerebrovascular events, amputations, retinal problems and renal problems. These can be measured through Hospital Episode Statistics (HES) data which looks at hospital admissions and attendances.

Brent had a lower admission rate for diabetes compared to the rest of London and Nationally in 2007-08. It had the 5th lowest admission rate in London. Of the 245 admissions, 59 patients were elective admissions and 214 patients were emergency admissions

Table 18: Total diabetes admissions per 100 patients on Diabetes Register 2007-08

Organisation	% Rate	Admissions	Patients
National	2.4	49486	2087978
London SHA	2	6278	320586
Brent Teaching PCT	1.5	245	16924

NHS Comparators

The likely explanation for the low number of diabetes-related admissions is due to how admissions are coded. Admissions are recorded as due to diabetes if it can be described by one of the ICD-10 codes E10-E14. Patients may be admitted due to conditions directly related

¹⁰ YHPHO Diabetes Attributable deaths: estimating the excess deaths among people with diabetes. May 2008

¹¹ Nchod archives 2005 Mortality from diabetes (ICD10 E10-E14):

to their diabetes, such as hypoglycaemia, or due to one of the complications of the disease. It is important to note that some of the most significant complications for admissions due to diabetes are not included in HES data. For example, a patient who has a myocardial infarction or a stroke because of their diabetes would not be coded for diabetes in HES data.

A possible way of determining the burden of diabetes in Brent is to look at hospital admissions due to conditions linked to diabetes. The morbidity and mortality that they cause are an important part of the effect of diabetes in Brent, and the cost of the disease to the PCT. Diabetic patients who are admitted with these conditions are not included in HES data for diabetes but may have diabetes coded as a second diagnosis. This gives an estimate of the proportion of these cases that are likely to have been caused by diabetes.

Table 19: Admissions due to conditions commonly caused by diabetes, showing proportion of admitted patients with diabetes, in Brent, during 2002-2005

Reason for admission to hospital	% of patients who have diabetes coded as a subsequent or secondary diagnosis
Angina	28% (n=663/1737)
MI	25% (n=302/929)
Cardiac Failure	29% (n=219/498)
Stroke	22% (n=330/1180)

HEA report 2008– data from Compendium of Clinical and Health Indicators

Diabetic ketoacidosis (DKA) is a condition that arises more frequently in type 1 diabetes mellitus, caused by poor glycaemic control, resulting in very high blood sugars. Diabetic coma could result from DKA, or more commonly in type 2 diabetes due to severe dehydration (from poor diabetic control).

The data below shows emergency admissions specifically with diabetic coma or DKA, Brent has a much higher rate when compared to the rest of London and Nationally.

Table 20: Emergency hospital admissions for diabetic ketoacidosis and coma during 2006-2007

	Resident Population (2006) - Denominator	Number of Admission Continuous Inpatient Spells - Numerator	Expected value	Indirectly age and sex standardised rate per 100,000	Percent improvement from 2005/2006 to 2006/2007
England	50762945	13074	11461.84	25.71	-5.67
London SHA	7512372	2014	1683.40	26.97	-5.81
Brent Teaching PCT	271425	98	61.08	36.17	-30.86

NCHOD data 2006-7 standardised to 2004/5 (ICD 10 codes: E10 - E14 with 4th digit codes .0 and .1)

A well known complication of poorly controlled diabetes is lower limb amputation. Two factors contribute to this, firstly loss of sensation in the area and secondly peripheral vascular disease. The risk of ulcers is high and due to the poor blood flow, healing of these ulcers can be very slow, causing an increased risk of infection.

From the data below, Brent has a lower number of amputations than expected and a significantly lower rate compared to London and Nationally. The reason for this is unclear¹². It may be due to the diversity of the population in Brent: South Asian and African Caribbean

¹² Young, B; Maynard, C; Reiber, G Boyko, E; Effects of Ethnicity and Nephropathy on Lower-Extremity Amputation Risk Among Diabetic Veterans Diabetes Care 26:495-501, 2003.

patients in the UK have been found to be at lower risk of amputation than Europeans¹³. Or it may reflect better preventative care and management of foot ulcers, thus avoiding amputation. The small numbers of patients could also show larger random fluctuations.

Table 21: Hospital procedures involving lower limb amputations in diabetic patients during 2007-2008

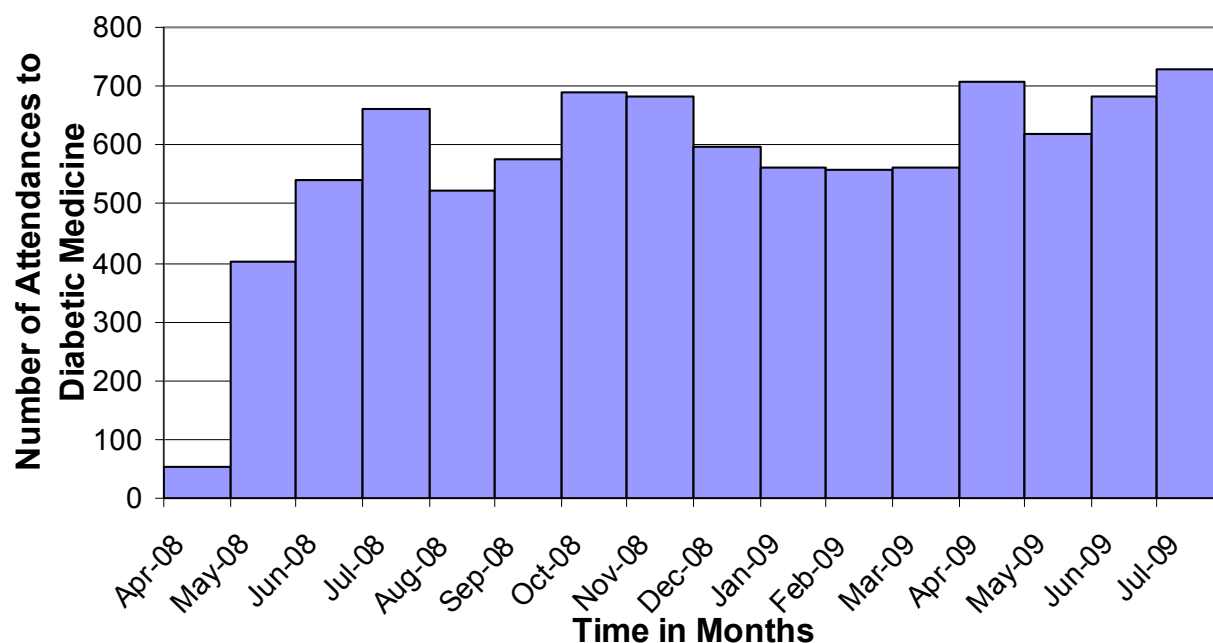
	Resident Population (2007) – Denominator	No. of Admission Continuous Inpatient Spells with lower limb amputation & diabetes – Numerator	Expected value	Indirectly age & sex standardised rate per 100,000	Percent improvement from 2006/07 to 2007/08
England	51092032	5301	5162.81	10.24	-3.85
London SHA	7556930	602	591.17	10.15	-3.15
Brent Teaching PCT	269969	17	21.33	7.95	26.73

NCHOD (From data using OPCS4 codes X09-X11 with ICD 10 codes E10-E14)

6.6 Utilisation of Secondary Care

There is limited data prior to May 2008, due to changes in coding for diabetes and endocrinology. In this time period there were 11170 appointments allocated and 9151 attendances to clinic. There has been a general increase in the number of outpatient attendances over time, with the most recent data showing 730 attendances in July 2009.

Figure 40: Outpatient attendances to Diabetic Medicine Outpatient Clinics in Brent (Apr08-Jul09)



Source: Dr Foster

¹³ Caroline A. Abbott, PHD; Adam P. Garrow, PHD; Anne L. Carrington, PHD; Julie Morris, PHD; Ernest R. Van Ross, FRCP; Andrew J. Boulton, MD. Foot Ulcer Risk Is Lower in South-Asian and African-Caribbean Compared With European Diabetic Patients in the U.K. The North-West Diabetes Foot Care Study Diabetes Care. 2005;28 (8):1869-1875

6.6.1 Diabetes pathway in Brent

The pathway for diabetes in Brent has been developed, but is due to change in line with the Healthcare for London recommendation for management of long-term conditions, and new changes to fit within the polysystem clinical setting.

The aim is to bring more services back in to the community setting, with more patients being managed in general practice. This will require general practice to handle more complex cases of diabetes, either within the practice or within a group of practices.

There are certain critical factors which will impact how successful the implementation of the new model will be, and more importantly, the sustainability of this model.

- The workforce will need developing and training and there will need to be additional support from a community specialist consultant and GPwSI in diabetes.
- The capacity will need to be improved as Brent has a large population of patients diagnosed with diabetes.
- Patient education will play a stronger role in keeping patients in control of their disease and there will need to be further development of the already existing programmes.
- Information systems will need to be integrated and enhanced so that care can be followed fully by all members of the team in both primary and secondary care.

Potential benefits to patients include full management in the community, and a more accessible setting for a wide range of community input and services.

There will need to be strict monitoring to audit whether the new service improves the quality of care of patients with diabetes. Another area may be to increase screening of patients in order to identify diabetes early, current advice is to test for patients who have an existing cardiac risk factor or are obese. The UK National Screening Committee have decided that general population screening should not be offered; it has been assessed against their criteria and does not meet a number of the screening criteria at present.

Chapter 7: Circulatory Diseases

Key Facts: Primary Health Care Provision

- Cardiovascular disease is one of the most important causes of ill-health in Brent
- Overall, the mortality from cardiovascular disease appears to be decreasing across the borough
- Improvement in clinical care at the primary care level might be explaining reduction in mortality experience
- Improvement in clinical care at the primary care level does not seem to be related to reduced use of secondary care services and acute admissions
- The prevalence of Coronary Heart disease (2.5%), Stroke (1%), Hypertension (11.1%), Atrial Fibrillation (0.6%) and Heart Failure (0.5%) are all significantly below the London and National averages.
- There are wide variations in reported prevalence across GP practices
- There are wide discrepancies between the reported and expected prevalence of each disease across GP practices
- Data quality and management issues need addressing, particularly exception reporting, and disease register maintenance.

7.1 Introduction

Cardiovascular disease (CVD), also known as heart and circulatory disease, is a group of diseases affecting the heart and circulatory system, and includes conditions such as coronary heart disease (angina and heart attack), and stroke. Globally, CVD is the number one cause of death. An estimated 17 million people die of CVDs, every year, representing 29% of all global deaths¹. Of these, 7.2 million were due to coronary heart disease and 5.7 million were due to stroke. Lifestyle and family characteristics can increase the risk of CVD i.e. Smoking, High blood pressure, High blood cholesterol, Physical inactivity, Being overweight or obese, Diabetes, a family history of heart disease, increasing age, and Ethnic group – some ethnic groups have a higher risk of heart disease, for example, South Asian people living in the UK have a higher risk than the rest of the UK population.²

In the UK, CVD kills more than 120,000 people every year³ and around 2 million people suffer from angina in the UK. More than 4% of NHS spending is on stroke services alone⁴. In the UK, an aging population will certainly increase the burden, both clinical and economic, of CVD on the health services. In Brent, specifically, the significant proportion of the population that are of South Asian descent indicate that CVD is and will be a particular concern over the coming years.

This chapter describes the burden of CVD in Brent, specifically Coronary Heart Disease, Stroke, Hypertension but also the related conditions, Heart Failure and Atrial Fibrillation. We deal with each condition in turn, looking at specific issues around prevalence and management of the conditions at the primary health care level, but also some issues around the quality of data management and reporting in these diseases. Finally, we present some data on the burden that these conditions have on secondary and tertiary services.

¹ WHO Factsheet 2009 - <http://www.who.int/mediacentre/factsheets/fs317/en/index.html> accessed 26/01/10

² M Gupta et al - South Asians and Cardiovascular Risk -What Clinicians Should Know. Circulation. 2006;113:e924-e929.

³ WHO Atlas of Heart Disease and Stroke p.91

⁴ WHO Atlas of Heart Disease and Stroke p.47

7.2 Coronary Heart Disease

Coronary Heart Disease (CHD) is defined as a narrowing of the coronary arteries which supply blood and oxygen to the heart. It is usually caused by atherosclerosis, fatty deposits deposited on the inside lining of the arteries. This causes symptoms of chest pain. CHD can result in a heart attack if the blood supply to the heart is stopped for long enough to cause damage.

As can be seen in Table 1, Brent appears to have a lower overall crude recorded prevalence of CHD compared with London and the National average.

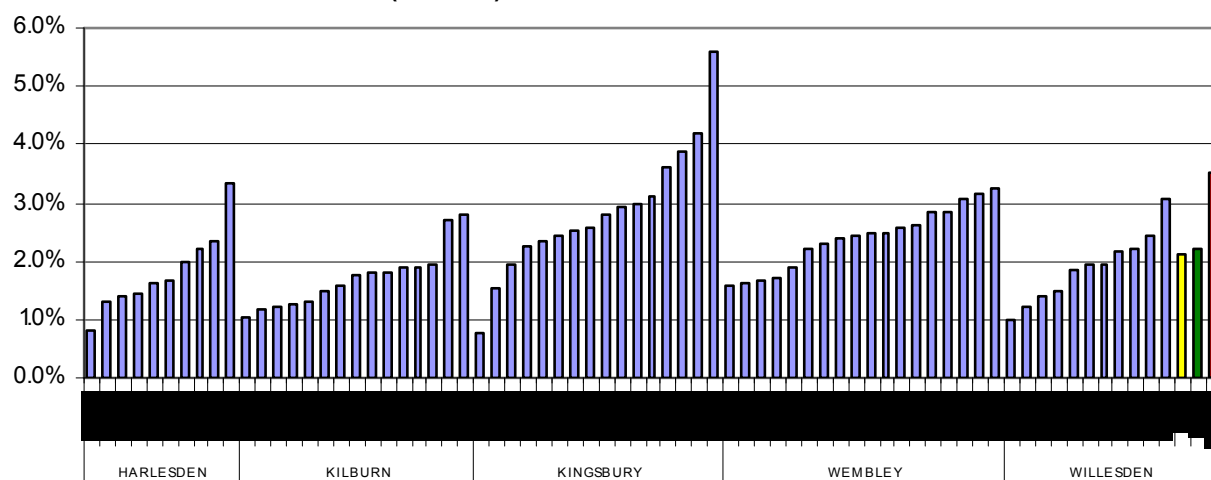
Table 22: 2008/09 Crude Prevalence of CHD in Brent, London and England (2007/08 in brackets)

	Number of all registered patients	Number of patients on CHD register	Percent
ENGLAND	54310660 (54009831)	1886406 (1892432)	3.5 (3.5)
London SHA	8462084 (8479049)	189,988 (191,420)	2.2 (2.26)
Brent Teaching PCT	350,880 (351189)	7322 (7267)	2.1 (2.07)

Source: NCHOD and QoF⁵

However, this belies enormous variation in prevalence between different GP practices as shown by the practice-specific prevalence of CHD in the figure below. CHD prevalence varies from 0.6% to 5.2% according to GP registers with several GP practices reporting CHD prevalence rates higher than the national average.

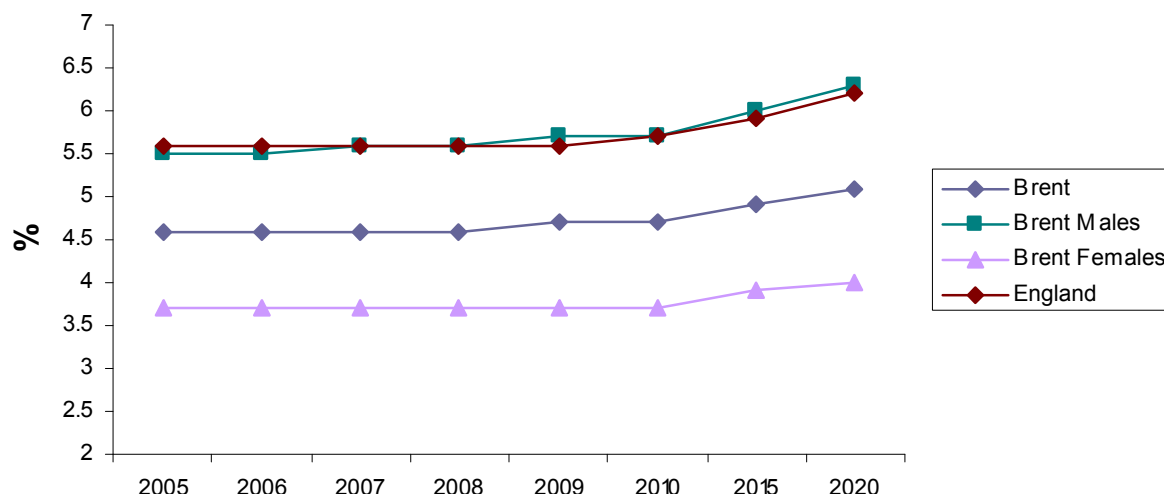
Figure 41: Prevalence of Coronary Heart Disease in Brent, by GP Practice, compared to London and National levels (2008/09)



Source: NHS Information Centre, QoF tables 2009

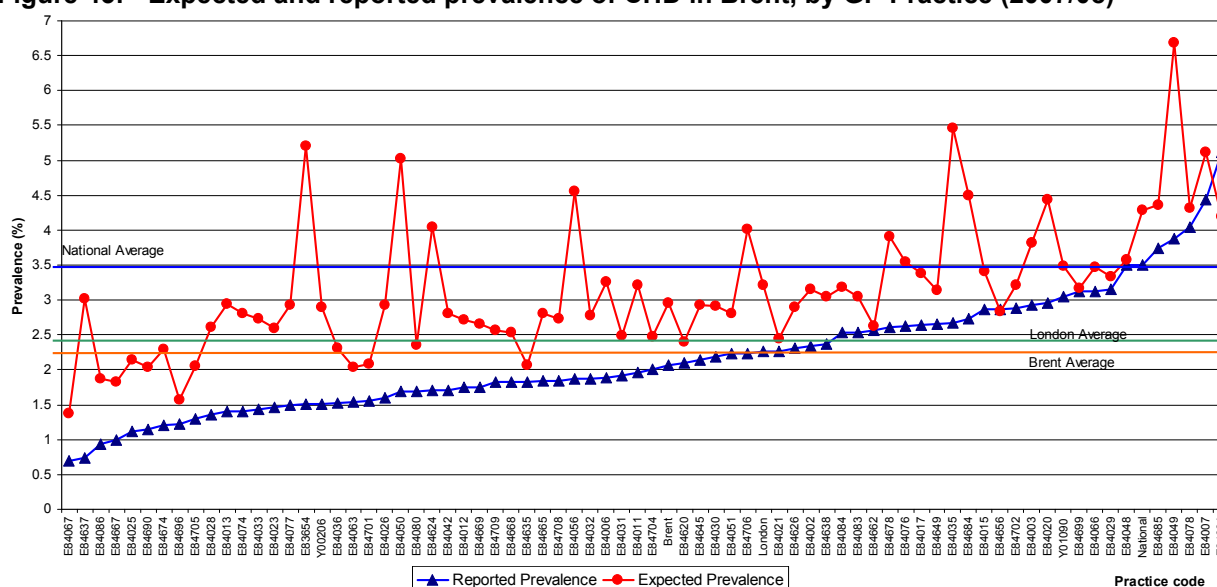
Furthermore, we expect the prevalence of CHD to increase significantly over the coming years. The graph below shows changes in prevalence in accordance with modelling work undertaken by APHO. Population characteristics such as age structure, deprivation, smoking levels, ethnicity and urbanicity have all been taken into account.

⁵ NCHOD updated May 2009, refers to 2007-8 data. QoF 2009 from NHS IC

Figure 42: Expected Coronary Heart Disease prevalence in Brent, 2005-2020

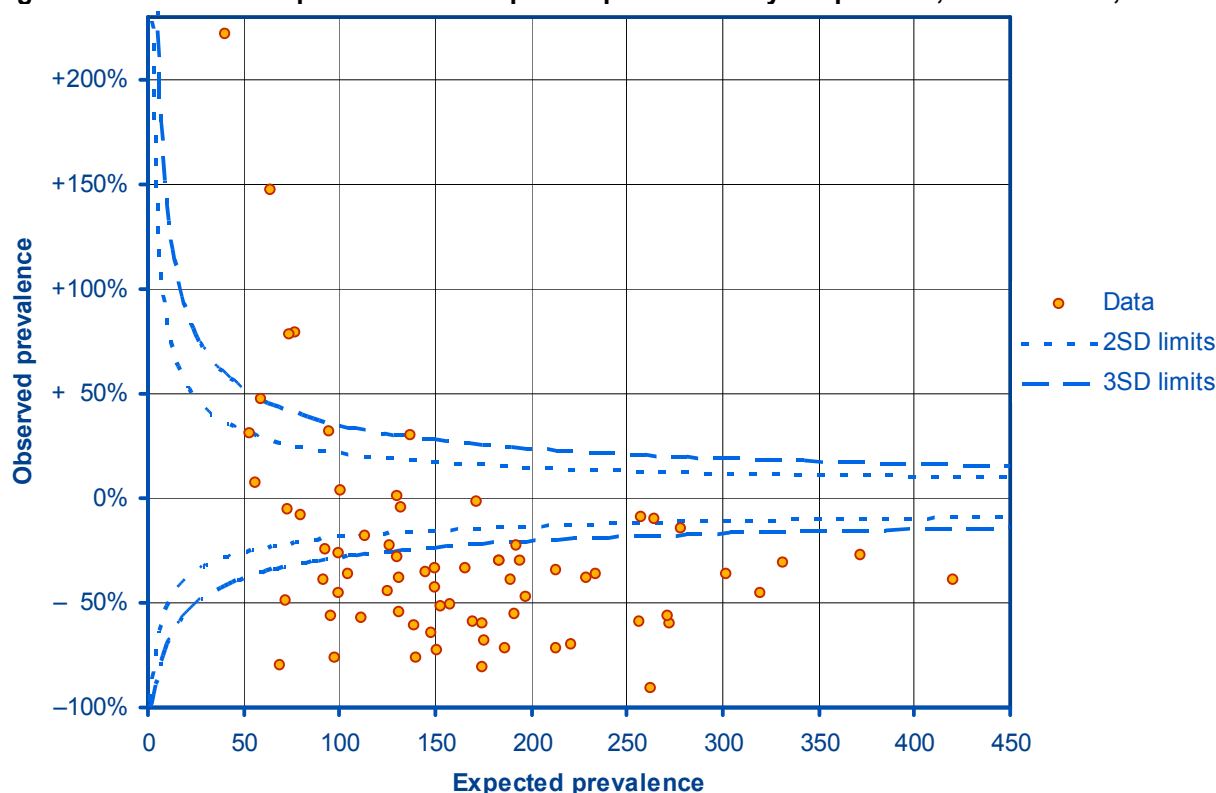
Source: APHO

In order to call and recall patients and to report on indicators for coronary heart disease, GP practices must be able to identify which patients in their population have CHD. This will include all patients who have had coronary artery revascularisation procedures such as coronary artery bypass grafting (CABG or PTCA),⁶ and a past history of myocardial infarction⁷. However, GP CHD registers may not be up-to-date, and practice list sizes may be over-inflated. There may, therefore, be a difference between reported prevalence and actual prevalence. In the absence of a more accurate method to determine actual prevalence, modelling can be used, based on population age structure, ethnicity, and gender mix amongst other factors, to estimate the prevalence that would be expected given the population characteristics of the area.

Figure 43: Expected and reported prevalence of CHD in Brent, by GP Practice (2007/08)

GP practices, as registers may not be being updated regularly enough, with high numbers of registered patients remaining on practice list registers even if they have moved out of the area. Both of these would give spuriously large differences between expected and reported prevalence.

Figure 44: CHD funnel plot observed-expected prevalence by GP practice, in Brent PCT, 2009



Source: QMAS

7.2.1 Management of CHD

Research has shown that high blood pressure following the onset of CHD increases the risk of a cardiac event and that reducing blood pressure reduces this risk. It is recommended that patients with CHD should have their blood pressure measured annually and if possible blood pressure should be kept to under 150/90. Similarly, a number of trials have demonstrated that cholesterol lowering with Statin medications significantly reduces cardiovascular or all-cause mortality in patients with angina or in patients following myocardial infarction, irrespective of age, starting cholesterol level, and prior CHD events.

The Joint British Recommendations on Prevention of Coronary Heart Disease in Clinical Practice (1998) and SIGN Guidelines 41 and 51 therefore recommend that patients who have a cholesterol of greater than 5mmol/l should be offered lipid lowering therapy and cholesterol measurement should be undertaken annually. Aspirin (75–150 mg per day) should be given routinely and continued for life in all patients with CHD unless there is a contraindication (when Clopidogrel 75mg may be given) and Beta-Blocker medications reduce mortality and morbidity in patients with angina and patients after myocardial infarction. Finally, the Department of Health and the Joint Committee on Vaccination and Immunisation recommend that patients with CHD should be offered the flu vaccine to avoid increased morbidity during the winter months.

According to Quality and Outcome Framework data, Brent GPs performance has improved from 2007-8 data, and is comparable to the London average on most of these management indicators. For example, 97.6% of CHD patients have their blood pressure measured annually which is slightly better than the London average (97.4%) (see table below). There is no

statistical difference between Brent's performance with respect to CHD management and the London average on each of the indicators. However, GPs are significantly better at providing the Flu vaccine than the London average⁸.

Table 23: Management of CHD in Brent compared to London and National (QoF, 2008/09)

Indicator (%)	Brent PCT 2007/8	London 2007/8	Brent PCT 2008/9 (range)	London 2008/9	England and Wales 2008/9
BP recorded in last 15 months	96.2	94.1	97.6 (33.3,100)	97.4	97.9
BP 150/90 or less in last 15 months	86.5	86.1	89.3 (84.6,100)	89.2	89.7
Cholesterol recorded in last 15 months	89.6	90.1	92.6 (81.2, 100)	92.6	94.0
Cholesterol 5mmol/l or less in last 15 months	73.9	73.6	80.8 (62.6,100)	79.8	82.1
Anti-platelet used in last 15 months	91.1	91.2	94.8 (88.8,100)	94.3	94.2
Treated with a beta-blocker	53.0	52.0	73.6 (47.1,100)	72.2	72.9
Flu vaccine uptake	81.1	79.0	92.8 (65.3,100)	91.6	92.1

Source: QoF 2009⁹

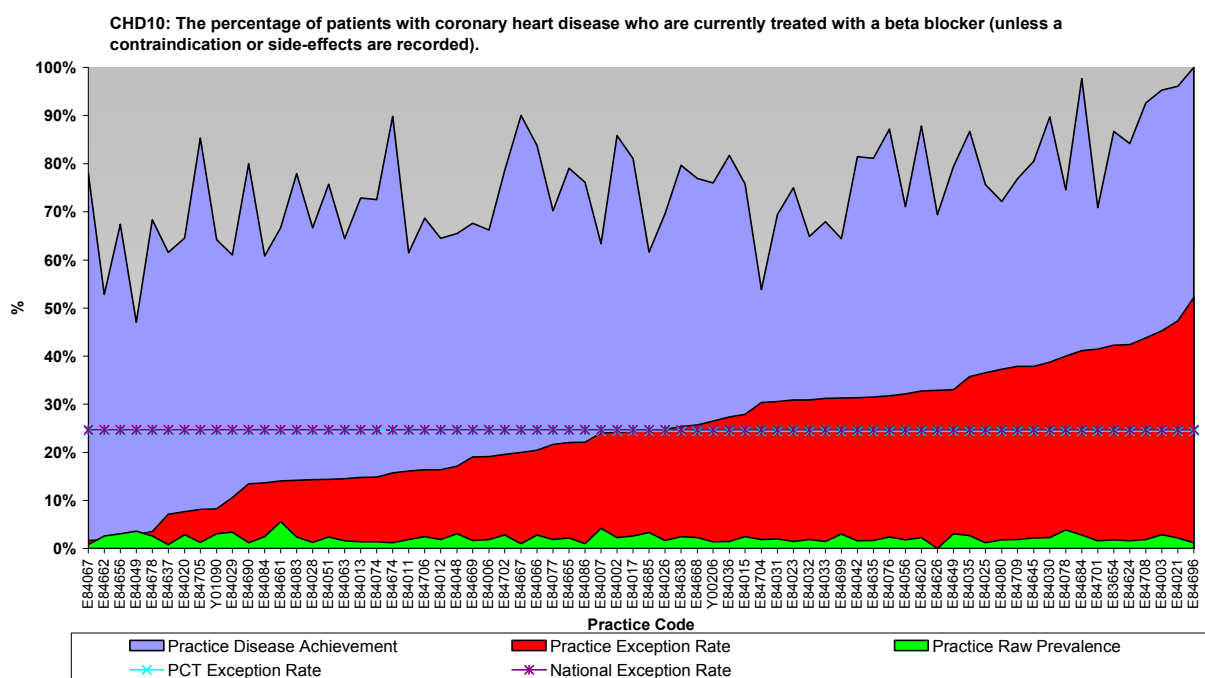
However, whilst this is encouraging, there is significant variation in performance between GP practices. In some cases, GPs can exclude (exceptions) some patients from the CHD register if their clinical management, and fulfilment of QoF indicators, is compromised by other underlying illnesses, failure to attend consultations or intolerance of recommended medications. The national exception rate for CHD indicators was 7.8% (2008/9)¹⁰, having decreased from 8.36% in 2007/8. The Brent exception rate was 9% for CHD indicators, and some GP practices reached an exception rate of up to 30%. With such a significant proportion of their CHD register excluded from analysis, overall performance for each indicator may be artificially elevated.

As the figure below shows, almost half of all GP practices have an exception reporting rate greater than the National average. For example, the CHD indicator that measures the use of beta-blockers in CHD, there is a clear trend to increasing performance in practices that have increased levels of exception reporting. Further analysis at the practice-specific level is required such as regression analysis, to confirm the association between exception reporting and performance, and practice visits in extreme cases to identify practice level barriers to clinical management.

⁸ London Health Observatory – in 2007/8 there was a statistically significant difference in flu uptake in Brent compared to London as a whole

⁹ 2007/8 data from London Health Observatory

¹⁰ Quality and Outcomes Framework Exception Data 2008/9 – NHS Information Centre 2009

Figure 45: GP QOF Performance for CHD10

Source: QMAS database – 2008/09, as at end of June 2009

7.3 Stroke

A Stroke is a brain attack and occurs when the blood supply to part of the brain is cut off. This can occur from blockage (ischaemia) or haemorrhage. Symptoms include numbness, weakness or paralysis on one side of the body, slurred speech or difficulty finding words or understanding speech, sudden blurred vision or loss of sight, confusion or unsteadiness or a severe headache. If these are temporary and transient then it is called a Transient Ischaemic Attack (TIA). 5.5million people die each year from Stroke worldwide¹¹ - morbidity and mortality is directly related to the speed with which treatment can be obtained¹². The National Stroke Strategy (2001)¹³ provides a quality framework for the development of stroke services, including prevention of further strokes among those with existing stroke or TIA. The target is to reduce the mortality rate by 2010 for stroke by at least 40 per cent in people under 75, with a reduction in the inequalities gap by at least 40 per cent.

The percentage of patients with Stroke or TIA, is recorded on practice disease registers¹⁴. The prevalence of Stroke or TIA in Brent is 1.0% which is very similar to the London average¹⁵, however well below the prevalence for England and Wales (1.7%). There is considerable variation between GP practices with some reporting a very low prevalence of around 0.3% and others a very high prevalence of nearly 2.5%. These differences may be real, but as discussed in the previous sections, most likely reflect issues around list inflation, exception reporting and record management.

¹¹ Stroke Alliance for Europe - The Burden of Stroke (White Paper) accessed 28th January 2010 <http://www.safestroke.org/Portals/10/FINAL%20Burden%20of%20Stroke.pdf>

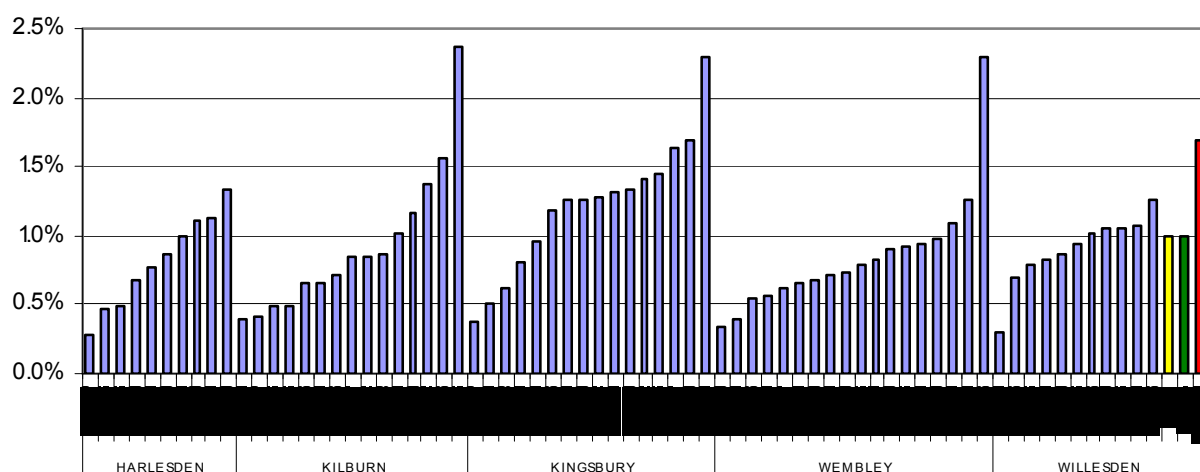
¹² Hacke W, Donnan G, Fieschi C, et al. - Association of outcome with early stroke treatment: pooled analysis of ATLANTIS, ECASS, and NINDS rt-PA stroke trials. Lancet 2004;363:768-774

¹³ <http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Stroke/index.htm>

¹⁴ Patients with a diagnosis of transient global amnesia or vertebro-basilar insufficiency should not be included in the retrospective register – London Health Observatory

¹⁵ Source: NHS Information Centre, QoF 2008-9

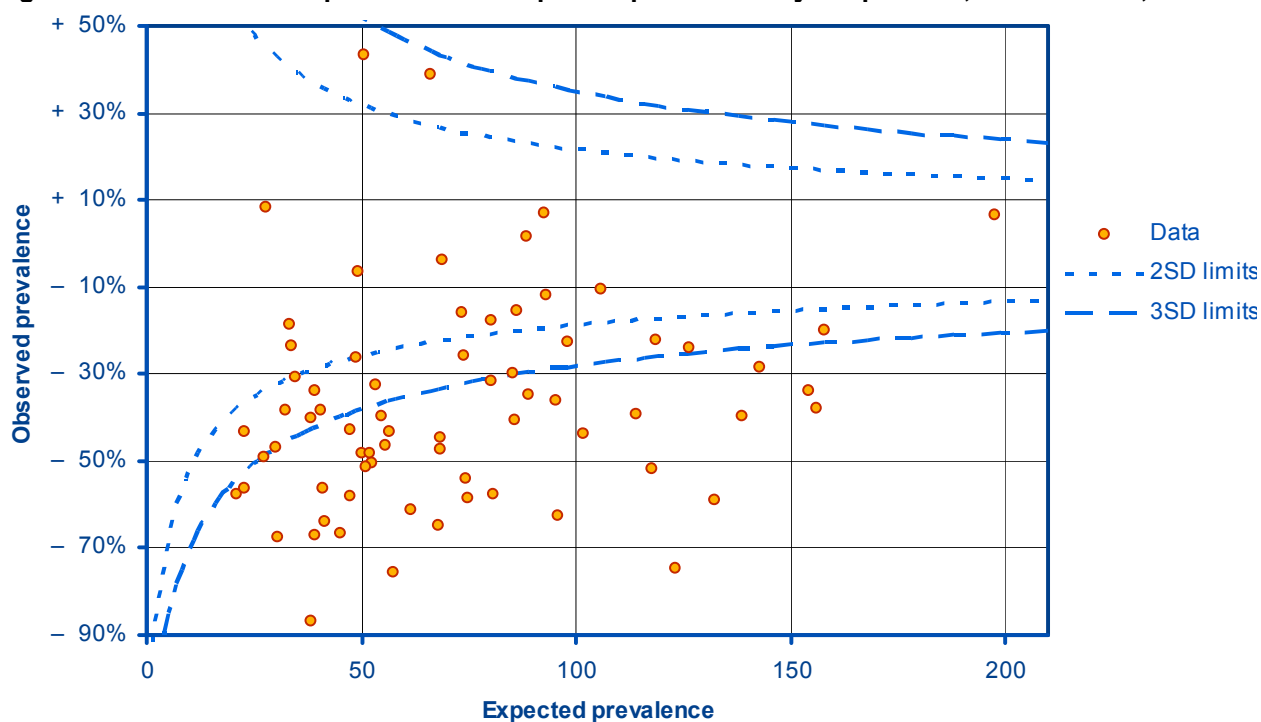
Figure 46: Prevalence of Stroke/TIA in Brent, by GP practice, compared to London and National average, 2008-09



Source: NHS Information Centre, QoF data 2009

This difference in reported versus expected prevalence is significant, as shown in the funnel plot below. Here, the majority of practices report a Stroke prevalence that is well beyond the limits considered to be due to chance alone. This may be due to differences in population structure in each GP practice e.g. the practice list may be composed of much younger patients than that accounted for in the modelled expected prevalence. It may also be due to list inflation in certain GP practices, as registers may not be being updated regularly enough, with high numbers of registered patients remaining on practice list registers even if they have moved out of the area. Both of these would give spuriously large differences between expected and reported prevalence.

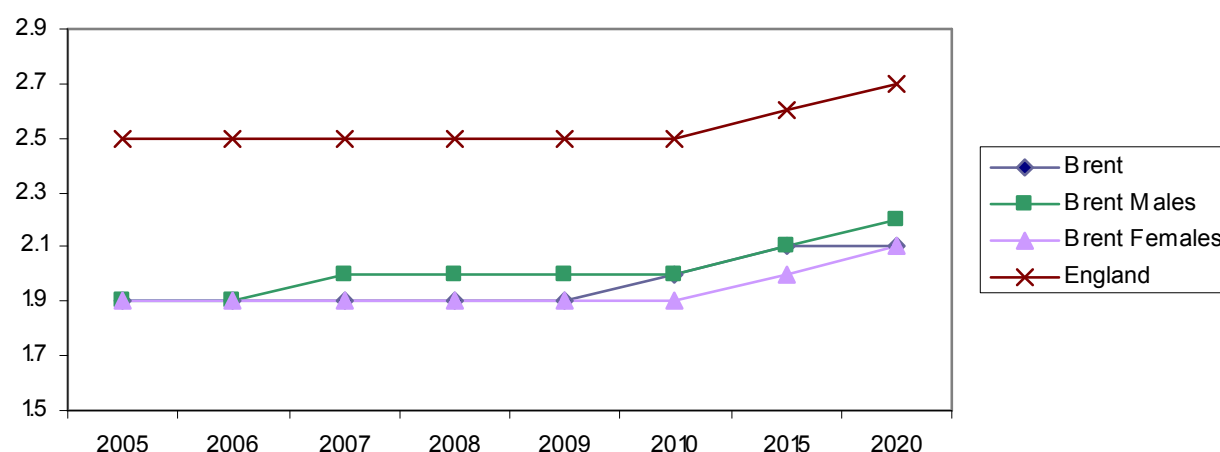
Figure 47: Stroke funnel plot observed-expected prevalence by GP practice, in Brent PCT, 2009



Source: QMAS

The Association of Public Health Observatories modelled the expected prevalence of Stroke/TIA in Brent and across the country. These estimates and projections of the prevalence of hypertension in people aged 16+ have been calculated using a model developed at the Dept of Primary Care and Social Medicine, Imperial College, London. The model was developed using data from the 2003-2004 Health Surveys for England. The model takes into account age, sex, ethnicity and deprivation score. Deprivation scores are from the Indices of Multiple Deprivation 2004 (IMD2004). PCT population data for 2006 by age (quinary age band), sex and ethnic group were provided by ONS (unpublished data).¹⁶

Figure 48: Expected Stroke prevalence in Brent, 2005-2020



Source: APHO

The 2007/8 exception reporting rate in Brent for Stroke indicators is 8.6%, as compared to 8% for London and 7.2% for the national average i.e. in Brent 8.6% of registered stroke patients were excluded in the analysis of management performance¹⁷. In addition, the stroke indicator exception rates varied considerably between GP practices, from 0.1% to nearly 30%.

7.3.1 Management of Stroke

All stroke patients should have their blood pressure measured regularly and high blood pressure (over 150/90) should be treated¹⁸. It is clinically and cost effective to treat stroke patients with a cholesterol-reducing statin medication if serum cholesterol is greater than 5mmol¹⁹, reducing the risk of subsequent vascular events. There is evidence from observation studies that flu vaccination²⁰ and long-term anti-platelet therapy also reduces the risk of serious vascular events following a stroke. Anti-platelet therapy, normally aspirin, should be prescribed for the secondary prevention of recurrent stroke. QoF indicators monitor the performance of GPs in maintaining adequate registers of stroke patients, and their management with respect to blood pressure, cholesterol, anti-platelet therapy and flu vaccination. The table below shows that there is no significant difference between Brent and the London average (flu vaccine uptake is slightly but significantly higher in Brent).

Table 24: Management of Stroke in Brent compared to London and National (QOF, 2008-09)

Indicator (%)	Brent 2007/8	London 2007/8	Brent 2008/9 (range)	London 2008/9	England and Wales 2008/9
BP recorded in last 15 months	94.5	94.9	96.8 (83.3,100)	96.6	99.6
BP 150/90 or less in last 15 months	82.2	83.2	87.0 (70.0,100)	87.5	99.6
Cholesterol recorded in last 15 months	85.1	85.8	88.7 (68.5,100)	90.3	96.5

¹⁶ See <http://www.erpho.org.uk/Download/Public/17905/1/Modelled%20hypertension%20by%20PCT%20v2.xls> for information

¹⁷ London Health Observatory – Practice Profiles, Brent PCT

¹⁸ British Hypertension Society guidelines

¹⁹ Heart Protection Study Collaborative Group, Lancet 2002; 360:7-22

²⁰ Lavalley et al. Stroke 2002; 33: 513-518; Nichol et al. NEJM 2003; 348:1322-32

Cholesterol 5mmol/l or less in last 15 months	65.1	65.7	72.5 (46.2,100)	74.5	98.6
Anti-platelet used in last 15 months	94.5	94.2	94.5 (76.2,100)	94.4	98.9
Flu vaccine uptake	77.0	74.7	90.4 (69.2,100)	88.9	97.4

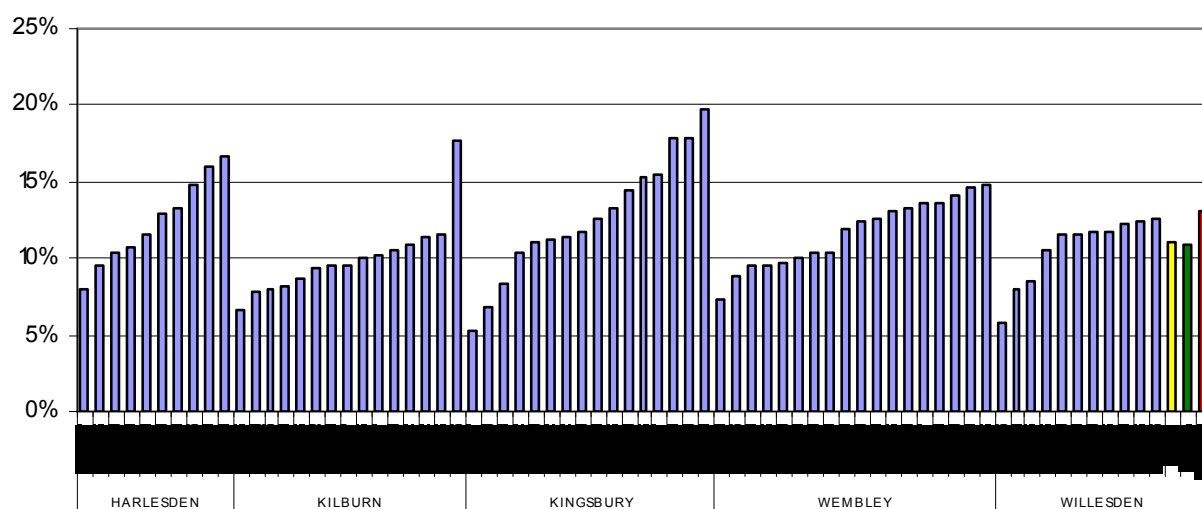
Source: QoF 2009²¹

7.4 Hypertension

Hypertension or High blood pressure can increase an individual's risk of developing heart disease or a stroke. It is often associated with lifestyle factors such as obesity, alcohol consumption, smoking, salt and caffeine intake. However, in a significant proportion of those affected, no specific cause is found ('essential hypertension'). In general, hypertension prevalence increases with age, and although most cases are mild around 1 in 20 adults have blood pressure of 160/100 mmHg or above. Diabetics, people of African, Caribbean or Indian sub-continent descent, and those with a family history of Hypertension are significantly more likely to develop it. Overall, 26.4% of the adult population, worldwide, has hypertension and this is projected to increase to 29.2% by 2025²². Tackling hypertension contributes to the achievement of objectives and standards in the National Stroke Strategy (2007)²³ and the National Service Framework for Coronary Heart Disease (2000)²⁴.

The percentage of patients with established hypertension is recorded on GP practice disease registers. The prevalence in Brent is 11.1% which is significantly, below the national average. However, as described in earlier sections, the reported prevalence in Brent may be significantly under-estimated i.e. the actual prevalence of hypertension in Brent may be as high as 20%²⁵. Furthermore, the reported prevalence of Hypertension varies significantly between GP practices, ranging from 5% to 20% prevalence, which is a four-fold variation in prevalence.

Figure 49: Prevalence of Hypertension by GP practice and locality in Brent, 2009



Source: QoF 2009

This difference in reported versus expected prevalence is significant, as shown in the funnel plot below. Here, almost all of the GP practices report a Hypertension prevalence that is well beyond the limits considered to be due to chance alone. This may be due to differences in population structure in each GP practice e.g. the practice list may be composed of much younger patients than that accounted for in the modelled expected prevalence. It may also be

²¹ 2007/8 data from London Health Observatory

²² Kearney PM et al - Global burden of hypertension: analysis of worldwide data. *Lancet*. 2005 Jan 15-21;365(9455):217-23

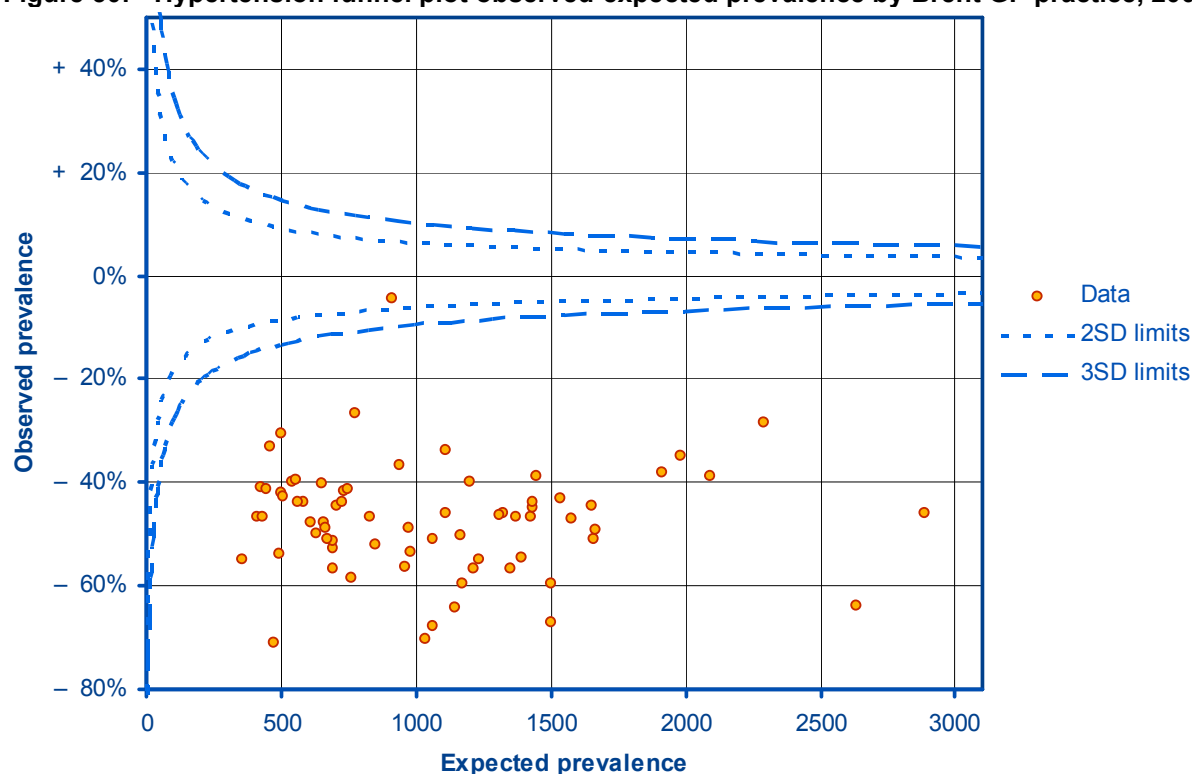
²³ <http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Stroke/index.htm>

²⁴ <http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Coronaryheartdisease/index.htm>

²⁵ See <http://www.erpho.org.uk/Download/Public/17905/1/Modelled%20hypertension%20by%20PCT%20v2.xls> for information

due to list inflation in certain GP practices, as registers may not be being updated regularly enough, with high numbers of registered patients remaining on practice list registers even if they have moved out of the area. Both of these would give spuriously large differences between expected and reported prevalence.

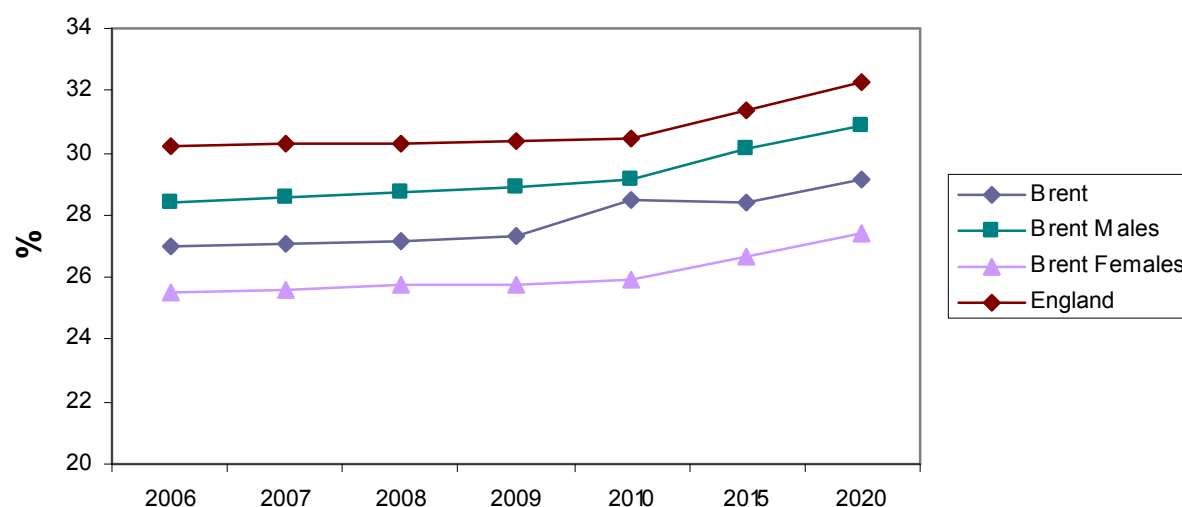
Figure 50: Hypertension funnel plot observed-expected prevalence by Brent GP practice, 2009



Source: QMAS

As the figure below shows, the expected prevalence of hypertension is likely to increase over the coming years from 27% to nearly 29%.

Figure 51: Expected Hypertension prevalence in Brent, 2005-2020



Source: APHO

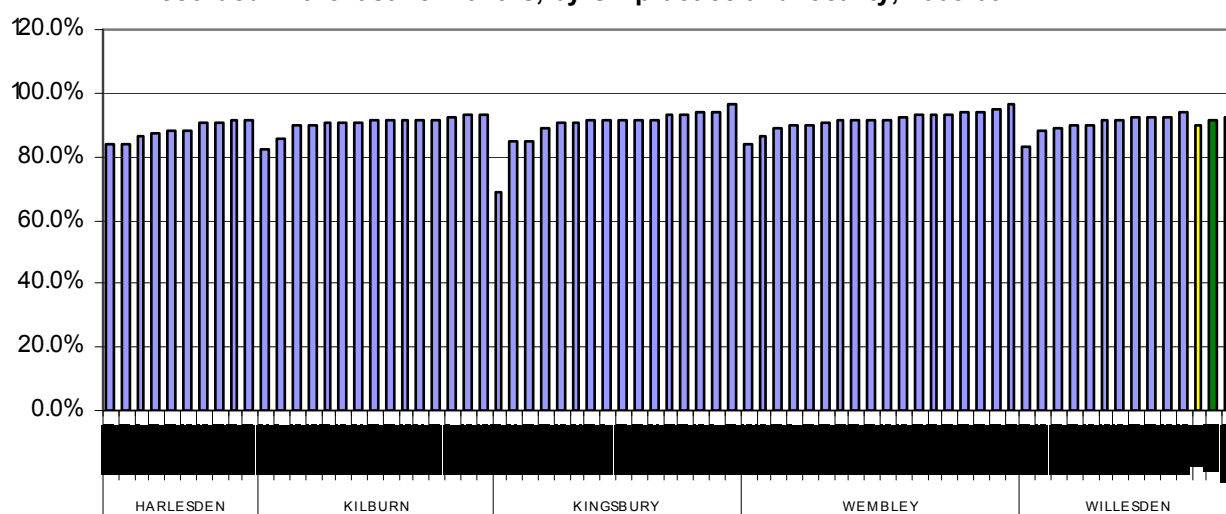
Management of Hypertension

The British Hypertension Society recommends that drug therapy should be started in all patients with sustained systolic blood pressures of greater than or equal to 160 mmHg or sustained diastolic blood pressures of greater than or equal to 100 mmHg despite non-pharmacological measures. Drug treatment is also indicated in patients with sustained systolic blood pressures of 140–159 mmHg or diastolic pressures of 90–99 mmHg if target organ damage is present or there is evidence of established cardiovascular disease or diabetes or the ten-year risk of CHD is raised. Elevated blood pressure readings on three separate occasions are generally taken to confirm sustained high blood pressure²⁶.

Treated patients vary with respect to follow up, and this may depend on the severity of the underlying hypertension, variability in measured blood pressure and the complexity of the treatment regime. There are no guidelines with respect to the frequency of follow up, however for the purposes of performance monitoring for the GMAS contract, this is generally taken to be 6-monthly visits, with the audit standard being 9 monthly visits²⁷.

NICE recommend a target blood pressure of 140/85, however, the British Hypertension Society suggests an audit standard of 150/90 which has been adopted for the QoF. According to QoF data, in Brent 90.2% of patients registered with hypertension have their blood pressure measured regularly, and 77.1% achieve a blood pressure of 150/90 or less in the last 9 months. However, these are, according to the London Health Observatory²⁸, significantly below the London average (91.1% and 77.8% respectively)

Figure 52: Proportion of patients with high blood pressure who had their blood pressure recorded in the last 15 months, by GP practice and locality, 2008-09



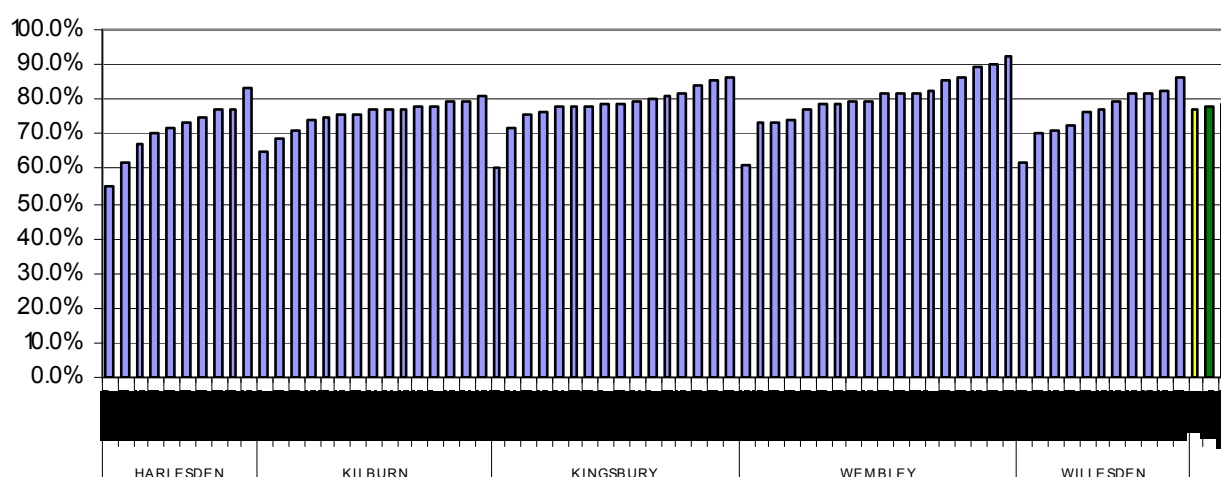
Source: NHS Information Centre, QoF data 2009

²⁶ London Health Observatory

²⁷ London Health Observatory

²⁸ Based on 2007-8 data

Figure 53: Proportion of patients with high blood pressure, with a recorded blood pressure under 150/95 in last 15 months, by GP practice and locality, 2008-09



Source: NHS Information Centre, QoF data 2009

7.5 Atrial Fibrillation

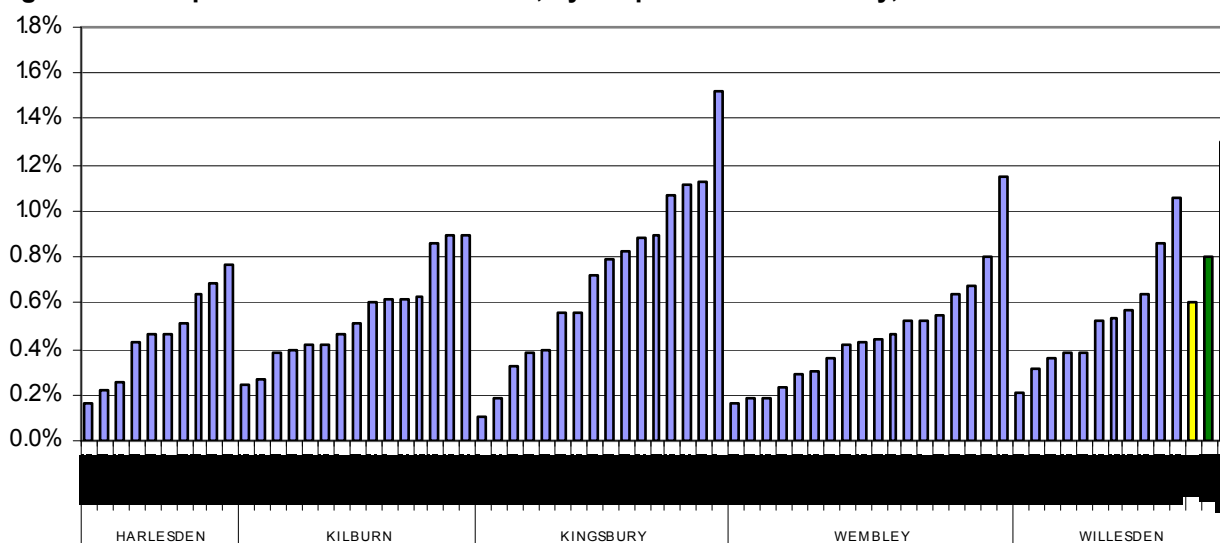
Atrial fibrillation (AF) is a common, abnormal heart rhythm, where the muscles of the atria (a chamber of the heart) contract in an uncoordinated, quivering way. It is often asymptomatic but may equally cause palpitations, chest pain, stroke and congestive heart failure. AF increases the risk of Stroke by up to 7 times, compared with the general population²⁹ and AF-associated strokes account for 6-24% of all ischemic strokes³⁰. Treatment involves medication or electrical cardio-version of the heart to return the heart to normal sinus rhythm. Given the increased risk of stroke, patients are often given anti-coagulants such as warfarin. Approximately 2.2 million individuals in the United States and 4.5 million in the European Union have AF³¹. The incidence of atrial fibrillation increases with age and in developed countries, the number of patients with atrial fibrillation is likely to increase during the next 50 years, due to the growing proportion of elderly individuals³².

²⁹ Blackshear JL, Odell JA (February 1996). "Appendage obliteration to reduce stroke in cardiac surgical patients with atrial fibrillation". *Ann. Thorac. Surg.* 61 (2): 755-9.

³⁰ Narumiya T, Sakamaki T, Sato Y, Kanmatsuse K (2003 January). "Relationship between left atrial appendage function and left atrial thrombus in patients with nonvalvular chronic atrial fibrillation and atrial flutter". *Circulation Journal* 67 (1): 68-72.

³¹ Go AS, Hylek EM, Phillips KA, *et al.* (2001). "Prevalence of diagnosed atrial fibrillation in adults: national implications for rhythm management and stroke prevention: the AnTicoagulation and Risk Factors in Atrial Fibrillation (ATRIA) Study". *JAMA* 285 (18): 2370-5.

³² Go AS, Hylek EM, Phillips KA, Chang Y, Henault LE, Selby JV, Singer DE (2001). "Prevalence of diagnosed atrial fibrillation in adults: national implications for rhythm management and stroke prevention: the AnTicoagulation and Risk Factors in Atrial Fibrillation (ATRIA) Study". *JAMA* 285 (18): 2370-5.

Figure 54: Proportion of Atrial Fibrillation, by GP practice and locality, 2008-09

Source: NHS Information Centre, QoF data 2009

The percentage of patients with atrial fibrillation, is recorded on GP practice disease registers and includes all people with an initial event; paroxysmal; persistent and permanent AF. In Brent, the recorded prevalence of AF is 0.6%, which is significantly lower than the London average (0.8%). The London Health Observatory modelled atrial fibrillation prevalence at the practice level in all London PCTs using the Doncaster PCT Atrial Fibrillation Model, with an additional adjustment for deprivation³³. The Brent ratio of 0.65 for reported to expected prevalence was significantly different to the London average (0.83)³⁴, and the actual prevalence in Brent may therefore be as high as 0.92%. There was also considerable variation in reported/expected ratios between GP practices, ranging from 0.1 to 1.2. This suggests that there is considerable variation in disease register management, practice list size management and exception reporting. With respect to the latter, exception reporting for AF indicators varied from 1% to 21% between GP practices (LHO).

7.5.1 Management of Atrial Fibrillation

Warfarin and Aspirin can both reduce the risk of stroke in patients with AF. However Warfarin is more likely to lead to hemorrhage, particularly in the elderly. Therefore it is not always clear which of these preventative therapies should be used in the elderly. In isolated incidences of AF, therapy is not necessarily indicated (LHO). Acceptable anti-coagulation agents are warfarin and phenindione; acceptable anti-platelet agents are aspirin, clopidogrel and dipyridamole. Anti-coagulation rates in Brent are 89.6% and are not significantly different to the overall London rate (89.9%) (LHO).

7.6 Heart Failure

Heart failure (HF) is a condition where the heart is not able to meet the blood flow requirements of the body's needs. Common causes include Coronary Heart Disease (62%), Smoking (16%), Hypertension (10%), Obesity 8%, Diabetes (3%) and Valvular Heart Disease (2%)³⁵. Heart failure can cause a large variety of symptoms such as shortness of breath, coughing, ankle swelling and exercise intolerance. Heart failure is a costly and disabling condition, estimated to amount to 2% of the total budget of the National Health Service in the United Kingdom, and

³³ For more detail about the Doncaster Model, see <http://www.doncasterpct.nhs.uk/phiu-resources.asp?ArticleID=100180>

³⁴ London Health Observatory – Practice Profiles, Brent PCT based on 2007-8 data

³⁵ He J; Ogden LG; Bazzano LA; Vupputuri S, *et al.* (2001). "Risk factors for congestive heart failure in US men and women: NHANES I epidemiologic follow-up study.". *Arch. Intern. Med.* **161** (7): 996–1002

more than \$35 billion in the United States.^{36,37} Although some patients survive many years, progressive disease is associated with an overall annual mortality rate of 10%.³⁸

In Brent, the prevalence of Heart Failure is recorded from GP practice registers (0.5%). It is not significantly different from the London prevalence (0.5%)³⁹. However, as is the case with other cardiovascular diseases described in previous sections, there is a significant difference in prevalence between GP practices ranging from 0.1% to 1.7%. Similarly, there is wide variation in the ratio between reported and expected prevalence of heart failure for each GP practice. The London average is 0.5 however, in Brent, ratios range from 0.1 through to 2.0. A ratio below 1 means that the practice has rates of recorded heart failure that are less than estimated in their local population modelled by the London Health Observatory using the Doncaster PCT Heart Failure Model, with an additional adjustment for deprivation⁴⁰. As above, the reasons may be due to list inflation, inaccurate disease registers and excessive exception reporting. These factors need further investigation at the practice level.

7.7 Burden of disease – mortality rates for Cardio-vascular diseases

Thus far, we have described the prevalence of Cardio-vascular diseases in Brent, and the performance of GP practices with respect to their management. However, to obtain a picture of the burden that these diseases have on the population we can describe their mortality rates. These reflect underlying population characteristics, health service utilisation and quality of care. As Cardio-vascular disease predominantly affects the adult population, particularly the elderly, the age structure of the population will impact greatly on mortality rates. A ward with a high mortality rate for CVD may be simply because the proportion of its population that are elderly is particularly high. For ease of comparison between populations, mortality rates are therefore standardised according to the age structure of the population. Standardised Mortality Rates (SMRs) use National death rates for each age group to calculate how many deaths would be expected in a particular ward given the size and age structure of its population. This is then compared with the total number of observed deaths which did take place and the SMR is the ratio of the observed number of deaths in a ward to the number expected if the ward had the same age-specific rates as England.

An SMR of 100 indicates that the observed number of deaths and expected number of deaths for a particular area are the same. An SMR of over 100 indicates there were more deaths than expected, while an SMR which is under 100 indicates the number of deaths was less than would have been expected. The SMRs allow the mortality experience of each ward to be compared to the national average⁴¹.

³⁶ Stewart S, Jenkins A, Buchan S, McGuire A, Capewell S, McMurray JJ (June 2002). ["The current cost of heart failure to the National Health Service in the UK"](#). *Eur. J. Heart Fail.* **4** (3): 361–71

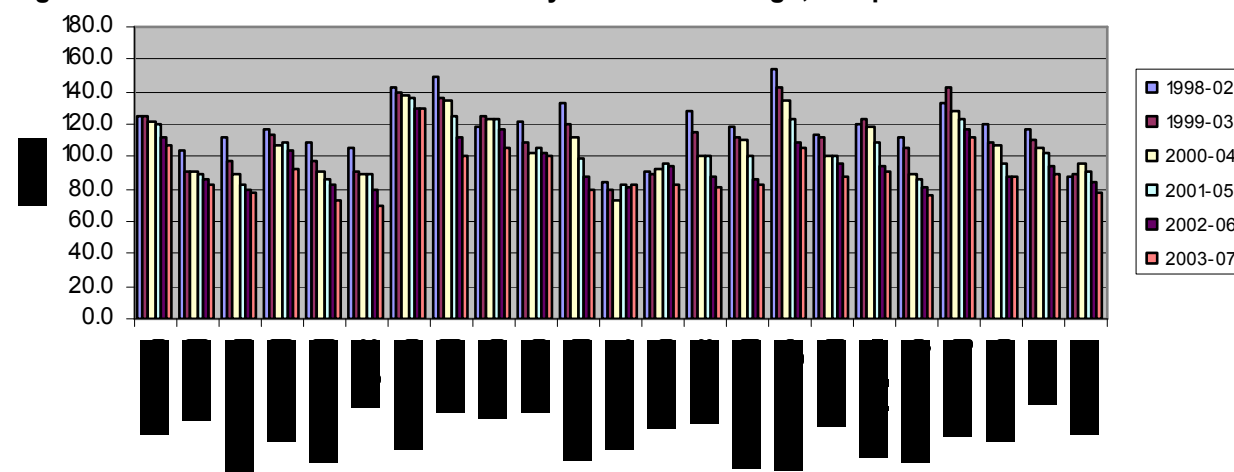
³⁷ Rosamond W, Flegal K, Furie K, *et al.* (January 2008). ["Heart disease and stroke statistics—2008 update: a report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee"](#). *Circulation* **117** (4): e25–146.

³⁸ Neubauer S (2007). "The failing heart — an engine out of fuel". *N Engl J Med* **356** (11): 1140–51, http://en.wikipedia.org/wiki/Heart_failure - cite_note-neubauer-2007-7#cite_note-neubauer-2007-7

³⁹ London Health Observatory – Practice Profile, Brent PCT

⁴⁰ London Health Observatory – Practice Profile, Brent PCT

⁴¹ London Health Observatory - Standardised Mortality Ratios for London wards: Circulatory Diseases, All Ages and Under 75s. SMRs may provide a misleading comparison of mortality between wards in some circumstances. If two wards have identical death rates in every age group their SMRs may still differ if their population age structures are very different.

Figure 55: Indirect CVD SMR 1998-2007 by ward and borough, compared to London

Source: London Health Observatory⁴²

In the above figure, Brent wards (apart from Northwick Park) generally show a declining SMR for all types of Cardio-vascular disease. These rates are compared to the 2003-7 national mortality rates and therefore indicate that from 1998 onwards, five-year mortality rates for CVD is improving in Brent, with the most recent estimates indicating that mortality is better than expected given the population structure in Brent.

7.8 NHS Health Checks in Brent

During 2010 the PCT will be implementing NHS Health Checks in Brent piloting it in the most deprived areas before rolling the programme out across Brent. The programme will screen all patients aged 40 to 75 years in Brent over a 5 year period, assess their CVD Risk, and offer a range of interventions, to those who need it, to reduce their risk of CVD.

The overarching aims of the initiative are:

- To reduce premature death from related vascular conditions including Coronary Heart Disease (CHD), Chronic Kidney Disease (CKD), Diabetes Mellitus (DM), stroke, Transient Ischemic Attack (TIA) and Peripheral Arterial Disease (PAD).
- To reduce the incidence of these related vascular conditions.
- To narrow inequalities in premature death from these related vascular conditions.

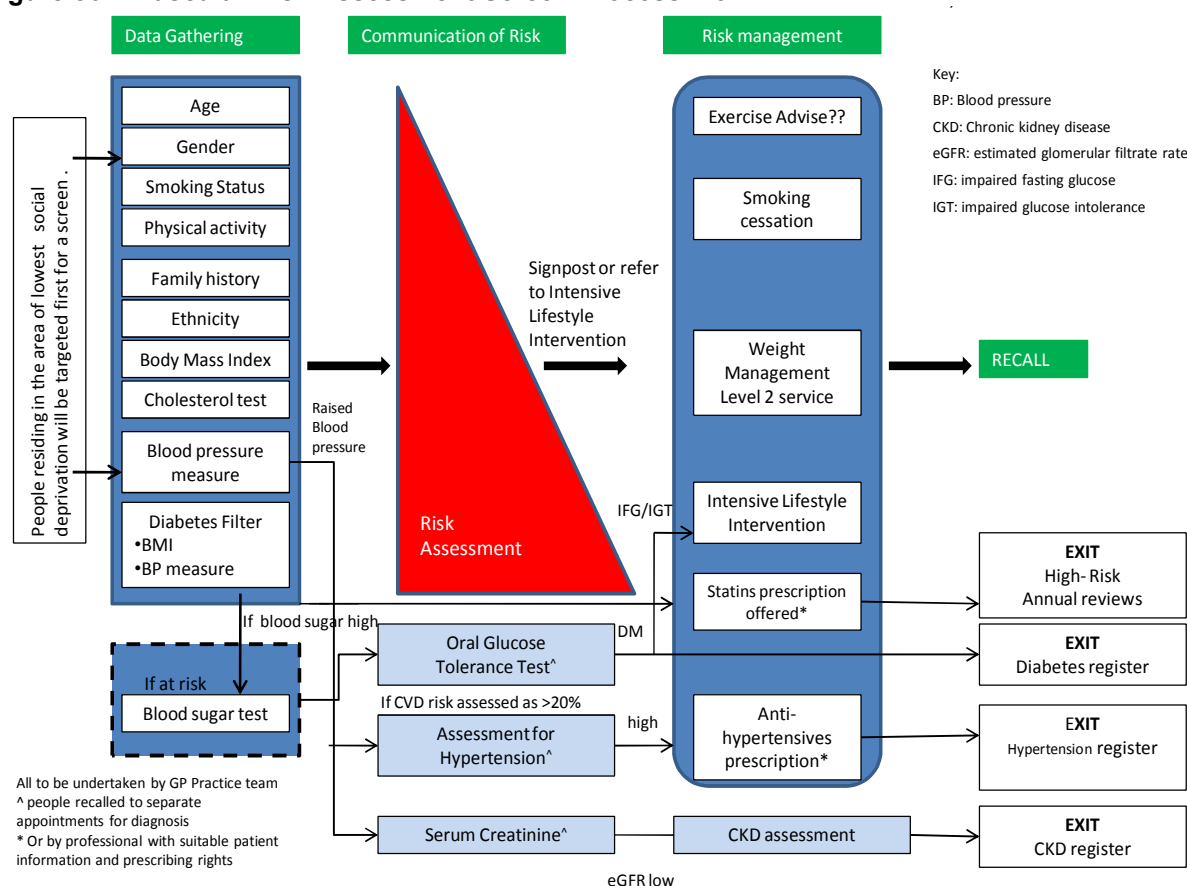
It will involve the following components:

- Review disease and at risk registers for sub-optimal treatment (drugs and lifestyle advice, lifestyle interventions)
- Detect undiagnosed Impaired Glucose Tolerance (IGT) and Type II Diabetes Mellitus
- Treat detected Type II Diabetes Mellitus with drugs and lifestyle advice and interventions
- Treat detected IGT with Intensive Lifestyle Interventions (ILI)
- Review Cardiovascular Risk Score in Patients (aged 40 to 74) and treat (with drugs and lifestyle advice and interventions) those with a CVD risk greater or equal to 20% risk of a CVD event over the next 10 years
- Detect and treat (with drugs and lifestyle advice and interventions) individual risk factors for CVD (obesity, hypertension, smoking etc)
- Detect and treat undetected Type II Diabetes Mellitus and IGT (with drugs and ILI)

⁴²The SMRs have been standardised using England mortality rates for 2003-07. Results in the trend data thus present a comparison between the mortality experience of a ward in a particular time period with national mortality in 2003-07. Deaths registered in 1998 to 2007, have been pooled into five-year time periods using International Classification of Diseases codes - 1998 - 2000: ICD-9 (390-459), 2001 - 2006: ICD-10 (I00-I99). ONS mid-year population estimates for the appropriate year were used.

The detailed risk assessment process is shown in figure 2 below. All patients should be offered this assessment which acts as a risk filter to identify risk factors including abnormal blood pressure, obesity, smoking and physical activity and the need to perform any further risk assessments. The hypertension risk assessment detects and treats undiagnosed hypertension. The risk filter is any patient found with a blood pressure at or above $\geq 140/90$ mmHg or where the SBP or DBP exceeded that threshold, an assessment for hypertension would be necessary. The diabetes risk assessment detects impaired glucose tolerance (IGT) and Type 2 diabetes mellitus (T2DM). Detected IGT is treated with intensive lifestyle interventions (ILI). The risk filter is any patient found with a BMI of 30 (and 27.5 for people of Asian subcontinent origins). In addition, those found with a blood pressure threshold, at or above either a 140 mmHg systolic or 90 diastolic mmHg should be recommended for a blood glucose test. Chronic kidney disease (CKD) risk assessment involves a serum creatinine test to calculate the estimated glomerular filtration rate (eGFR) in order to assess the level of kidney function. The CKD risk filter is employed only if a blood pressure at or above either a 140 mmHg systolic or 90 diastolic mmHg is found at the CVD risk assessment.

Figure 56: Vascular Risk Assessment Screen Process Flow



As adopted from DOH, NHS Health Check, 2009

7.8.1 Modelling the impact of NHS Health Checks in Brent

There is strong evidence demonstrating the benefits of managing cardiovascular disease. The Department of Health have done an economic assessment of the NHS Health Checks programme (Department of Health, Economic Modelling for Vascular Checks. July 2008). This shows the programme to be very cost effective with a conservative cost per quality adjusted life year (cost per QALY) of £3000. NICE generally considers an intervention with a cost per QALY below £30,000 per QALY to be cost effective.

Based on this evidence detailed modelling of the impact of the vascular risk assessment programme in Brent has been carried out. As a result of this work the following impacts have been modelled:

- Premature deaths relating to CVD will be reduced. Estimated at 24 less premature deaths per annum by 2014. In 2007/08 there were 200 premature deaths from CVD.
- Reduction of CVD Events, estimated to be 210 events per annum by 2014. There were 2567 Cardio Vascular events within 2007/08 in Brent.
- Reduction in the health inequalities gap between the highest and lowest areas in Brent. Modelling suggests that the current widening of health inequalities (based on life expectancy at birth) will be reduced.
- The gap in male life expectancy is increasing rapidly and is expected to reach 13.2 years by 2014 if the current rate of increase continues. We aim to reduce the gap in life expectancy against this baseline by 6 months amongst males and 4 months amongst females by 2013.

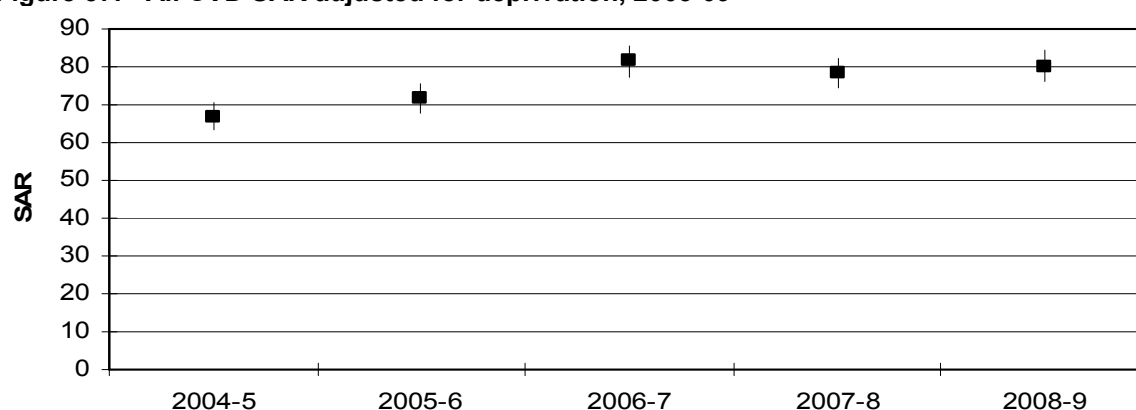
7.9 Utilisation of Secondary/Tertiary Care

7.9.1 Admissions rates for each condition

To a certain extent, declining SMRs may reflect improvements in the quality of care received. We have already seen that, despite considerable variability in clinical performance indicators amongst GP practices, there has been an improvement, year-on-year, in the clinical care of cardio-vascular disease in Brent. Early diagnosis of cardio-vascular complications at the primary care level, and referral to specialist care, may be an important factor in the reduction of cardio-vascular mortality.

However, we can describe the admission rates for cardio-vascular disease for each GP practice, standardised by the age and deprivation characteristics of the population registered to GP practices (Standardised Admission Ratio)⁴³.

Figure 57: All CVD SAR adjusted for deprivation, 2003-09



Source: Dr Foster⁴⁴

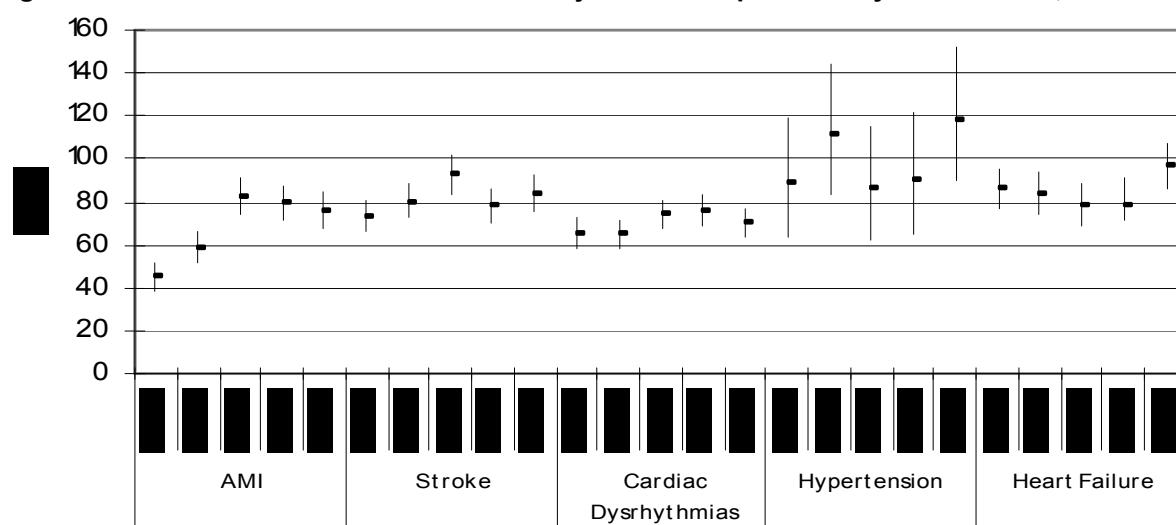
The figure above shows that since 2004-5, the admission rates for cardio-vascular diseases in Brent has actually been increasing and is approaching the rate which would be expected given the age and deprivation characteristics of the borough. The figure below indicates that, when broken down by type of cardio-vascular disease, this pattern is, broadly speaking, explained by the increase in admission rates for high blood pressure and heart failure, and admission rates for myocardial infarction, cardiac dysrhythmias and stroke have each begun to decline from

⁴³ The ratio of the observed number of admissions or outpatient attendances to the expected number. This ratio is expressed as an index where the expected value = 100. Hence values greater than 100 suggest a higher than expected number of admissions, while values less than 100 suggest fewer admissions than expected. SAR values should always be interpreted along with their [confidence limits](#).

⁴⁴ Data shown is 95% confidence intervals

2007 onwards. This may reflect the time lag between good clinical care at the primary care level and the anticipated decline in hospital admission for cardio-vascular disease and their complications.

Figure 58: Standardised Admission Rates adjusted for deprivation by disease area, 2008-09

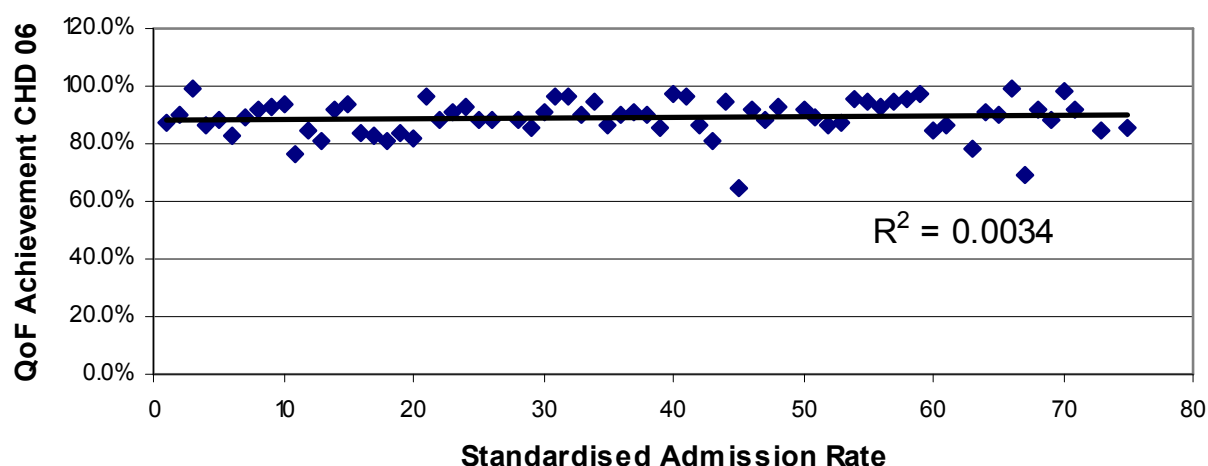


Source: Dr Foster⁴⁵

7.9.2 Relationship between QoF management indicators and Inpatient admissions for CHD

QoF indicators represent good clinical management at the primary care level, by monitoring the achievement of certain standards of care in different disease areas. This performance management system covers clinical, management and patient experience domains. Acute myocardial infarction can be viewed as one undesirable end-point or consequence of cardiovascular disease. In this respect admission for acute myocardial infarction is a useful gauge to monitor the impact of reported improvement in clinical management. The control of hypertension, and the maintenance of serum cholesterol below agreed levels, should lead to reduction of admission for acute myocardial infarction.

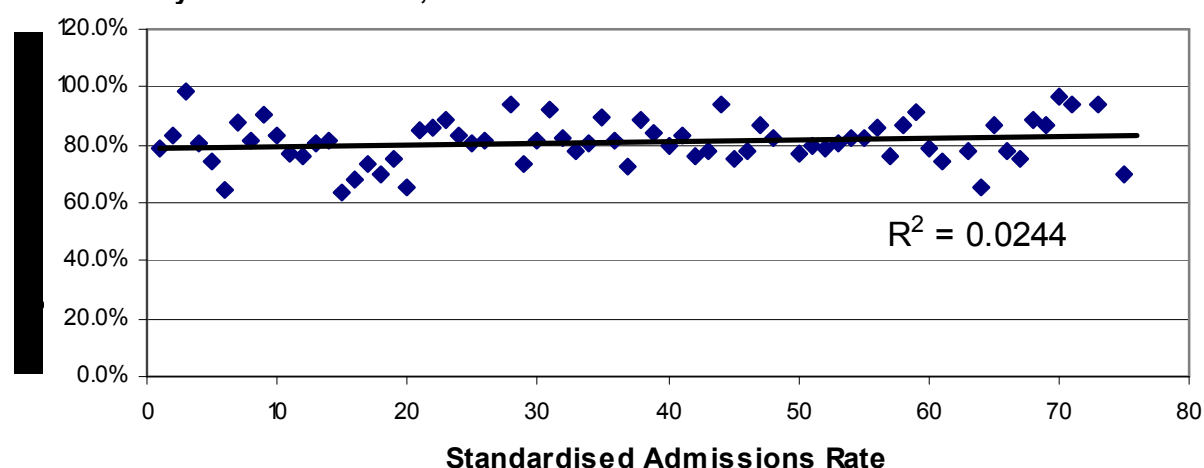
Figure 59: Relationship between control of blood pressure and admission for Acute Myocardial Infarction, Brent 2008-09



Source: Dr Foster (HES) and NHS Information Centre (QoF)

⁴⁵ Data shown is 95% confidence intervals

Figure 60: Relationship between the management of cholesterol and admission for Acute Myocardial Infarction, Brent 2008-09



Source: Dr Foster (HES) and NHS Information Centre (QoF)

As the crude regressions show here, there does not appear to be any significant correlation between achievement of good clinical control and standardised admission rates by GP practice. Even though standardised admission rates appear to be stabilizing since 2006-7, we cannot be sure whether this is due to improved clinical management. This may be significant, however as data is aggregated to the practice level, we cannot comment on whether admissions are occurring in controlled or uncontrolled patients, only that there is no association. Further analysis is required to understand these findings.

7.10 Summary and Recommendations

This chapter has described the prevalence of cardiovascular disease in Brent across several domains. Firstly, we have explored reported and expected prevalence, changing prevalence and prevalence across GP practices in five different Cardiovascular diseases – coronary heart disease, stroke, hypertension, atrial fibrillation and heart failure. Secondly, we have explored some of the pertinent issues around the burden of cardiovascular disease in Brent, specifically mortality rates and how these have been changing over the last few years. Finally, we have commented on the relationship between clinical performance and cardiovascular disease outcomes in Brent.

It can be noted that prevalence of cardiovascular disease has remained broadly constant since last year, and there have been some year-on-year improvements in management indicators. Specifically, the Standardised Mortality Ratio for all cardiovascular diseases appears to have improved across all wards over the last few years and there has been a general stabilization in admission rates since 2006-7. However, there is considerable variation in prevalence reporting between GP practices. This may be due to exception reporting practices, which are very high in Brent, but also underlying differences in population structure between GP practices. Notwithstanding this, there is significant difference in the reported and expected prevalence across all of the disease domains and is an issue that needs addressing.

Based on this, recommendations might include tightening quality control processes in data collection, performing rigorous analysis of referral rates across each condition, further investigation of the relationship between QoF indicators and hospital episode statistics and finally to target attention to GP practices that continue to exhibit wide variance from the average in reporting disease prevalence and clinical management.

Chapter 8: Mental Health

8.1 Introduction

The causes of mental health problems are complex and multi-factorial and have considerable public health significance, being by far the largest single cause of morbidity. It is estimated that, at any one time, 1 in 6 of the population is suffering from a mental health problem¹. Many incidences of mental health are mild to moderate and self limiting. However, mental illnesses are disabling and may last for many years, creating significant emotional and socio-economic burdens to both individuals and relatives.

People with mental health problems are more likely to exhibit behaviours that are detrimental to overall health, with poor diet, less exercise, heavy smoking, and drug and alcohol misuse². Poor mental health significantly increases the risk of poor physical health and premature mortality due to increased likelihood of heart disease, respiratory disease, diabetes, infections and suicide³.

Good mental health is not simply an absence of mental disorders - according to the WHO, the state of complete well being is an aggregate of a dynamic process including physical, psychosocial, cultural and spiritual factors which enable us to maximise our ability. Positive mental health attitudes influence how we "live" and behave⁴.

The effective management of mental health problems is not solely a clinician's role but an amalgamation of community, individuals and healthcare professionals. Tackling issues from these various components to engage the citizens, its communities and the locality will enhance and support health services, local authorities and other statutory bodies.

8.1.1 Burden of Mental Ill Health in Brent

There is limited data available about the prevalence of mental illness and the demographic profile of sufferers in Brent⁵. There have been various models used to estimate needs and relative impact on the community. For example, socio-demographic indicators and mental health service utilisation rates have been used to predict the mental health needs of an area. These indices describe if the needs within a defined area are likely to be greater or less than that of the standard area, which is the national need. The Mental Health Needs Index (MINI) and Local Index of Need (LIN) have been used here as data was available readily and they better explain the need for mental health services (admissions, bed days, readmissions and enhanced of Care Programme Approach (CPA) rates⁶.

Using the LIN scores, the mean score of boroughs in England is zero, and a negative score for a borough indicates lower than average mental health need. Cluster A represents the boroughs with the least mental health need in London whilst Cluster E boroughs have the greatest needs. Brent is in Cluster D, with the second most need. Within its cluster, Brent is at the 50% percentile of the most need. In simple terms, Brent has a mental health need that is above the national average (Figure 61).

¹ Department of Health (2001). Making it happen: A guide to delivering mental health promotion.

² Department of Health (2004). Choosing Health: Making healthy choices easier. London: DH.

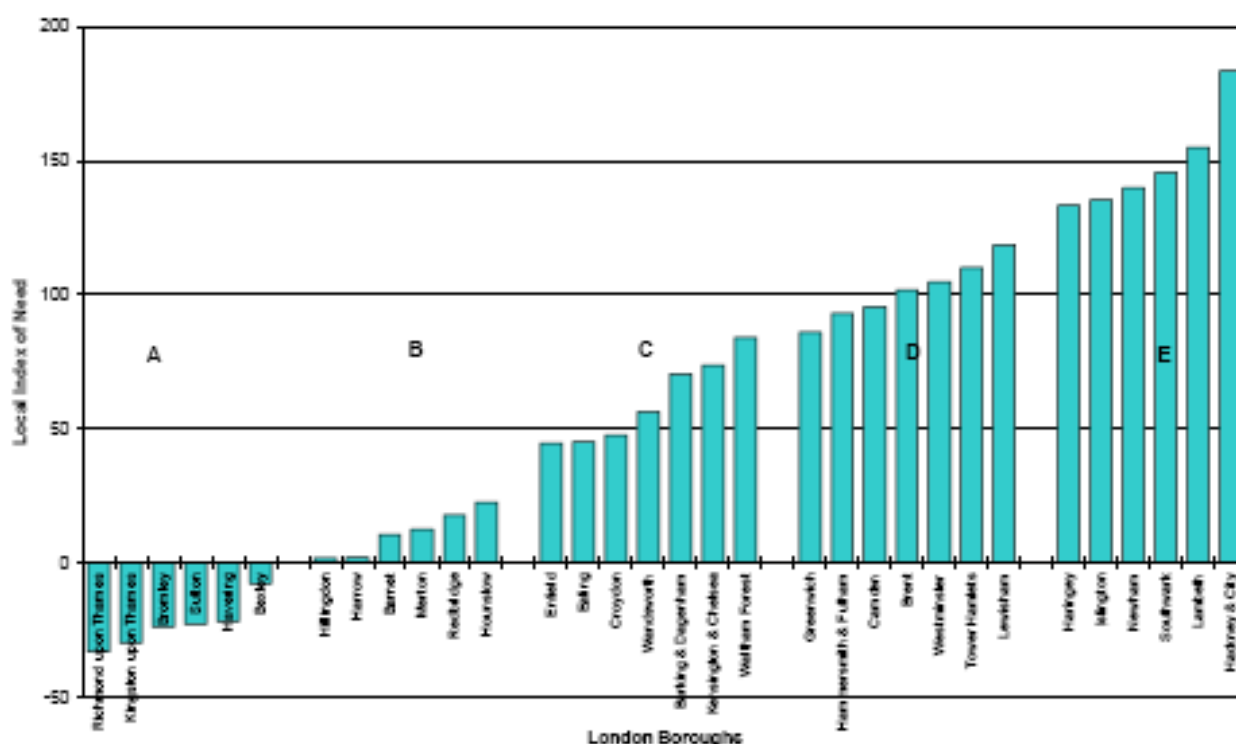
³ World Health Organisation (2002). Prevention and Promotion in Mental Health. Geneva: WHO.

⁴ World Health Organisation (2004). Promoting Mental Health: Concepts, Emerging Evidence, Practice Office for National Statistics.

⁵ Psychiatric morbidity among adults living in private households. London: The Stationery Office, 2002.

⁶ Availability of mental health services in London, 2003, Dr Foster for the Mayor of London; Adult mental health services in primary care, 2005, NHS Confederation and Sainsbury Centre for Mental Health

Figure 61: Boroughs clustered and ordered by increasing Local Index of Need

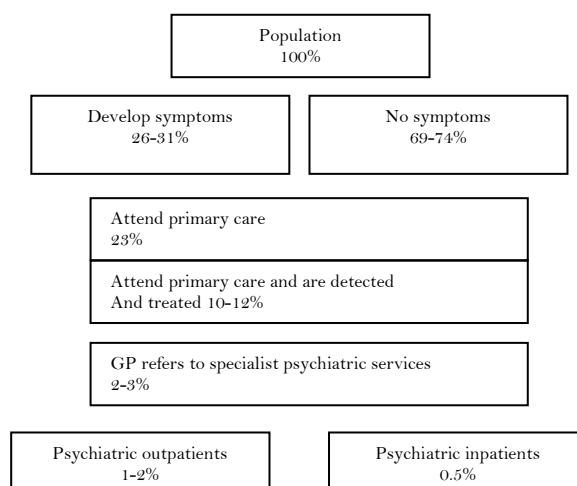


8.2 Prevalence of Mental Illness

Around 40 to 50% of patients attending primary care have psychological symptoms amounting to a detectable case level of psychiatric disorder. Around half of these cases will remit within 12 months whether detected and treated or not, the best predictor of chronic course is initial level of severity. The rest will have longer durations and may last years. Yet only about 50% of cases are detected by GPs, the level of detection varying because of patient and GP factors. Patient factors making detection less likely include: somatic presentation of psychiatric disorder; male sex; being employed; being young or old, rather than middle-aged; severe cases are more likely to be detected. GP factors making detection less likely include: reluctance to use a psychiatric label, interviewing style, knowledge and training. The general effect of these factors in Brent is to increase rates.

The effect of ethnicity on individual diagnoses varies. For certain psychotic disorders there is a very significant increase in risk for South Asians and Afro-Caribbean people. A recent audit carried out by NHS Brent looking at depression in the community has shown an indicative trend to suggest that mental health problems are underreported in the South-Asian populations.

A typical distribution of cases of psychiatric disorder as measured in the entire population over the five-levels (community, attend primary care, attend primary care and is detected, attend primary care and are referred to specialist/secondary care, patients receiving outpatient or inpatient care) of the Goldberg and Huxley model on the next page:



Thus only a minority of cases attend their GP and during a year only 2 to 3% of the total population are referred to specialist/secondary care.

Applying national rates to the borough (ONS 2007 population projections) the figure for all neuroses in Brent is 18.2% (See Table 25). These crude estimates can be adjusted for higher prevalence rates from the PMS ("London factor"). This would suggest that some 37,678 are suffering from a variety of neuroses. This will gradually increase over time and will not take into consideration socio-economic factors.

The current NHS Brent prevalence for chronic disorders such as schizophrenia, bipolar disorder and other psychoses is recorded as 6.1% which, when compared with expected prevalence in Table 26, suggests under-diagnosis of mental health problems. The prevalence varies widely across practices and it is not known how this reflects differences in GP diagnoses or record keeping rather than the difference in illness prevalence.

The prevalence of personality disorders is higher than the national level in both sexes (5.8% and 5.6 % respectively as against 3.4% and 5.4%).

Table 25: Common Mental Health Problem (estimated)

Common Health Problem (estimated)	% people aged 16-74 Brent	% people aged 16-74 London	Estimated people in PCT	Requiring intervention (50%)
Mixed anxiety and depression	8.4	9	17451	8726
Generalised anxiety	5.3	4.4	10951	5476
Depressive episode	3.5	2.3	7273	3637
All phobias	2.2	1.4	4497	2249
Obsessive-compulsive disorder	1.6	1.2	3205	1603
Panic disorder	0.8	1	1751	876
All Neuroses	18.2	16	37678	18839

Table 26: Severe mental illness – Psychosis (including bi-polar affective disorder)

Estimated people experiencing symptoms per year	Number of residents		Prevalence	
	Males	Females	Males (%)	Females (%)

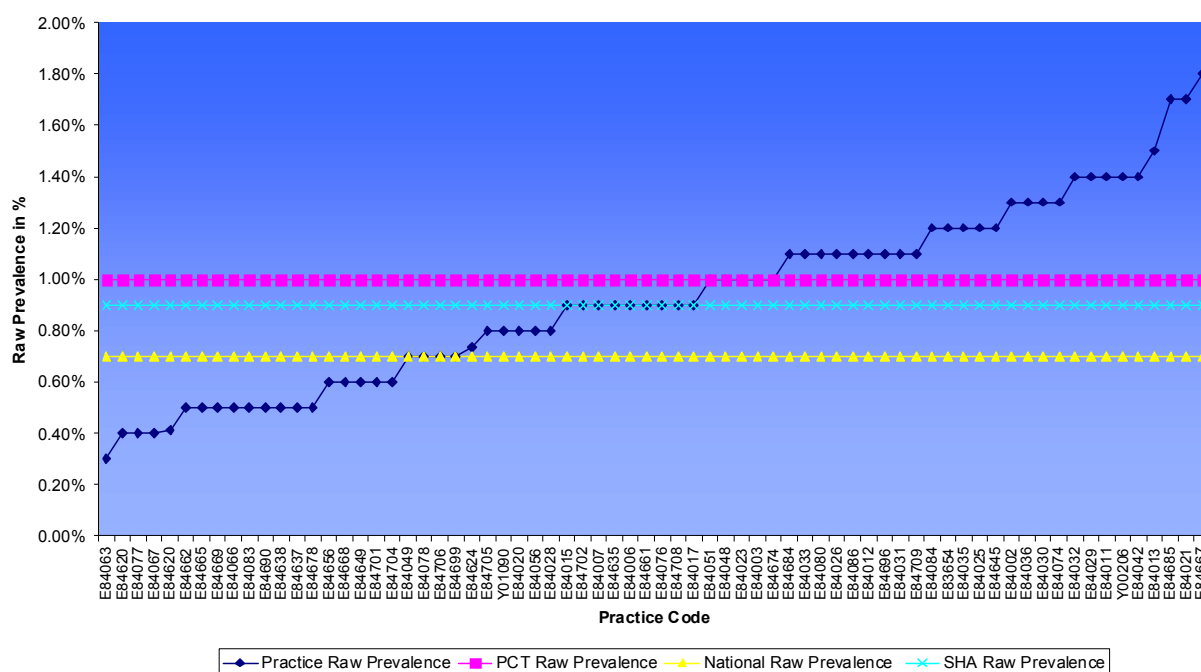
Schizophrenia	390	360	0.8	0.6
Bipolar and related disorders	980	950	1.4	1.3
Depressive episode*	1900	2200	2.8	3.4
Anxiety disorder*	3500	4500	4.6	6.5
Eating disorders	40	140	0.1	0.5
Personality disorders	4300	3900	5.8	5.6

Source: OPCS survey of Psychiatric Morbidity in Adults, 2001;

*assumes 63% of GP list in this age group (These rates are general and need to be adjusted to reflect the characteristics of the Brent population)

The figure below shows the reported prevalence for people suffering enduring mental health disorders by GPs in Brent. Overall the PCT prevalence rate is above national and SHA levels with some practices incurring almost twice the national level (approx. 67%). As expected, there is a wide difference within the geographical region with some practices showing very low level of mental illness (<0.04%). The Trust needs to seek re-assurances on the accuracy of the data to explain the wide variations.

Figure 62: Mental Health Raw Prevalence by Practice



Source: QMAS database – 2008/09, as at end of June 2009

8.3 Management of patients with Mental Illness in Brent PCT

In general both drug therapies and many types of psychological therapy are effective for neurotic disorders at primary care level. The majority of new cases of psychotic disorder should be referred to the Early Intervention Service (EIS) and shared care models are appropriate for the maintenance of these patients. The major issues for a primary care level service are:

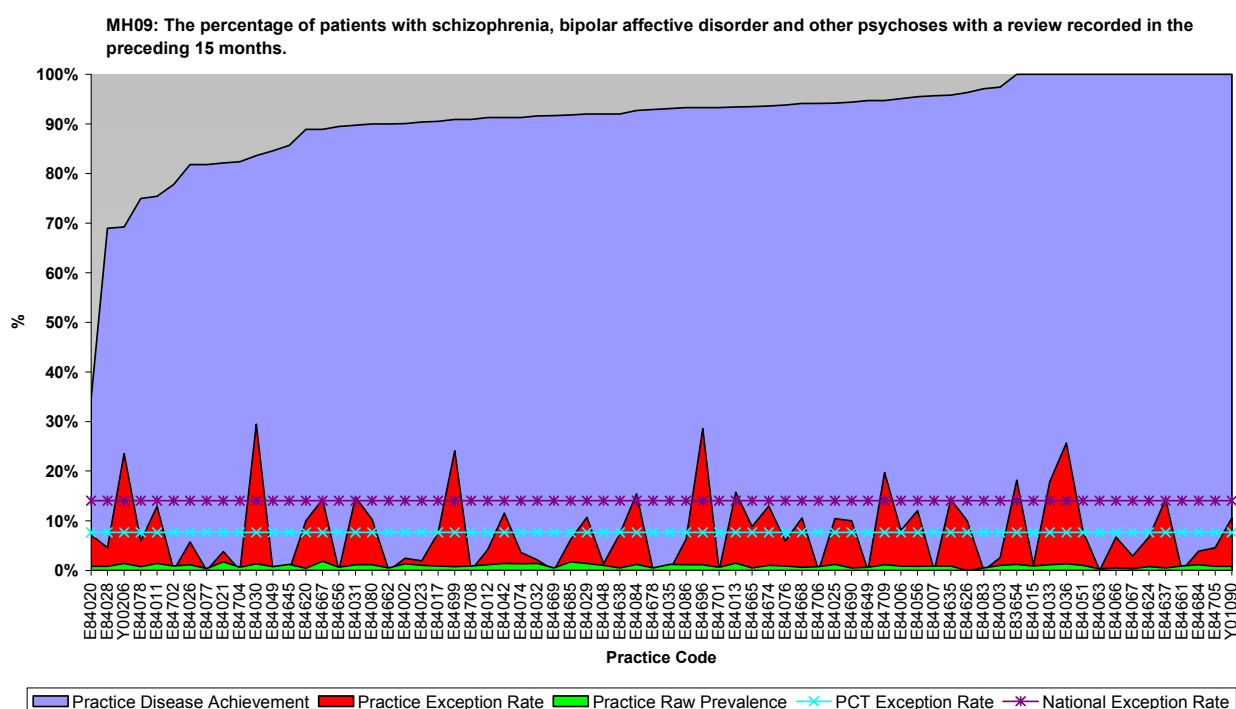
- Better detection of more severe (and therefore chronic) neurotic disorders and better management using evidence-based approaches
- Improved early detection and referral to the EIS of patients manifesting symptoms of a psychotic disorder
- Improved access of appropriate patients to evidence-based psychological therapies such as brief focused therapy, problem solving therapy, and cognitive behavioural therapy

- Improved multi-disciplinary working, including rehabilitation, treatment of comorbidities, employment and housing services and shared care of complex and chronic cases

8.3.1 Annual Review of patients with schizophrenia, bipolar affective disorder and other psychoses

Figure 63 shows that the percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who had an annual review is high and compares favourably with the national level. The PCT scores compare favourably against national figures. However, the Trust needs to explore the patterns of exceptional reporting on its chronic mentally ill patients.

Figure 63: GP QOF Performance for MH09



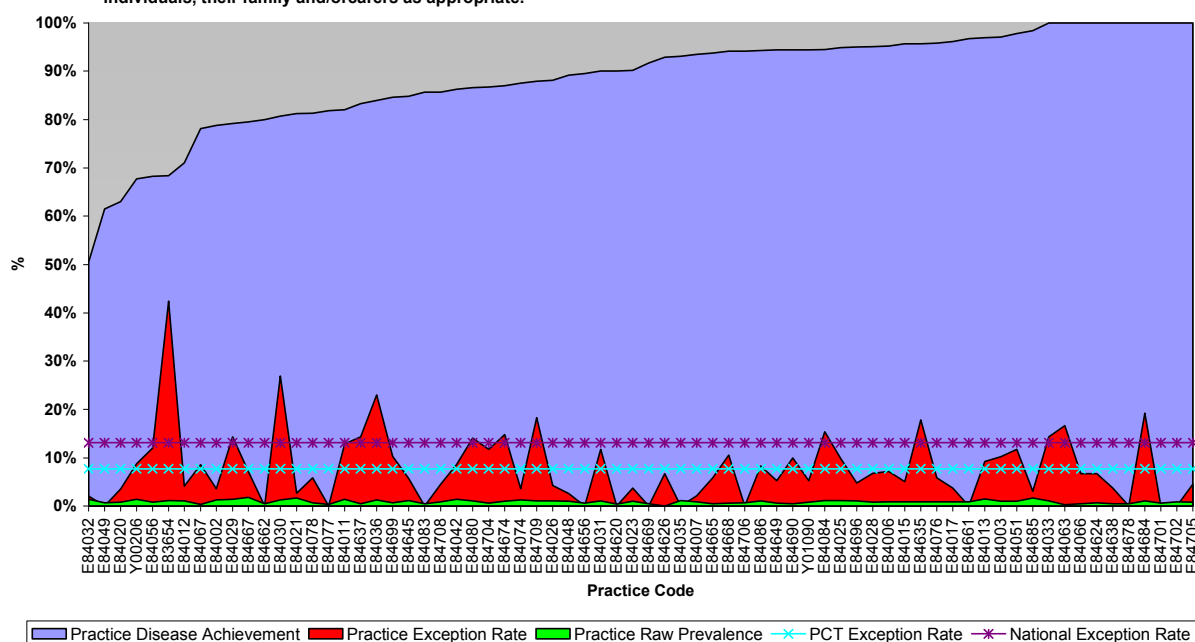
Source: QMAS database – 2008/09, as at end of June 2009

8.3.2 Patients with a comprehensive care plan documented in the records

QOF MH06 is an index of measurement of patients who had had a comprehensive care plan documented in the records agreed with patients and carers. The level of activity compares favourably with the national norm. Figure 64 shows that 21% of practices did not conform to this clinical guideline with some variations along geographical settings. 13% of practices had exceptional reporting in this category; though it is below the national average, it is imperative to understand this variation. If patients are being exceptionally reported, it may be that some are falling through the net and may eventually get compromised. An audit of admissions to MHS would shed more information in this area.

Figure 64: GP QOF Performance for MH06

MH06: The percentage of patients on the register who have a comprehensive care plan documented in the records agreed between individuals, their family and/or carers as appropriate.



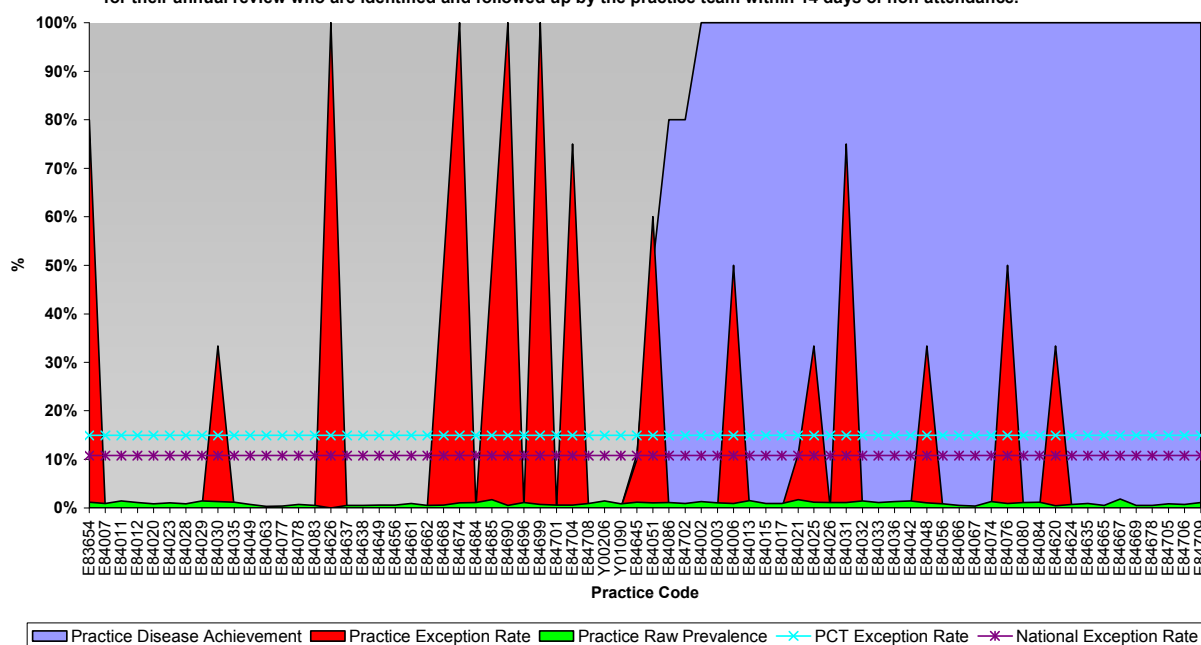
Source: QMAS database – 2008/09, as at end of June 2009

8.3.3 Patients followed up after failing to have a review

Figure 65 shows patients who were followed up after failing to have a review. This is part of the QOF requirement for the management of chronic/enduring mental health problems. Approximately 50% of practices did not report on the failure of patients to have an annual review. No data was available from a number of practices. Brent scores poorly against national averages.

Figure 65: GP QOF Performance for MH07

MH07: The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who do not attend the practice for their annual review who are identified and followed up by the practice team within 14 days of non-attendance.



Source: QMAS database – 2008/09, as at end of June 2009

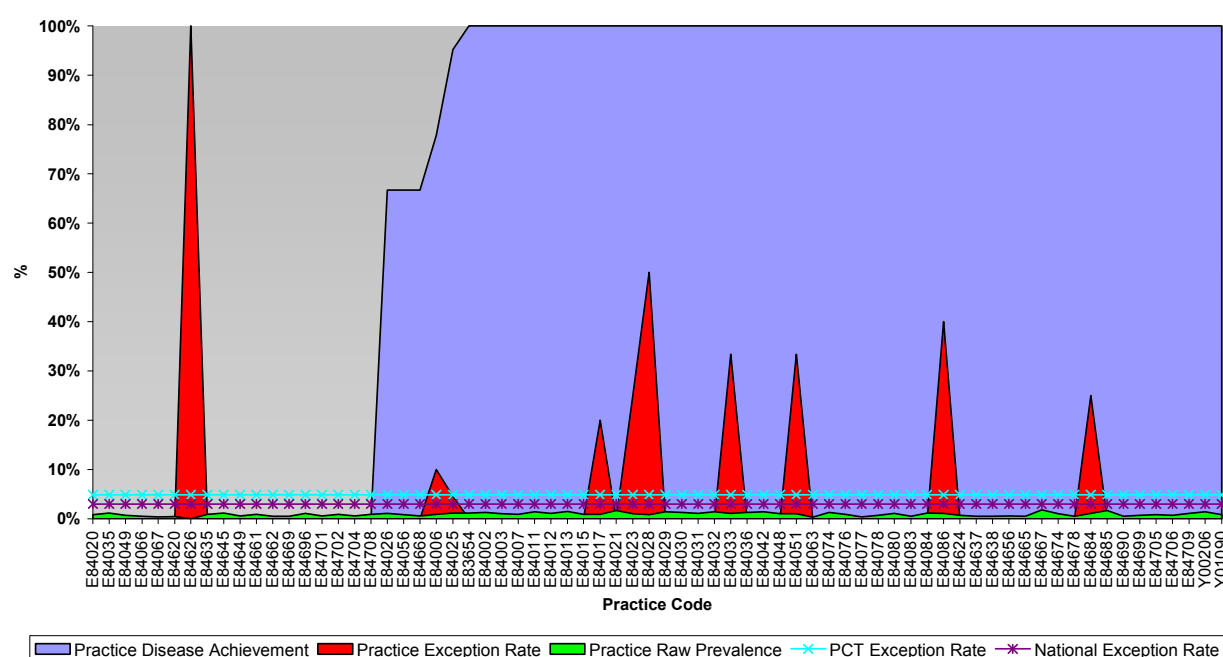
This may indicate that either they do not have patients of that category or simply did not comply with this dataset. More of a concern is that of the 50% that complied, more than 25% had exceptional reporting.

8.3.4 Annual Checks for patients on lithium therapy

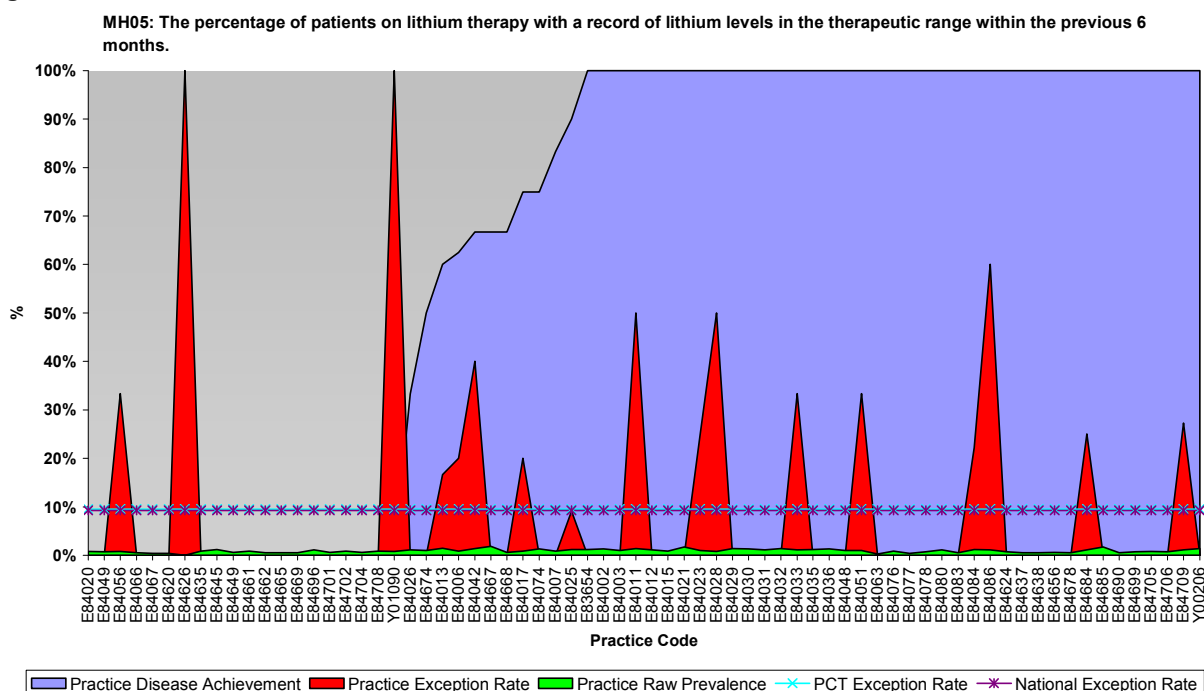
Patients receiving Lithium therapy are required to have regular annual checks. Figure 66 shows conformity of GPs to this QOF target. Most of the practices (92%) have scored the maximum 100%. Nearly 6% scored less than 60%. 26% of practices had no data. There is a need to establish if these did not have any patients on lithium therapy or simply that practices did not report on these. Of the 9% which had exceptional reporting, there is a need to establish if blood tests have been taken. Failure to do so carries a high risk of toxicity.

Figure 66: GP QOF Performance for HF03

MH04: The percentage of patients on lithium therapy with a record of serum creatinine and TSH in the preceding 15 months.



Source: QMAS database – 2008/09, as at end of June 2009

Figure 67: GP QOF Performance for MH05

Source: QMAS database – 2008/09, as at end of June 2009

8.4 Depression

Depression is set to be second only to cardiovascular disease in terms of the world's disabling diseases by the year 2020. The point prevalence of depression amongst 16 to 65 year olds in the UK is 17 per 1,000 for males and 25 per 1,000 for females⁹. When anxiety and depression are mixed, the prevalence rises to 71 and 124 per 1,000 in males and females respectively. Major depressive disorder is associated with a high degree of personal disability, multiple morbidity, suicide and lost quality of life for patients, families and carers.

Depression may not always be recognised by GP's whilst treating a patient's other chronic illnesses, and so practices pursuing the Quality and Outcomes Framework of the GP contract are required to screen patients with coronary heart disease (CHD) and diabetes for depression (Quality Indicator DEP1). In patients with a new diagnosis of depression, practices are also required to assess severity within 28 days of the initial diagnosis using an assessment tool validated for use in primary care (Quality Indicator DEP2).

The QOF data for new diagnosis of Depression is below national average (Figure 69). However, the percentage of exceptional reporting is well above national level with over 31% reporting this phenomenon. This suggests that nearly a third of our GPs are not completing or using a validated tool for confirming depression. A study published online by the BMJ found that there were inconsistencies in clinical practice and that many GPs did not use Standardised tools. This is in line with the Trust's own audit which indicated that less than 50% of practices were using a guideline when diagnosing depression.

spouses with dementia and other illnesses requiring intensive caring, putting themselves at significantly higher risk of mental ill health⁷.

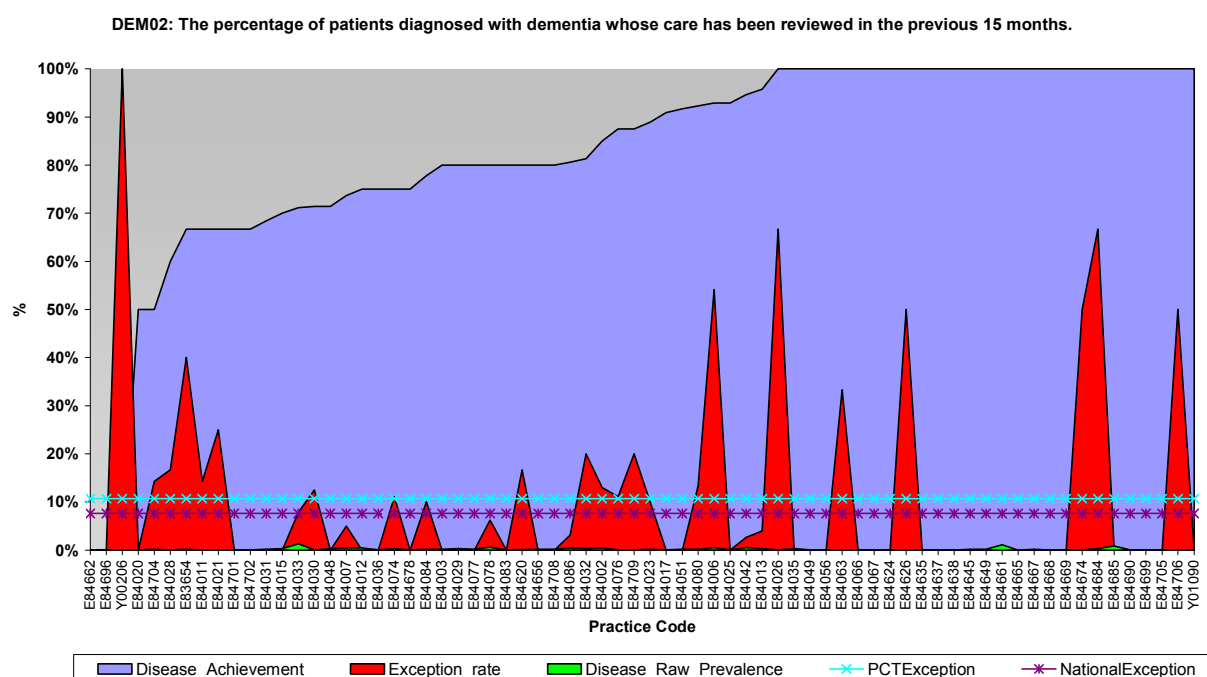
The number of people aged 65 years and older is rising in Brent. National data demonstrates that common mental disorders decrease with age and this is more pronounced for males than females. However, while the prevalence of some functional mental health disorders such as anxiety and depression is thought to be lower in later life, the absolute numbers will rise as the population ages.

Older adults aged 65 years and older with severe and/or enduring mental health care needs often also have physical illness, chronic disabling conditions and social problems related to their mental disorders. These needs must be understood in order to support the development of effective older adult mental health services in Brent. Such services are mainly and increasingly provided in the community as opposed to within a hospital setting.

8.4.2 Review of Patients with Dementia

All patients with dementia must be reviewed (as part of the agreed care plans). Figure 70 shows the relative performance of the Trust in this domain. Brent performance is superior to the national norm; however, some practices show an excess of 50% of exceptional reporting.

Figure 70: GP QOF Performance for DEM02



Source: QMAS database – 2008/09, as at end of June 2009

8.5 Suicide

Suicide is the 3rd leading cause for death in adolescents in the UK and “Depression” accounts for 50-80% of adolescent suicide attempts. Depression contributes to 12% of the total burden of nonfatal global disease and affects between 5 and 10% of individuals. Up to 90% of patients suffering from depression are managed in primary care. The National Suicide Prevention

⁷ Department of Health (2002). National suicide prevention strategy for England.

Strategy (2002) was put in place for achieving the 20% reduction in suicide and undetermined injury deaths by 2010 and this included the need for a population-based suicide audit system⁸.

Brent has undertaken an audit of its services in order to set an effective process for recognising, monitoring and sharing information about suicide between primary care, secondary care and public health. The rate of suicide found was equivalent to an annual rate of 8.7 per 100,000, in line with the rate expected for London (8.3 per 100,000). The audit showed that 54 deaths of Borough residents by suicide and undetermined death within the 3-year period were identified. A further 17 deaths by suicide or undetermined injuries by non- Borough residents registered with a Borough GP were identified. Medical records of the Borough residents who died by suicide were requested. Of the cases, 13 were not registered with either a Borough GP or with a local mental health service. Of those with traceable primary care records, 13 cases contained details of previous contact with mental health services.

8.6 Conclusions

Currently we use QOF to provide trends in the mental health problems. To have a better understand of the true prevalence, we need more robust health intelligence, looking at individuals, ethnicity and cultural backgrounds to enable more effective mental health planning.

The detection and appropriate treatment of both neurotic and early onset first episode psychotic ill health is a major area for improvement of primary care mental health services. IAPT has the potential to add capacity to the service and improve outcomes for those with mixed anxiety-depression disorders that have lasted at least 6 months. There is some evidence that improved training of GPs and other primary care staff might allow the required improvements.

Tackling mental health requires a whole system approach involving active community engagement, primary care support and effective interventions. One area of priority is mental health promotion⁹.

⁸ Zubenko G, Mulsant BH, Sweet RA. Mortality of elderly patients with Psychiatric Disorders. *The American Journal of Psychiatry* 1997; 154 (10): 1360-1368.

⁹ Wilson, M. and Francis J, (1997). *Raised Voices – African-Caribbean and African Users Views and Experiences of Mental Health Services in England and Wales*, London.

Glossary

Confidence Interval	The range of values within which we are 95% confident that the true population value lies
Confidence Limits	The upper and lower values of a confidence interval.
Coronary heart disease	Disease of the heart muscle due to lack of blood supply and oxygen as a result of obstruction to the flow of blood, either through blockage of the vessel or narrowing of the coronary blood vessels which supply blood to the heart muscles. This can manifest as heart failure, angina, heart attack (myocardial infarction) or sudden cardiac arrest.
Direct Age Standardisation	The directly age standardised rate for an indicator is the number of events that would occur in a standard population (per 100,000) if that population had the age specific rates of a given area. The rates are standardised to the European Standard Population.
Directly Age Standardised Rates	Standardisation adjusts rates to take into account any changes in the age structure of the population at risk and allows comparison over time and between different geographical locations. Rates have been standardised to the European Standard Population.
General Fertility Rate	Number of live births per 1,000 females of childbearing age (between the ages of 15 and 44 years).
Incidence	Rate of occurrence of new cases of disease (within a given population over a given time period)
Index of Multiple Deprivation	An aggregate score of different dimensions of deprivation – income deprivation, employment deprivation, health deprivation and disability, education, skills and training deprivation, barriers to housing and services. A higher score implies greater deprivation. (For more information see the website of the Office of the Deputy Prime Minister http://www.odpm.gov.uk)
Infant Mortality Rate	The number of deaths of infants under age 1 per 1,000 live births in a given year.
Life Expectancy	Life expectancy is an estimate of the number of years a new-born baby would survive if they were to experience the particular area age-specific mortality rates for that time period they were born in throughout their lives.
Locality	Area consisting of several electoral wards. There are five localities in Brent.
Low Birth-weight	Any baby weighing less than 2,500 grammes at birth.
Standardised Admission Ratios (SARs)	Admission rates calculated to enable fair comparison with another area allowing for the difference in age composition of the population. Expressed as a ratio to the average value - in this case England and Wales whose SAR is set to 100. Values greater than 100 indicate higher than average mortality. Values less than 100 indicate lower than average admissions.
Standardised Mortality Ratio (SMR)	The Standardised Mortality Ratio (SMR) is the ratio of the actual number of deaths in a population to the number of deaths one would expect if the population had the same death rate as the standard population (multiplied by 100). The standard population has an SMR of 100. SMRs greater than 100 indicate that the death rate in the population of interest is higher than the death rate in the standard population. Standardisation acts to even out the differences between populations with different age structures. If death rates were not standardised a higher death rate in one population compared to another may simply be because the population with the higher rate has a greater proportion of elderly people within it. Age cannot be a reason for different death rates once standardisation has taken place.
Total Period Fertility Rate	The average number of live births that would occur per woman resident in the area, if women experienced the area's current age-specific fertility rates throughout their childbearing life span (namely at ages 15-44).
Ward	An administrative area that is laid down in statute. Brent has 21 wards.