Croydon joint strategic needs assessment
2010/11

Appendices

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Acknowledgements

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Appendix 1: Understanding and interpreting the data

Accessing high quality data and intelligence to inform decisions on health is a higher priority than ever before. This section aims to help the reader understand and interpret data on the health of the population. It is organised as an A-Z of common terms that you may find used in the JSNA.

Confidence intervals and statistical significance

A confidence interval (often abbreviated as CI) is a statistical term used to account for the uncertainty that there often is in the results that we observe and report on. When we make statements about the extent of a particular disease or lifestyle behaviour in a population, we are often making an estimate of the 'true' figure for the population based on studies of smaller samples if we are not able to study an entire population.

Confidence intervals are the range of results (expressed as upper and lower figures) within which the true figure is likely to lie. Ideally, we want to see a range that is quite narrow, suggesting a precise estimate of the true figure. Where confidence intervals are wide, this indicates that the sample was small or the variability in the data great and we can be less confident about where the true figure lies.

In the JSNA we have used a 95% confidence interval. This means that we can be confident that in 95% of cases (or 19 in 20 cases) the true figure lies within the range expressed by the confidence interval.

Figure 1 | an example of the use of a confidence interval

> In Selhurst ward, the standardised mortality ratio is 150 with a lower confidence interval of 137 and an upper confidence interval of 163. This means we are 95% confident that the standardised mortality ratio for Selhurst falls between 137 and 163. There is only a 5% chance that it falls outside this range.

We can use confidence intervals to assess whether a finding is statistically significant or not. We can assess whether we can be confident that the figure we have estimated is significantly different from the one to which we are comparing it. A simple way to understand this is by looking at confidence intervals expressed visually and assessing whether they overlap.

Figure 2 shows confidence intervals in white drawn as a dot and whiskers, where the dot or central point represents the specific value that we are reporting and the upper and lower confidence intervals are represented as whiskers (with the higher whisker representing the upper confidence interval and the lower whisker the lower confidence interval). There are three different scenarios shown in the figure.

In scenario (a) the target or benchmark value is outside the confidence interval. It is below the lower confidence interval and does not overlap with it. Therefore we can be confident that the difference between the estimate and the target line is statistically significant.

Scenario (b) illustrates a situation where two different values or estimates are being compared. We see that they do not overlap. There is a space between the lower confidence interval of one value and the upper confidence interval of the next. This shows that these two values are significantly different from one another.

The confidence intervals in scenario (c) overlap with each other. This shows that the two values are not significantly different from each other.

Figure 2 | assessing statistical significance
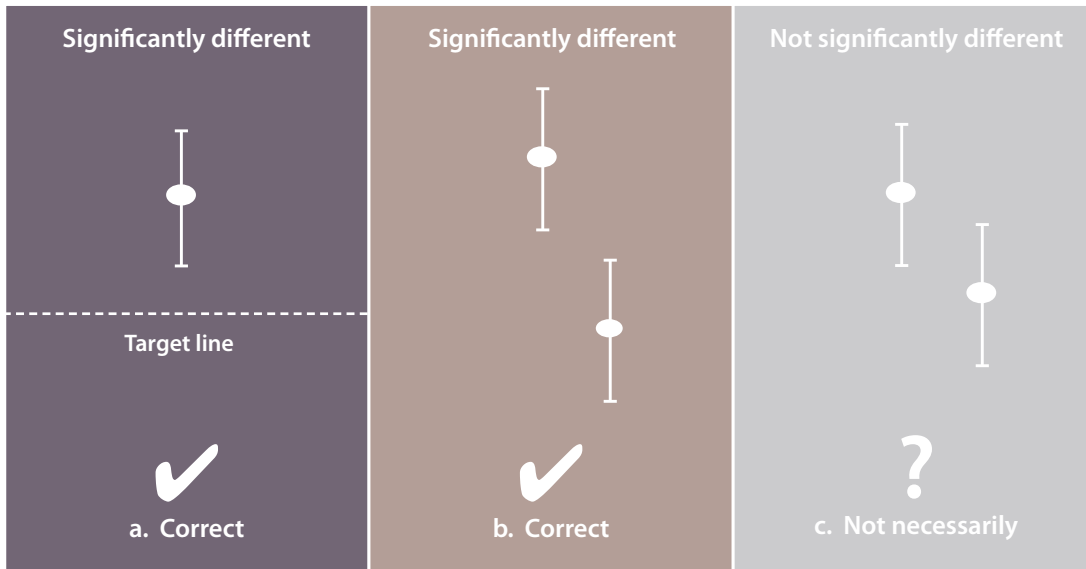
Source: Technical briefing 3: commonly used public health statistics and their confidence intervals. York: Association of Public Health Observatories; 2008.

Determinants of health

Our health is determined by a wide range of interacting factors. Some, like our age, sex, and genetic make up are not modifiable. Our lifestyle includes factors like whether we eat a healthy diet, are physically active, drink or take drugs. It also includes factors that might expose us to injury, for example, whether we take part in high risk sports. Many of these factors can have both beneficial and harmful effects on our health. Our family, relationships and social networks can also have an impact on our health.

The social determinants of health are those factors affecting the heath of individuals that relate to their social or economic circumstances as well as the overall environmental conditions in society. The social determinants of health are sometimes referred to as the causes of the causes of ill health. Different factors can combine or interact: living in poor housing or in a poor neighbourhood, for example, may make it harder to lead a healthy lifestyle.

Figure 3 | the determinants of health
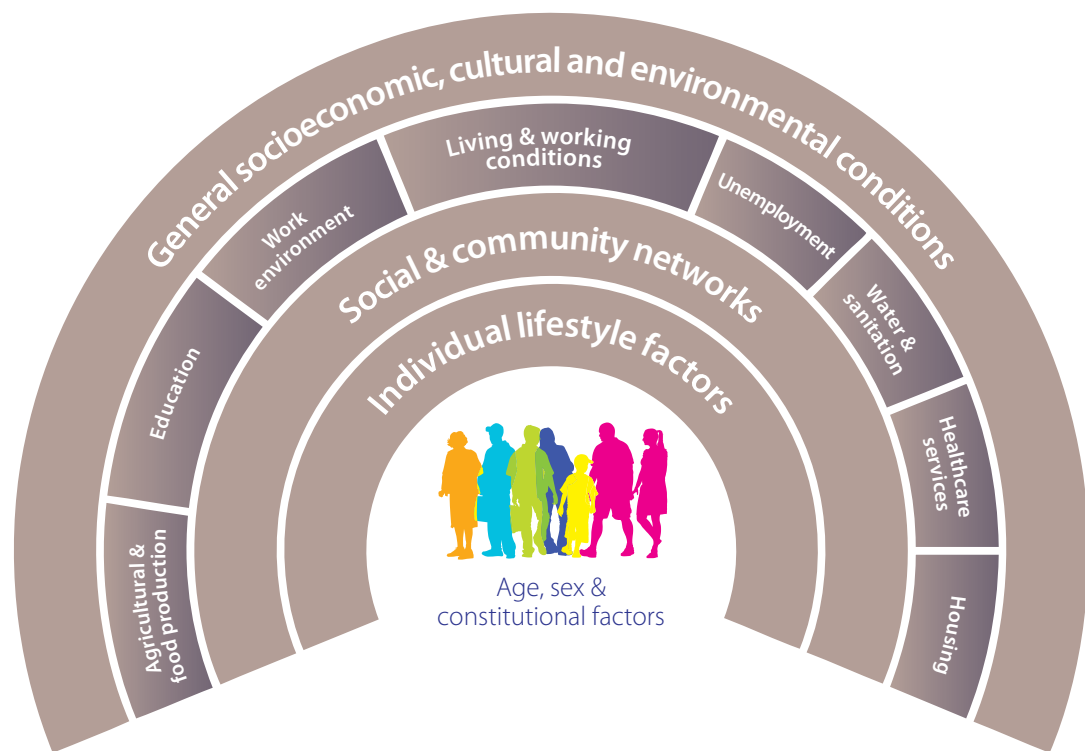
Source: G Dahlgren and M Whitehead, 1991

Epidemiology

Epidemiology is the study of the patterns and causes of health and illness, how they are distributed in society and how they change over time. It is concerned with populations and is the basic science which underpins public health. Epidemiological methods are used to describe changes in patterns of disease and injury. It identifies health problems that are becoming more or less common; it describes the characteristics of the people who are most likely to suffer from particular diseases; and it looks at geographical and temporal patterns in health and illness. In other words, epidemiology is the study of disease by time, person and place. Epidemiology can also be used to evaluate the effectiveness of health services.

Incidence and prevalence

Incidence and prevalence are different measures of the occurrence of cases of disease or injury or other kinds of event.

Incidence is the number of new cases of a disease or injury in a given population at risk over a given period of time (new because they have just emerged or just been diagnosed). It is particularly useful for describing acute, rather than long term illnesses (for example, cases of people with chest pain) and for spotting emerging trends. Incidence is often expressed as a rate per 1,000 population per year. The 'at risk' population should not include those who could not develop the disease (for example, due to age or immunisation status) to avoid underestimating true incidence.

Figure 4 | an example of the use of incidence

The chapter on diabetes in this year's JSNA shows that the annual incidence of type 2 diabetes in Croydon is estimated to be 1.27 per 1,000 population. This means that there are estimated to be 1.27 new cases of type 2 diabetes per 1,000 people every year.

Prevalence is a way of describing or measuring the occurrence of a disease, disability or behaviour in a population at a specific time or during a specific time period. It is useful for planning purposes, for looking at public health impact, and for long term rather than acute conditions (for example, heart disease rather than chest pain). Prevalence can be expressed as a percentage or proportion, for example, 50% or 500 per 1,000 population. An increase in prevalence can be due to changes in incidence or changes in the duration of the disease, including people recovering or dying.

Figure 5 | incidence and prevalence

It can help to think of incidence and prevalence in terms of water dripping from a tap into a bath.The drops of water are the incidence. The prevalence is the water in the bath. The overflow is recovery or death. Public health seeks to stop the tap from dripping.

The chapter on sexual health refers to the prevalence of HIV infection as 4.2 per 1,000 for Croydon in 2008. This means that in 2008, there were just over four people per 1,000 known to have HIV in Croydon that year. The true prevalence may be higher due to undiagnosed cases.

Index of multiple deprivation

The index of multiple deprivation (IMD) is a measure of how deprived an area is. The IMD for England was first published in 2000 and updated in 2004 and 2007. Deprivation is often associated with poor health. For example, people living in the most deprived areas of Croydon have a much higher risk of diabetes than people living in the least deprived areas.

Croydon as a whole has an IMD score of 21.3 which means that it is slightly less deprived than the national average (21.6) and considerably less deprived than the London average (26.1). Within Croydon there is a high level of variation, with parts of the borough much more deprived than others. For example, Selsdon and Ballards ward has an IMD score of 7.5 making it one of the least deprived areas in the country, whilst Fieldway ward has a score of 39.7, placing it amongst the most deprived.

Life expectancy

Life expectancy is the average number of years that a person can expect to live if they were to experience the current age specific death rates for an area throughout their lives. It is often used as measure of the overall health of a population. Higher life expectancy indicates a healthier population. It is usually calculated separately for men and women. Croydon's male life expectancy is 78.9 years and its female life expectancy is 82.2 years. Both are slightly above the England average of 77.9 for men and 82.0 for women, average of 77.9 for men and 82.0 for women, which is a positive indicator.

Mean, median, mode and range

In a set of numbers the mean, median, mode and range are commonly used in describing data. The mean is the average of a set of numbers. It is calculated by adding up all the numbers, then dividing by how many numbers there are. The median is the middle number in a sequence of numbers that have been ranked. The mode is the most commonly occurring number in a set of numbers. The range is how far it is from the lowest to the highest number. It is calculated by identifying the highest and lowest numbers and subtracting the lowest from the highest. In practice, we tend to specify the lowest and highest numbers rather than giving a single figure.

The mean and median are used more frequently. They are quite distinct. The median does not take into account each number in the sequence, which the mean does. This effectively excludes those numbers at the extreme end of the sequence. These are sometimes called outliers. It is sometimes better to use the median when there are some extreme values at either end of a range of numbers. The example of average wages at figure 6 demonstrates the impact of extreme values on the mean. There is a very high earner in the sample who earns £10,000 a week. This increases the mean wage of the sample giving a mean wage of £1,860.71. However, if we wanted to describe the 'average' wage for the sample, the median weekly wage of £500 would be better.

Figure 6 | calculating the mean, median, mode and range

Consider this example of the weekly incomes for six people in Croydon:

£1,000, £350, £125, £500, £10,000, £700, £350

1 The *mode* (in fact the only value that occurs more than once in this short set of numbers) is £350.

2 The *range* of incomes is £125 to £10,000 (£9,875)

3 The *mean* weekly income for these individuals in Croydon (the sum of all the wages divided by the number of individuals) is £1,860.71

4 The *median* income (derived by organising the incomes into ascending order, and selecting the number that falls in the middle of these, in this example, fourth of seven) is £500.

Morbidity and mortality

Morbidity is another word for illness, disease or injury. Mortality simply means death. Information on mortality is much easier to obtain than information on morbidity. There is a legal requirement in this country for all deaths to be certified by a doctor and officially registered. Although there are still some inconsistencies in the way these data are recorded, almost all deaths are recorded. The cause of death is also recorded. Information on morbidity is less extensive. Not all cases of illness give rise to a visit to the doctor and not all episodes of illness that do reach the health system are recorded with the same level of accuracy as death certification.

Probability

The probability of an event is the likelihood of it happening. Probability can be expressed in different ways. If we toss a coin, there is an equal chance it will land on heads or tails. So there is a one in two probability that it will land heads up. Probability can also be expressed as a fraction. With a coin the probability of throwing heads is one divided by two or ½.

Probability can also be expressed on a scale between zero and one. A rare event has a probability close to zero. A very common event has a probability close to one. The probability of throwing a head is ½ or 0.5. Finally, probability can be stated as a percentage. When tossing a coin, there is a 50% chance of throwing a head.

Programme budgeting

Programme budgeting is a technique used for analysing where the money is spent within a health system by primary care trusts. It aims to track and influence future spending. It looks at the outcomes that are being achieved in return for investment by comparing spend and outcomes with other areas, such as the England average. Expenditure is broken down into manageable and meaningful programmes which might be disease groups, age groups, geographical locations or settings for care. In the Department of Health programme budget system, 23 disease groups are used to categorise expenditure.

The annual report of the joint director of public health for 2010/11 examines in detail the programme budget expenditure for the NHS in Croydon.

Rate

In the JSNA we have often used rates as well as numbers. A rate is a measure of the frequency of occurrence of an event. A rate takes account of differences that may exist between the populations that are being compared in a way that numbers or counts do not. For example, we know that there were 1,008 looked after children in Croydon at 31 March 2010. This information does not tell us how we compare with other areas. It is only when we compare Croydon's rate of 126 looked after children per 10,000 population under 18 with the rates for London (66 per 10,000) and England (58 per 10,000) that we realise the borough has an unusually high proportion of looked after children. This can lead to a search for explanations. In the case of looked after children, it is the large numbers of unaccompanied asylum seeking children and young people placed in the care of the council. Rates can also help us detect trends more accurately. Even if the population size changes, we can use rates to help compare data across periods of time. (Numbers can still be very important to know, for example, in helping us plan services.)

Ratio

A ratio is a way of concisely demonstrating the relationship between two values, for example, the ratio of male to female deaths. It is usually shown by separating the two numbers with a colon. In the chapter on looked after children, we can see that there are three times as many boys as girls looked after by the local authority or a ratio of 3:1.

Slope index of inequality

The slope index of inequality is a single score which measures the gap between the most and least deprived areas. The slope index of inequality is best understood with reference to a graph. Figure 7 shows deaths from respiratory diseases in Croydon. The slope index of inequality for respiratory diseases is 51.2. This is a large figure relative to the average death rate for respiratory diseases in Croydon (29.5) and so the inequality gap is considered particularly wide.

Croydon's population has been divided into ten groups (or deciles) by grouping lower super output areas according to their index of multiple deprivation score. They are ranked on the graph from high to low levels of deprivation. The mortality rate has been calculated for each of the deciles and is plotted on the graph in blue. The red line on the graph is a line of best fit for the data points. The slope index of inequality is the gradient of that line or the difference between the top of the line and the bottom.

In the case of deaths from respiratory disease in Croydon, the line goes from 55.2 to 4.0. This gives a slope index of inequality of 51.2 deaths per 100,000 population (with a 95% confidence interval of 39.2 to 63.1 years). This is the difference in premature death from respiratory diseases of 51.2 deaths per 100,000 population between the most and least deprived areas of Croydon.

Figure 7 | mortality from respiratory diseases in people aged under 75 by deprivation decile, showing the slope index of inequality, Croydon, 2004-2008

Slope index of inequality = 51.2 (95% CI: 39.2 to 63.1)
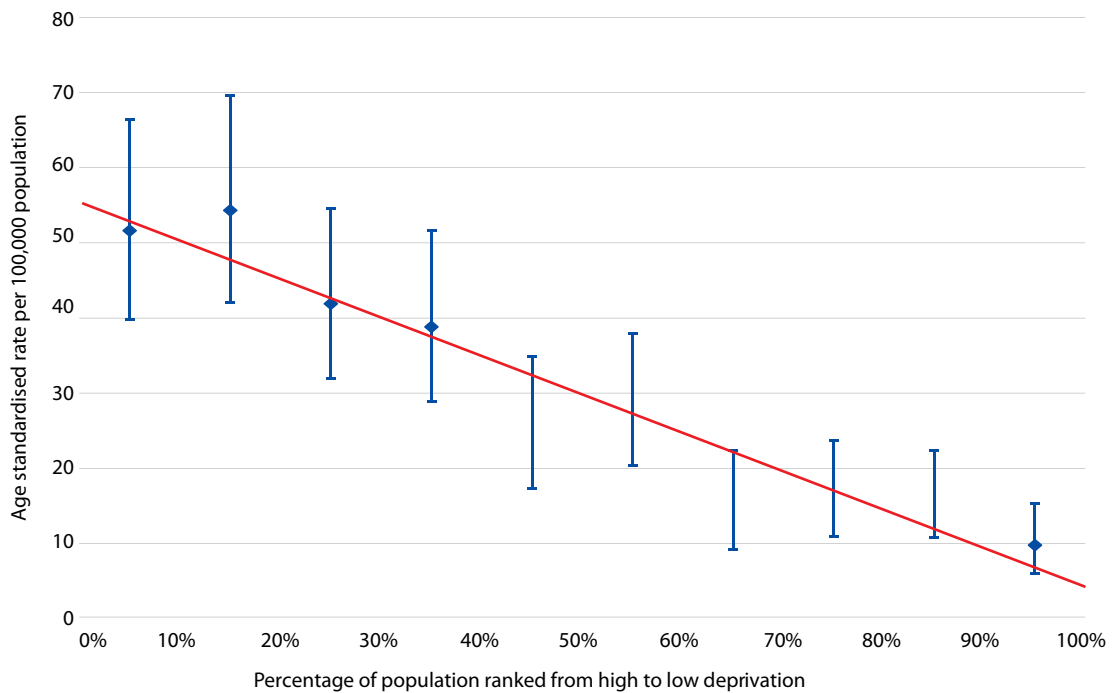
◆ Mortality rate with 95% confidence intervals ——— Inequality slope

Source: Office for National Statistics death registration data and mid year population estimates; Department of Communities and Local Government, Indices of Deprivation 2007

Super output areas

Super output areas are geographical areas used for statistical analysis in the UK. They were designed to aid the analysis of small areas. They are fairly consistent in terms of population size. Lower super output areas are the lowest layer of a super output area. They have an average population size of about 1,500. There are 220 lower super output areas in Croydon. These can be aggregated into 44 middle super output areas with an average population of about 7,500.

Appendix 2: Croydon health profile 2010

Croydon

This profile gives a picture of health in this area. It is designed to help local government and health services improve people's health and reduce health inequalities.

Health Profiles are produced every year by the Association of Public Health Observatories.

Visit the Health Profiles website to:

- see profiles for other areas
- use interactive maps
- find more detailed information

www.healthprofiles.info
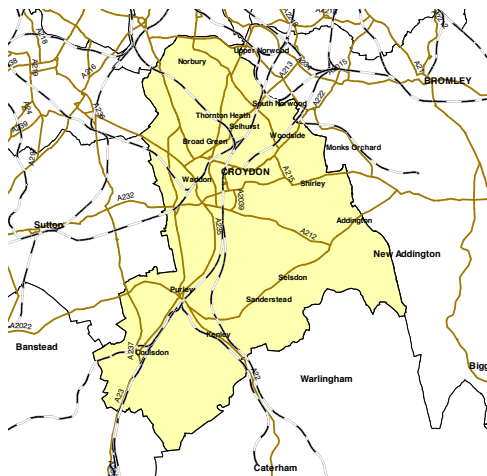
Based on Ordnance Survey material. © Crown Copyright. All rights reserved.
DH 100020290 2010. Other map data © Collins Bartholomew.

Population 341,800
Mid-2008 population estimate
Source: National Statistics website: www.statistics.gov.uk

Croydon at a glance

- Overall, the health of people in Croydon shows a mixed picture. Life expectancy is better than the England average for men and similar to the average for women. The proportion of people diagnosed with diabetes and the rate of new cases of tuberculosis are higher than average, as is the rate of violent crime. However, estimated levels of healthy eating among adults and the rate of early deaths from cancer are better than the England average.
- There are health inequalities within Croydon. For men living in the most deprived areas of Croydon, life expectancy is 8 years less than for those living in the least deprived areas. For women the difference is 5 years.
- Over the last 10 years, the death rate from all causes combined has fallen for men and remains lower than the England average. While the rate for women has also improved, it is similar to the England average. Early death rates from heart disease and stroke, and from cancer have also fallen during this period.
- A higher percentage of children live in poverty than the England average. The teenage pregnancy rate and the proportion of children in Reception year classified as obese are both worse than average. However, levels of smoking during pregnancy and children spending more than 3 hours a week on physical activity in school are better than the England average.
- Further information about the health of this area can be found at www.croydon.nhs.uk

Deprivation:
a national view

This map shows differences in deprivation levels in this area based on national quintiles (of the Index of Multiple Deprivation 2007 by Lower Super Output Area). The darkest coloured areas are some of the most deprived areas in England.
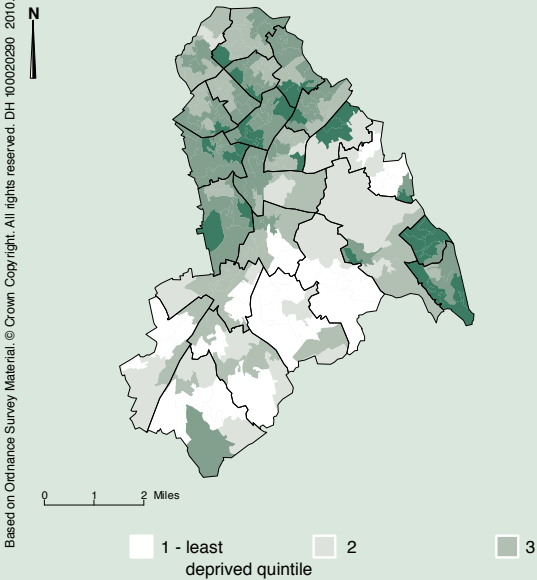
This chart shows the percentage of the population in England, this region, and this area who live in each of these quintiles.

0   1   2 Miles

% Residents

England   London   Croydon

| | 1 - least deprived quintile | | 2 | | 3 | | 4 | | 5 - most deprived quintile |
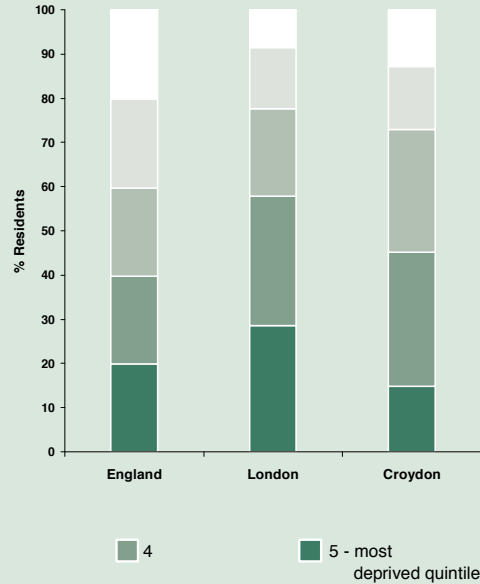
Health inequalities:
a local view

This map shows differences in deprivation levels in this area based on local quintiles (of the Index of Multiple Deprivation 2007 by Lower Super Output Area). The darkest coloured areas are the most deprived in this area.
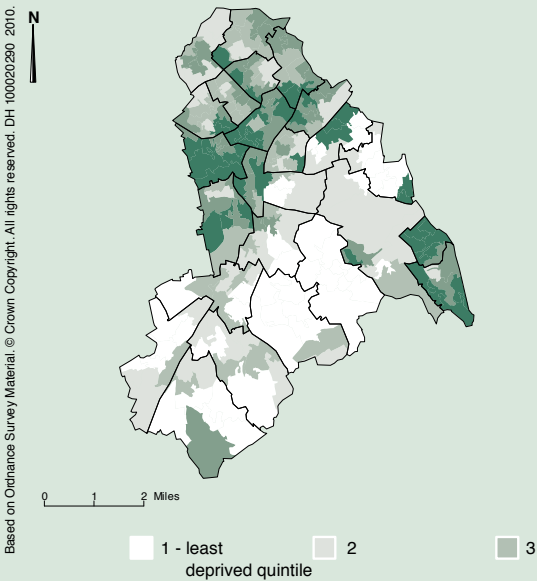
This chart shows the life expectancy at birth for males and females (2004-2008) for each of the quintiles in this area.

0   1   2 Miles

Life expectancy at birth (years)

Quintile 1   Quintile 2   Quintile 3   Quintile 4   Quintile 5

M = Males   F = Females

95% confidence interval. These indicate the level of uncertainty about each value on the graph. Longer/wider intervals mean more uncertainty.

| | 1 - least deprived quintile | | 2 | | 3 | | 4 | | 5 - most deprived quintile |
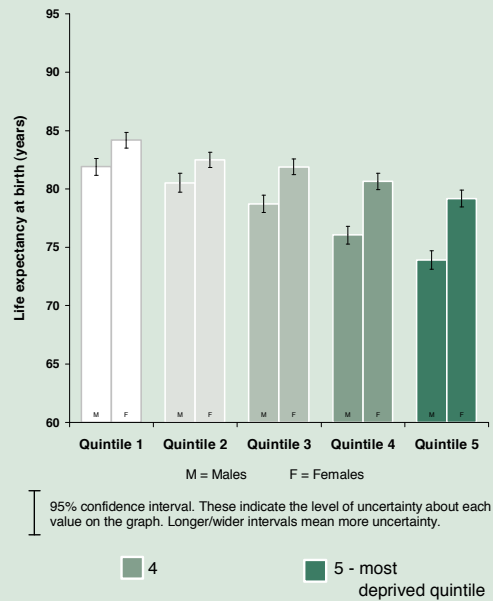
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Health inequalities:
changes over time

These graphs show how changes in death rates for this area compare with changes for the whole of England. Data points on the graph are mid-points of 3-year averages of yearly rates. For example the dot labelled 2003 represents the 3-year period 2002 to 2004.

Trend 1 compares rates of death, at all ages and from all causes, in this area with those for England.

Trend 2 compares rates of early death from heart disease and stroke (in people under 75) in this area with those for England.

Trend 3 compares rates of early death from cancer (in people under 75) in this area with those for England.

Trend 1:
All age, all cause mortality

| Males: | England | Croydon |
| Females: | England | Croydon |

Trend 2:
Early death rates from heart disease and stroke

England   Croydon
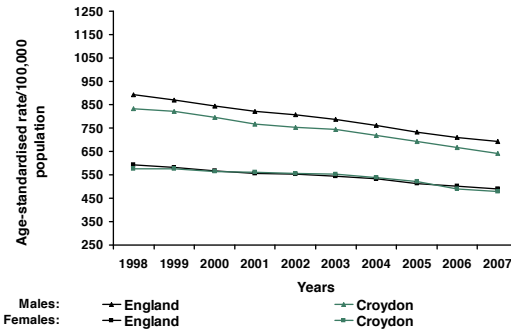
Trend 3:
Early death rates from cancer

England   Croydon
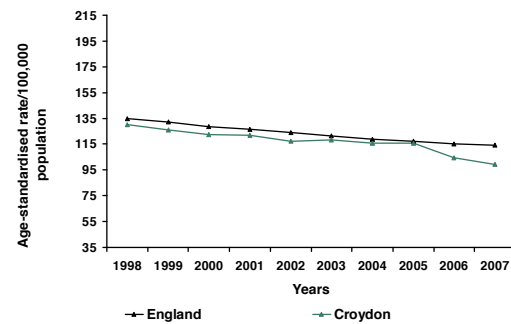
Health inequalities:
ethnicity

This chart shows the percentage of pupils by ethnic group in this area who achieved five GCSEs in 2008/09 (A* to C grades including English and Maths). Comparing results may help find possible inequalities between ethnic groups.

England
Croydon

95% confidence intervals are shown for this local authority area
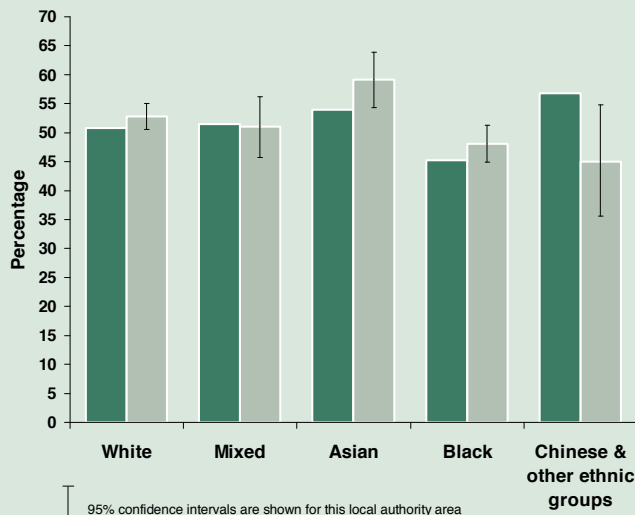
Ethnic Groups	% pupils achieved grades	No. of pupils achieved grades
White	52.8	964
Mixed	51.0	176
Asian	59.2	242
Black	48.1	451
Chinese/other	45.0	45

If there are any empty cells in the table this is because data has not been presented where the calculation involved pupil numbers of 0, 1 or 2. Some further groups may not have data presented in order to prevent counts of small numbers being calculated from values for other ethnic groups or areas.

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Croydon

Health summary for Croydon

The chart below shows how the health of people in this area compares with the rest of England. This area's result for each indicator is shown as a circle. The average rate for England is shown by the red line, which is always at the centre of the chart. The range of results for all local areas in England is shown as a grey bar. A red circle means that this area is significantly worse than England for that indicator; however, a green circle may still indicate an important public health problem.

- 🔴 Significantly worse than England average
- 🟡 Not significantly different from England average
- 🟢 Significantly better than England average
- ⚪ No significance can be calculated

England Worst — Regional average [+] — England Average — England Best
25th Percentile — 75th Percentile

[+] In the South East Region this represents the Strategic Health Authority average

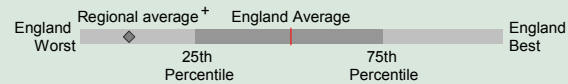| Domain	Indicator	Local No. Per Year	Local Value	Eng Avg	Eng Worst	England Range	Eng Best
Our communities	1 Deprivation	50028	14.9	19.9	89.2		0.0
	2 Children in poverty	19951	28.3	22.4	66.5		6.0
	3 Statutory homelessness	449	3.01	2.48	9.37		0.00
	4 GCSE achieved (5A*-C inc. Eng & Maths)	1894	51.9	50.9	32.1		76.1
	5 Violent crime	6925	20.4	16.4	36.6		4.8
	6 Carbon emissions	1639	4.8	6.8	14.4		4.1
Children's and young people's health	7 Smoking in pregnancy	454	8.9	14.6	33.5		3.8
	8 Breast feeding initiation	4403	86.0	72.5	39.7		92.7
	9 Physically active children	23516	51.5	49.6	24.6		79.1
	10 Obese children	404	11.1	9.6	14.7		4.7
	11 Tooth decay in children aged 5 years	n/a	1.1	1.1	2.5		0.2
	12 Teenage pregnancy (under 18)	369	55.6	40.9	74.8		14.9
Adults' health and lifestyle	13 Adults who smoke	n/a	18.6	22.2	35.2		10.2
	14 Binge drinking adults	n/a	13.8	20.1	33.2		4.6
	15 Healthy eating adults	n/a	36.8	28.7	18.3		48.1
	16 Physically active adults	n/a	7.4	11.2	5.4		16.6
	17 Obese adults	n/a	23.5	24.2	32.8		13.2
Disease and poor health	18 Incidence of malignant melanoma	33	10.4	12.6	27.3		3.7
	19 Incapacity benefits for mental illness	5325	24.4	27.6	58.5		9.0
	20 Hospital stays for alcohol related harm	5470	1510	1580	2860		784
	21 Drug misuse						
	22 People diagnosed with diabetes	15940	4.66	4.30	6.72		2.69
	23 New cases of tuberculosis	110	32	15	110		0
	24 Hip fracture in over-65s	252	421.7	479.2	643.5		273.6
Life expectancy and causes of death	25 Excess winter deaths	98	12.4	15.6	26.3		2.3
	26 Life expectancy - male	n/a	78.9	77.9	73.6		84.3
	27 Life expectancy - female	n/a	82.2	82.0	78.8		88.9
	28 Infant deaths	28	5.42	4.84	8.67		1.08
	29 Deaths from smoking	390	186.7	206.8	360.3		118.7
	30 Early deaths: heart disease & stroke	238	75.8	74.8	125.0		40.1
	31 Early deaths: cancer	309	99.4	114.0	164.3		70.5
	32 Road injuries and deaths	146	43.1	51.3	167.0		14.6

Indicator Notes

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 2008/09 4 % at Key Stage 4 2008/09 5 Recorded violence against the person crimes crude rate per 1,000 population 2008/09 6 Total end user CO_2 emissions per capita (tonnes CO_2 per resident) 2007 7 % of mothers smoking in pregnancy where status is known 2008/09 8 % of mothers initiating breast feeding where status is known 2008/09 9 % of year 1-13 pupils who spend at least 3 hours per week on high quality PE and school sport 2008/09 10 % of school children in reception year 2008/09 11 Weighted mean number of teeth per 5 yr old child sampled that were actively decayed, missing or filled 2007/08 12 Under-18 conception rate per 1,000 females aged 15-17 (crude rate) 2006-2008 (provisional) 13 % adults, modelled estimate using Health Survey for England 2006-2008 14 % adults, modelled estimate using Health Survey for England 2007-2008 15 % adults, modelled estimate using Health Survey for England 2006-2008 16 % aged 16+ 2008/09 17 % adults, modelled estimate using Health Survey for England 2006-2008 18 Directly age standardised rate per 100,000 population under 75 2004-2006 19 Crude rate per 1,000 working age population 2008 20 Directly age and sex standardised rate per 100,000 population 2008/09 (rounded) 21 New Problematic Drug User estimates were not available in time for inclusion 22 % of people on GP registers with a recorded diagnosis of diabetes 2008/09 23 Crude rate per 100,000 population 2006-2008 24 Directly age-standardised rate per 100,000 population for emergency admission 2008/09 25 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths 1.08.05- 31.07.08 26 At birth, 2006-2008 27 At birth, 2006-2008 28 Rate per 1,000 live births 2006-2008 29 Per 100,000 population age 35+, directly age standardised rate 2006-2008 30 Directly age standardised rate per 100,000 population under 75, 2006-2008 31 Directly age standardised rate per 100,000 population under 75, 2006-2008 32 Rate per 100,000 population 2006-2008

More indicator information is available in The Indicator Guide: www.healthprofiles.info For information on your area contact your regional PHO: www.apho.org.uk

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Appendix 3: Supplementary data tables

Table 1 | estimated population by age band and gender, mid 2009

		Croydon		London		England	
		Number	**%**	**Number**	**%**	**Number**	**%**
Persons	All ages	342,816	100.0%	7,753,555	100.0%	51,809,741	100.0%
Males	0-4	12,465	3.6%	290,671	3.7%	1,635,982	3.2%
	5-9	10,488	3.1%	224,027	2.9%	1,464,014	2.8%
	10-14	11,119	3.2%	207,410	2.7%	1,543,764	3.0%
	15-19	11,280	3.3%	217,848	2.8%	1,700,935	3.3%
	20-24	10,891	3.2%	279,740	3.6%	1,817,233	3.5%
	25-29	12,452	3.6%	367,576	4.7%	1,788,910	3.5%
	30-34	12,608	3.7%	394,091	5.1%	1,647,128	3.2%
	35-39	12,607	3.7%	352,991	4.6%	1,817,140	3.5%
	40-44	13,958	4.1%	327,856	4.2%	1,970,268	3.8%
	45-49	12,828	3.7%	265,352	3.4%	1,838,606	3.5%
	50-54	10,863	3.2%	212,439	2.7%	1,600,537	3.1%
	55-59	8,718	2.5%	170,688	2.2%	1,467,903	2.8%
	60-64	8,061	2.4%	155,443	2.0%	1,519,094	2.9%
	65-69	5,931	1.7%	110,355	1.4%	1,132,295	2.2%
	70-74	4,925	1.4%	99,835	1.3%	956,635	1.8%
	75-79	3,700	1.1%	78,672	1.0%	738,932	1.4%
	80-84	2,659	0.8%	52,879	0.7%	499,790	1.0%
	85+	2,362	0.7%	43,316	0.6%	375,405	0.7%
Females	0-4	11,983	3.5%	278,498	3.6%	1,560,093	3.0%
	5-9	10,264	3.0%	216,547	2.8%	1,399,146	2.7%
	10-14	10,547	3.1%	200,816	2.6%	1,472,705	2.8%
	15-19	10,324	3.0%	208,731	2.7%	1,610,856	3.1%
	20-24	9,886	2.9%	283,824	3.7%	1,737,065	3.4%
	25-29	12,496	3.6%	377,097	4.9%	1,722,697	3.3%
	30-34	12,600	3.7%	363,058	4.7%	1,615,944	3.1%
	35-39	13,813	4.0%	320,790	4.1%	1,840,314	3.6%
	40-44	14,857	4.3%	304,718	3.9%	1,983,091	3.8%
	45-49	14,336	4.2%	268,535	3.5%	1,886,810	3.6%
	50-54	11,128	3.2%	216,784	2.8%	1,629,237	3.1%
	55-59	9,152	2.7%	182,995	2.4%	1,518,228	2.9%
	60-64	8,719	2.5%	172,183	2.2%	1,587,512	3.1%
	65-69	6,516	1.9%	130,391	1.7%	1,218,141	2.4%
	70-74	5,803	1.7%	115,373	1.5%	1,072,984	2.1%
	75-79	4,937	1.4%	98,818	1.3%	920,392	1.8%
	80-84	3,670	1.1%	78,599	1.0%	732,523	1.4%
	85+	3,870	1.1%	84,609	1.1%	787,432	1.5%

Source: Office for National Statistics mid year population estimates

Table 2 | projected population by age band and gender, 2010, 2013 and 2015 & 2020, Croydon

		2011		2013		2015		2020	
		Number	%	Number	%	Number	%	Number	%
Persons	All ages	340,820	100.0%	345,862	100.0%	348,799	100.0%	356,620	100.0%
Males	0-4	12,955	3.8%	12,873	3.7%	12,612	3.6%	12,342	3.5%
	5-9	11,255	3.3%	12,182	3.5%	12,570	3.6%	12,242	3.4%
	10-14	10,756	3.2%	10,638	3.1%	10,866	3.1%	12,045	3.4%
	15-19	10,903	3.2%	10,525	3.0%	10,460	3.0%	10,651	3.0%
	20-24	9,500	2.8%	9,543	2.8%	9,409	2.7%	9,264	2.6%
	25-29	11,583	3.4%	11,869	3.4%	11,885	3.4%	11,824	3.3%
	30-34	13,712	4.0%	13,122	3.8%	13,022	3.7%	13,225	3.7%
	35-39	13,736	4.0%	13,867	4.0%	13,734	3.9%	13,137	3.7%
	40-44	13,234	3.9%	13,131	3.8%	13,173	3.8%	13,141	3.7%
	45-49	12,227	3.6%	12,648	3.7%	12,567	3.6%	12,557	3.5%
	50-54	10,626	3.1%	11,110	3.2%	11,460	3.3%	11,823	3.3%
	55-59	8,719	2.6%	9,292	2.7%	9,740	2.8%	10,527	3.0%
	60-64	8,019	2.4%	7,599	2.2%	7,720	2.2%	8,624	2.4%
	65-69	5,960	1.7%	6,754	2.0%	6,832	2.0%	6,624	1.9%
	70-74	4,675	1.4%	4,733	1.4%	4,949	1.4%	5,719	1.6%
	75-79	3,750	1.1%	3,801	1.1%	3,808	1.1%	4,087	1.1%
	80-84	2,659	0.8%	2,702	0.8%	2,805	0.8%	2,937	0.8%
	85+	2,230	0.7%	2,520	0.7%	2,659	0.8%	3,136	0.9%
Females	0-4	12,486	3.7%	12,410	3.6%	12,160	3.5%	11,900	3.3%
	5-9	10,746	3.2%	11,665	3.4%	12,025	3.4%	11,700	3.3%
	10-14	10,205	3.0%	10,152	2.9%	10,375	3.0%	11,535	3.2%
	15-19	10,211	3.0%	9,838	2.8%	9,927	2.8%	10,159	2.8%
	20-24	9,237	2.7%	9,354	2.7%	9,166	2.6%	9,141	2.6%
	25-29	12,192	3.6%	12,278	3.5%	12,361	3.5%	12,318	3.5%
	30-34	14,108	4.1%	13,807	4.0%	13,585	3.9%	13,704	3.8%
	35-39	13,595	4.0%	13,869	4.0%	14,056	4.0%	13,594	3.8%
	40-44	13,891	4.1%	13,329	3.9%	13,246	3.8%	13,691	3.8%
	45-49	13,806	4.1%	13,853	4.0%	13,389	3.8%	12,883	3.6%
	50-54	11,224	3.3%	12,412	3.6%	13,044	3.7%	12,708	3.6%
	55-59	9,275	2.7%	9,867	2.9%	10,392	3.0%	12,033	3.4%
	60-64	8,706	2.6%	8,237	2.4%	8,326	2.4%	9,318	2.6%
	65-69	6,518	1.9%	7,477	2.2%	7,665	2.2%	7,367	2.1%
	70-74	5,587	1.6%	5,559	1.6%	5,780	1.7%	6,811	1.9%
	75-79	4,711	1.4%	4,763	1.4%	4,793	1.4%	5,011	1.4%
	80-84	3,753	1.1%	3,800	1.1%	3,783	1.1%	3,930	1.1%
	85+	4,070	1.2%	4,283	1.2%	4,455	1.3%	4,912	1.4%

Source: Greater London Authority Population Projections – 2009 Round for London Plan

Table 3 | migration, internal and international, 2008/2009

	Croydon	London	England
Estimated internal migration inflow	17,810	205,220	99,550
Estimated internal migration outflow	19,950	237,170	104,650
Estimated international migration inflow	4,340	156,230	490,760
Estimated international migration outflow	3,090	116,670	339,060
National insurance registrations to overseas nationals	6,700	275,610	686,110*
International migrants identified on GP register	6,054	204,083	577,566

Sources: Office for National Statistics mid year population estimates; Department for Work and Pensions; Office for National Statistics
* UK data

Table 4 | Office for National Statistics Area Classification: London Suburbs cluster

The London Suburbs cluster includes:
Barnet
Croydon
Ealing
Enfield
Greenwich
Harrow
Hounslow
Luton
Merton
Redbridge
Slough
Waltham Forest
The most similar local authorities to Croydon, in order of closeness are:
Enfield
Waltham Forest
Greenwich
Merton

Table 5 | estimated population by ethnic group, mid 2007

		Croydon		London		England	
		Number	%	Number	%	Number	%
All Groups		339,500	100.0%	7,556,900	100.0%	51,092,000	100.0%
White	British	197,600	58.2%	4,361,800	57.7%	42,736,000	83.6%
	Irish	6,000	1.8%	181,300	2.4%	570,500	1.1%
	Other White	17,100	5.0%	674,300	8.9%	1,776,300	3.5%
Mixed	White and Black Caribbean	5,300	1.6%	76,300	1.0%	282,900	0.6%
	White and Black African	1,800	0.5%	41,100	0.5%	114,300	0.2%
	White and Asian	3,700	1.1%	75,300	1.0%	260,900	0.5%
	Other Mixed	3,800	1.1%	73,500	1.0%	212,000	0.4%
Asian or Asian British	Indian	27,200	8.0%	501,600	6.6%	1,316,000	2.6%
	Pakistani	9,400	2.8%	179,100	2.4%	905,700	1.8%
	Bangladeshi	2,300	0.7%	174,900	2.3%	353,900	0.7%
	Other Asian	8,000	2.4%	152,500	2.0%	339,200	0.7%
Black or Black British	Black Caribbean	26,800	7.9%	321,300	4.3%	599,700	1.2%
	Black African	20,300	6.0%	417,700	5.5%	730,600	1.4%
	Other Black	3,700	1.1%	63,300	0.8%	117,600	0.2%
Chinese or Other Ethnic Group	Chinese	2,800	0.8%	114,800	1.5%	400,300	0.8%
	Other	3,700	1.1%	148,000	2.0%	376,100	0.7%

Source: Office for National Statistics population estimates by ethnic group (experimental)

Table 6 | estimated population by religious group, 2001

	Croydon		London		England	
	Number	%	Number	%	Number	%
All people	330,587	100.0%	7,172,091	100.0%	49,138,831	100.0%
Christian	215,124	65.1%	4,176,175	58.2%	35,251,244	71.7%
Buddhist	1,579	0.5%	54,297	0.8%	139,046	0.3%
Hindu	16,781	5.1%	291,977	4.1%	546,982	1.1%
Jewish	999	0.3%	149,789	2.1%	257,671	0.5%
Muslim	17,642	5.3%	607,083	8.5%	1,524,887	3.1%
Sikh	1,310	0.4%	104,230	1.5%	327,343	0.7%
Other religions	1,831	0.6%	36,558	0.5%	143,811	0.3%
No religion	48,615	14.7%	1,130,616	15.8%	7,171,332	14.6%
Religion not stated	26,706	8.1%	621,366	8.7%	3,776,515	7.7%

Source: 2001 Census (KS07)

Table 7 | **Projected number of households, 2010, 2013, 2015 and 2020**

	Croydon	London	England
2008	146,000	3,244,000	21,731,000
2013	153,000	3,416,000	22,868,000
2018	162,000	3,606,000	24,108,000

Source: 2008 based household projections, Department for Communities and Local Government

Table 8 | **population by Mosaic Group, Croydon, London and England**

	Croydon		London		England	
	Number	%	Number	%	Number	%
A Residents of isolated rural communities	0	0.00	2,627	0.03	1,924,319	3.78
B Residents of small and mid sized towns with strong local roots	4,946	1.5%	72,951	1.0%	4,487,023	8.8%
C Wealthy people living in the most sought after neighbourhoods	29,907	8.8%	671,622	8.9%	1,874,441	3.7%
D Successful professionals living in suburban or semi rural homes	14,860	4.4%	87,281	1.2%	4,438,018	8.7%
E Middle income families living in moderate suburban semis	60,321	17.8%	1,079,388	14.3%	6,563,623	12.9%
F Couples with young children in comfortable modern housing	5,721	1.7%	62,790	0.8%	2,859,556	5.6%
G Young, well educated city dwellers	57,205	16.9%	2,105,049	27.8%	4,396,024	8.6%
H Couples and young singles in small modern starter homes	27,383	8.1%	353,472	4.7%	2,294,961	4.5%
I Lower income workers in urban terraces in often diverse areas	73,449	21.7%	1,128,258	14.9%	4,388,631	8.6%
J Owner occupiers in older-style housing in ex-industrial areas	2,639	0.8%	88,468	1.2%	4,038,325	7.9%
K Residents with sufficient incomes in right to buy social housing	14,883	4.4%	159,963	2.1%	4,569,240	9.0%
L Active elderly people living in pleasant retirement locations	6,443	1.9%	101,876	1.3%	1,862,279	3.7%
M Elderly people reliant on state support	5,101	1.5%	98,332	1.3%	1,925,387	3.8%
N Young people renting flats in high density social housing	19,286	5.7%	1,447,202	19.1%	2,436,409	4.8%
O Families in low rise social housing with high levels of benefit need	15,826	4.7%	102,590	1.4%	2,839,115	5.6%

Source: Mosaic Classification, Experian

Table 9 | population by Mosaic type, Croydon, London and England

		Croydon		London		England	
		Number	%	Number	%	Number	%
A01	Rural families with high incomes, often from city jobs	0	0.0%	1,091	0.0%	514,617	1.0%
A02	Retirees electing to settle in environmentally attractive localities	0	0.0%	710	0.0%	494,398	1.0%
A03	Remote communities with poor access to public and commercial services	0	0.0%	0	0.0%	372,165	0.7%
A04	Villagers with few well paid alternatives to agricultural employment	0	0.0%	826	0.0%	543,139	1.1%
B05	Better off empty nesters in low density estates on town fringes	2,892	0.9%	49,261	0.7%	1,523,440	3.0%
B06	Self employed trades people living in smaller communities	259	0.1%	3,839	0.1%	1,318,087	2.6%
B07	Empty nester owner occupiers making little use of public services	1,427	0.4%	14,871	0.2%	1,013,966	2.0%
B08	Mixed communities with many single people in the centres of small towns	368	0.1%	4,980	0.1%	631,530	1.2%
C09	Successful older business leaders living in sought after suburbs	14,862	4.4%	112,978	1.5%	761,562	1.5%
C10	Wealthy families in substantial houses with little community involvement	496	0.1%	55,798	0.7%	296,537	0.6%
C11	Creative professionals seeking involvement in local communities	14,549	4.3%	324,147	4.3%	635,288	1.2%
C12	Residents in smart city centre flats who make little use of public services	0	0.0%	178,699	2.4%	181,054	0.4%
D13	Higher income older champions of village communities	1,319	0.4%	6,754	0.1%	1,156,561	2.3%
D14	Older people living in large houses in mature suburbs	5,760	1.7%	36,055	0.5%	998,923	2.0%
D15	Well off commuters living in spacious houses in semi rural settings	3,864	1.1%	26,467	0.4%	1,185,000	2.3%
D16	Higher income families concerned with education and careers	3,917	1.2%	18,005	0.2%	1,097,534	2.2%
E17	Comfortably off suburban families weakly tied to their local community	32,106	9.5%	441,996	5.8%	1,483,710	2.9%
E18	Industrial workers living comfortably in owner occupied semis	2,676	0.8%	53,396	0.7%	1,217,669	2.4%
E19	Self reliant older families in suburban semis in industrial towns	689	0.2%	24,639	0.3%	1,657,767	3.3%
E20	Upwardly mobile South Asian families living in inter war suburbs	23,511	7.0%	539,023	7.1%	765,530	1.5%
E21	Middle aged families living in less fashionable inter war suburban semis	1,339	0.4%	20,334	0.3%	1,438,947	2.8%
F22	Busy executives in town houses in dormitory settlements	4,788	1.4%	45,116	0.6%	924,641	1.8%
F23	Early middle aged parents likely to be involved in their children's education	373	0.1%	5,534	0.1%	1,174,713	2.3%

		Croydon		London		England	
		Number	%	Number	%	Number	%
F24	Young parents new to their neighbourhood, keen to put down roots	560	0.2%	7,944	0.1%	642,746	1.3%
F25	Personnel reliant on the Ministry of Defence for public services	0	0.0%	4,196	0.1%	117,456	0.2%
G26	Well educated singles living in purpose built flats	14,693	4.3%	288,090	3.8%	685,456	1.3%
G27	City dwellers owning houses in older neighbourhoods	132	0.0%	338,381	4.5%	356,826	0.7%
G28	Singles and sharers occupying converted Victorian houses	292	0.1%	318,314	4.2%	341,107	0.7%
G29	Young professional families settling in better quality older terraces	31,631	9.4%	592,715	7.8%	961,777	1.9%
G30	Diverse communities of well educated singles living in smart, small flats	177	0.1%	133,844	1.8%	178,280	0.4%
G31	Owners in smart purpose built flats in prestige locations, many newly built	8,563	2.5%	383,523	5.1%	528,101	1.0%
G32	Students and other transient singles in multi-let houses	92	0.0%	11,803	0.2%	509,105	1.0%
G33	Transient singles, poorly supported by family and neighbours	1,625	0.5%	15,620	0.2%	505,789	1.0%
G34	Students involved in college and university communities	0	0.0%	22,759	0.3%	329,583	0.6%
H35	Childless new owner occupiers in cramped new homes	5,055	1.5%	82,955	1.1%	1,083,554	2.1%
H36	Young singles and sharers renting small purpose built flats	20,647	6.1%	217,681	2.9%	550,230	1.1%
H37	Young owners and rented developments of mixed tenure	533	0.2%	15,665	0.2%	416,700	0.8%
H38	People living in brand new residential developments	1,148	0.3%	37,171	0.5%	244,477	0.5%
I39	Young owners and private renters in inner city terraces	4,689	1.4%	244,505	3.2%	254,438	0.5%
I40	Multi ethnic communities in newer suburbs away from the inner city	49,951	14.8%	394,602	5.2%	446,157	0.9%
I41	Renters of older terraces in ethnically diverse communities	16,325	4.8%	307,957	4.1%	325,401	0.6%
I42	South Asian communities experiencing social deprivation	0	0.0%	43,618	0.6%	728,687	1.4%
I43	Older town centres terraces with transient, single populations	2,274	0.7%	130,103	1.7%	1,463,032	2.9%
I44	Low income families occupying poor quality older terraces	210	0.1%	7,473	0.1%	1,170,916	2.3%
J45	Low income communities reliant on low skill industrial jobs	1,748	0.5%	45,388	0.6%	1,599,926	3.1%
J46	Residents in blue collar communities revitalised by commuters	891	0.3%	38,257	0.5%	1,281,471	2.5%

		Croydon		London		England	
		Number	%	Number	%	Number	%
J47	Comfortably off industrial workers owning their own homes	0	0.0%	4,823	0.1%	1,156,928	2.3%
K48	Middle aged couples and families in right to buy homes	1,929	0.6%	40,568	0.5%	775,710	1.5%
K49	Low income older couples long established in former council estates	551	0.2%	6,027	0.1%	618,103	1.2%
K50	Older families in low value housing in traditional industrial areas	635	0.2%	3,669	0.0%	1,667,403	3.3%
K51	Often indebted families living in low rise estates	11,768	3.5%	109,699	1.5%	1,508,024	3.0%
L52	Communities of wealthy older people living in large seaside houses	440	0.1%	7,087	0.1%	304,160	0.6%
L53	Residents in retirement, second home and tourist communities	0	0.0%	137	0.0%	312,462	0.6%
L54	Retired people of modest means commonly living in seaside bungalows	403	0.1%	12,180	0.2%	775,531	1.5%
L55	Capable older people leasing / owning flats in purpose built blocks	5,600	1.7%	82,472	1.1%	470,126	0.9%
M56	Older people living on social housing estates with limited budgets	402	0.1%	18,955	0.3%	833,508	1.6%
M57	Old people in flats subsisting on welfare payments	386	0.1%	14,940	0.2%	355,317	0.7%
M58	Less mobile older people requiring a degree of care	2,414	0.7%	41,063	0.5%	328,655	0.6%
M59	People living in social accommodation designed for older people	1,899	0.6%	23,374	0.3%	407,907	0.8%
N60	Tenants in social housing flats on estates at risk of serious social problems	4,275	1.3%	59,139	0.8%	244,398	0.5%
N61	Childless tenants in social housing flats with modest social needs	1,399	0.4%	34,481	0.5%	695,604	1.4%
N62	Young renters in flats with a cosmopolitan mix	7,350	2.2%	294,090	3.9%	302,736	0.6%
N63	Multicultural tenants renting flats in areas of social housing	4,315	1.3%	361,540	4.8%	374,521	0.7%
N64	Diverse homesharers renting small flats in densely populated areas	796	0.2%	362,125	4.8%	366,328	0.7%
N65	Young singles in multi ethnic communities, many in high rise flats	1,073	0.3%	317,139	4.2%	327,197	0.6%
N66	Childless, low income tenants in high rise flats	78	0.0%	18,688	0.2%	125,625	0.2%
O67	Older tenants on low rise social housing estates where jobs are scarce	881	0.3%	9,320	0.1%	1,061,047	2.1%
O68	Families with varied structures living on low rise social housing estates	14,720	4.4%	92,336	1.2%	665,093	1.3%
O69	Vulnerable young parents needing substantial state support	225	0.1%	934	0.0%	1,112,975	2.2%

Source: Mosaic Classification, Experian

Table 10 | disabilities in Croydon, London and England

	Croydon	London	England
Number of people registered blind and partially sighted*	955	21,650	152,980
Modelled number of people with learning disability	6,237	145,612	973,428
Number of older people unable to manage mobility activities	8,282	167,420	1,599,206
Number of older people with a visual impairment	3,946	79,113	759,603

Source: Health Needs Assessment Toolkit, Commissioning Support for London, 2010
* 2008 figures

Table 11 | index of multiple deprivation score, Croydon electoral wards

Fieldway	39.7
New Addington	34.6
Broad Green	32.3
Selhurst	32.0
South Norwood	28.4
Waddon	27.7
Thornton Heath	26.1
Woodside	24.8
Upper Norwood	24.8
West Thornton	23.2
Bensham Manor	21.0
Fairfield	20.9
Ashburton	20.4
Addiscombe	20.0
Norbury	19.0
Heathfield	16.7
Shirley	15.7
Croham	15.6
Purley	14.4
Kenley	13.9
Coulsdon East	10.9
Coulsdon West	10.5
Sanderstead	8.7
Selsdon and Ballards	7.5

Source: Department of Communities and Local Government, Indices of Deprivation 2007

Table 12 | indices of deprivation domain scores, Croydon, London and England

Domain of deprivation	Croydon	London	England
Income	17.4	20.6	15.6
Employment	9.0	10.3	10.1
Health deprivation and disability	-27.9	-0.8	-1.3
Education, skills and training	15.6	14.4	21.5
Barriers to housing and services	29.6	31.8	21.9
Crime	7.0	35.1	-0.9
Living environment	28.8	34.0	21.8
Index of multiple deprivation	21.3	26.0	21.6

Source: Department of Communities and Local Government, Indices of Deprivation 2007

Table 13 | older people living alone, 2010-2025 predictions

Domain of deprivation	Croydon	London	England
2010	15,706	316,671	3,043,285
2015	16,919	334,027	3,388,304
2020	17,995	350,427	3,704,809
2025	19,917	385,258	4,149,615

Source: Health Needs Assessment Toolkit, Commissioning Support for London

Table 14 | number of social care clients by client group and age group

Client group		Age group	Croydon	London	England
All client groups	Number of clients	18-64	2,915	80,195	552,960
		65+	5,895	138,020	1,220,660
	Number of clients receiving services in the community	18-64	2,270	71,600	510,045
		65+	4,735	117,125	1,024,845
Physical disability, frailty and sensory impairment	Number of clients	18-64	885	29,160	220,685
		65+	5,100	111,085	1,045,250
	Number of clients receiving services in the community	18-64	810	27,855	212,470
		65+	4,205	97,425	901,545
Learning disability	Number of clients	18-64	1,090	17,730	126,245
		65+	95	1,535	14,155
	Number of clients receiving services in the community	18-64	630	13,085	101,440
		65+	35	860	9,300
Mental health	Number of clients	18-64	765	29,830	187,125
		65+	685	13,885	130,045
	Number of clients receiving services in the community	18-64	655	27,585	178,315
		65+	475	9,180	88,035
Substance misuse	Number of clients	18-64	65	2,680	11,360
		65+	0	340	1,120
	Number of clients receiving services in the community	18-64	65	2,325	10,575
		65+	0	115	715
Vulnerable people	Number of clients	18-64	110	790	7,550
		65+	15	11,175	30,090
	Number of clients receiving services in the community	18-64	110	750	7,240
		65+	15	9,550	25,245

Source: Information Centre for Health and Social Care, Community Care Statistics, 2007/2008

Appendix 4: Useful links

The following websites can be used to access the latest data and more detail for many of the indicators in the JSNA core dataset:

Association of Public Health Observatories
Health Profiles for local authority areas and a range of other datasets relevant to public health.
http://www.apho.org.uk/

Compendium of Clinical and Health Indicators
Indicators for measuring health outcomes.
http://www.nchod.nhs.uk/

Floor Targets Interactive
Performance indicators used within local government.
http://www.fti.communities.gov.uk/

Government Office for London
London borough indicator tool for indicators used in Local Area Agreements.
http://www.go-london.gov.uk/tools/toolsindex.htm

Health needs assessment toolkit
Contains charts, maps and data for many of the indicators in the JSNA core dataset.
http://hna.csl.nhs.uk/

Information Centre for Health and Social Care
Central source of information for health and social care.
http://www.ic.nhs.uk/

Local Basket of Indicators
Indicators for measuring inequalities.
http://www.lho.org.uk/LHO_Topics/National_Lead_Areas/Basket_Of_Indicators/BasketOfIndicators.aspx

London Datastore
Datasets relevant to London, including population projections produced by the Greater London Authority.
http://data.london.gov.uk/

National Adult Social Care Intelligence Service
Social care information, including an tool with indicators from the JSNA core dataset.
http://nascis.ic.nhs.uk/

Neighbourhood statistics
Demographic data on local areas.
http://neighbourhood.statistics.gov.uk/

Office for National Statistics population estimates and projections
Population estimates and projections for national and local areas.
http://www.statistics.gov.uk/STATBASE/Product.asp?vlnk=601

Places analysis tool
Charts and maps of indicators from the National Indicator Set.
http://www.pat.communities.gov.uk/pat/