Mayor’s Health Inequality Strategy Delivery Plan 2015-2018
Indicator Report

Introduction

Health inequalities are the differences in health and wellbeing risk or outcomes, between different groups of people. They are heavily influenced by the social determinants of health, such as education, employment and housing. Health inequalities are often expressed by the gap in life expectancy between different population groups. However this information does not capture the complex range of factors that influence differences in health outcomes.

For the new delivery plan (2015-2018) for The Mayor’s Health Inequalities Strategy (2010), it was agreed that a set indicators of health, and wider determinants of health, should be selected. The aim was to support a greater understanding of health inequalities, and to allow for monitoring over time. The indicator set was initially developed with colleagues at Public Health England (PHE), the Association of Directors of Public Health, and GLA colleagues in the Health, Housing, Economics and Intelligence teams. Extensive consultation with this core steering group led to the selection of the final indicators. Further consultation was carried out with a wide range of partners and London organisations (see appendix A for list of stakeholders engaged), which influenced the final 12 chosen indicators, how they are presented, and proposals for their use at the annual conventions for the Mayor’s Health Inequalities Strategy.

This report documents the selected indicators and provides the rationale for each with regards to measuring health inequalities. For transparency, it also describes other indicators which were considered, the reasons they were not selected, and the latest picture for London and London boroughs for each of these indicators.

Criteria for identification and selection of the indicators

As a whole, the indicator set chosen reflects the five strategic objectives of the Mayor’s Health Inequalities Strategy:

1. Empowering individuals and communities
2. Equitable access to high quality health and social care services
3. Income inequality and health
4. Health, work and well-being
5. Healthy places

In order to provide an accurate and useful picture of health inequalities in London, the indicators had to meet as many of the following specific criteria as possible:

- Be meaningful to stakeholders, representing health issues and determinants of health.
- Easy to understand and to communicate to a range of health and non-health stakeholders, and the general public.
- Relevant to the rapidly changing and future policy context.
- Span the life-course for London’s population.
• Able to be tracked over time.
• Useful as levers for action within regional and local authorities.
• Use the most accurate and valid data sources, available for both London as a whole, and for London borough levels, collected on an annual basis.
• Has a relevant evidence base which can be discussed and critiqued in order to guide action.
• Be manageable in number i.e. maximum of 12.

It is important to acknowledge that there will always be limitations to both the indicators selected and the data used for each one. It has not been possible to provide all information for a consistent time period because of the diverse data sources and nature of these indicators. It is also not possible to sub-analyse each data source by the protected characteristics included in the Equality Act, although we understand that these frequently contribute to health inequalities. However, these indicators will be a useful starting point for the development of a themed annual convention on health inequalities where additional information and data on the theme can also be presented.

It was also important that there is consistency between these indicators and those being used by partner organisations and institutions in health inequalities. Therefore the selection of indicators was heavily influenced by, and where possible, the same as those used by:
• Professor Sir Michael Marmot at the Institute of Health Equity in their September 2014 summary report on the 2014 Marmot Indicators of inequality.
• Public Health England (PHE), in particular the Public Health Outcomes Framework (PHOF).
• The GLA’s own intelligence team, in order to align with existing targets and priorities for the GLA group and integrate our dataset with the London Datastore for practical purposes.

The chosen indicators

**Overall measures of health inequality:**
1. Slope Index of Inequality for Life Expectancy
2. Healthy Life Expectancy
3. Self-reported wellbeing
   a. Happiness
   b. Life Satisfaction
   c. Worthwhileness
   d. Anxiety

**More specific measures of health inequality:**
4. School Readiness at age 5

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2 Institute of Health Equity; Sept 2014; Marmot Indicators: A preliminary summary with graphs; Strategic Review of Health Inequalities post 2010
3 Public Health England; Public Health Outcomes Framework; http://www.phoutcomes.info/
4 Greater London Authority; London Datastore; http://data.london.gov.uk/
5. Educational Achievement - Percentage of pupils achieving 5 or more GCSEs at grades A*-C (including English and Maths)
6. Antenatal late booking - Percentage of pregnant women booking after 12wks +6 days
7. Flu vaccination proportion of those >65 years and of those at risk <65 years
8. Vulnerable road user risk of fatality or serious injury
9. Homelessness
   a. Statutory homelessness
   b. Homelessness prevention
   c. Change in number of rough sleepers
10. Proportion of employees receiving lower income than the London Living Wage
11. Unemployment rates – model-based estimates; proportion of resident population
12. Childhood obesity - Proportion of children aged 4-5 classified as overweight or obese.
Section A: Overarching measures of Health Inequality

1. Slope Index of Inequality in Life Expectancy at Birth

Indicator definition
The slope index of inequality (SII) in life expectancy at birth, is a health inequalities measure that represents the gap in years of life expectancy across the social gradient within each local authority, from most to least deprived.

Life expectancy at birth is a measure of the average number of years a new-born baby would be expected to live, based on current mortality rates for that specific geographical area. The slope index of inequality in life expectancy at birth describes how life expectancy varies with local deprivation and will be reported for each London borough as a single score, but for males and females separately.

Why this indicator?
This indicator is widely recognised as a robust measure to describe the inequality in life expectancy within areas such as local authorities. This is because the statistical methods used to calculate it, account for the relationship between life expectancy and deprivation across all deprivation deciles, rather than just comparing the two extremes of the population. The slope index of inequality in life expectancy at birth is broadly comparable over time although recent trends for local authority have not shown changes over time which are statistically significant. The SII in life expectancy at birth for different London boroughs can be compared since they are calculated over similar sized geographical areas, however it is important to note that these borough figures cannot be compared to the SII values for London or England, since these take into account the full range of deprivation and mortality across the whole city/country.

By highlighting area based inequalities, London boroughs can assess the other indicators in context, and set priorities by identifying the drivers of life expectancy. This could be done by using The Segment Tool developed by the Public Health England (PHE) Knowledge and Intelligence Teams (London and East Midlands). This tool provides information on the causes of death that are driving inequalities in life expectancy at local area level. Targeting the causes of death which contribute most to the life expectancy gap should have the biggest impact on reducing inequalities. The tool uses data for 2010–12 and allows users to view the breakdown of the life expectancy gap both within upper tier local authority areas, and between an upper tier local authority and England as a whole. The Segment tool is available at http://www.lho.org.uk/LHO_Topics/Analytic Tools/Segment/TheSegmentTool.aspx
Figure 1 Slope index of inequality (SII) in life expectancy at birth, London boroughs, 2011-13, ranked by male SII

Source: GLA, based on data in PHE’s, Public Health Outcomes Framework data tool; Inequality in Healthy Life Expectancy (HLE) at birth by national deciles of area deprivation1: England, 2011-13, ONS 2015;
The London picture

Inequality in male life expectancy within London boroughs, as measured by the SII, was highest in Kensington and Chelsea (14.26 years) and lowest in Barking and Dagenham (2.43 years) for 2011-2013. The SII for female life expectancy at birth was highest in Camden (8.8 years) and lowest in Islington (0.6 years). The inequality in male life expectancy compared to female life expectancy, as measured by the SII, is much greater in the majority of London Boroughs, with most boroughs’ data demonstrating uncertainty around this difference with overlapping confidence intervals. The London boroughs with the most inequality in male life expectancy as measured by the SII do not necessarily correlate with the London boroughs with the most inequality for female life expectancy. The confidence intervals for some of this data are very wide5.

National comparisons

In 2011-2013, Kensington and Chelsea had second highest SII for male life expectancy in England. Barking and Dagenham had the lowest SII for male life expectancy in England, with four other London boroughs among the lowest ten: Brent, Kingston upon Thames, Greenwich, and Waltham Forest.

For the same time period, Camden was the local authority with the highest SII for female life expectancy in London, but 22nd in England. Islington had the lowest SII for female life expectancy in England, with three other London boroughs among the lowest ten: Redbridge, Haringey and Kingston upon Thames.

The regional figure SII in female life expectancy for London for 2011-2013 was 4.81, it was 7.28 for males.6

Alternative indicators considered

Alternatives to the slope index of inequality in life expectancy at birth include the simpler indicator of life expectancy at birth alone. Whilst this is a useful statistic to understand the current expected life span of a person born and living in a London borough, this does not allow us to describe inequality within the London borough based upon deprivation, one of the most dominant determinants of health.

5 PHE are looking to revise the method for calculating the confidence intervals around the SII which should reduce their width
6 Slope index of inequality in life expectancy at birth within English regions, based on regional deprivation deciles within each area, Public Health Outcomes
2. **Healthy Life Expectancy at birth**

**Indicator definition**

This measure of health expectancy at birth describes the average number of years a person would expect to live in good health, based on contemporary mortality rates, and the prevalence of self-reported good health (derived from responses to a survey question on general health).

It is an important summary measure of quality of life resulting from health as well risk of death, but is area and time specific. The figures do not represent the number of years a baby born in the area could actually expect to live in good general health. This is because the health prevalence and mortality rates of the area are likely to change over the course of the baby’s life, and because many of those born in the area will live elsewhere for at least some of their lives.

**Why this indicator?**

Inequalities in mortality are of course important; however mortality data describes nothing of the inequalities in quality of life during people’s lifetimes. Healthy life expectancy (HLE) at birth is commonly used to try to assess this, as an estimate of the amount of lifetime that an average person spends in ‘Very good’ or ‘Good’ health based on how individuals perceive their health. This adds a ‘quality of life’ dimension to estimates of life expectancy, reflecting the burden of chronic ill health and poor well-being within a population. The data, produced by ONS and included in the Public Health Outcomes Framework (PHOF), is generated by self-reported measures of health and well-being from survey data. Such data is invaluable for identifying trends in inequalities.

HLE at birth complements the other indicators by showing the overall trend in a major population health measure. This sets the context in which local authorities can assess other indicators, identify the drivers of healthy life expectancy, and act on existing inequalities.

**The London Picture**

HLE is higher for females than males in London by 0.4 years, even though in some boroughs HLE is higher for males than females. Male HLE in London boroughs ranged from Richmond-on-Thames at 69.7 years and Tower Hamlets at 53.6 years, a difference of 16.1 years. For female HLE, Richmond-on-Thames had the highest again at 71.2 years with Barking and Dagenham the lowest at 55.5 years, a difference of 15.7 years. ONS does not calculate the HLE value for City of London as this resident population is too small.

Average HLE at birth in London in 2011–2013 was similar to the average for England. For 2011 – 2013, male HLE at birth was 63.4 years in London, while in England it was 63.3 years. Female HLE at birth was 63.8 years in London, and 63.9 years in England. There are 7 London boroughs in which the HLE (for both males and females) is significantly lower than the average for England with reasonable certainty of this being a true difference.

It is not possible to analyse healthy life expectancy data by ethnicity, as ethnicity is not requested on registration of a death.

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7 ONS Healthy Life Expectancy at birth for Upper Tier Local Authorities: England (2011-2013)

8 Ibid
Figure 2: Graph showing the HLE at birth for London Boroughs for males of all ages, compared to London and England as a whole (2011-2013).

Source: GLA, based on data from ONS

Figure 3: Graph showing the HLE at birth for London Boroughs for females of all ages, compared to London and England as a whole (2011-2013).

Source: GLA based on data from ONS
3. Self-reported well-being – 4 components

**Indicator definition**

‘Well-being’ refers to self-reported well-being and includes 4 aspects: life satisfaction, happiness, the extent to which life feels worthwhile, and the level of anxiety being experienced. A high level of subjective well-being is associated with increased life expectancy, good health outcomes and improved recovery.\(^9\)

A composite indicator of all four components of well-being is not currently feasible since it would require us to objectively value each component of well-being relative to the others. This would be especially difficult without any research into how populations of different characteristics in London value different areas of their well-being and the impact that each area could have upon physical and mental health. These four components, and therefore overall well-being, may be subject to health inequalities.

The Annual Population Survey four component questions which inform this data are:

1. Overall, how satisfied are you with your life nowadays? (0-4/10 = defined as low)
2. Overall, how happy did you feel yesterday? (0-4/10 = defined as low)
3. Overall, to what extent do you feel the things you do in your life are worthwhile? (0-4/10 = defined as low)
4. Overall, how anxious did you feel yesterday? (6-10/10 = defined as high)

Responses are given on a scale of 0-10 (where 0 is “not at all satisfied/ happy/ anxious/ worthwhile” and 10 is “completely satisfied/ happy/ anxious/ worthwhile”). The percentages of those scoring 0-4 (for the first 3 questions and 6-10 for question 4) will be presented in this 4-part indicator.

**Why this indicator?**

Whilst there is on-going work to further improve measures of national well-being, (recognising its current sample size limitations and uncertain link between well-being and mental ill health), this data from the Annual Population Survey provides a useful snapshot of a sample of a population’s view on their own well-being. This is useful to demonstrate geographical or demographic inequalities in well-being and other health outcomes, prompting further investigation in some areas.

For example, recent research indicates that life satisfaction is lower for BME groups, with a larger effect for people of second generation status, even when controlled for individual characteristics and neighbourhood factors.\(^{10}\) At a national level people from the Black ethnic group were on average least satisfied with their lives out of all the broad ethnic groups in the UK (6.7).\(^{11}\)

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\(^9\) Guidance: *Well-being and Health Policy* (suite of papers) (Department of Health, 2014)

\(^{10}\) Stevenson, J., Rao, M. *Explaining levels of well-being in BME populations in England* (2014)

\(^{11}\) Differences in Well-being by ethnicity (ONS, 2013) [http://www.ons.gov.uk/ons/dcp171766_308226.pdf](http://www.ons.gov.uk/ons/dcp171766_308226.pdf)
This data is used by both the London datastore, and the Public Health Outcomes Framework, and despite its limitations in sample size, likely bias from the mixed mode nature of the Annual Population Survey (the effect of the ways data was collected on the responses), and questionable representativeness as a sample, well-being is deemed important and useful for boroughs and London as a whole, to gain some understanding of people’s own perception of their well-being.

Well-being is a key issue for the government as people with higher well-being have lower rates of illness, recover more quickly and sustainably, and generally have better physical and mental health. Local data on well-being and the inequalities identified should help inform local Joint Strategic Needs Assessments and local Health and Wellbeing Board Strategies.

The publication of 2014 Marmot indicators also showed a relationship between life satisfaction and deprivation, with the proportion of people with low life satisfaction tending to increase as the level of deprivation in a local authority increases.13

**The London picture**

Levels of self-reported well-being, as measured by these four components, vary greatly within London. This reflects widespread uncertainty in the London borough estimates and their relative difference. Some of this uncertainty can be attributed to the sample size of the Annual Population Survey unable to provide sufficient samples across all boroughs. The data for worthwhileness and satisfaction are incomplete, as the samples for some of the boroughs are insufficient, unavailable or the confidence level exceeds 20 per cent. Where data is available, the London borough values have wide 95 per cent confidence intervals which overlap.

The percentage of people that score four or lower, out of 10, for happiness ranges from 6.3 per cent in Tower Hamlets, to 12.61 per cent in Greenwich for 2014/2015.

The proportion of people reporting anxiety levels of 6/10 or above, in London in 2014/2015, varies from 10.3 per cent (Enfield) to 26.4 per cent (Greenwich).

There may be complex reasons why people are more likely to report high ‘anxiety’ levels than low ‘happiness’ levels. These two concepts, happiness and anxiety, are understood in a host of different ways by different people and cannot be directly compared. Especially, as many boroughs with relatively high proportions of people reporting higher anxiety, do not necessarily report low happiness in large proportions as well, and vice versa. This presents problems when trying to use these four components to reflect well-being as a whole and in fact if you rank the boroughs for each component of well-being there is not always good correlation between scores.14

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12 The APS data is collected by telephone and face-to-face and this can affect the responses
13 Institute of Health Equity; Sept 2014; Marmot Indicators: A preliminary summary with graphs; Strategic Review of Health Inequalities post 2010
Figure 4: Percentage of a sample of London borough residents\textsuperscript{15} with low self-reported happiness score (0-4/10), all persons, 16+ years old, compared to London and England (2014-2015)

Source: Annual Population Survey Personal Well-being National Statistics dataset, ONS.

Figure 5: Percentage of a sample of London borough residents with high self-reported anxiety score (6-10/10), all persons, 16+ years old, compared to London and England (2014-2015)

Source: Annual Population Survey Personal Well-being National Statistics dataset, ONS
Note: City of London excluded.

\textsuperscript{15} City of London, Ealing, Enfield, Harrow, Islington, Lambeth, Newham, Wandsworth, Westminster & Sutton excluded
It is also useful to look at the inner and outer London borough estimates for these areas of well-being since the sample size increases the accuracy and certainty of the data. This data includes worthwhileness and satisfaction.

Figure 6 shows that the proportion of people in the survey from the outer London boroughs who have feelings of low worthwhileness and low life satisfaction and low happiness is lower than it is for the inner London boroughs, although the confidence intervals for life satisfaction and happiness intersect meaning we cannot be confident that these differences aren’t chance findings. The data also suggests that a greater proportion of people score lower life satisfaction and happiness, than they do worthwhileness in London.

**Figure 6: Percentage of a sample of Inner and Outer London borough residents with low self-reported life satisfaction, happiness, worthwhileness scores (0-4/10) and high anxiety scores (6-10/10), all persons, 16+ years old (2014-15)**

![Bar chart showing percentage of Inner and Outer London borough residents with low life satisfaction, happiness, worthwhileness, and high anxiety.]

Source: Annual Population Survey Personal Well-being National Statistics dataset, ONS

**National comparisons**

The vast majority of the 95 per cent confidence intervals for the happiness and anxiety data include the values for both London and England as a whole. Therefore we cannot be sure of whether there is a true difference between the borough, London or England values. This could be, in part, a consequence of the relatively small sample size in the Annual Population Survey by borough level. Improvements to the data collection and synthesis for well-being measures will help this interpretation in the future.

The 2014 Marmot indicators estimated that 2.5 million (5.8 per cent) of adults in 2012–2013, aged over 16 in England, had low levels of life satisfaction. This figure is slightly higher than

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the upper limit of the confidence intervals for the values for both inner and outer London (2014/15 data). This means that we can be reasonably certain that low levels of life satisfaction are less common in inner and outer London than they are nationally.

**Alternative indicators considered**

Average well-being scores for London boroughs were considered. This data is available via the London datastore.


This approach would have allowed the use of all self-reported well-being values in its calculations. This is in contrast to some of the PHOF data which, in some borough areas of London, particularly the City of London, due to the small sample size, relies upon inner and outer London estimates. The use of averages on non-normal distribution data such as this masks the extent to which there are inequalities in well-being, both within and between boroughs. Analysis in this way would have diluted the understanding of health inequalities in self-reported well-being.

It is also important to mention the recent debate around well-being indicators generated by the CMO’s report 2014, which concluded that well-being does not have a “sufficiently robust evidence base” proportionate to the current attention and funding it receives in public mental health at national and local government level. She states it is unclear how the self-reported well-being measures relate to populations with mental illness, or have the potential to “shift the normal distribution curve”.

Section B: More specific measures of Health Inequalities

4. School Readiness

Indicator definition
This indicator shows the number of children who achieved a good level of development at the end of the Early Years Foundation Stage (EYFS), (the year they become 5 years old) as a proportion of the total number of children eligible for state-funded early year’s education. It is derived from data collected from teacher assessments of young children and can be interpreted as a measure of readiness for school. Children are defined as having reached a ‘good level’ of development if they achieve the expected standard in a range of early learning areas including personal, social and emotional development; physical development; communication and language, and mathematics and literacy, in the year that they become 5 years old.

Why this indicator?
This is a readily available and key measure of early year’s development across a wide range of developmental areas and is supported by the work of the Institute of Health Equity. Children from more deprived backgrounds are at greater risk of poorer development and evidence shows that differences by social background emerge early in life. For London boroughs, keeping track of school readiness levels will help to plan primary education services, support & capacity, based on the need of the children at the end of the Early Years Foundation Stage (EYFS). It may not be so useful to assess the quality of early years’ foundation services due to the mobility of children during this stage of life, and many other cultural, economic and social factors affecting access to these services.

The London Picture
The percentage of children achieving a good level of development at age 5 (as defined by the school ready criteria) is lower in some areas of high deprivation. Across London’s boroughs 2013 - 14, the percentage of children achieving a good level of development at age 5 ranges from 52.5 per cent in Hillingdon, to 75.3 per cent in Lewisham.

National/International comparisons
The proportion of total children eligible for state-funded early year’s education children who achieved a good level of development at the end of the Early Years Foundation Stage (EYFS), (the year they become 5 years old) in London as a whole is 62.2 per cent, and for England, 60.4 per cent. The range of school readiness achieved by all London boroughs is such that almost half (16) of London boroughs achieved the same or more than this proportion, and half (17) achieved less.

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18 GLA Economics 2011 Early years interventions to address health inequalities London
Figure 7: Map showing percentages of children achieving a good level of development at age 5 in each London Borough for 2013-2014

Source PHE PHOF indicator 1.02i (original data from Dept for Education, EYFS Profile)

**Alternative indicators considered**

The proportion of children achieving a good level of development as a proportion of those eligible for free-school-meals was explored as an alternative measure of inequality in school readiness, since free school meal eligibility can be used as a proxy for child poverty. It was felt important to reflect school readiness for the whole local authority child population aged 5 years, rather than only those deemed the most deprived. This is because there are multiple determinants of child development, which may not always relate to socio-economic status and therefore it is important to measure the inequalities between the whole child populations in local authorities.
5. Educational achievement

**Indicator definition**
This indicator measures the proportion of pupils at the end of Key Stage 4 in schools maintained by the local authority that have achieved 5 or more GCSEs at grades A*-C (including English and Maths) or equivalent.

**Why this indicator?**
Educational attainment is influenced by multiple factors including both the quality of education that children receive their family socio-economic circumstances and the child’s health. Educational qualifications are a determinant of an individual’s labour market position, which in turn influences income, housing and other material resources. These all determine, and are inter-related to health and health inequalities. Educational attainment and early child development are determinants for future health and wellbeing, as stated in The Importance of Teaching - The Schools White Paper 2010. The importance of early child development is further mentioned in the Marmot Review “Fair Society, Healthy Lives”.

**The London Picture**
There are large inequalities between the boroughs in terms of the proportion of children achieving this level of educational achievement. The data shows a range from Lewisham where the value is 51.3 per cent to Kensington and Chelsea where it is 73.8 per cent. The extent of the inequality is unlikely to be as a result of the data limitations related to only local authority maintained schools contributing to the data. In fact it would be a reasonable assumption that the boroughs with the lowest values for educational achievement do not have a higher proportion of private or independent schools than those high achieving boroughs.
For 29 London boroughs in 2013/2014, the proportion of children achieving this level of educational achievement at GCSE is higher than for the whole of England (56.8 per cent). This makes the London wide value (61.5 per cent) higher than for England.

**Alternative indicators considered**

This GCSE data, published on the Department for Education website, is for local authority maintained schools only, therefore it does not include data from private or independent schools, although should include academies and Co-teaching collaborative (CTC) schools.

The data presented is attributed to the London borough of the school location and not the pupil residence, unlike the Child Health Profiles. However, this is a very complex situation in London as pupils may live and attend schools in very different boroughs, but have their health needs addressed by their resident borough.

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Whilst educational achievement is an important determinant of health, progression onto successful employment and income, wider training and skills achievement in adult life, is also key to determining health. For this reason, skills data, available from the Annual Population Survey, via the Office National Statistics (ONS), which captures the percentage of 16-64 year olds with NVQ2+ qualifications (defined as the equivalent of 5 A*-C GCSE grades but inclusive of several training qualifications for a wider age group), was reviewed for inclusion in the Health Inequalities Strategy delivery plan refresh. As with other Annual Population Survey data, the limited sample size of the survey presented wide confidence intervals around these estimates and therefore difficulty concluding whether there was any true difference between borough estimates or over time. In addition, the cohort surveyed is not representative of the borough populations as a whole and therefore may be misleading. On this basis, it was decided that whilst educational achievement is more limited to a particular age group leaving school, its data is collected more systematically with a larger sample. In addition, the ONS data does not capture information on foreign qualifications (other than in the National Census) and so wouldn’t capture the inequality intertwined with migration.
6  Antenatal late booking

**Indicator definition**

This indicator describes the proportion of pregnant women whose booking for antenatal care occurs after 12wks +6 days gestation. This data is given by Clinical Commissioning Group (CCG) patient population every quarter year.

NICE define booking later than 12 weeks +6days as ‘late’. Booking into antenatal care including screening and monitoring of the mother and developing foetus is recommended ideally by 8-10 weeks gestation

**Why this indicator?**

All women are recommended to access maternity services for a full health and social care assessment of their needs, risks and choices by 12 completed weeks of their pregnancy. This is to give people the full benefit of personalised maternity care and to improve outcomes and experience for the mother and baby.

Reducing the percentage of women who access maternity services later in pregnancy through targeted outreach work for vulnerable and socially excluded groups will help to reduce the health inequalities these groups face whilst also guaranteeing choice to all pregnant women.

This indicator can also be said to reflect, at a basic level, a family’s access to health and social care services, since women’s health seeking practices may influence their wider family in terms of engaging with services on health issues.

**The London picture**

NHS England data for late antenatal booking shows some important gaps in data collection for populations of patients served by different CCGs. This will be of concern in terms of tracking inequality going forward. The map shows an average proportion (Q1 and Q2 2013/2014) of pregnant women seen for their first antenatal care after 12 weeks and 6 days gestation for each CCG population which corresponds to the geographical areas shown. The grey areas are where CCG level data for this metric is not currently available.

Some of this lack of data can be explained by a change in methodology in its production by NHS England, meaning that some of the data does not meet the necessary validation criteria.

In addition, some 12-week risk assessment percentages are greater than 100, either because the indicator definition compares bookings for mothers with the number of maternities 2 quarters later, due to the impact of mothers suffering miscarriage, women choosing to undergo a termination, or women transferring to another hospital, or because women choose to undergo assessments at more than one hospital to enable them to compare maternity service provision resulting in double counting and a higher ratio of assessments to deliveries.
Figure 9: Map showing percentages of pregnant women first seen after 12 weeks and 6 days of pregnancy as an average of quarters 1 and 2 in 2013/2014


National/International comparisons

Under the Health and Social Care Act 2012, Primary Care Trusts (PCTs) were abolished by 2013, but some NHS data for the transition period remains aggregated by PCTs. These match the populations that London local authorities now have responsibility for in terms of health improvement and the coordination of health and social care. The exception to this is Sutton and Merton PCT which was replaced by separate CCGs for Sutton and for Merton, in line with the local authorities.

This map below shows that compared with most of England, many London boroughs have a higher proportion of women who access antenatal care late. This may reflect a poorer access to health and social care in London despite the high concentration of health care facilities. Other barriers to ‘access’ should be considered and it would be important to investigate this inequality in terms of ethnicity, deprivation, educational status, age and parity for example.


Figure 10: Map showing the proportions of maternities booking late for antenatal care in London compared to the rest of the UK, by PCTs before they were abolished (2012-2013 Quarter 2)

Number of women seen after 12 weeks and 6 days of pregnancy as percentage of maternities by PCTs by quartile in England 2012/13 Q2


Alternative indicators considered

Several other indicators were considered to reflect the Mayor’s Health Inequalities Strategy objective of ‘Equitable access to health and social care’. These included GP non-registration and rates of screening uptake.

Since access to health and social care services in the UK rely heavily upon access to primary care, GP non-registration was felt to be a reasonable proxy measure for ‘access inequalities’. However, there are several problems with this data related to over-inflated registration lists, reflecting a very mobile London population, large student population and lack of data cleaning within primary care. Alternative data sets such as Hospital Episode Statistics data were

investigated as proxy options, however these were not deemed to be representative or valid approaches to capturing general population access to health and social care services, capable of demonstrating inequalities.

Screening data captures non-uptake in very specific population groups depending upon the target population. No screening programme was identified that was generic enough to serve as a useful proxy for population access to health and social care services. The most generic of the screening programmes, NHS Health Checks targets 40-74 year olds for both genders; however as a relatively junior programme with great diversity across London in programme scale and scope, this would introduce considerable confounding and biases to the interpretation of such data for this purpose.

The limitations of using the antenatal care late booking data as opposed to a more direct measure of access to health and social care services, relate to its inability to reflect demographic groups in a population (such as single men, transgender, and complete migrant families).
4. **Rate of vulnerable road user fatalities and serious injuries**

**Indicator definition**
This indicator describes the rate of fatalities and serious injuries per billion passenger-kilometre (hence adjusted for boroughs with busier roads than others), for vulnerable road users (pedestrians, cyclists and motorcyclists), making adjustments for different degrees of sharing between modes of transport in the boroughs. We can interpret this as a ‘risk level’ for people using the roads as pedestrians, cyclists or motorcyclists, per London borough, which represents a proxy for healthy places conducive to safe active travel.

**Why this indicator?**
Working towards and maintaining healthy places for people to live is an important objective of the Mayor’s Health Inequality Strategy. A ‘healthy place’ can be defined, in part, by the safety of its streets for active travel that has been shown to promote physical and mental health, and also contribute less to environmental damage, poor air quality and noise.

There is no simple indicator that accurately, wholly, annually, and objectively measures ‘healthy places’ in order to make comparisons between boroughs. This indicator includes the number of casualties amongst those undertaking active travel on London borough roads. It is a reasonable proxy for multiple aspects of healthy places and engages one of the GLA groups’ largest members, Transport for London (TfL). TfL define ‘vulnerable road users’ (VRUs) as pedestrians, pedal cyclists and motorcycle riders, and they have been identified as a key target group for policy work.

VRUs are considered to be populations who may also be experience other more general health inequalities, such as experiencing socio economic deprivation. In addition to this, they represent modes of travel that are promoted as ‘healthier’ and therefore ensuring they are safe is key to reductions in health inequalities. It is also important to remember that the vast majority of road traffic collisions are preventable and can be avoided through improved education, awareness, road infrastructure and vehicle safety.

It is important that this data has been controlled for mode share differences across boroughs, since this means that if two boroughs have the same risk levels for the same modes, but different mode shares, they will have the same adjusted casualty rate. This ensures comparison between boroughs is not misleading because of differences in proportional use of modes of transport.

The bars in Figure 11 represent the 90 per cent confidence intervals. Some are relatively wide reflecting the fact that both collision and particularly exposure data is quite sparse once disaggregated to borough level. Most of the intervals overlap the ‘all London’ interval, suggesting that there is no certainty of a difference in risk. However, some boroughs do stand out as being above or below average, potentially meriting further investigation.
Figure 11 Vulnerable road user risk level controlling for mode share KSI rate per billion passenger-kilometres by London borough within 90% confidence intervals, 1st April 2010 to 31st March 2014

Source: TfL.
Note: For each of the boroughs TfL is 90% confident that the calculated casualty KSI rate for VRUs falls within the specified range. Vulnerable Road User (VRU) rate is weighted based on average modal share (Pedestrian, Pedal Cycle and Powered 2 Wheeler) across boroughs. Data includes London residents aged 5+ injured during the course of personal travel.
The London picture
According to this data there are several London boroughs that have a vulnerable road user risk level considerably higher than the average for the London region. These include Ealing, Croydon, Haringey, Enfield, Lewisham, Hackney, Tower Hamlets, Barnet, Brent, Waltham Forest and Lambeth. Some of these differences may be attributable to the state of the roads, the road environment for vulnerable road users, and the speed of traffic. All of these factors play a part in the overall healthiness of the place, as the road infrastructure and urban environment needs to be modified to allow humans to live healthily including encouraging the use of active travel modes of transport.

National comparisons
There is no similar data available for England since this is collated by Transport for London.

Alternative indicators considered
In order to capture the inequalities under the strategy’s objective of ‘healthy places’, several other data indicators were considered including ‘access to green space’, ‘excess winter deaths’ and ‘fuel poverty’.

Regular use of good quality natural environments is associated with higher health and well-being, however there are clear inequalities in access and use of natural environments. According to the Institute of Health Equity’s Natural Solutions to Tackling Health Inequalities 2014 report, people living in the most deprived areas are 10 times less likely to live in the greenest areas, and are therefore more likely to experience worse health outcomes. The Public Health Outcomes Framework reports on ‘Utilisation of outdoor space for exercise/health reasons’, which uses data from Natural England’s Monitor of Engagement with the Natural Environment (MENE) survey. However, this data is extremely variable across London boroughs suggesting important methodological challenges, which limit the certainty of any conclusions. The confidence intervals are variable – many are very wide in areas where the effective sample size is small. There are many confounding factors for the association between access to ‘outdoor space’ (not necessarily defined as ‘green’) and improved health. It is difficult to adjust for these factors using this survey. However, it would be important to consider how in future the accuracy and validity of this data may improve, as the environment that populations have access to is likely to be important to understand and tackle health inequalities.

As an alternative, access to green space data from the GLA’s London Datastore, London Ward well-being scores was considered. This tool uses ‘Access to public space and nature’, a composite metric of distance from public open space, the proportion of homes with good access to green space, and the proportion of the ward which is green space. These data sets were sourced from the ‘Green Space Information for Greater London’ and Ordnance survey. Unfortunately, the validity of this data is also questionable, since the confidence intervals and sample size or representativeness of the samples could not be assessed.

24 Institute of Health Equity 2014; Natural Solutions to Tackling Health Inequalities
25 Greater London Authority; London Ward well-being score tool 2014;
http://data.london.gov.uk/dataset/london-ward-well-being-scores
The Excess Winter Deaths (EWD) Index represents the ratio of extra deaths from all causes that occur in all those aged 85 and over in the winter months, compared with the expected number of deaths, based on the average of the number of non-winter deaths in those aged 85 and over. The number of excess winter deaths depends on the temperature and the level of disease in the population as well as other factors, such as how well equipped people are to cope with the drop in temperature. Most excess winter deaths are due to circulatory and respiratory diseases, and the majority occur amongst the elderly population, making it a useful indicator for the life course approach to measuring health inequalities. Since these are deaths above the expected rates, some broad assumptions can be made about how preventable these deaths are. However this data, via the Public Health Outcomes Framework, appears highly variable with wide confidence intervals, many of which overlap and therefore present no certainty of true differences between London boroughs.

Fuel poverty, is a link to the objective of ‘healthy places’. Fuel poverty data was also considered at length as a collation of income, fuel prices and fuel consumption (dwelling characteristics and lifestyle of the household), and a potential proxy for healthy places & experiencing income inequalities. The Public Health Outcomes Framework Indicator 1.17 (with data originally from Department of Energy and Climate Change (DECC)) shows the percentage of households that experience fuel poverty based on the "Low income, high cost" methodology, on an annual basis, for each London borough. However, this data shows that the relationship between fuel poverty and deprivation is not straightforward in London. Some of the more deprived boroughs have the lowest levels of fuel poverty, while some of the highest levels are in less deprived boroughs in outer London. This may be related to issues such as size and quality of housing stock (larger and older homes in outer London for example). Unfortunately it was felt that whilst fuel poverty is an important determinant of poor health in some areas and capable of compounding the issues with other poor determinants of health, the data for fuel poverty in London does not help us to broadly understand and illustrate health inequalities.
5. **Homelessness – Statutory, rough sleepers and homelessness prevention**

**Indicator definition**
In order to describe the situation of homelessness in London, three indicators will be presented.

a) **Numbers in temporary accommodation from statutory homelessness figures**
This indicator (a snapshot of the number of households in temporary accommodation per thousand households, all ages and all persons) is a Department for Communities and Local Government (DCLG) department impact indicator. These data demonstrate the number of homeless households in temporary accommodation awaiting a settled home.

b) **The change in number of rough sleepers (CHAIN data) in each borough (2013/14 – 2014/15)**
Rough sleepers have an average age of death that is 30 years younger than the average population. They suffer profound chronic physical and mental health conditions which can be a contributory factor in rough sleeping as well as a consequence. This indicator illustrates how each London borough is doing to alleviate rough sleeping, a severe determinant of health inequalities.

c) **Rate of Homelessness Prevention (or Relief) per 1000 households**
A huge proportion of homelessness is preventable with measures in place via the local authorities to mitigate the risk of an individual or family becoming homeless. Some of these measures include legal advice, financial support to cover rents that are due etc., prior to a homelessness application being filed. This indicator represents the rate of homelessness prevention per 1000 households for each London borough on an annual basis.

**Why this indicator?**
Homelessness is associated with severe poverty, and can result in adverse health, education and social outcomes, particularly for children. There are many different circumstances that culminate in homelessness and there are also many different types of people who become affected. This means there are many different types of homelessness which result in or from health inequalities.

To be deemed statutorily homeless a household must have become unintentionally homeless and must be considered to be in ‘priority need’. As such, statutorily homeless households contain some of the most vulnerable and needy members of our communities. Preventing and tackling homelessness requires sustained and joined-up interventions by central and local government, health and social care and the voluntary sector.

However, whilst this data is extremely important for understanding homelessness as a cause and/or consequence of health inequalities amongst particular vulnerable adults, the statutory homeless definition does not include all groups whose living environments are neither healthy, safe or secure and for whom health inequalities is also a huge issue. For example, many single people who become homeless do not fit the priority need criteria for statutory homelessness and also rough sleepers with very complex needs may not approach London boroughs for help and therefore be missing from these figures. This also includes non-UK nationals whose immigration status renders them ineligible for acceptance as statutorily homeless.
In order to capture some of these missing groups, and also to reflect the work of London boroughs in preventing and relieving cases of homelessness, two other indicators are used here. Boroughs addressing non-statutory homelessness as a determinant of poor health may have higher rates of homelessness prevention and relief and lower numbers of rough sleepers. This will, only in part, reflect the systems in place to address the housing and health needs of people facing homelessness or rough sleeping, since mobility, migration, the geography of inner versus outer London and other factors will affect this data in the capital.

**The London picture**

Statutory Homelessness

**Figure 12: Map showing the crude rate of households placed in temporary accommodation per 1000 estimated total households of all ages by all London boroughs for 2014-2015**

Source: Department for Communities and Local Government

There is large variation in statutory homelessness rates across London, with the lowest in Merton at 1.75 per 1000 estimated total households and the highest in Newham at 29.92 per 1000 households. Rates of statutory homelessness rely upon the local connections that people have with certain boroughs, which goes some way to explain the pattern of higher rates in central London, such as Westminster. Brent, Newham and Haringey have relatively high rates of statutory homelessness, perhaps reflecting the levels of deprivation. This may also be related to

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26 Data not available for Barking and Dagenham
the connections that people vulnerable to homelessness have to boroughs where they have worked or lived previously.

Due to the fact that local governments have a statutory duty to support these individuals to find temporary and later permanent accommodation, the data validity is relatively good for this indicator. 95 per cent confidence intervals are relatively narrow and there is reasonable certainty that there are statistically significant differences between boroughs.

**Figure 13: Graph showing the change in the number of rough sleepers in each London borough from 2013/2014 to 2014/2015**

![Graph showing the change in the number of rough sleepers in each London borough from 2013/2014 to 2014/2015](image)

Source: CHAIN database.

*Note: Change since 2014 shown as increase in red and decrease in blue.*

This component of the indicator for homelessness captures the changing numbers of rough sleeping in each London borough. There is large variation between boroughs, from Westminster who have seen an increase of 373 rough sleepers comparing those two years, to Ealing where there has been a reduction of 30 recorded rough sleepers. The table (below) shows the numbers of rough sleepers in each borough since 2011.

There are obviously many factors affecting the counting of rough sleepers for the CHAIN database, however this data is useful to inform us of the trends of rough sleeping, a group who are affected by some of the most severe health inequalities.

The following table presents the number of rough sleepers in each borough.
Table 1 Number of people seen sleeping rough in the year, by borough, 2011/12 to 2014/15

<table>
<thead>
<tr>
<th>Borough</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>Change since 2013/14</th>
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<tbody>
<tr>
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<td>2197</td>
<td>2570</td>
<td>373</td>
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</tbody>
</table>

Source: GLA CHAIN rough sleeping annual report 2014/15, table 2.10

Homelessness prevention rates refers to the ability of the London borough to either obtain alternative accommodation for the family or individual at the point at which the person/people would be vulnerable to homelessness, or be assisted to remain in their existing home through such interventions as help with rent or legal negotiations. This data captures a large proportion of the work of local government on homelessness which may address the needs of people who do and don’t fit the criteria of statutory homelessness, before they are faced with either temporary accommodation or rough sleeping. These are therefore crucial interventions for reductions in health inequalities.
Figure 14: Graph showing rate of homelessness prevention per 1,000 households in London boroughs in 2014/2015.

Successful prevention of homelessness rates differ from 0.77 per 1,000 households in Hounslow and 0.92 per 1,000 households in Wandsworth to 26.38 and 26.36 per 1,000 households in Barking and Dagenham and Redbridge respectively. Many factors will influence these figures, such as the size of the homelessness problem being reported to the borough, the nature of the homelessness circumstances, the degree to which London boroughs are prioritising the homelessness prevention services and/or the effectiveness of service or housing stock availability.

Source: DCLG
National comparisons
In 2014/15, 17,530 households were accepted as statutorily homeless in London, 32 per cent of the national total.\textsuperscript{27}

In 2014/15, a total of 220,800\textsuperscript{28} cases of homelessness prevention or relief are estimated to have taken place outside the statutory homelessness framework in England. There were 7,000 (3.1 percentage points) fewer cases of homelessness prevention or relief during this period compared with 2013/14.

In England in 2014/15, 47 per cent of cases of homelessness prevention involved the household being assisted to obtain alternative accommodation. The remaining 53 per cent involved the cases being assisted to remain in their existing home.

Alternative indicators considered
There are several other potential data sources/indicators that were considered to reflect the health inequalities associated with housing in London. These were the Housing Health and Safety Rating System (HHSRS) hazards data (at London borough level), overcrowding data or Energy performance certificate data.

A HHSRS indicator would have been the ‘Total number of ALL dwellings with category 1 hazards (HHSRS) in the London Borough Area’; however there were a number of issues with this data. Firstly there is considerable heterogeneity in the figures suggesting that some boroughs have thousands of homes in their area with hazards, whilst some report implausibly low figures (e.g. zero in some cases). In addition there are discrepancies in the data for example, Bexley reporting zero homes with hazards overall, but 16,272 in the private sector (!), while the Kensington and Chelsea figure is enormous (68,630 homes in the private sector alone). It was felt that whilst these figures are derived by individual reporting practices of environmental health teams in boroughs with little standardisation of collection and reporting practices, these differences were too large to be as a result of inconsistent collection practices, but more likely due to more fundamental errors in the data. That said, the data validity and reliability was deemed to be too low for the purpose of understanding health inequalities.

Overcrowding data would have been useful in understanding health inequalities. Overcrowding is associated with poorer mental health, physical health, childhood growth, education and development, and other personal health and safety issues such as fire risk.\textsuperscript{29,30} However, overcrowding statistics available via the Office for National Statistics (ONS), are only collated every 10 years from the census. Therefore we cannot track these meaningfully over the 3 year period of the new delivery plan.

\textsuperscript{27} GLA, Housing in London 2015
\textsuperscript{28} https://www.gov.uk/government/collections/homelessness-statistics
Influenza vaccination coverage for those in medical high-risk groups, and >65 year olds

**Indicator definition**

As another marker of access to health and social care, this time focusing on access amongst older people in London, and amongst those with long term medical conditions, this indicator describes the proportion of eligible adults in both those groups who have received the vaccine for influenza. This data is reported annually in the Public Health Outcomes Framework.

**Why this indicator?**

Vaccination coverage is the best indicator of the level of protection a population will have against vaccine preventable communicable diseases, but uptake of vaccination can also be used as a proxy indicator for access to the services within which they are provided. Inequalities can exist across the life-course, and this indicator was chosen to help describe the inequalities that may exist amongst older people, an important and vulnerable group in terms of ill-health. Health inequalities also exist between people who are fit and well and those who have already been diagnosed with an existing long term medical condition. The prevention of influenza in those already more vulnerable to this disease is essential to help reduce this inequality.

The Department of Health (DH) recommends that the seasonal trivalent influenza vaccine be offered to all GP patients aged over 65 years, and all those with long term conditions. This relies on these patients having access to primary care in the first place and this in itself is a good indicator of onward access to other services such as social care, since GPs are still seen as the gateway to such services in the UK. In undertaking the monitoring surveillance programme, Public Health England’s Health Protection Directorate help to identify groups and geographical areas where coverage is low in London, demonstrating inequalities in ‘access’, in its broadest definition.

**The London picture**

Sixty nine per cent of people aged over 65 years old in London were immunised against influenza between 1st September 2014 and 31st January 2015. Tower Hamlets and Newham had the highest percentage take up, 75.43 and 75.21 per cent respectively. Hammersmith and Fulham had a 61.69 per cent take up amongst people aged over 65.

In London, almost fifty per cent of at risk individuals aged between six months and 65 years, (with chronic medical conditions and excluding pregnant women) were immunised against influenza between 1st September 2014 and 31st January 2015. Merton, Hounslow and Bromley had the lowest take up, whereas take up was highest in Redbridge and Waltham Forest.
Figure 15: Percentage of eligible at risk population who had the influenza vaccination for 2014/15 between the ages of >6 months & <65 years (excluding pregnant women)\textsuperscript{31}

Source: PHE, Public Health Outcomes Framework;

Figure 16: Map showing the proportion of eligible >65 year old population who had the influenza vaccination, 1st September and 31st January 2014/2015

Source: PHE, Public Health Outcomes Framework

\textsuperscript{31} Flu vaccine uptake between 1st September and 31st January in a primary care setting (GPs)
National comparisons
In 2014/15, the majority of London boroughs have lower uptake for flu vaccinations in the eligible at risk population (>6 months < 65 years with chronic medical conditions; excluding pregnant women) than the England average of 50.27 per cent. Among the over 65 year-old population, the majority of London boroughs have higher uptake for flu vaccinations than the average for England, 72.74 per cent.

Alternative indicators considered
See other data considered under late booking to antenatal care, as proxies for equitable access to health and social care.

Table 2 Flu vaccination coverage (percentage), at risk individuals, by age and London borough, 2014/15,

<table>
<thead>
<tr>
<th>Area</th>
<th>6 months-64 years</th>
<th>65 years and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of London</td>
<td>46.58</td>
<td></td>
</tr>
<tr>
<td>Barking and Dagenham</td>
<td>57.43</td>
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<td>Southwark</td>
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<td>68.14</td>
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<td>Sutton</td>
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<td>70.28</td>
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<td>Tower Hamlets</td>
<td>61.12</td>
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<td>70.20</td>
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<td>51.57</td>
<td>69.83</td>
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<tr>
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<td>65.31</td>
</tr>
<tr>
<td><strong>London</strong></td>
<td><strong>49.75</strong></td>
<td><strong>69.24</strong></td>
</tr>
<tr>
<td><strong>England</strong></td>
<td><strong>50.27</strong></td>
<td><strong>72.74</strong></td>
</tr>
</tbody>
</table>

Source: PHE, Public Health Outcomes Framework
Note: Value for Westminster and City of London combined
10. Proportion of employees receiving less than the London Living Wage

Indicator definition
This indicator uses data from the Annual Survey of Hours and Earnings (ASHE), to provide estimates of the proportion of employees earning less than the London Living Wage by London borough, comparing resident and working populations.

Why this indicator?
The London Living Wage represents what the Greater London Authority assesses as the minimum wage needed to meet basic living expenses in the capital (set at £9.40 an hour in November 2015, 40 per cent above the National Minimum Wage of £6.50), reflecting the higher costs of living in London. The proportion of London based employees and residents that are still not in receipt of the LLW can tell us the size of the income inequality that has the potential to affect Londoners health.

Tackling low pay would have a positive impact on individuals and their families’ health and also on London’s employers and the wider economy. Higher wages mean a healthier, more loyal and productive workforce, leading to higher productivity, but also higher consumer spending and therefore wider economic growth, benefiting the health and well-being of the community more widely.

The London picture
Low pay contributes to poverty which contributes to poorer health in London. Over 2 million Londoners are in poverty and of these over half live in households with at least one person in work, demonstrating that employment alone, whilst an important determinant of health, may not offer the financial security needed for economic well-being.

The London Living Wage represents what the Greater London Authority assesses as the minimum wage needed to meet basic living expenses in the capital (currently £9.40 an hour). In 2014, there were an estimated 800,000 Londoners earning less than the Living Wage, the majority women and the majority are part-time workers. You are also more likely to be in a low-paid job if you are from a Black, Asian or other minority ethnic group. Older people are more likely to suffer long term low pay than their younger counterparts. Low pay in London is concentrated in a number of sectors. There is a high concentration in the private sector; jobs in retail, hotels and restaurants account for 50 per cent of all low-paid jobs in London.

Low pay is also concentrated in certain geographical areas in London, the majority in the outer London boroughs.

Whilst London coped reasonably well with some of the pressure of the economic recession, inequalities in earning and incomes increased between 2006-08 and 2010. Those living on the

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32 A new minimum wage of £7.20 has been introduced for over 25s
33 Trust for London, London’s Poverty Profile October 2013
34 A Fairer London, the 2014 Living Wage in London, GLA Economics, November 2014
35 Trust for London, London’s Poverty Profile October 2013
36 London Assembly ‘Fair Pay: Making the London Living Wage the norm’ Feb 2014

36
lowest incomes were the hardest hit, and their incomes after housing costs fell by 24 per cent in real terms compared with 3.5 per cent nationally.\textsuperscript{37}

The inequalities represented by whether or not employees are achieving the London Living Wage vary depending on if you view the data for London borough of residence or London borough of workplace. The former can be used if the concern is for the potential health and well-being consequences of lower hourly income that the set standard for London and the latter is more useful in terms of knowing where to target workplace interventions around the London Living Wage. It is important to remember that this data only tells us about the working (not unemployed or retired) populations in terms of income inequality. It does not account for the number of hours you work, whether or not they are fixed contract hours or ad hoc, whether people have more than one job, and what other sources of income each individual or economic unit (such as a family/household) may have that contributes to overall wealth and therefore health.

\textbf{Figure 17 Proportion of employees resident in London local authorities, paid less than the London Living Wage, 2014, including 95\% confidence intervals}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure17}
\caption{Proportion of employees resident in London local authorities, paid less than the London Living Wage, 2014, including 95\% confidence intervals}
\end{figure}

\textsuperscript{37} Lupton R et al, Poverty, prosperity and inequality in London 2000/01-2010/11, July 2013

Figure 17 shows that for residents of London boroughs, the proportion of those employed at below the London Living Wage varies greatly from 12.5 per cent to 37.8 per cent. This tells us that there are large proportions of people who are not earning the sufficient wage needed to
meet basic living expenses in the capital. There is great inequality between populations in different boroughs.

Many of the boroughs with the greatest proportion correlate with the most deprived boroughs in London. We should also be aware that some people will be working outside of the London boroughs but living within them.

**Figure 18 Proportion of all employee jobs of people working in the London Local Authority in 2014 where employees earned less than the LLW, including 95% confidence intervals**

The order and values change when we look at the data by workplace since boroughs such as City of London and Tower Hamlets host large numbers of high paying employers, whose employees do not live in the borough. Many of the poor performing boroughs, with high proportions of employers not providing LLW to employees are still in outer London.

*Source: Annual Survey of Hours and Earnings (provisional) 2014, ONS*
Figure 19: Map showing the proportion of jobs in London boroughs where employees are earning less than the London Living Wage in April 2014.

Annual Survey of Hours and Earnings (ASHE).

**National comparisons**

It should be noted that whilst average London wages are already well above the national average, by nearly 30 per cent, this is reflective of both London’s economy dominated by professional and managerial services such as the financial, information and communication and real estate, and the need to afford the higher cost of living in the capital.

However, the difference from the national median is greatest at the top end of the income distribution (41.3 per cent at 90th percentile), whilst at the 10th percentile the difference is 15.8 per cent highlighting that Londoners receive higher remuneration in unequal proportions across the income scale.  

**Alternative indicators considered**

Fuel poverty was also considered as an indicator to represent income inequality. See the section on Rate of vulnerable road user casualties and serious injuries, alternative indicators considered for a discussion of the limitations with fuel poverty.

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38 London’s Changing Economy since 2008, GLA 2015
11. Unemployment rates

Indicator definition
This indicator shows modelled-estimates of unemployment rates (as a percentage of the resident population) for London boroughs, that have been modelled from estimates at regional and country level produced from Annual Population Survey data. As the unemployed form a small percentage of the population, the Annual Population Survey (APS) unemployed estimates within local authorities are based on very small samples and so for many areas are unreliable. To overcome this, model-based estimates have been developed that provide better estimates of total unemployed for local authorities. These model-based estimates are only available for total unemployed; they are not produced for males or females separately.

Why this indicator?
Unemployment is associated with poorer health, resulting not only from the impact this has on income and economic status, but from the social and emotional well-being aspects of social interaction, a sense of purpose and identity. Due to a change in the benefit system in the last few years in the UK, it is no longer valid to track those out of work via the numbers receiving state benefits. Therefore unemployment rates from modelled estimates are now considered the best way of tracking this determinant of health at local authority level, which is in agreement with the latest Marmot Indicator report (2014).39 Unemployment has been particularly high since the financial crisis of 2008 which is likely to have the biggest impact on those already most vulnerable, perpetuating health inequalities.

The London picture
There is large variation between London boroughs’ unemployment rates, with 4.4 per cent in Richmond-on-Thames (lowest) and 10.5 per cent in Barking and Dagenham (the highest). The London boroughs with the highest unemployment rates are Barking & Dagenham and Newham despite considerable investment relating to the Olympics.

National comparisons
The average unemployment rate in London (6.7) was slightly higher than the national average (5.9) according to 2014-2015 figures. Twenty two of the London boroughs have unemployment rates that are higher than England; reasonable statistical certainty supports that this is a true difference.

Alternative indicators considered

One consideration for this aspect of the data was the number of people ‘Not in education, employment, or training’ (NEETs). As discussed by Marmot in the recent health inequalities indicator report, being NEET at a young age is associated with poorer outcomes in the future. However, this indicator is now less helpful to demonstrate health inequalities of this nature, due to the changes in policy stating that all young people are recommended to remain in education or training until the age of 18. Previously the number of people aged 16-19 who were NEET was a useful indicator of discrepancies in work and income, and future economic prospects of populations. The change in policy has reduced the numbers who are NEET in the 16-19 year old group, making the data less valid and meaningful for demonstrating difficulties accessing work after education.40

40 Institute of Health Equity; Sept 2014; Marmot Indicators: A preliminary summary with graphs; Strategic Review of Health Inequalities post 2010
12. **Childhood excess weight and obesity**

**Indicator definition**
This indicator shows the proportion of children aged 4-5 years who are classified as overweight or obese. Children are classified as overweight (including obese) if their BMI is on or above the 85th centile of the British 1990 growth reference (UK90) according to age and sex. This data is collected by the National Child Measurement Programme and is reported annually in the Public Health Outcomes Framework.

**Why this indicator?**
Being overweight or obese represents one of the most widespread threats to health and wellbeing in the UK. Obesity has become one of the biggest public health challenges for all age groups, and there are clear health inequalities with regards to obesity. There are higher levels of obesity found among more socioeconomically deprived groups and this association is stronger for women than for men. Data from the Health Survey for England indicate that for women, obesity prevalence increases with decreasing socioeconomic position. There are considerable inequalities in obesity prevalence for children, both girls and boys, and across different age groups. There is an almost linear relationship between the prevalence of obesity in children and the Index of Multiple Deprivation 2010 (IMD) score for the area they where they live; child obesity in the most deprived areas almost twice as prevalent as in the least deprived areas.

Childhood obesity can be a determinant of many secondary health and social problems and health inequalities throughout the entire life span. Tackling childhood obesity requires a whole system, and multiagency approach. Among other things, it is strongly related to the ever-increasing obesogenic environment especially in urban areas, poor diet, food poverty and the food industry, and lack of physical activity or access to green space.

This indicator demonstrates obesity rates in 4-5 year olds as measured by The National Child Measurement Programme (NCMP), which surveys around one million children every year in England.

Tackling childhood obesity is essential to curb the growing prevalence of morbidity associated with conditions such as diabetes, cardiovascular disease and mental ill-health. Aside from the actual population health benefit and the cost benefit to the health and social care system in the future, there would also be the societal benefits of fitter, healthier people who are economically productive.

**The London picture**
London as a whole has a higher proportion of 4-5 year olds classed as overweight or obese compared to England in 2013/14. There are stark differences between these statistics for various London boroughs, ranging from 28.6 per cent in Greenwich, 28.0 per cent in Southwark to 17.1 per cent in Kingston-on-Thames. There is reasonable certainty in this data since the confidence intervals are narrow. Some of this inequality between boroughs relates to

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42 National Obesity Observatory; Child Obesity and Socioeconomic Status Factsheet 2014
socioeconomic deprivation such that the most deprived borough populations have the higher proportions of overweight and obese children.\textsuperscript{44} See Figure 21 on page 44.

**National comparisons**

There are 11 London boroughs who have, with reasonable certainty, higher proportions of children aged 4-5 year olds classified as overweight or obese than the figures for England as a whole for 2013/2014. There is reasonable statistical certainty for a difference between the average figure for London (23.1 95% CI 22.7-23.6) and England as a whole also (22.6 95%CI 22.4-22.7), suggesting a greater proportion of London’s 4-5 year old population are classified as overweight or obese than nationally.

**Alternative indicators considered**

The reason for choosing the younger age group data for childhood obesity was because of the evidence of the longer term impact on health in very young children. As with many other data sets there is the potential for error in the collection, collation and interpretation of this data from the National Child Measurement Programme (e.g. bias may be introduced due to poor response rates and selective opt out of larger children which it is not possible to control for).

**Conclusion**

These 12 data indicators cover a range of determinants of health and health outcomes that exhibit health inequalities. They span the five objectives of the Mayor’s Health Inequalities Strategy 2010. It is important for the new delivery plan 2015-2018, that these indicators meet the necessary criteria for the specific purpose of helping to understand health inequalities in the London region and between London boroughs. This report has described the rationale for choosing these 12 indicators. It also demonstrates transparency in the selection process, by explaining other data sources that were considered, but for reasons of data quality, interpretation or availability, deemed inappropriate or insufficient for this specific purpose. The chosen 12 indicators will be described in a separate section of the new delivery plan; however this report should serve as a more detailed reference document for future discussion.

\textsuperscript{44} Greater London Authority; Childhood Obesity in London report; April 2011
Figure 21: Graph showing the proportion of 4-5 year olds classified as overweight or obese in London boroughs for 2013/2014

### Appendix A. Stakeholders Engaged on the Health Inequalities Strategy Delivery Plan

<table>
<thead>
<tr>
<th>Stakeholder groups</th>
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<tbody>
<tr>
<td><strong>GLA Group</strong></td>
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<tr>
<td>GLA Diversity and Social Policy</td>
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<td>GLA Economic Development Team</td>
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<td>GLA Education and Youth Team</td>
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<td>GLA Environment Team</td>
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<td>GLA Health Team</td>
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<td>GLA Housing Team</td>
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<td>GLA Intelligence Team</td>
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<td>GLA Peer Outreach Team</td>
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<td>GLA Skills and Employment</td>
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<td>London Assembly Health Committee</td>
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<td>Mayor’s Office for Policing and Crime Team London</td>
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<td>Transport for London</td>
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<td><strong>Mayor’s Advisory Panels</strong></td>
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<tr>
<td>Annual Trans Stakeholder Group</td>
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<tr>
<td>Deaf and Disabled Forum</td>
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<td>LGBT Community Organisations</td>
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<tr>
<td>Mayor's Older People's Advisory Forum</td>
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<td>Mayor's Refugee Advisory Panel Migrant and Refugee Community Organisations)</td>
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<tr>
<td>Men’s Health Forum</td>
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<tr>
<td><strong>Health Organisations</strong></td>
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<tr>
<td>Directors of Public Health Inequalities Event</td>
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<tr>
<td>London CCG Council</td>
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<tr>
<td>London Health Chief Officers Group (CCGs and NHS England)</td>
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<tr>
<td>NHS England - National Health Inequalities Team</td>
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<tr>
<td>NHS England (London) – Health and Justice</td>
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<td>Public Health England – Health Equity Team</td>
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<td>Public Health England – Knowledge and Intelligence Team Network</td>
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<tr>
<td>Public Health England – London Drugs and Alcohol Team</td>
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<td>Public Health England - London Region</td>
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<td><strong>Other Government Organisations</strong></td>
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<td>London Voluntary Service Council</td>
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<td>Poverty and Child Health Seminar</td>
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<td>Revolving Doors Agency</td>
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<td>Stonewall Housing (LGBT housing advice and support)</td>
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<td>The King’s Fund</td>
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<td>Trust for London</td>
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<td>Women Like Us</td>
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