

BIRMINGHAM HEALTH PROFILE 2019



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Introduction

This profile is one of a series of reports containing demographics and data relating to the health and wellbeing of the citizens of Birmingham at a local area level.

Birmingham's health and social care organisations use a locality model to deliver services across the city. Birmingham has 5 localities each made up of 2 constituencies. These are:

- Central: Hall Green and Selly Oak constituencies
- East: Hodge Hill and Yardley constituencies
- North: Erdington and Sutton Coldfield constituencies
- South: Edgbaston and Northfield constituencies
- West: Ladywood and Perry Barr constituencies.

Birmingham Public Health are currently consulting on a draft vision and strategy which is to improve and protect the health and wellbeing of Birmingham's population by reducing inequalities in health and enabling people to help themselves. These are our draft priorities which are underpinned by addressing health inequalities and an intention to maximise the public health gains from hosting the Commonwealth Games in 2022.

Birmingham Public Health: Priorities on a Page

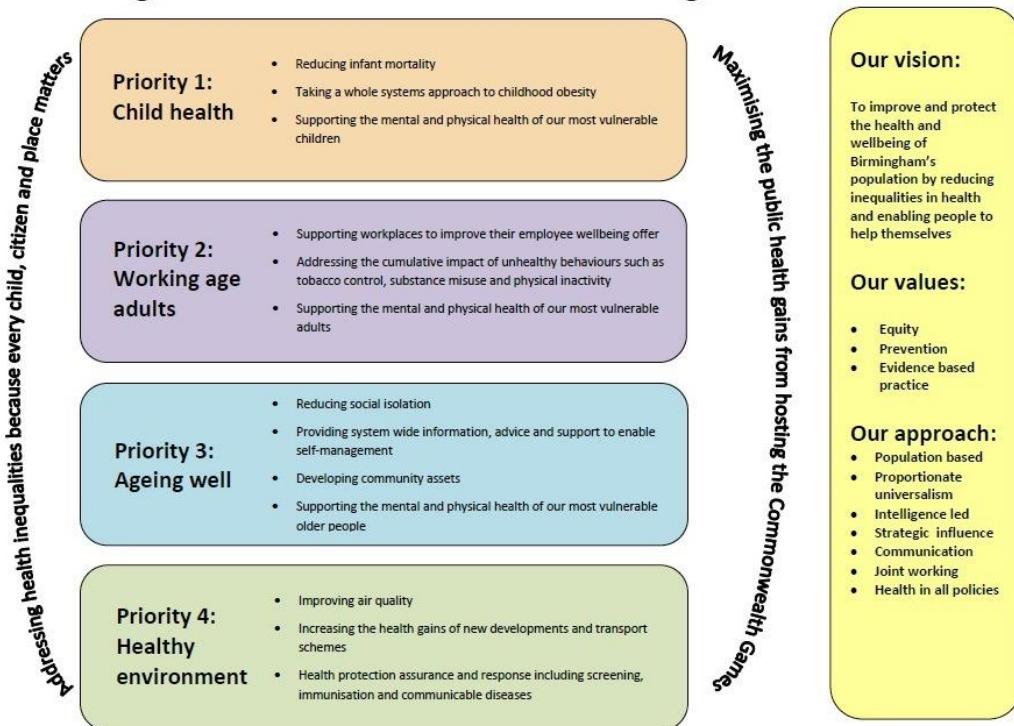


Figure 1 – Draft Birmingham Public Health Priorities 2019

There is a variety of information available on each local area, including demographics and public health priorities. These profiles allow health and care organisations to identify public health issues in their local area and work with Birmingham Public Health to improve local services.

Demographics

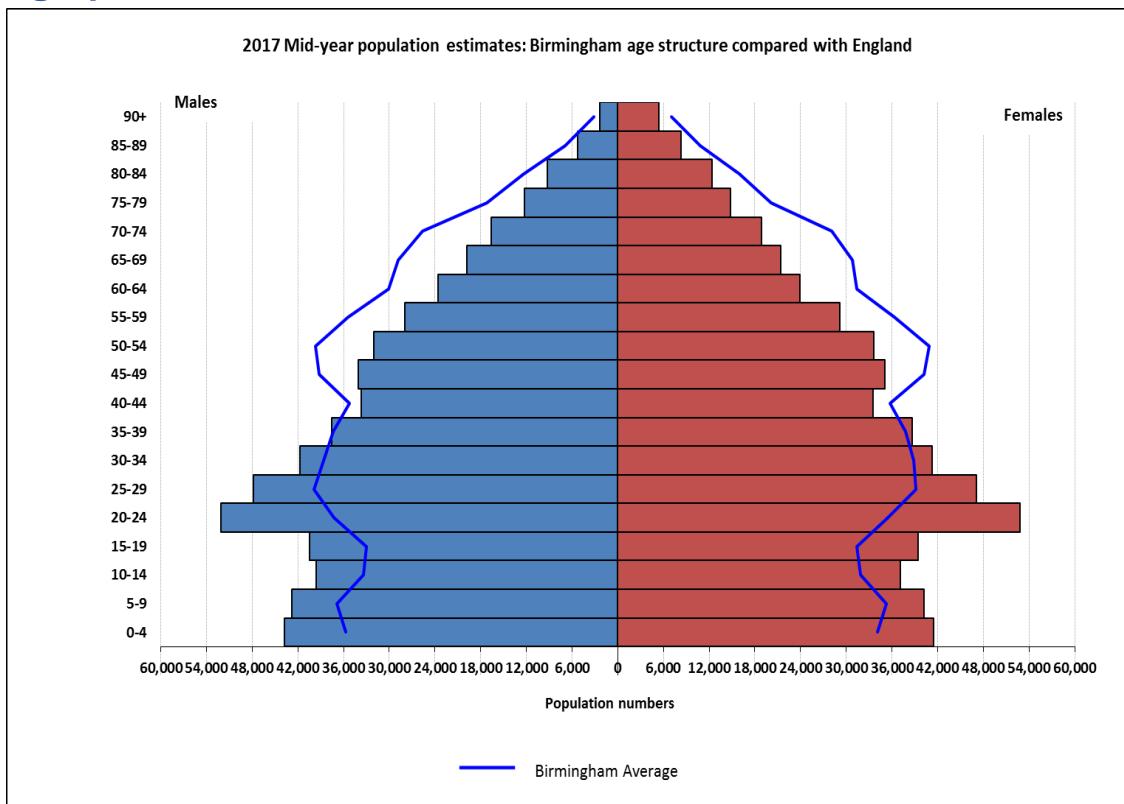


Figure 2 - Birmingham population pyramid. Source: ONS 2017MYE

It is estimated that there are approximately 1,137,150 people living in Birmingham (ONS 2017 mid-year estimates). Of these 49.5% are male and 50.5% are female. The population are predominately aged under 45 years old (72%). The 2011 Census estimated that 42.1% were from Black, Asian and Minority Ethnicity groups as opposed to 42% within Birmingham as a whole and 15% nationally.

During 2013 to 2017 Birmingham saw just over 102,000 migrants register with GPs across the city.

Life Expectancy

Life expectancy in Birmingham is lower than the national average, for males life expectancy at birth is 77.2 years (England 79.5) and females 81.9 years (England 83.1).

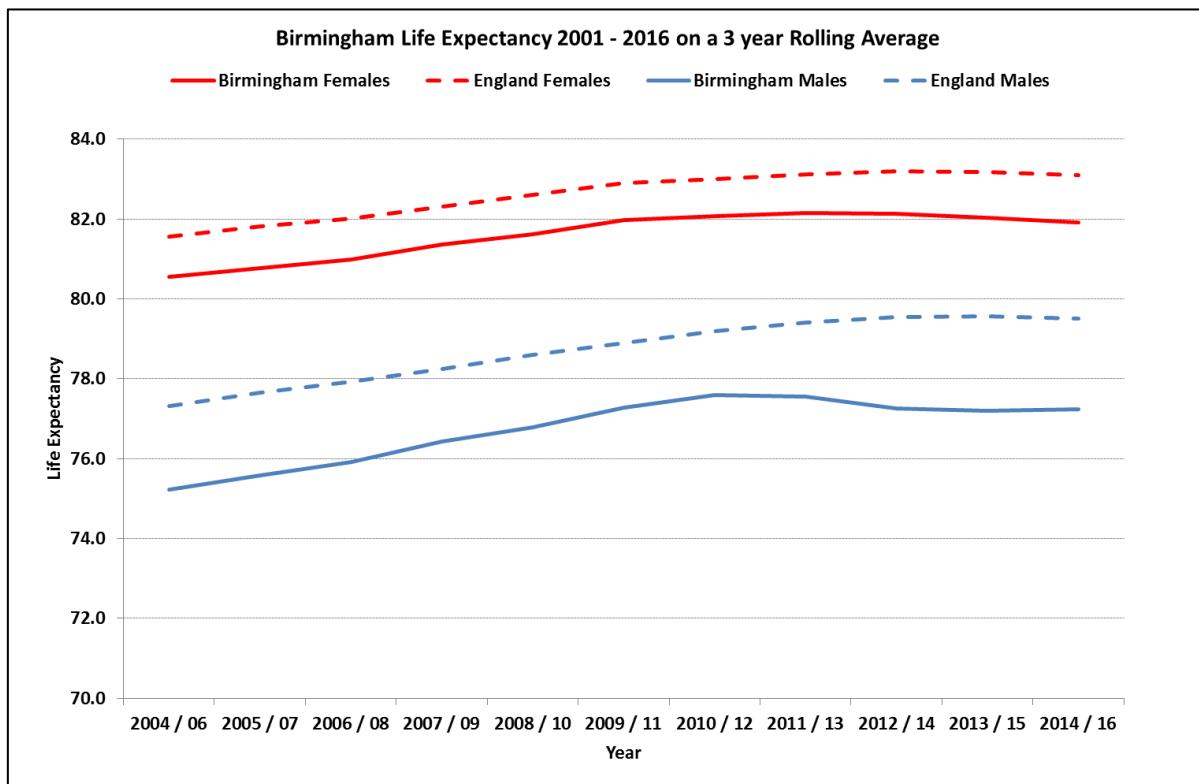


Figure 3 - Life expectancy for Birmingham compared to England. Source: ONS Deaths

Life expectancy has increased in Birmingham over the last 10 years however it has plateaued in the last few years and is lower than England average for both males and females.

Causes of early death

The major health conditions contributing to premature mortality can be identified by the number of years of life lost due to people dying before the age of 75. The biggest single contributor to excess years of life lost is infant mortality. This is discussed later in this report. The other main causes of early death in Birmingham are coronary heart disease, lung cancer and alcoholic liver disease.

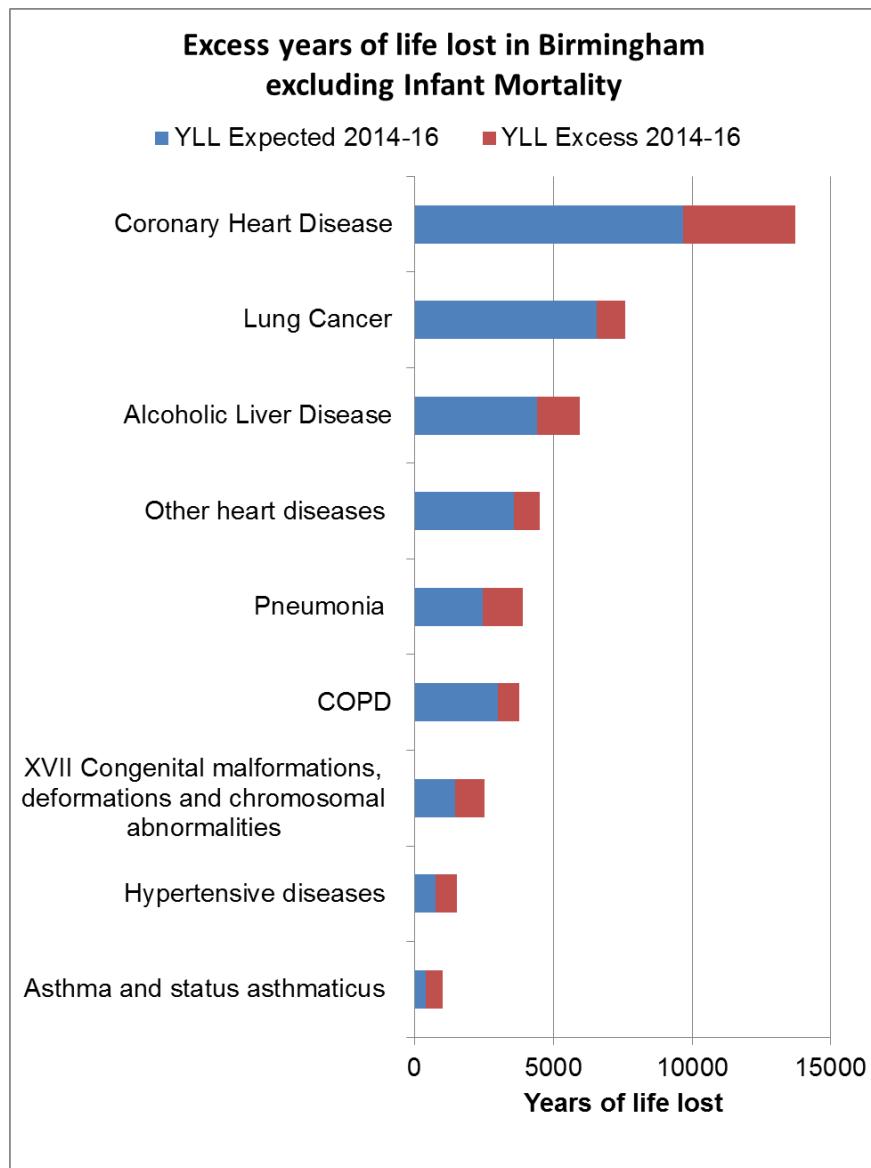


Figure 4 - Excess years of life lost in Birmingham excluding infant mortality. Source: ONS Deaths

For the three main conditions contributing to early death in Birmingham, we have calculated the excess years of life lost for each locality. Across the city coronary heart disease is the main cause of early death with almost 3,200 excess years of life lost between 2014-2016.

Table 1 - Excess years of life lost for main conditions. Source: ONS Deaths 2014-16

Locality	Excess Years Life Lost 2014-16		
	Coronary Heart Disease	Lung Cancer	Alcoholic Liver Disease
Central	770	185	62
East	178	329	178
North	353	310	419
South	395	-6	304
West	1,486	218	589
Birmingham	3,182	1,036	1,552

Child Health

Infant mortality

Birmingham has the worst infant mortality rate of all the local authorities in the country – 7.9 per 1,000 live births (England 3.9) (2014-2016).

Birmingham Ward Level Infant Mortality Rate 2014-2016

Source: ONS Births

- Higher than Birmingham average (3SD) (1)
- Higher than Birmingham average (2SD) (2)
- Similar to Birmingham average (62)
- Lower than Birmingham average (2SD) (1)
- Lower than Birmingham average (3SD) (3)

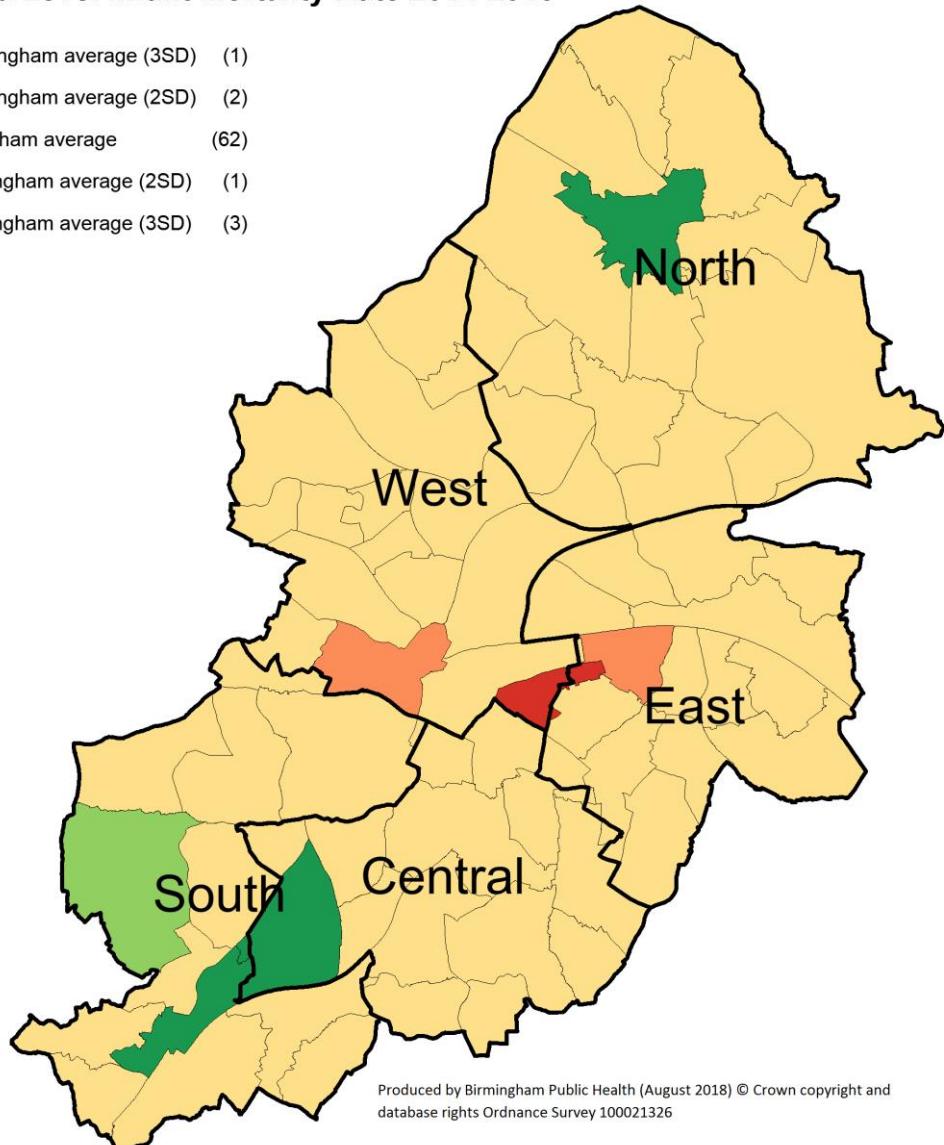


Figure 5 - Infant Mortality Rate 2014-16 by ward map. Source: ONS Births

The map shows that most wards are similar to the Birmingham average which is much higher than England. Bordesley Green, Heartlands and Ladywood wards shown in red have a higher infant mortality rate compared to the Birmingham average.

Child obesity

Birmingham has a higher prevalence of child obesity. More than one in ten 4-5 year olds are obese (11.5%) and a quarter of all 10-11 year olds (25.5%)

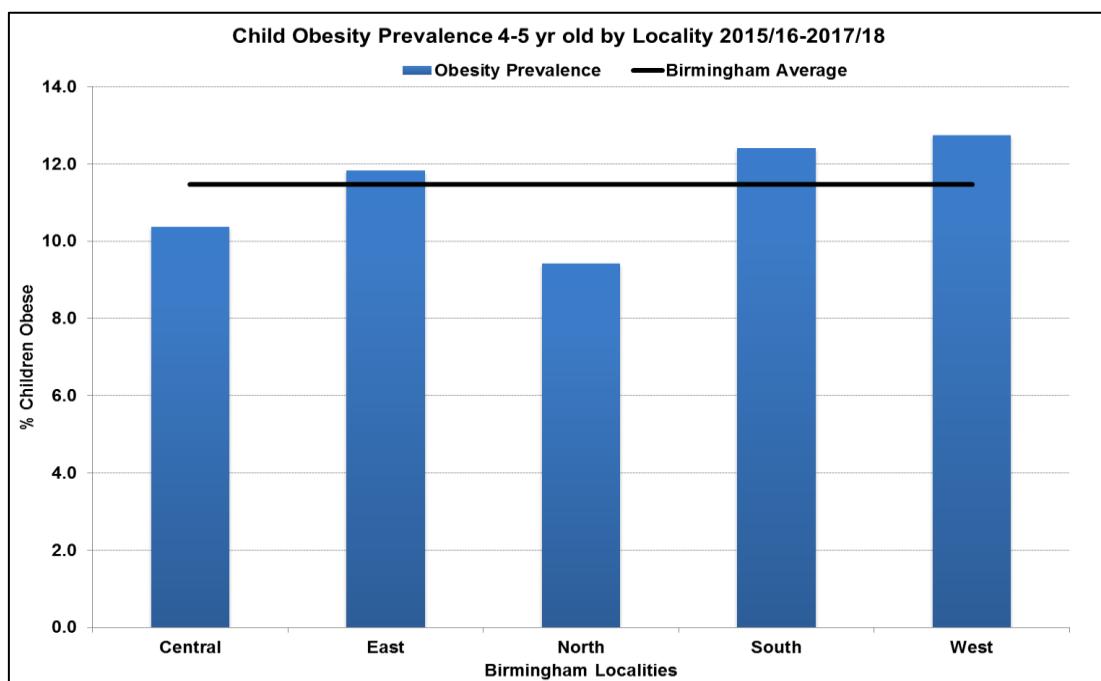


Figure 6 - Childhood obesity 4-5 year olds by locality. Source NCMP 2015/16-2017/18

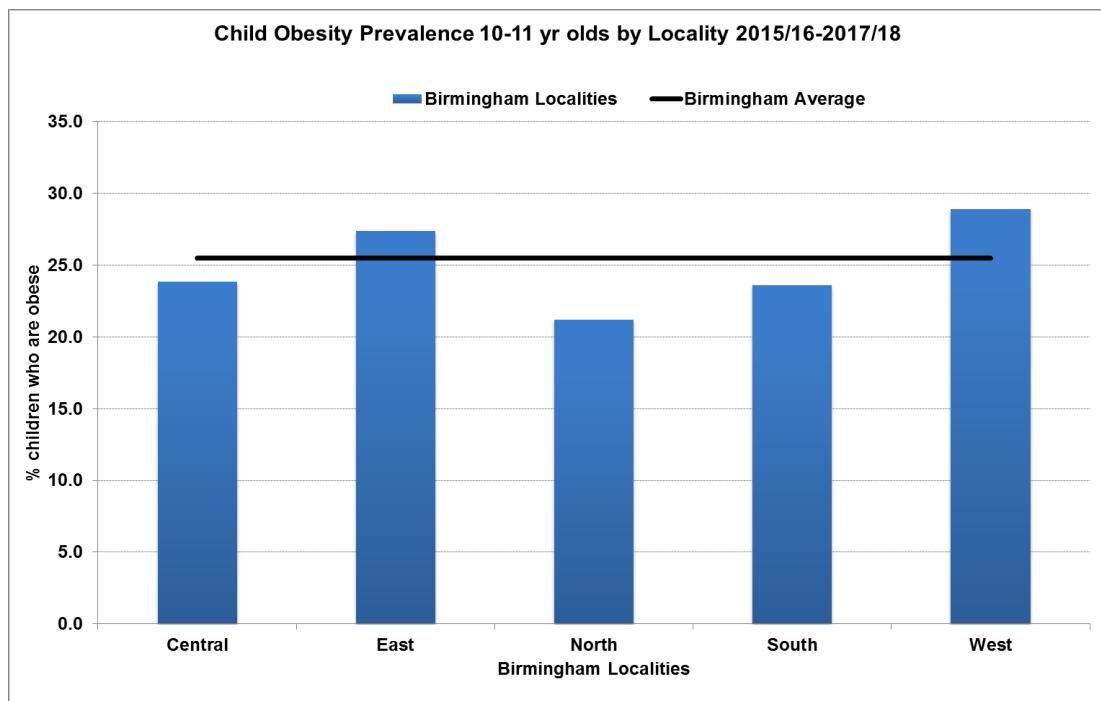


Figure 7- Childhood obesity 10-11 year olds by locality. Source NCMP 201516-2017/18

Child educational attainment

Figure 8 shows the percentage of children achieving a good level of development during their foundation year. Achievement in Birmingham is below the national average.

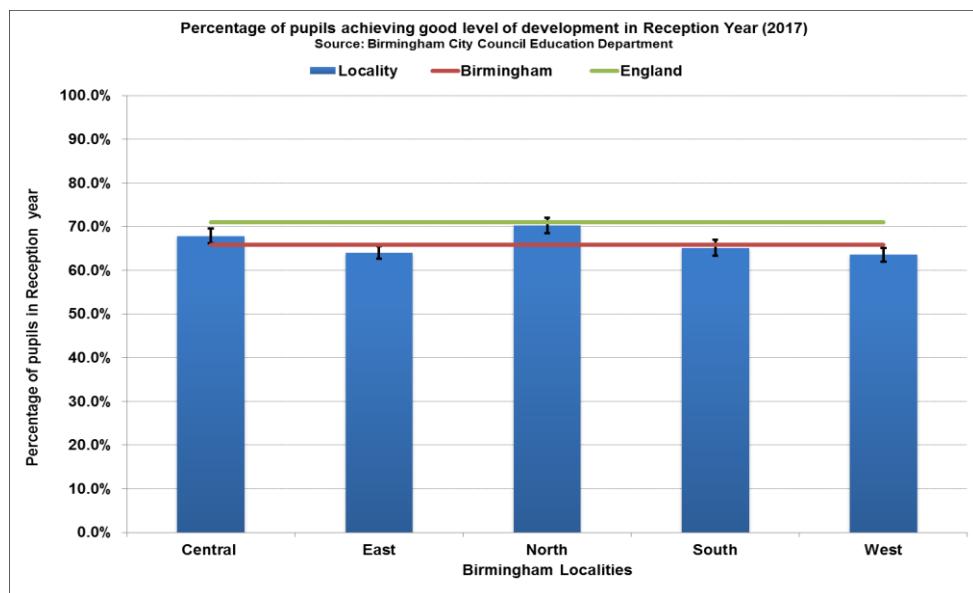


Figure 8 – Reception Year 2016/17 Attainment Percentage

Figure 9 shows the percentage of children by locality achieving 5 or more A-C Grades at GCSE during 2016/17. Achievement in Birmingham is similar to the national average.

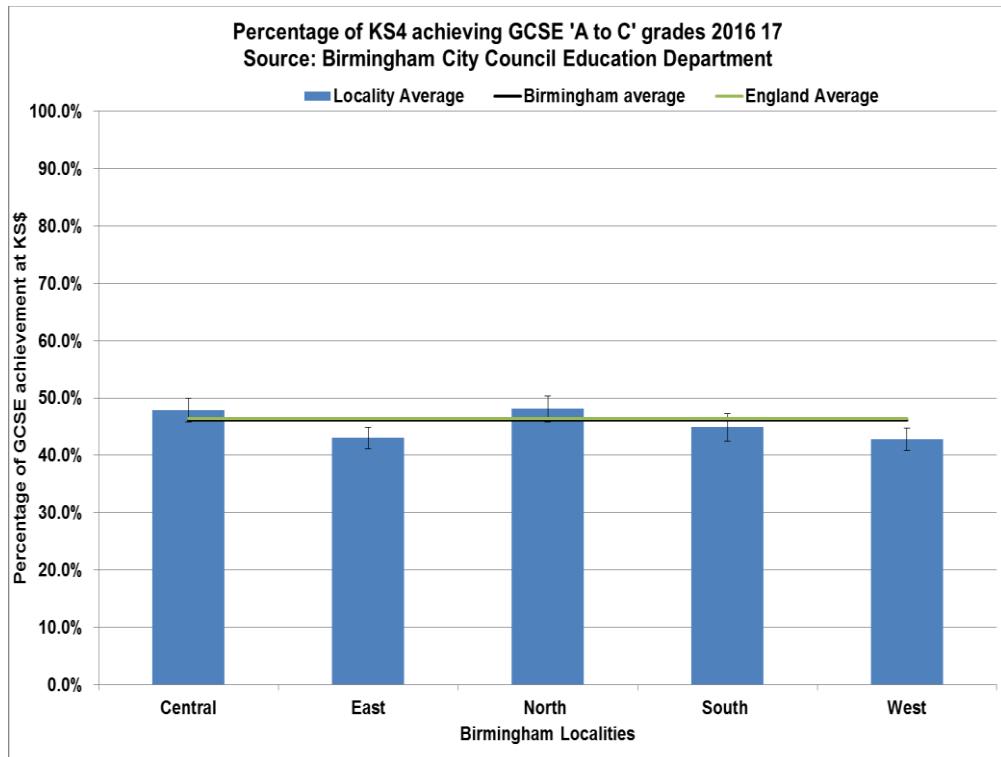


Figure 9 – KS4 GCSE result Grades A to C 2016/17 Attainment Percentage

Child protection

The figures below show the numbers of children in with a child protection plan (CPP) and those in the care of the local authority (CIC). These charts do not include those children whose place of residence cannot be identified (for child protection reasons) which are 21% of CIC and 7% of those with a CPP.

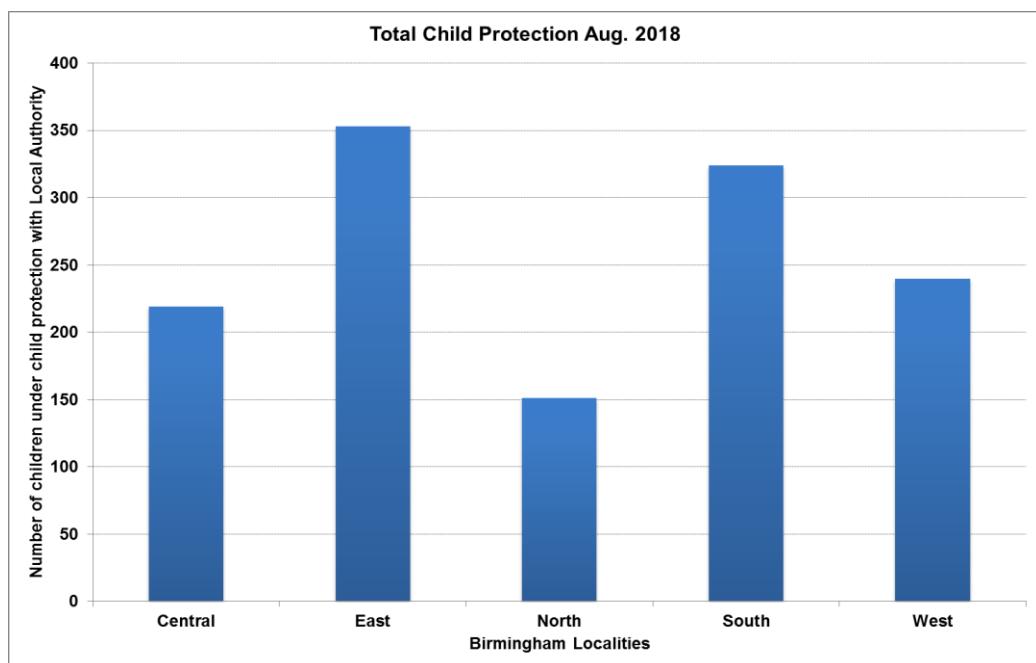


Figure 10 – Number of children under Child Protection Order August 2018¹

Children in care

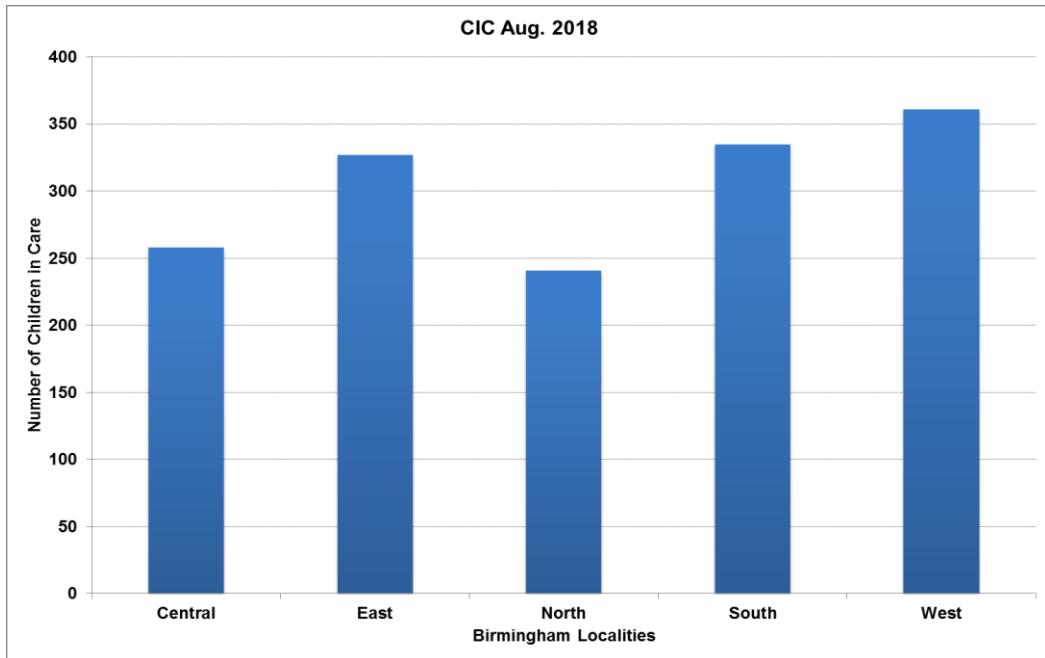


Figure 11 – Number of children identified in care August 2018²

¹ Sourced from Birmingham CYPF data strategy team

Child mental health

As part of the HeadStart Phase 3 bid an experimental mental health index was created using 30 indicators grouped into 5 sections (children and families, crime, economics, hospital activity and education).³ An overall score was created to give an indication of resilience and mental wellbeing. Those areas with the lowest scores (shaded darkest on the map) are potentially more likely to have lower resilience and poorer mental wellbeing.

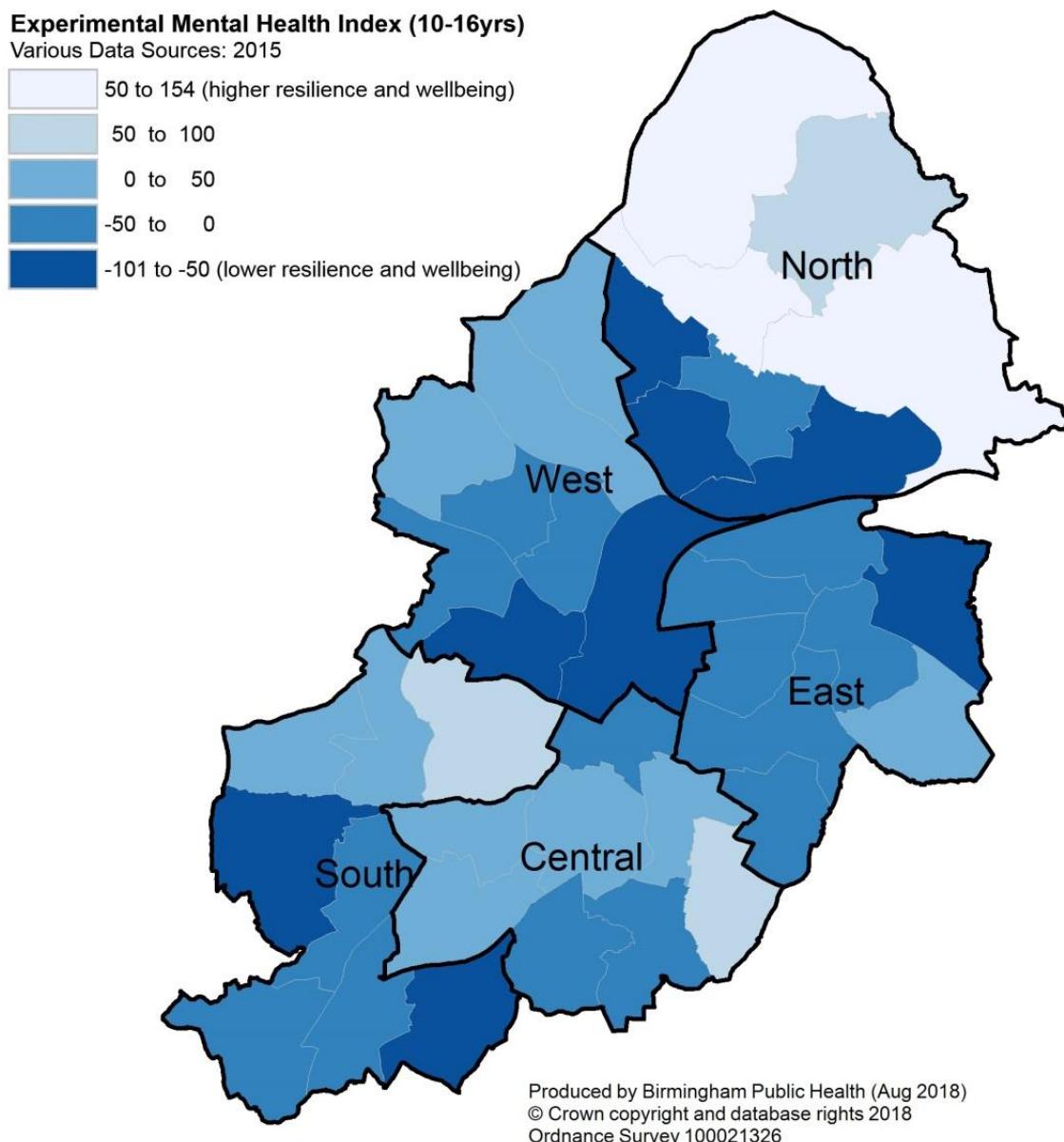


Figure 12 : Experimental Mental Health Index (10-16yrs). Source: HeadStart Strategy 2015

² Sourced from Birmingham CYPF data strategy team

³ HeadStart Strategy Stage 3 2015 available online

https://www.childrenssociety.org.uk/sites/default/files/HeadStart_Strategy_Stage_3%20_xfinal.pdf

Working Age Adults

A Birmingham Public Health priority for working age adults is to address the cumulative impact of unhealthy behaviours e.g. smoking and substance misuse.

Smoking

Smoking attributable deaths account for around half of all deaths across Birmingham each year. The chart shows the percentage of these deaths for each gender over 3 year rolling trends from 2010-2016. During this period there were a total of 21,288 deaths in the city that could be attributed to smoking. Within the age range 22% of male deaths were attributed to smoking and 14% of females.

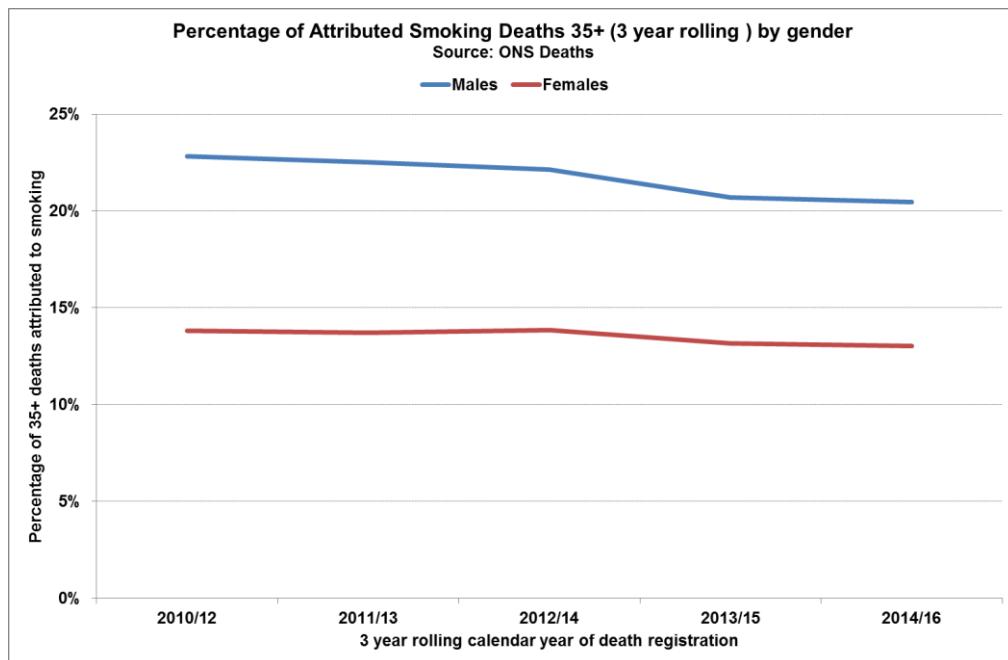


Figure 13- Attributed smoking deaths. Source: ONS Death

Alcohol

Alcohol related deaths account for approximately 16% of all deaths within the 25 to 64 year age group each year across Birmingham.

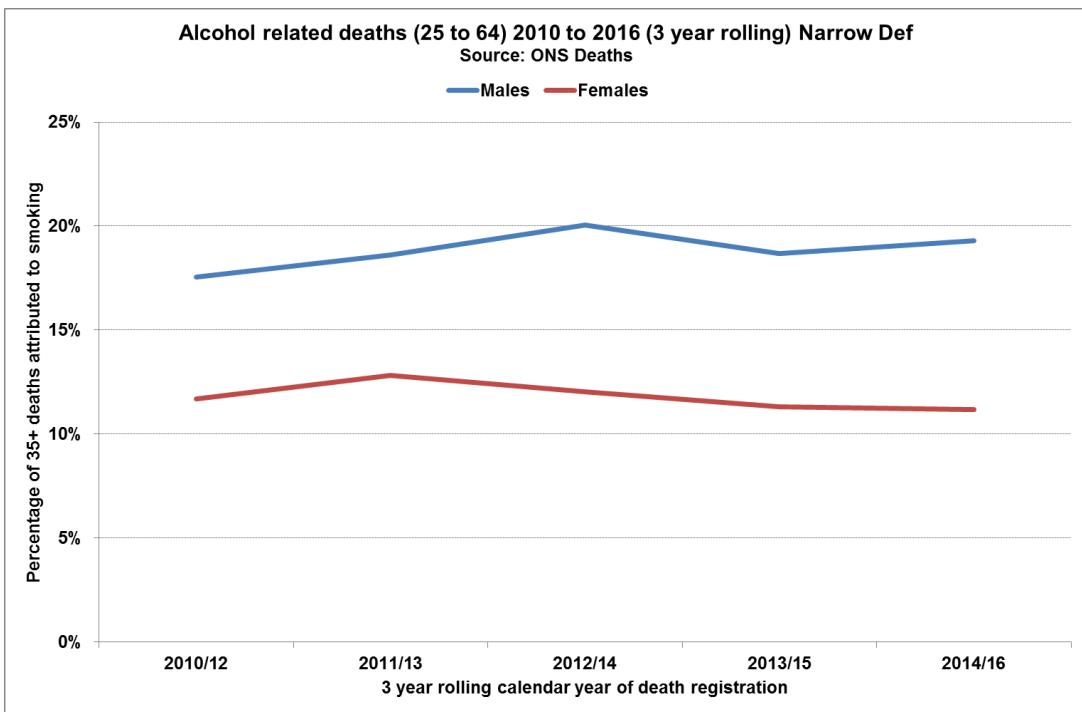


Figure 14- Chart showing alcohol related deaths 25-64. Source: ONS Deaths 2010-2016

Hospital admission rates for alcohol related admissions rates for Birmingham between the ages of 25-64 have been high for the last three years. The chart below shows that they were higher than the national averages. The trend however is lowering.

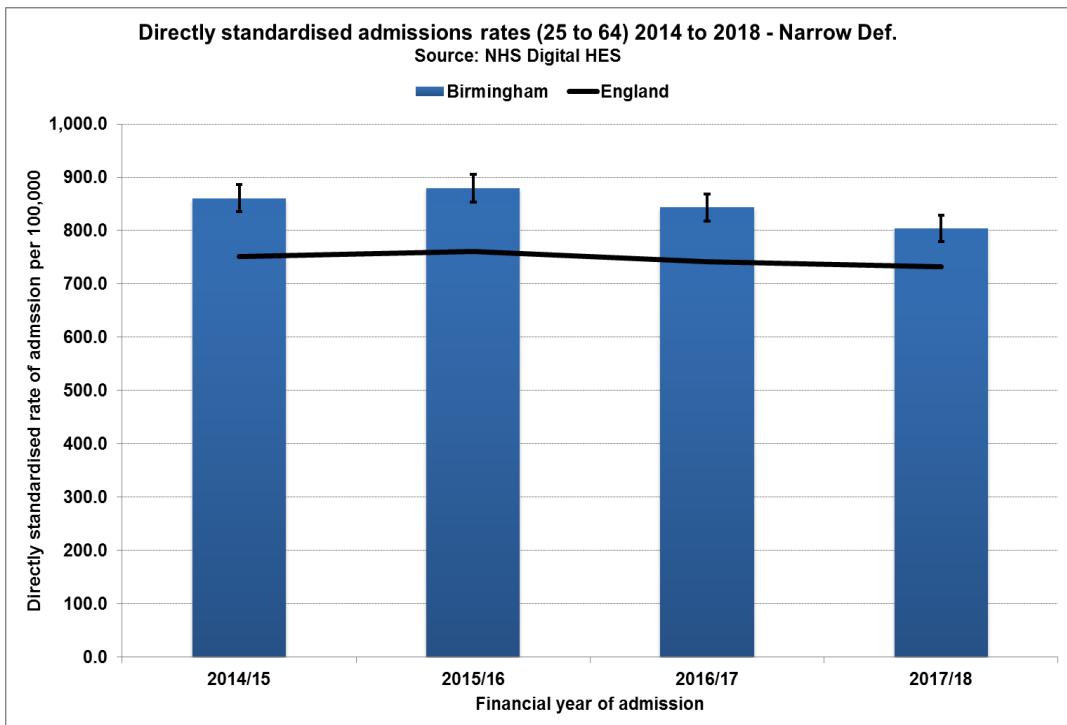


Figure 15- Chart of alcohol admission rates. Source: NHS Digital 2014-2017

Substance misuse

Drug misuse is a significant cause of premature mortality in the UK. Analysis of the Global Burden of Disease Survey 2013 shows that drug use disorders are now the third ranked cause of death in the 15–49 age group in England. Birmingham Public Health commission drug treatment services for the city. The chart above shows the death rates between 2014/16 for each Birmingham locality that are specifically related to drugs (not including alcohol). Intentional and unintentional deaths are included.

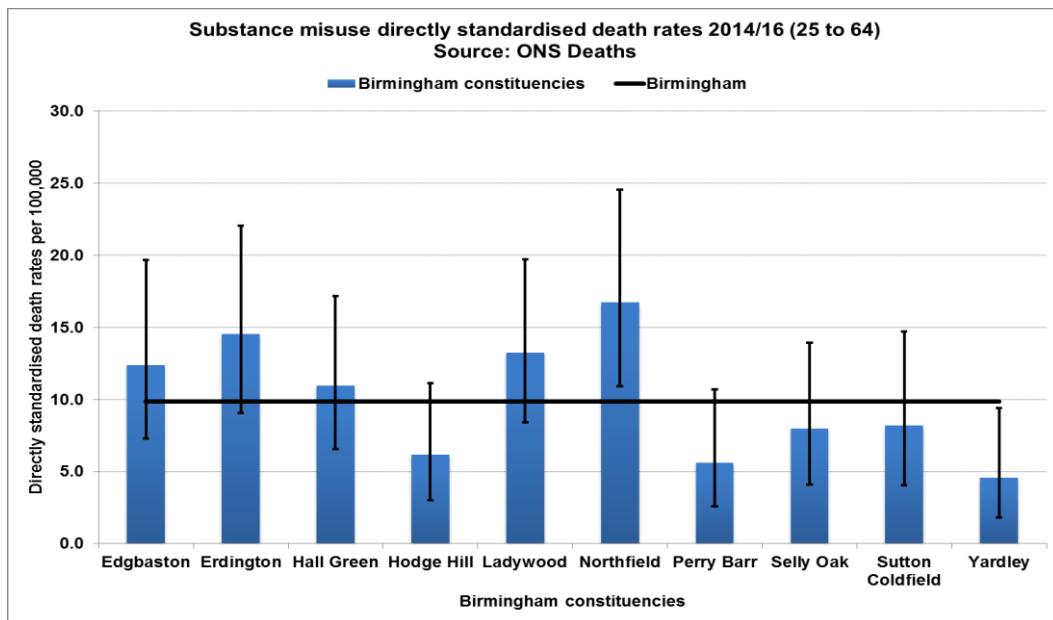


Figure 16 – Number of deaths from drugs. Source: ONS Deaths

Hospital admission rates for substance misuse for 25 to 64 year olds are shown below. Broken down by core cities, these are inpatient admissions for mental and behavioural disorders, toxic effects and poisoning.

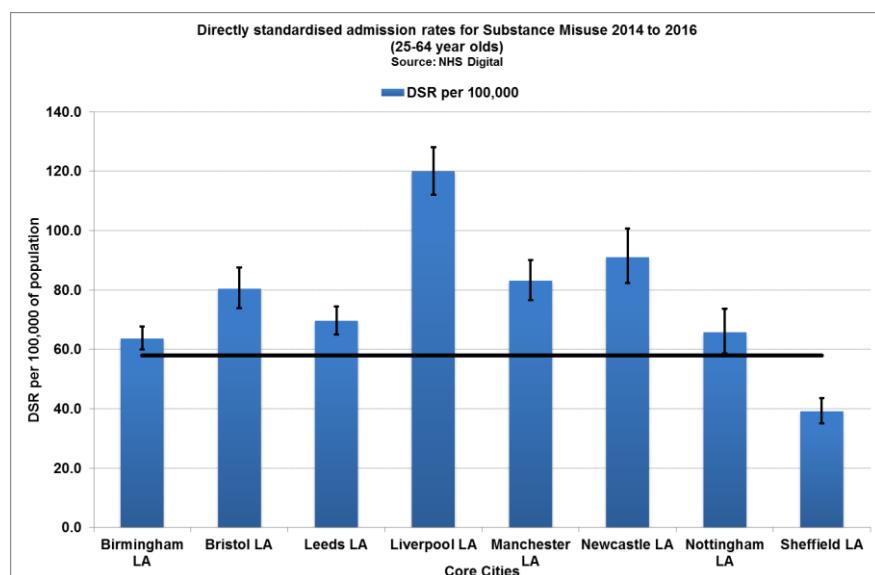


Figure 17 - Chart of DSRs for substance misuse. Source: NHS Digital HES 2012-2015

Learning disability and employment

The proportion of supported working age adults with learning disability in paid employment is an indicator in the Adults Social Care Outcomes Framework. Birmingham has one of lowest proportions in the country with less than 1% in employment during 2017/18. Nationally approximately 6% of people with learning disability have paid employment (ASCOF 2016-17).

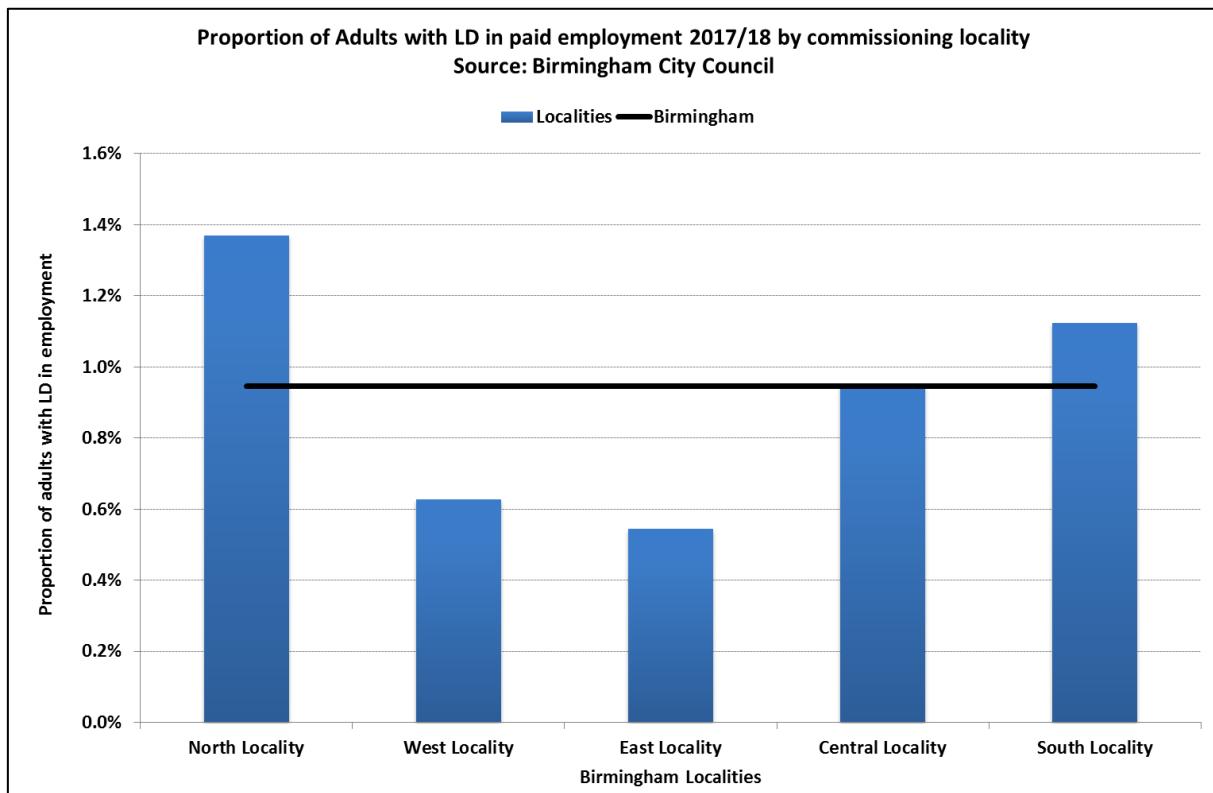
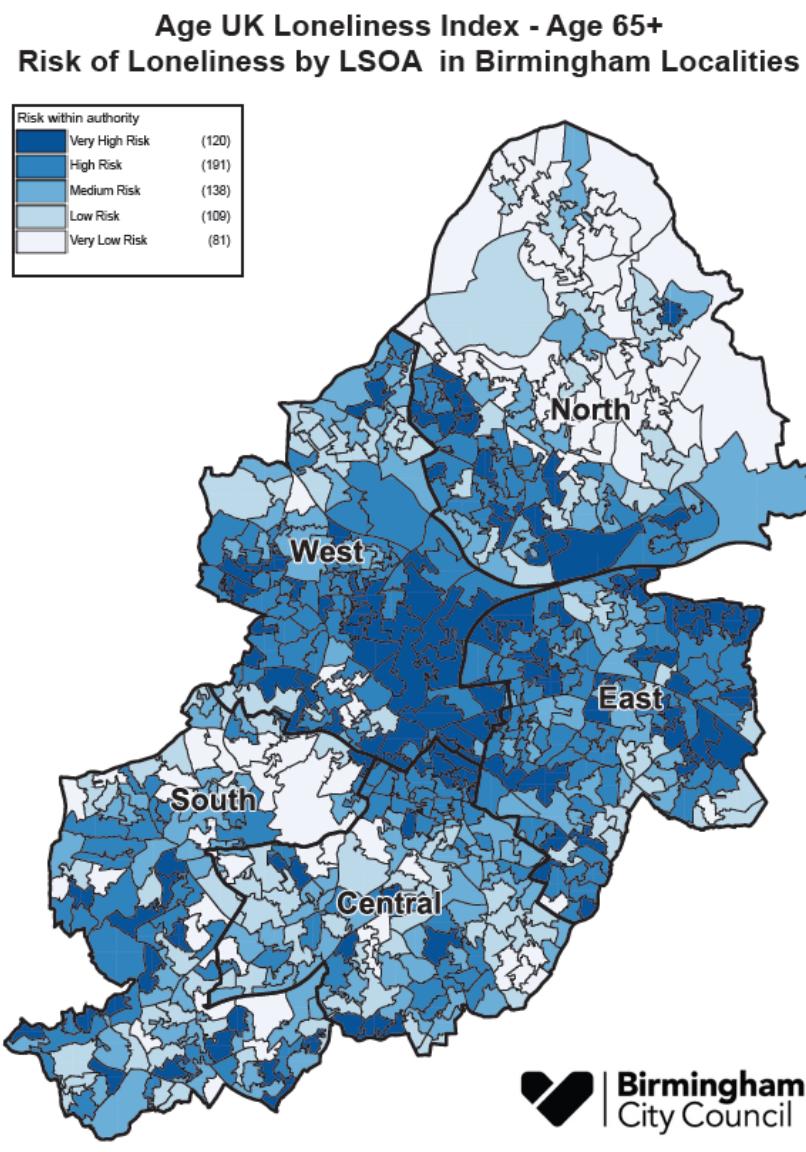


Figure 18 - Adults with LD in paid employment by locality. Source: Adults Social Care data 2017/18

Older Adults

Social isolation

People who feel socially isolated have a 30% higher risk of early death.⁴ The map below shows the relative risk of loneliness based on Census 2011 information on marital status, health status, age and household size.



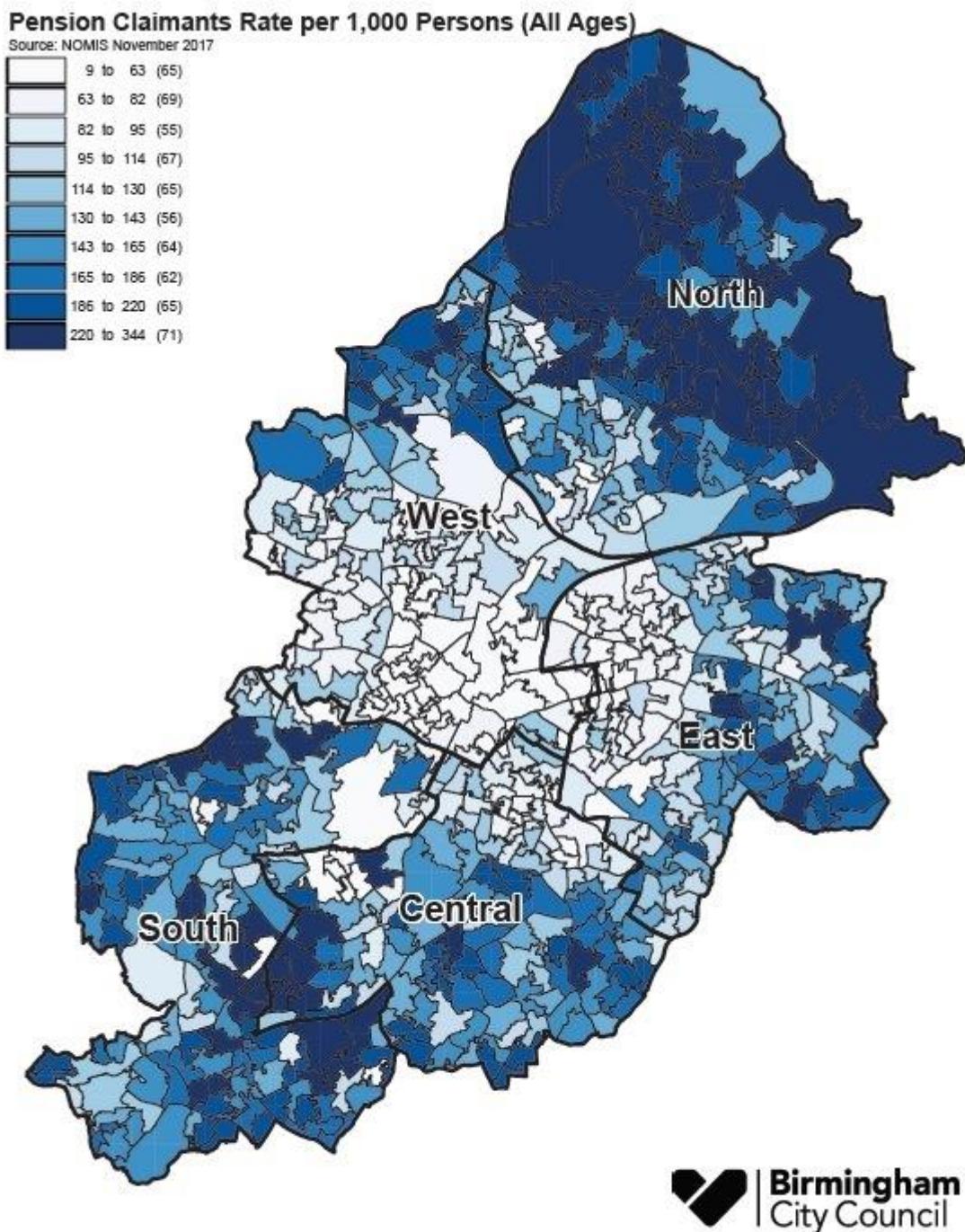
Produced by Birmingham Public Health Knowledge, Impact & Outcomes Team (Aug 18)
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Figure 19: Loneliness Index age 65+ by Birmingham LSOA. Source: Age UK

Birmingham contains the largest number of areas where there is a very high risk of loneliness amongst older adults.

⁴ Holt-Lunstad J, Smith TB, Baker M, et al. Loneliness and Social Isolation as Risk Factors for Mortality - A Meta-Analytic Review, Perspectives on Psychology. Published online March 11 2015

Pension claimants



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Figure 20: Pension Claimants per 1,000 2017. Source: NOMIS

Birmingham contains large areas who were claiming a pension during 2017 indicating there are pockets of elderly residents and those with disabilities located in this area.

Admissions for falls

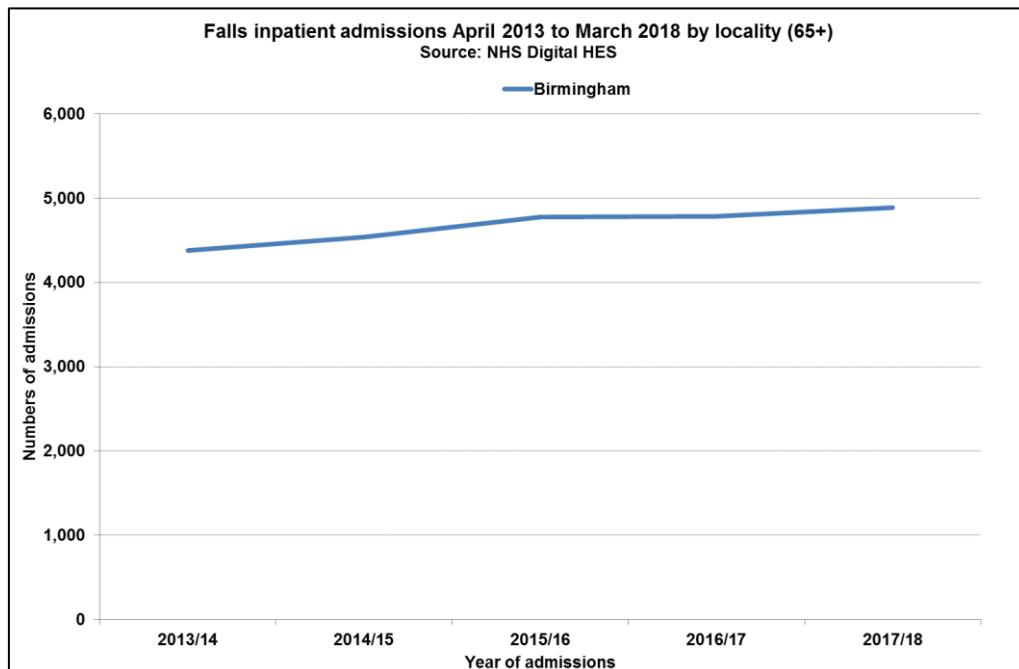


Figure 21: Number of Falls Admissions 65+ Source: NHS Digital HES

Between April 2013 and March 2018 there were approximately of 23,350 admissions across Birmingham for falls related conditions.

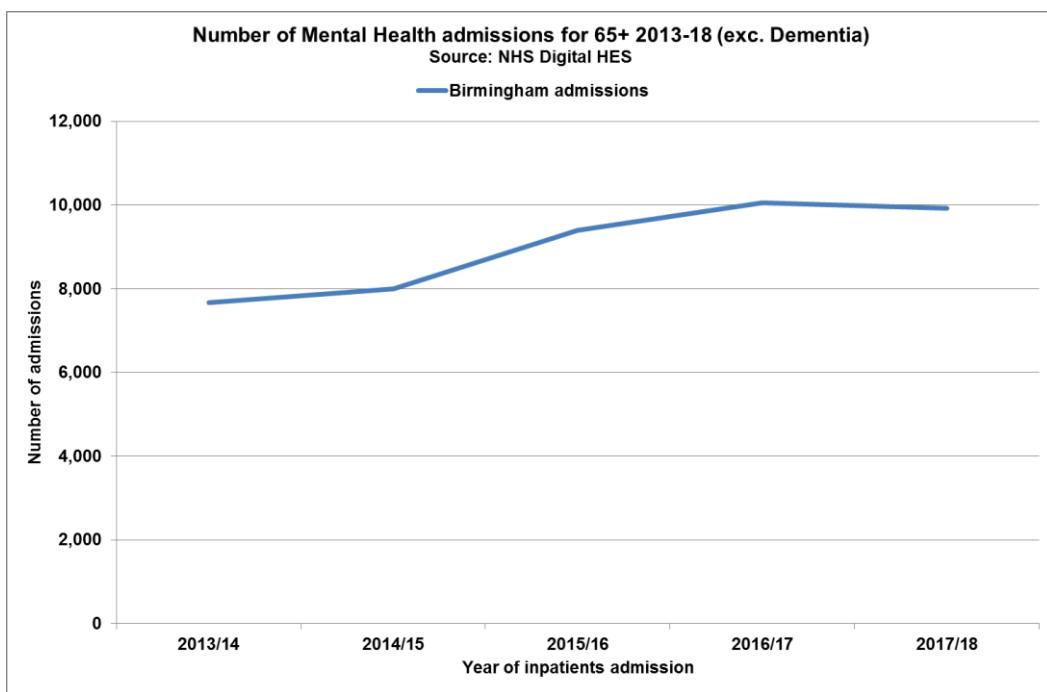


Figure 22: Number of mental health Admissions 65+ (excluding Dementia) Source: NHS Digital HES

Between April 2013 and March 2018 there were approximately of 45,000 admissions across Birmingham for mental health conditions excluding dementia.

End of life care

The majority of residents who die in Birmingham in any given year are in the 65+ age group. Our biggest killers are cancers and cardiovascular diseases; it is therefore important that patients are permitted to die in their own chosen place and receive high quality palliative care in their last twelve months of life. There is no data available on whether patients are receiving end of life care (EOLC) in their preferred place. The figure below shows the place of death for residents in Birmingham.

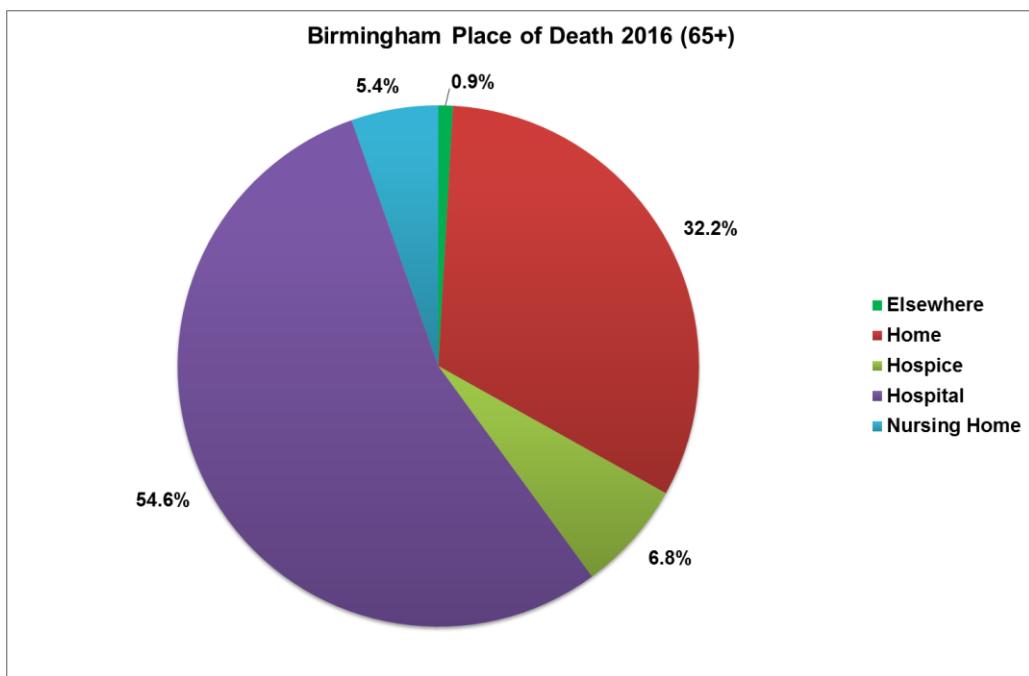


Figure 23: Percentage of Place of Death 2016 Source: ONS Deaths

During 2016 there were a total of 6,776 deaths in Birmingham in the 65+ age group. 54.6% of deaths for this age group took place in hospital (47.1% for England). Nationally, the main measurement relating to EOLC are those deaths taking place at home or in a hospice. Birmingham 32.2% of deaths occurring at home (England 21.6%) and 6.8% in a hospice (England 4.8%). This indicates that more people aged over 65 die at home or in a hospice in Birmingham than across England.

Healthy Environment

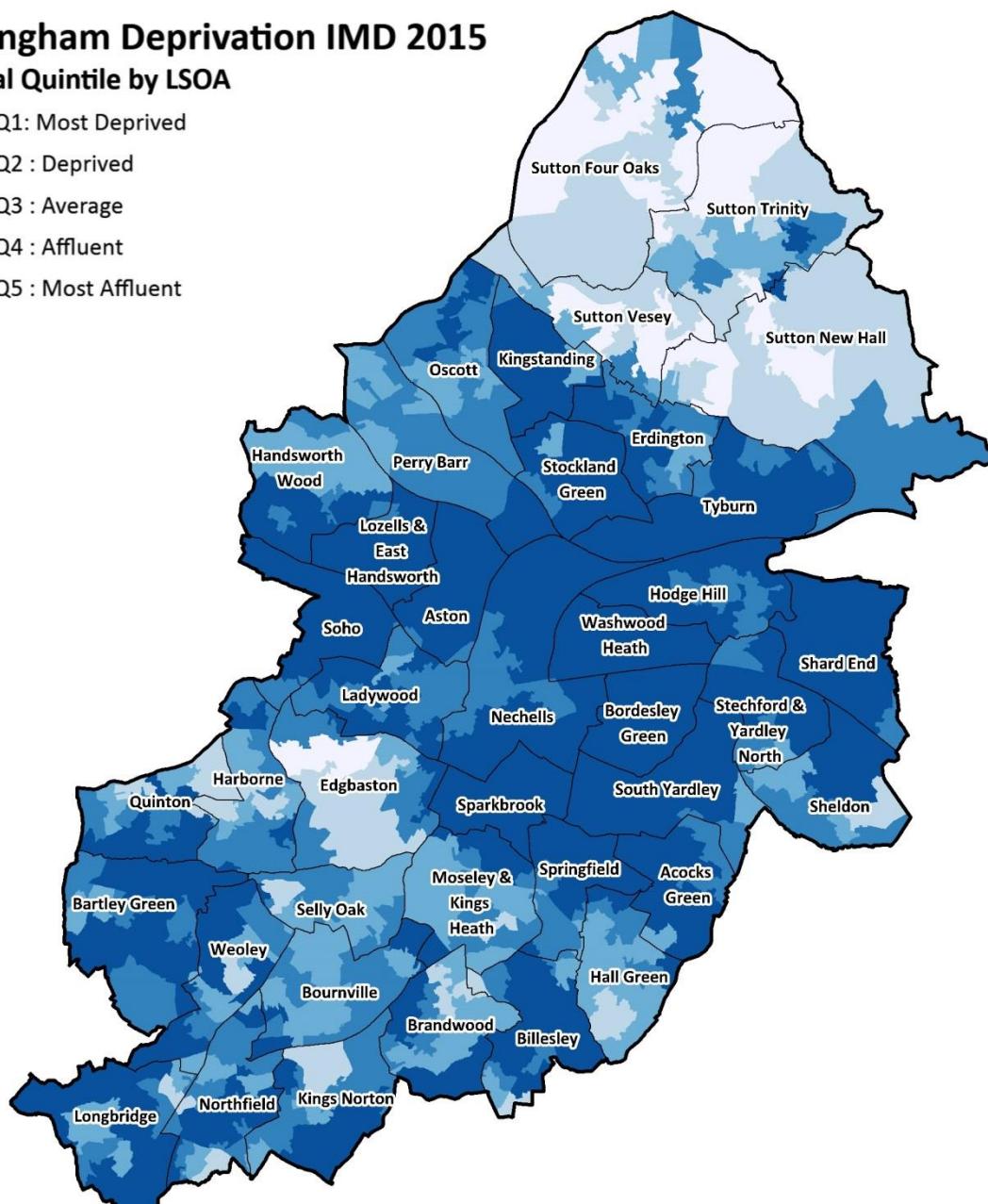
Deprivation

The Index of Multiple Deprivation (IMD) is a measure of the relative levels of deprivation at small area levels. Birmingham as a whole has high levels of deprivation with 40% of the population living in the 10% most deprived areas of England. The figure below shows the local areas by their national rank, the darkest shading being the most deprived. Many areas within Birmingham are amongst the most deprived in the country.

Birmingham Deprivation IMD 2015

National Quintile by LSOA

- Q1: Most Deprived
- Q2 : Deprived
- Q3 : Average
- Q4 : Affluent
- Q5 : Most Affluent



Produced by Birmingham Public Health Information & Intelligence Team (Nov2015).
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Figure 24 - deprivation map by Birmingham ward. Source: IMD 2015

Life expectancy inequality

Life expectancy in Birmingham is lower than the national average. However within the city there is great variation between areas. The train and metro map shows life expectancy for males and females around areas of the city. With only six stops on the train life expectancy varies by 10 years for males and 8 years for females.

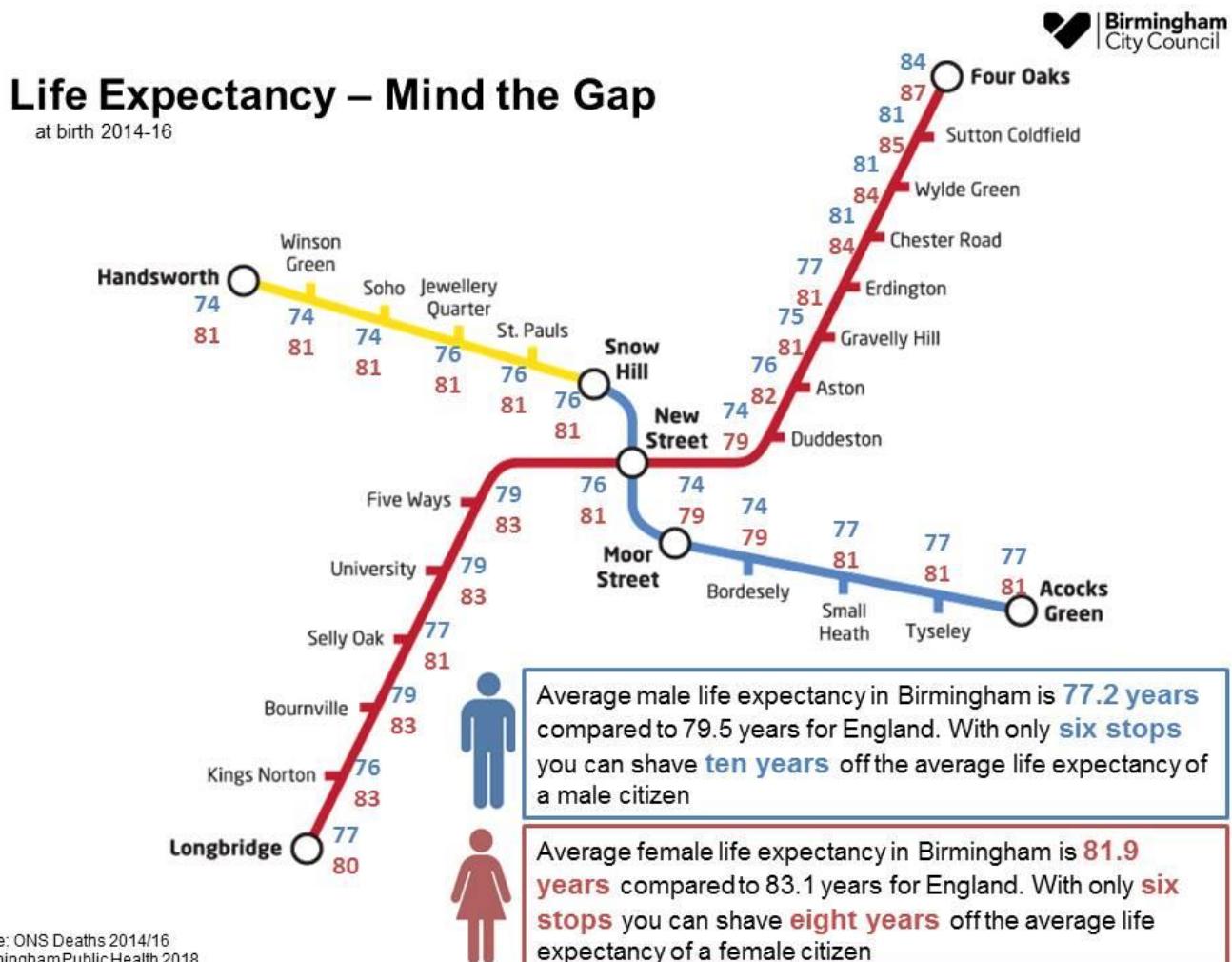


Figure 25 - Life Expectancy Inequalities Across Birmingham Source: ONS Births / Deaths

Air quality

In Birmingham it is likely that air pollution is second only to tobacco smoke in causing premature death (deaths before the age of 75). In the UK it is estimated that each year there are 40,000-50,000 deaths attributable to air pollution; in Birmingham based on current mortality, this equates to almost 900 deaths a year. Heart disease and stroke are the most common reasons for premature death attributable to air pollution, responsible for 80% of cases of premature death; lung diseases and lung cancer follow.

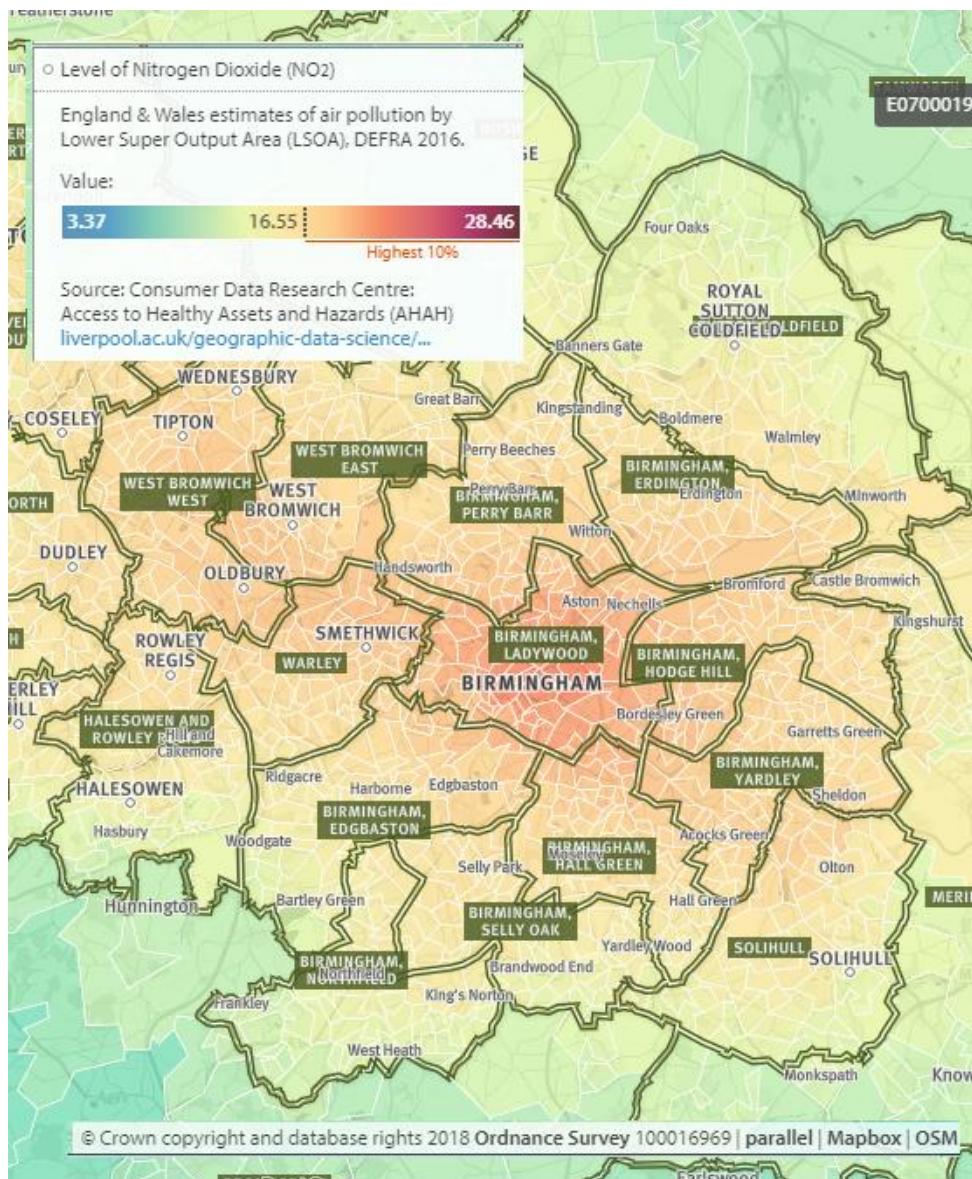


Figure 26: Map showing Nitrogen Dioxide levels. Source: DEFRA 2016

These two maps have been created using Public Health England's SHAPE tool⁵ and show Nitrogen Dioxide NO₂ and PM10 Particulate Matter levels for Birmingham.

⁵ Strategic Heath Asset Planning and Evaluation <https://shapeatlas.net/>

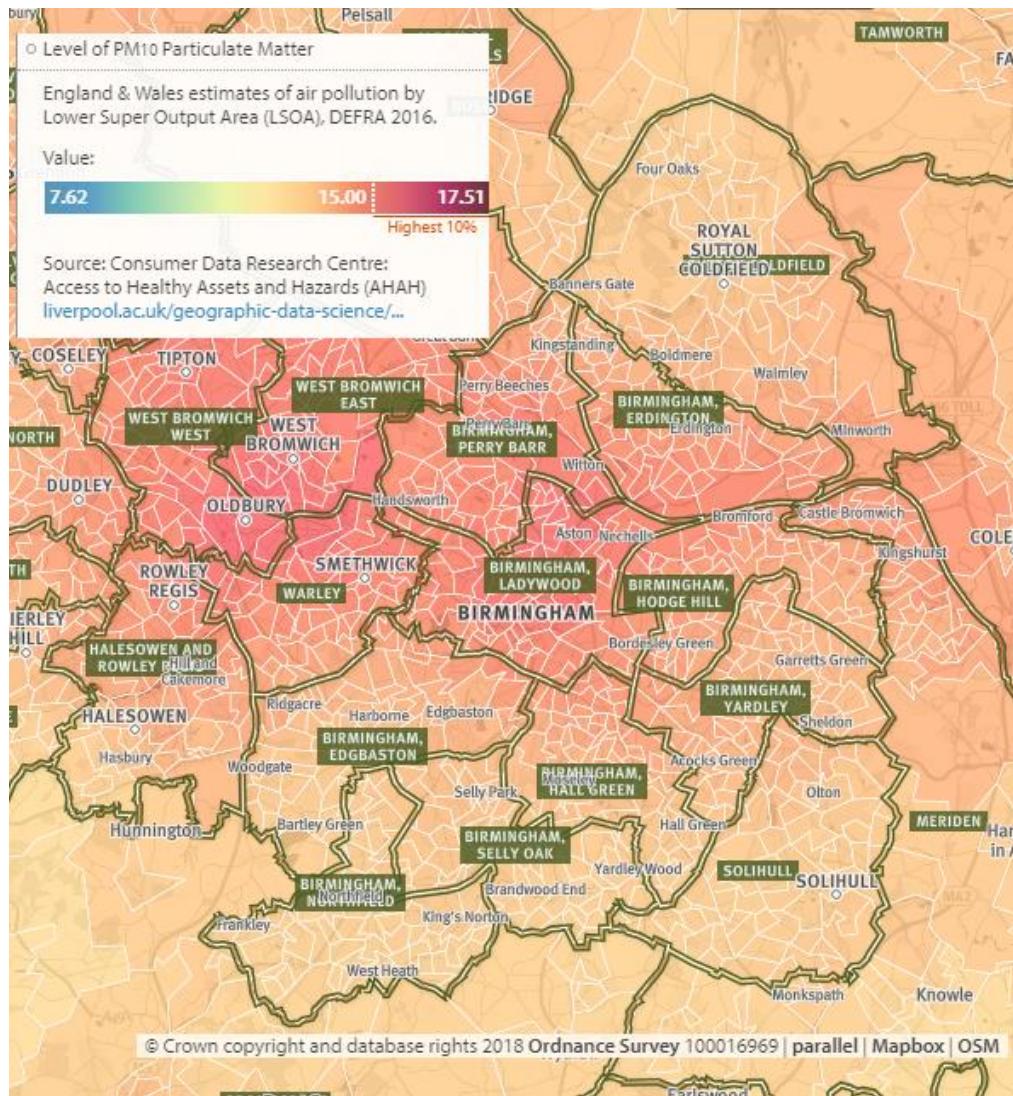


Figure 27: Particulate Matter levels. Source: DEFRA 2016

Birmingham has some high levels of both NO₂ and PM10 which will be the cause of poor health and early death in the city.

Becoming a food smart city

Prevalence of childhood obesity is higher in children from poorer neighbourhoods. Within these areas there are more fast food outlets.⁶ Birmingham has a higher than the national average prevalence of child obesity. The map shows the location of takeaway and sandwich shops in the city with the obesity prevalence for 10-11 year olds.

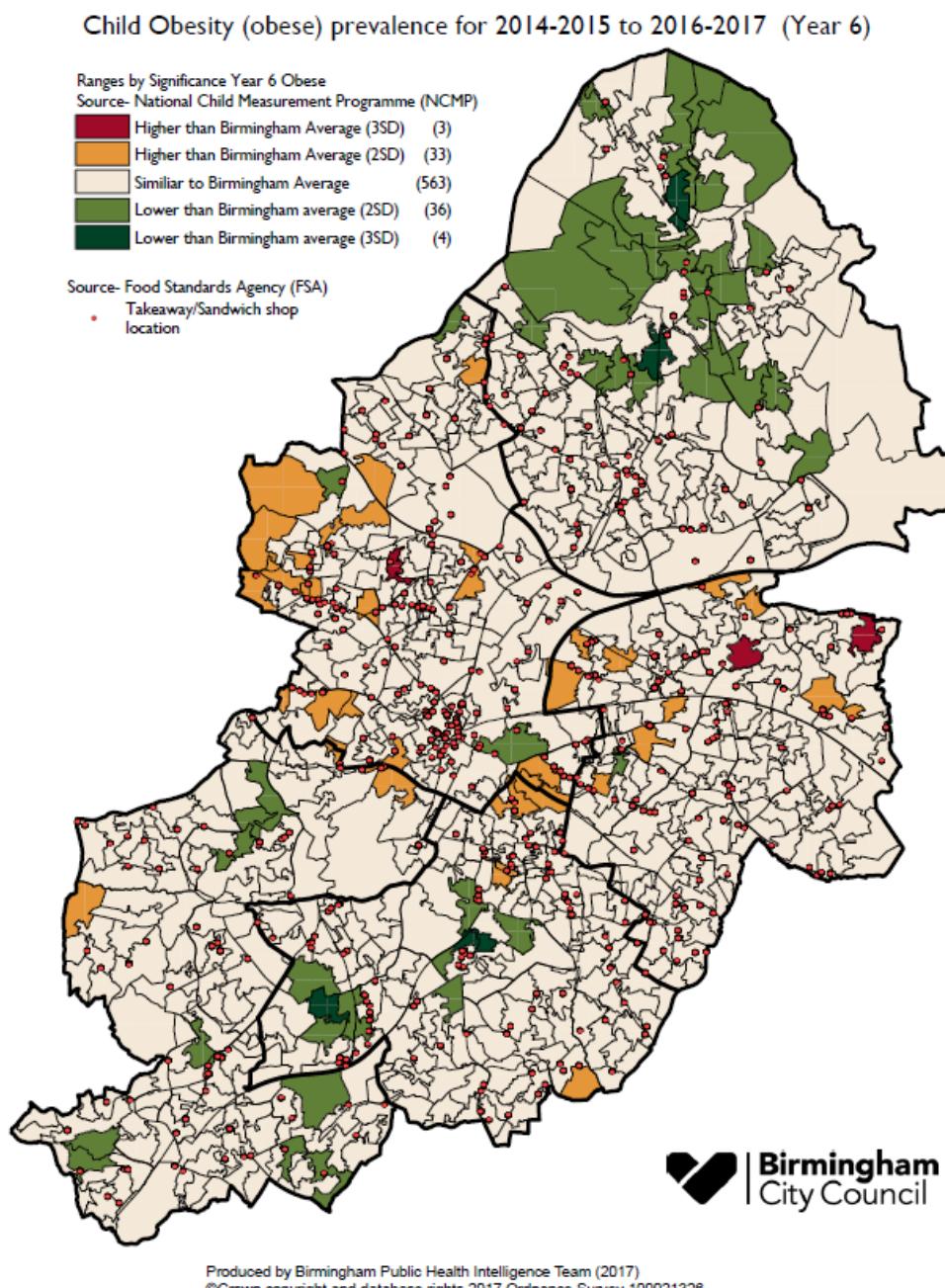


Figure 28: Birmingham takeaway/sandwich shops locations and childhood obesity prevalence age 10-11yrs.
Source: Foods Standards Agency and NCMP

⁶ Public Health England, Obesity and the environment briefing online available at:
<https://www.gov.uk/government/publications/obesity-and-the-environment-briefing-regulating-the-growth-of-fast-food-outlets>

Fuel Poverty

Fuel poverty is defined as households with a low income but with high energy costs. The map below shows that there is a higher than average percentage of the population in Birmingham who may be struggling to pay high energy costs with low incomes. Living in a poorly heated home is strongly linked to poor health outcomes.

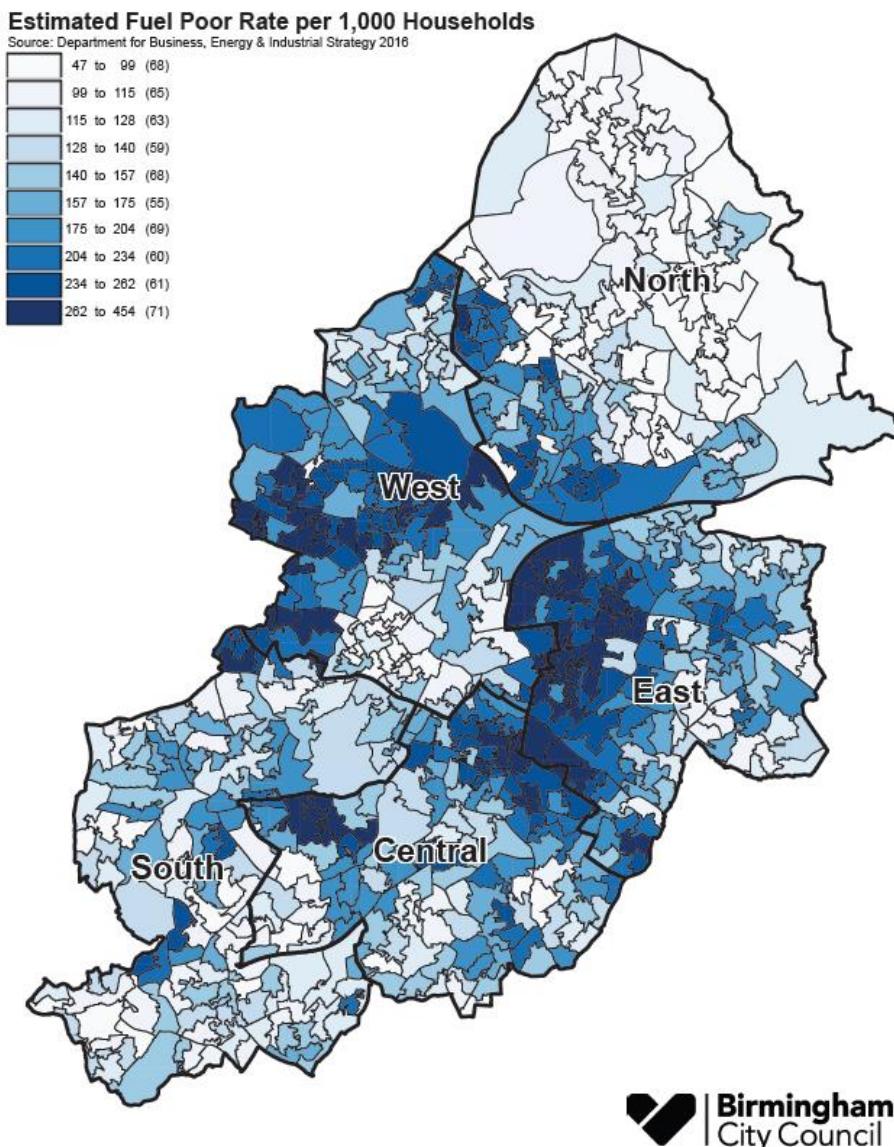
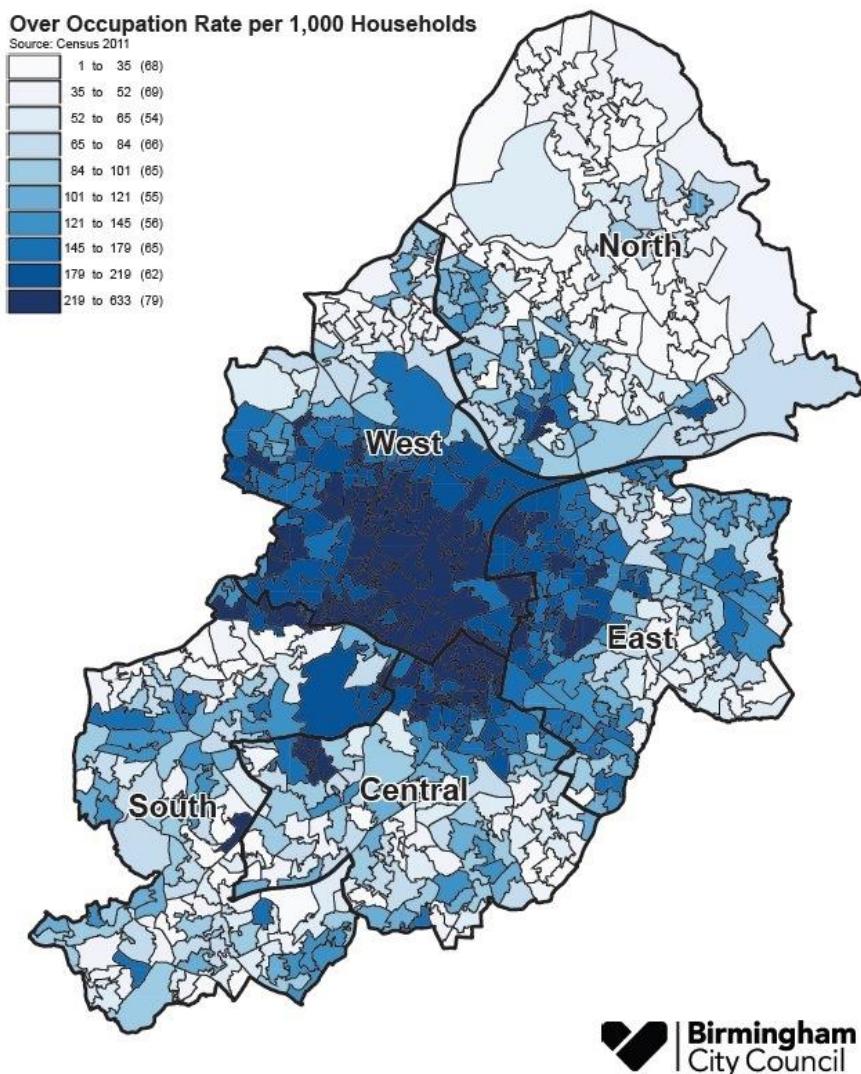


Figure 29: 2016 Fuel Poverty by LSOA within Locality

<https://www.gov.uk/government/collections/fuel-poverty-sub-regional-statistics>.

Overcrowding

In Birmingham 9.1% of households were overcrowded (Census 2011). These households have at least one bedroom too few for the number of people living in the household. People living in challenging housing conditions are more likely to experience poor health.



Produced by Birmingham Public Health Knowledge Impacts and Outcomes Team (2018)
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Figure 30: Overcrowding across Birmingham 2011 Census

<https://www.ons.gov.uk/search?q=census+2011>

A&E Hospital Attendances

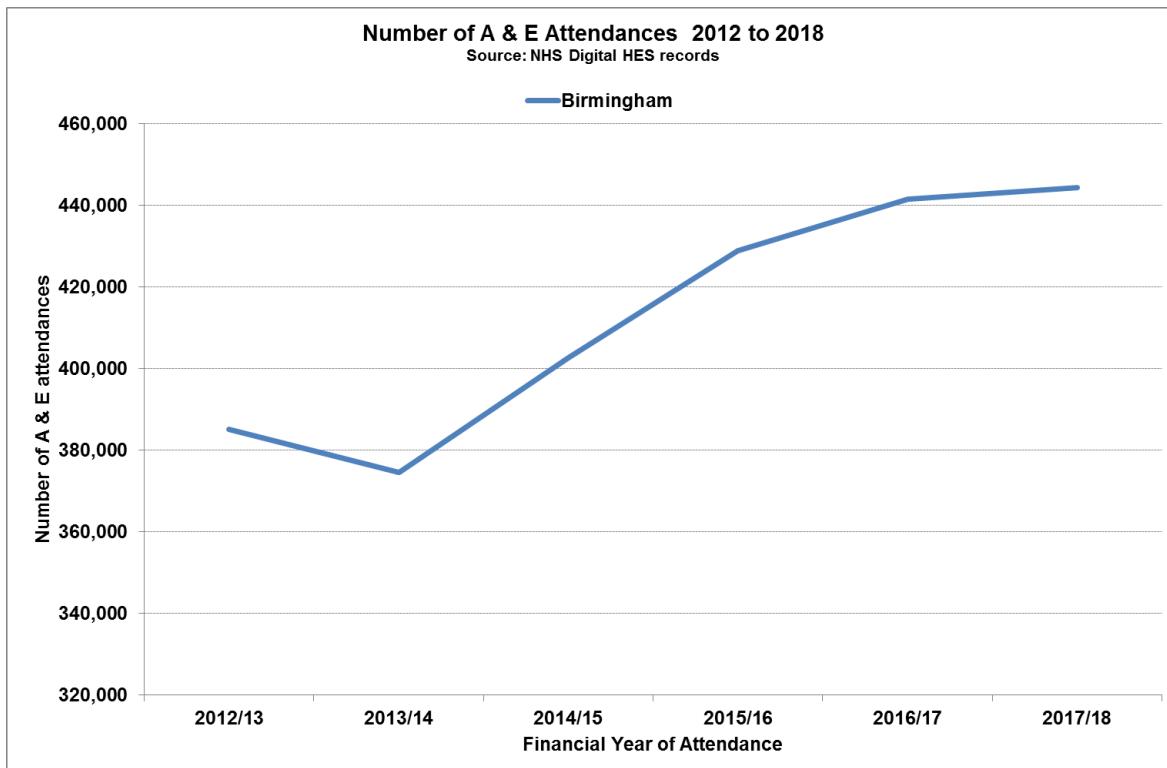


Figure 31 - A&E attendances by locality 2012-2018

A&E attendances have steadily increased across Birmingham over the last five years.

Disease Breakdowns

Cardiovascular disease (CVD) is a general term for conditions affecting the heart or blood vessels. CVD is one of the main causes of death and disability in the UK, but it can often largely be prevented with a healthy lifestyle.⁷

A specific QOF no longer exists for CVD as a whole but to give a broader picture here are some of the main heart related diseases that come under CVD.

Coronary Heart Disease (CHD)

CHD is the term that describes what happens when the heart's blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries.

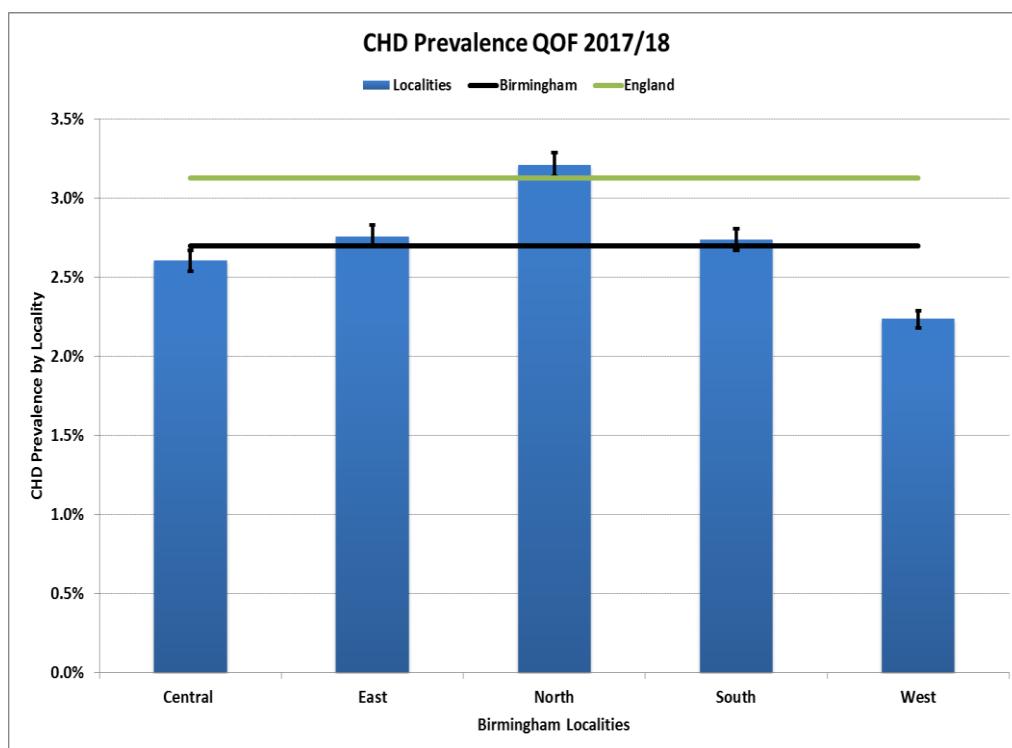


Figure 32 - CHD prevalence. Source: QOF 2017-18

A proxy has been developed to calculate locality prevalence based on the overall spread of populations within each practice. Using this method it can be estimated around 2.7% of the population of Birmingham is on the CHD register; this compares to 3.1% nationally,

⁷ Sourced from NHS Choices Website 22nd August 2018

Stroke

There are two main causes of strokes: ischaemic – where the blood supply is stopped because of a blood clot, accounting for 85% of all cases and haemorrhagic – where a weakened blood vessel supplying the brain bursts.

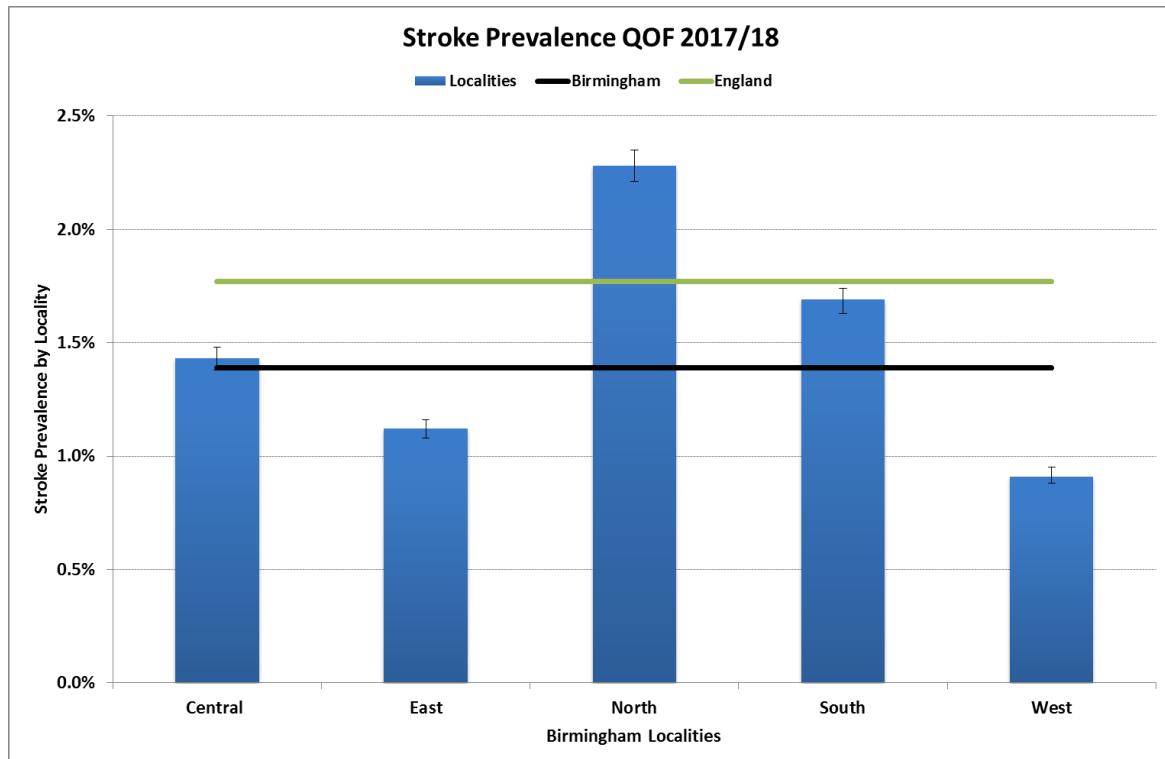


Figure 33- Stroke prevalence. Source: QOF 2017-18

It is estimated that Birmingham has around 1.8% of its registered population on the stroke register; this compares to 1.4% across Birmingham.

Hypertension

High blood pressure, or hypertension, can if untreated, increase the risk of serious problems such as heart attacks and strokes.

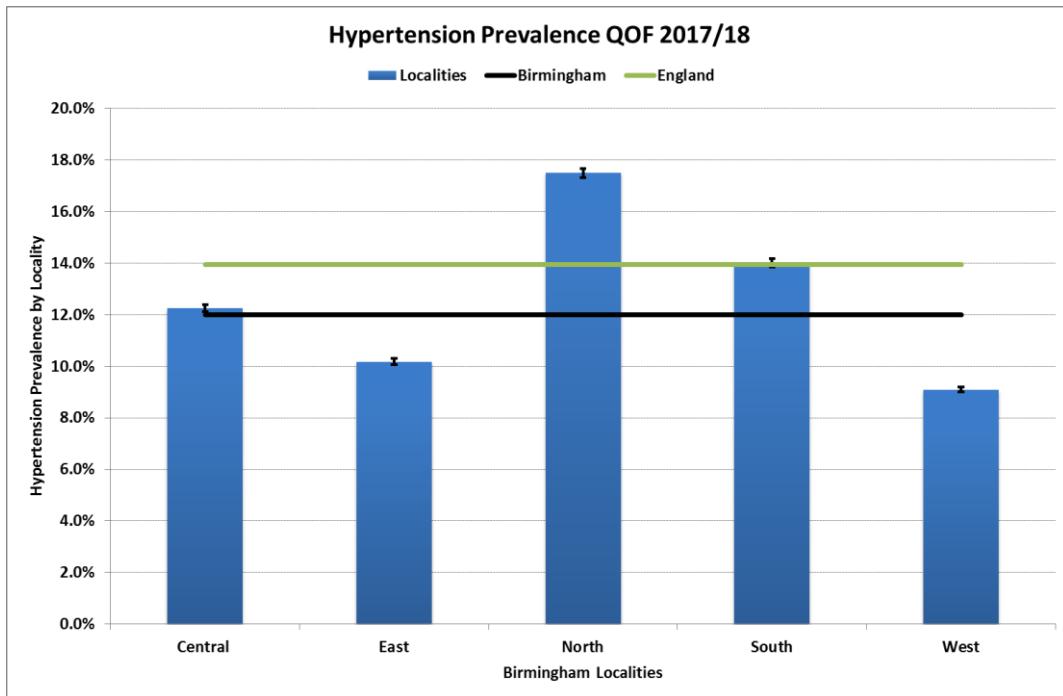


Figure 34- Hypertension prevalence. Source: QOF 2017-18

It is estimated that Birmingham has around 12.0% of its registered population on this register; this compares to 13.9% nationally.

Heart failure

Heart failure means that the heart is unable to pump blood around the body properly. It usually occurs because the heart has become too weak or stiff.

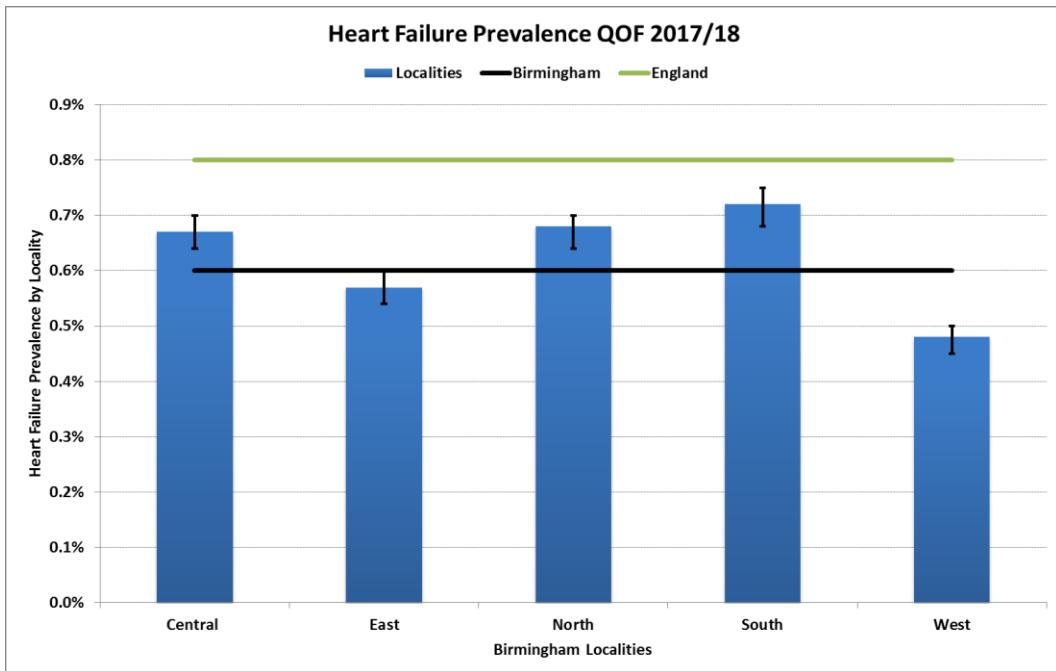


Figure 35 - Heart Failure prevalence. Source: QOF 2017-18

It is estimated that Birmingham has around 0.6% of its registered population on this register; this compares to 0.8% nationally.

Atrial fibrillation (AF)

AF is a heart condition that causes an irregular and often abnormally fast heart rate.

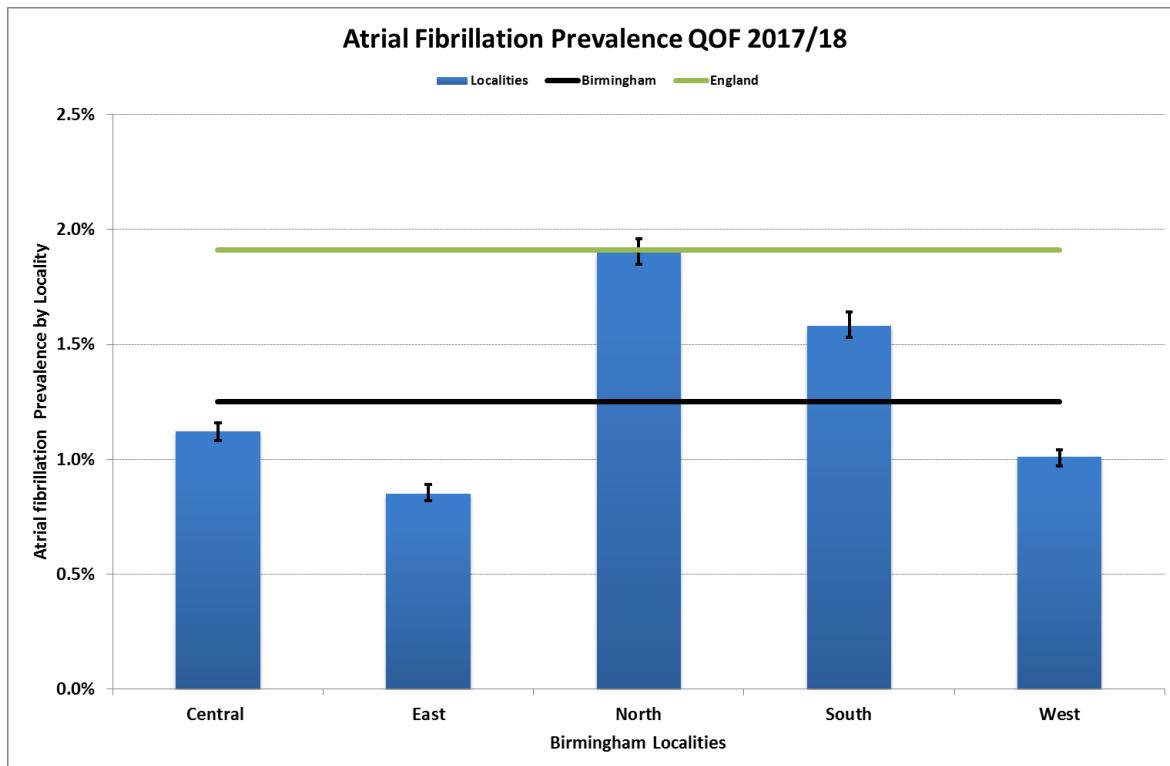


Figure 36 - Atrial Fibrillation prevalence. Source: QOF 2017-18

It is estimated that Birmingham has around 1.3% of its registered population on this register; this compares to 1.9% nationally.

CVD – hospital inpatient admissions

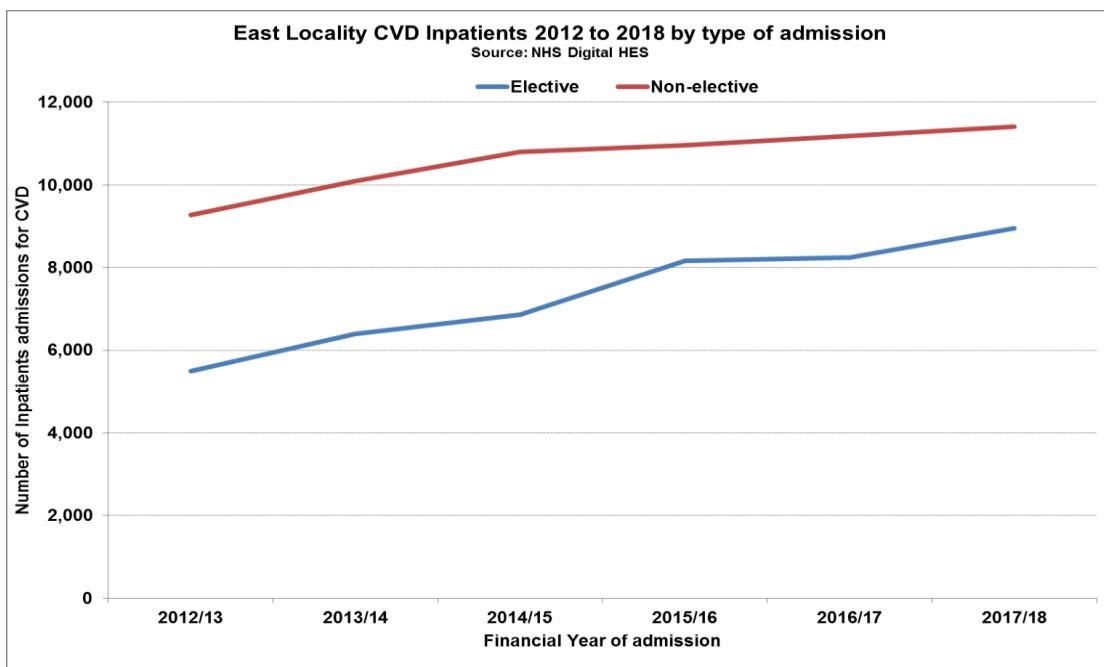


Figure 37 - CVD inpatient admissions. Source: NHS Digital HES 2012-2018

Over the last 6 years CVD inpatients admissions in Birmingham have slowly increased; predominantly admissions are non-elective.

CVD deaths

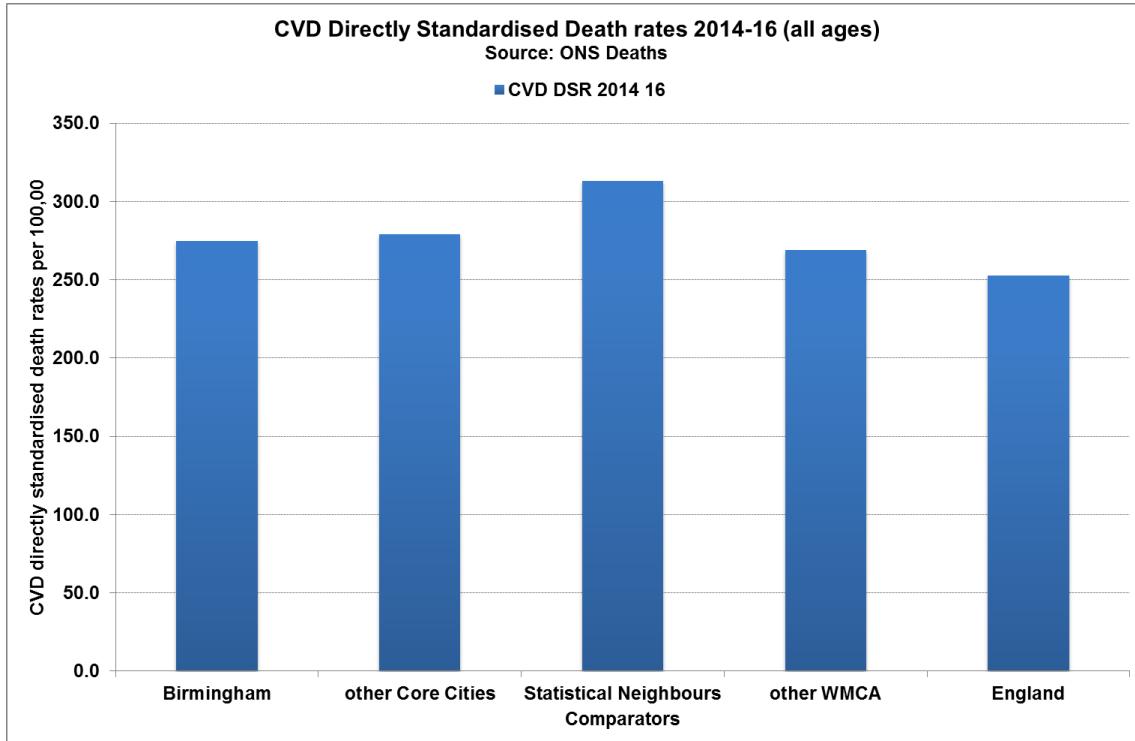


Figure 38 - Chart of CVD DSRs. Source: ONS 2014-16

Death rates are calculated per 100,000 of the population; for the 3 year period 2014-16 had a DSR at 274.8 per 100,000 (England 252.7). Further analysis highlights that the majority of deaths are in the 65+ age group.

Diabetes – is a lifelong disease that causes a patient blood sugar levels to be too high. There are 2 main types of diabetes:

- type 1 diabetes – where the body's immune system attacks and destroys the cells that produce insulin
- type 2 diabetes – where the body doesn't produce enough insulin, or the body's cells don't react to insulin

Type 2 diabetes is far more common than type 1. In the UK, around 90% of all adults with diabetes have type 2.⁸

Diabetes prevalence (age 17 and over)

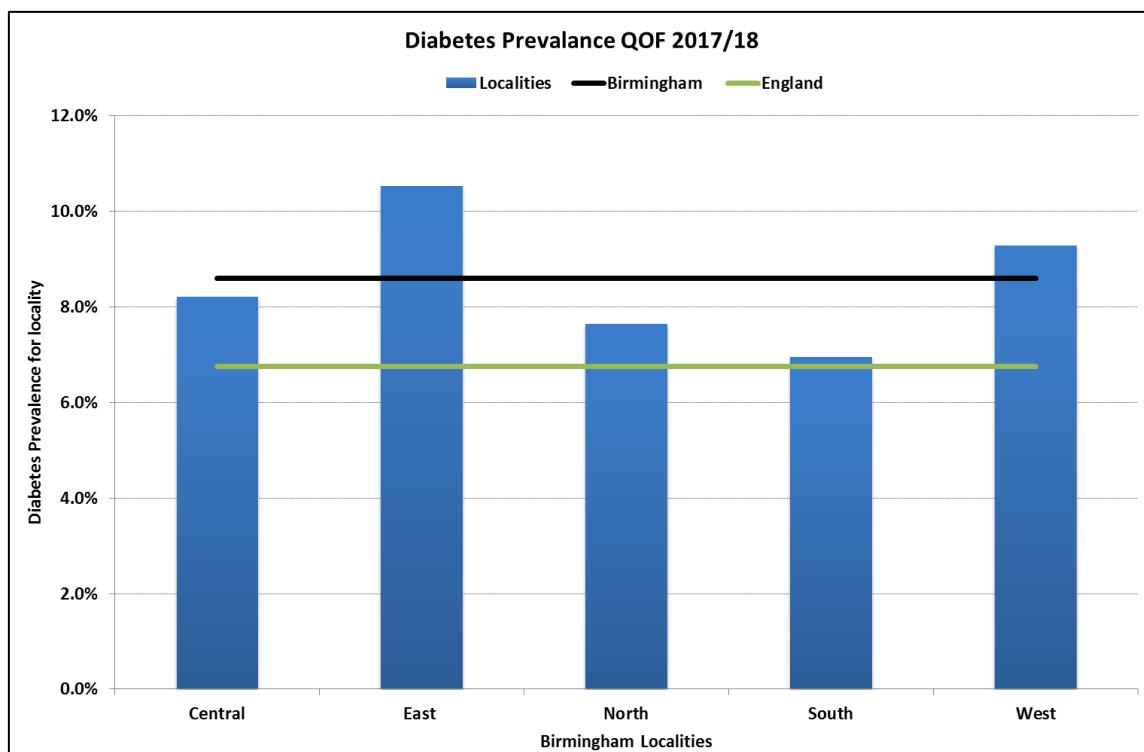


Figure 39: chart of diabetes prevalence. Source: QOF 2017/18

We are not given exact numbers by lower areas a proxy has been developed based on overall spread of populations within each practice. Using this method it can be estimated that Birmingham during 2017/18 had around 8.6% of its registered population on this register; this compares to 6.8% nationally. Diabetes has one of the highest prevalence figures of all the diseases within the QOF register partly because Type 2 is associated with lifestyle but also because the disease has such a profound effect on a patient's life once identified.

⁸ Sourced from NHS Choices Website 22nd August 2018

Diabetes – hospital admissions

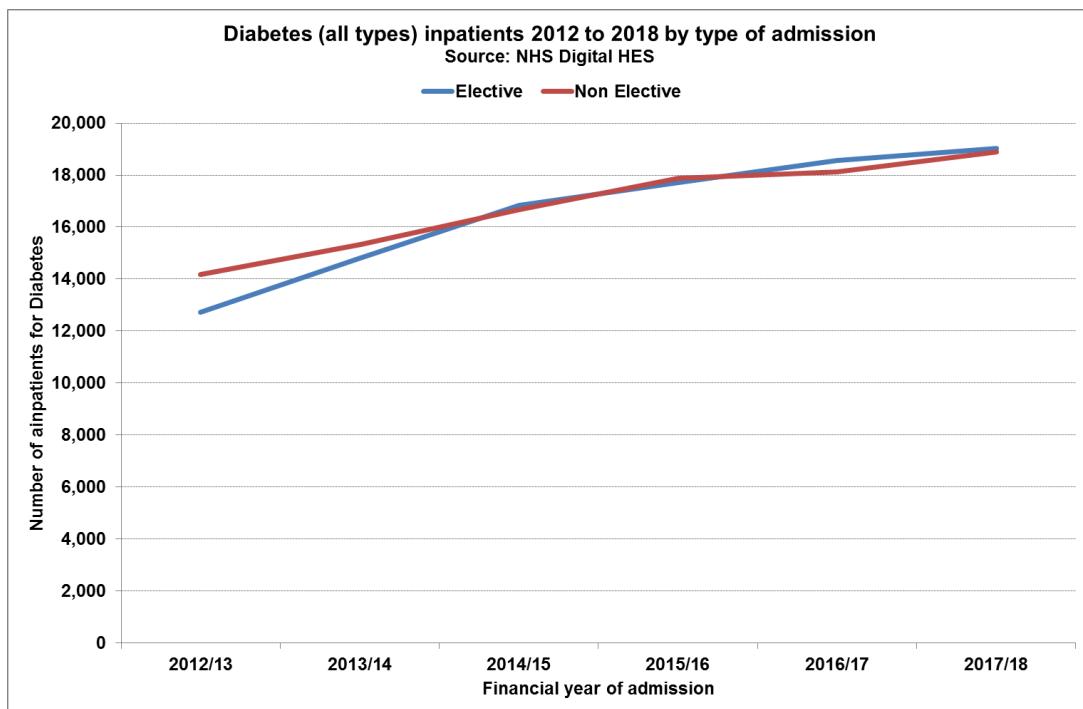


Figure 40: chart of diabetes inpatients. Source: NHS Digital HES 2012 to 2018

Admissions for all types of Diabetes has risen year on year since 2014/15 in Birmingham, both types of admission are close to each other with neither really dominating

Diabetes deaths

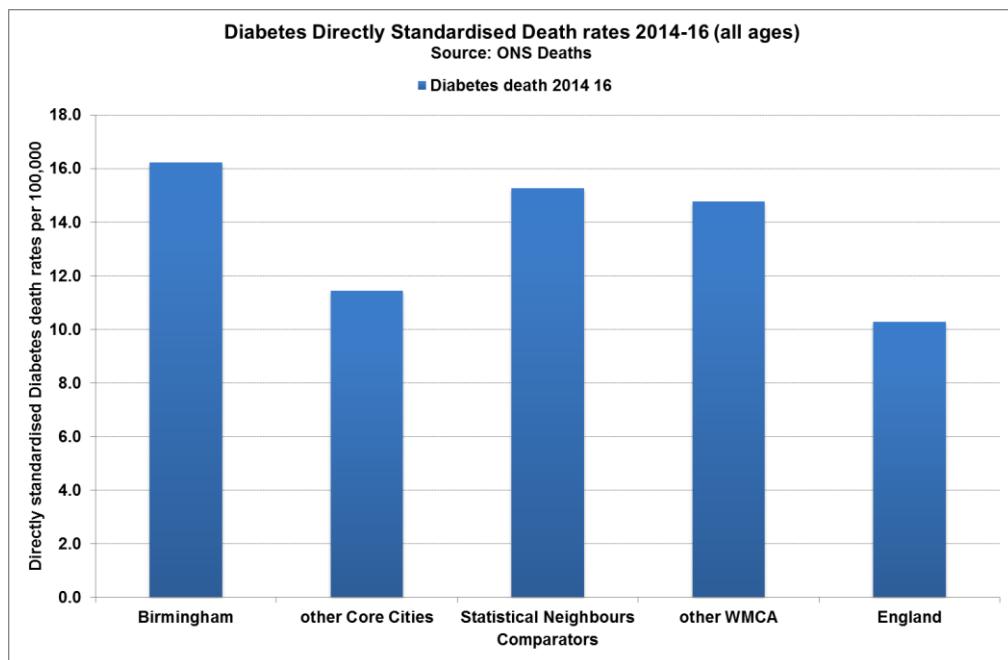


Figure 41: chart of diabetes DSRs. Source: ONS Deaths 2014/16

The death rate per 100,000 of the population for diabetes compared to other conditions remains low across Birmingham, with diabetes very rarely being recorded as the underlying cause of death; however that said Birmingham still has a high rate at 16.2 per 100,000 (England 10.3). The majority of deaths are in the 75+ age group and predominantly male.

Cancer is a condition where cells in a specific part of the body grow and reproduce uncontrollably. The cancerous cells can invade and destroy surrounding healthy tissue, including organs. Cancer sometimes begins in one part of the body before spreading to other areas. This process is known as metastasis.

More than one in three people will develop some form of cancer during their lifetime. In the UK, the four most common types of cancer are:

- breast cancer
- lung cancer
- prostate cancer
- bowel cancer

Although, there are anything up to 200 known cancers.⁹

Cancer prevalence

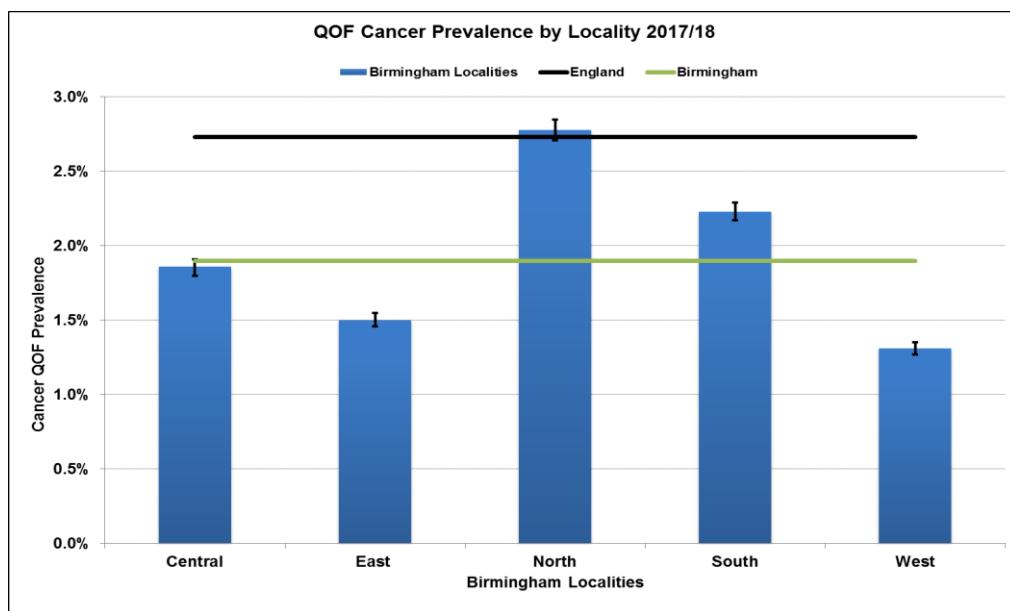


Figure 42: chart showing cancer prevalence by Birmingham localities. Source: QOF 2017/18

We are not given exact numbers by lower areas a proxy has been developed based on overall spread of populations within each practice. Using this method it can be estimated that Birmingham during 2017/18 had around 1.9% of its registered population on this register; this compares to 2.7% nationally.

⁹ Sourced from NHS Choices Website 22nd August 2018

Cancer – hospital admissions

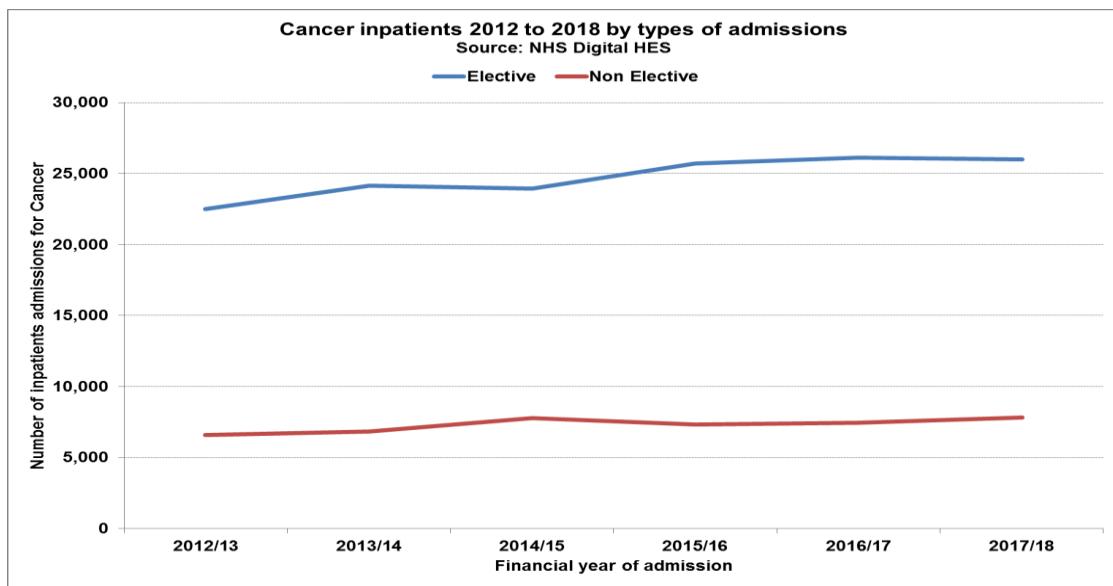


Figure 43: chart of cancer inpatients. Source: NHS Digital HES 2012-2018

The treatment of cancer requires a regular attendance as either an outpatient or inpatient facility to receive necessary drugs; as such numbers of admissions are high. Around 76.8% of those were elective admissions and this is different to the other diseases mentioned within this report where most inpatients admissions are non-elective.

Cancer deaths

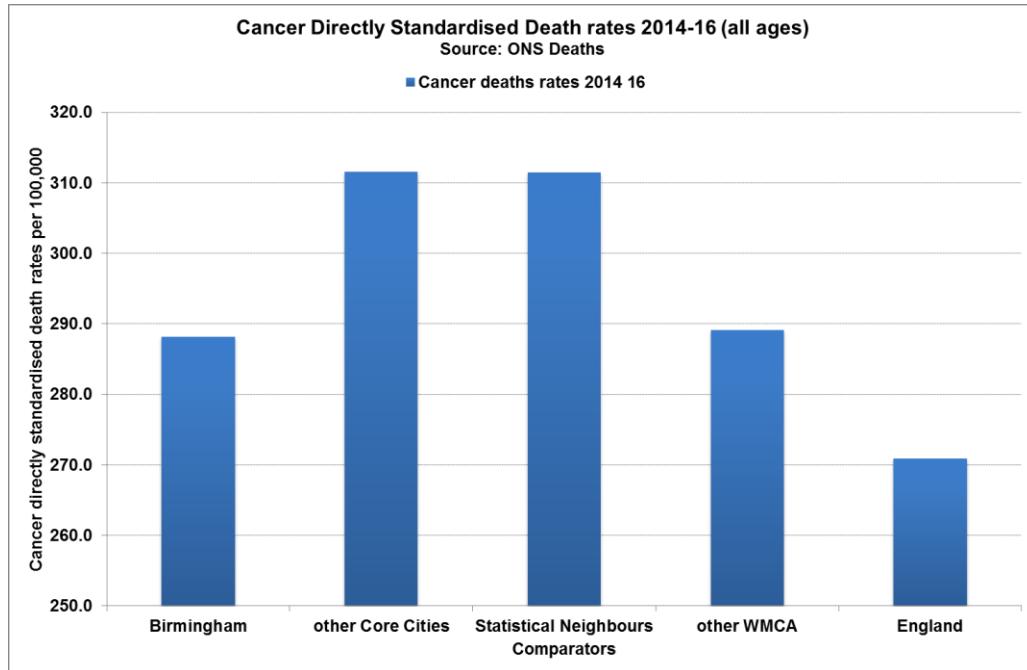


Figure 44: - chart showing cancer DSRs. Source: ONS Deaths 2014-16

During 2014/16 cancer across all ages accounted for around 6,800 (26.5%) deaths across Birmingham. For those three years the disease was the city's biggest killer. In Birmingham the cancer death rate 288.2 per 100,000 of the population (England 270.9).

Respiratory - this wide area covers those diseases that affect the respiratory areas of the body (lungs) and affect breathing. The majority of these which cause distress and require constant medical attention are mainly:

Chronic obstructive pulmonary disease (COPD) is the name for a group of lung conditions that cause breathing difficulties.

It includes:

- emphysema – damage to the air sacs in the lungs
- chronic bronchitis – long-term inflammation of the airways

COPD is a common condition that mainly affects middle-aged or older adults who smoke. The breathing problems tend to get gradually worse over time and can limit your normal activities, although treatment can help keep the condition under control.

Asthma is a common lung condition that causes occasional breathing difficulties.¹⁰

COPD prevalence

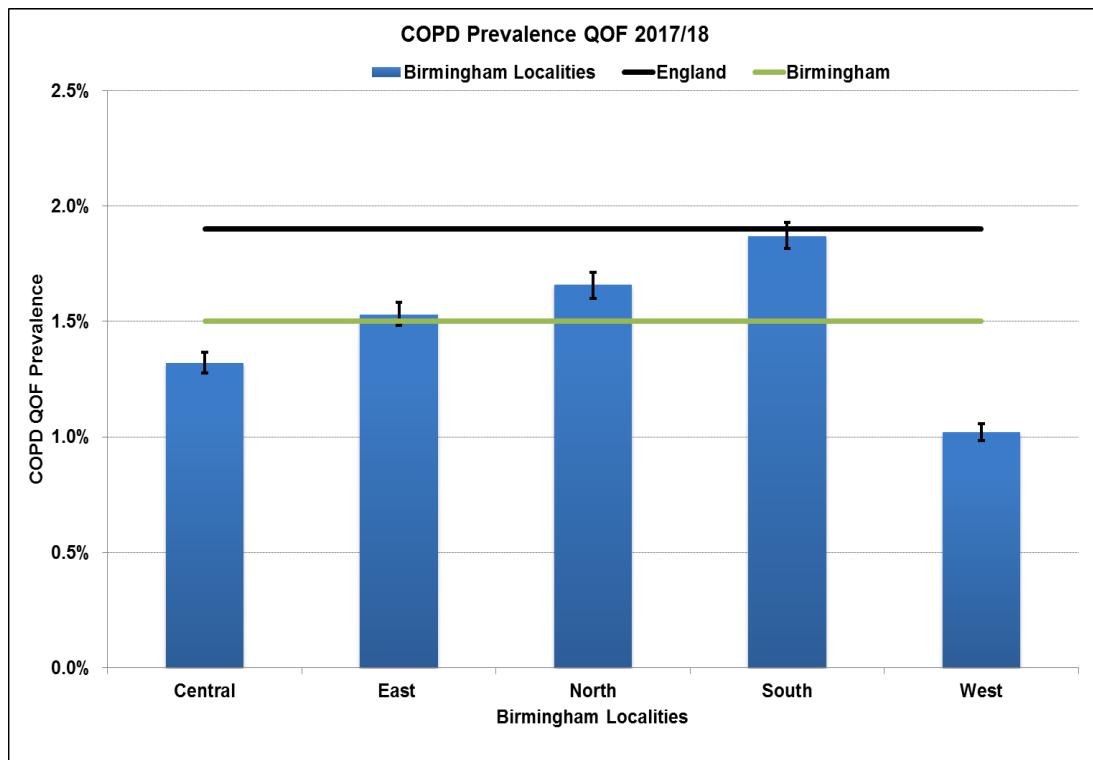


Figure 45 - COPD prevalence. Source: QOF 2017/18

It can be estimated that Birmingham during 2016/17 had around 1.5% of its registered population on this register; this compares to 1.9% nationally.

¹⁰ Sourced from NHS Choices website 22nd August 2018

Asthma prevalence

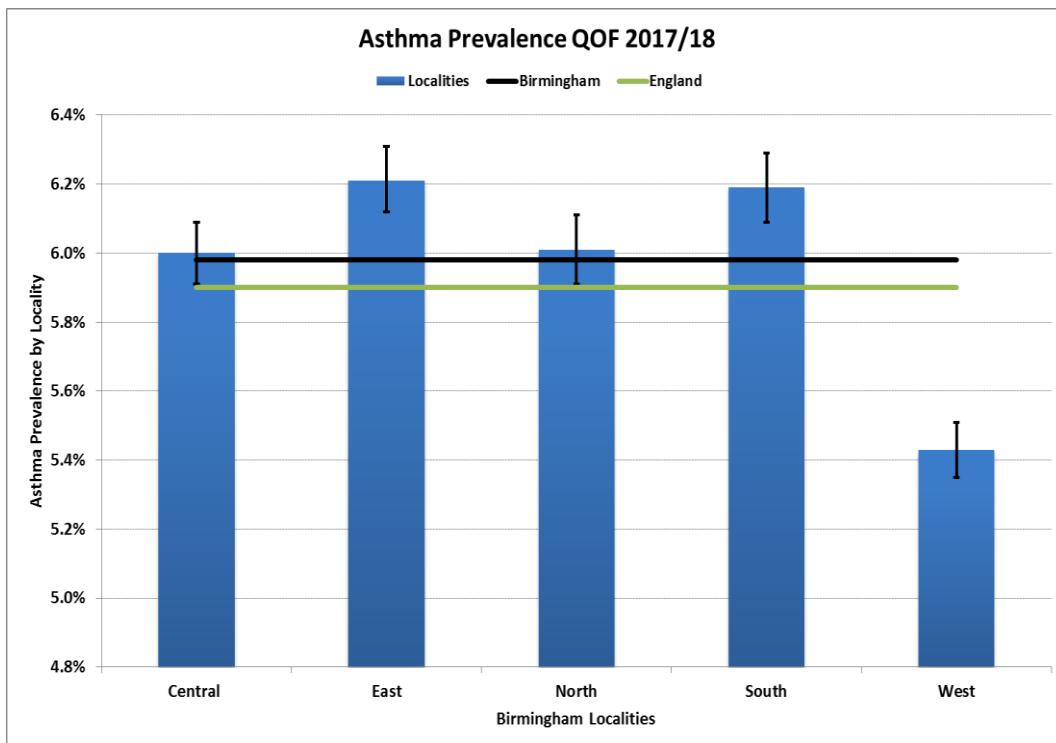


Figure 46: Asthma prevalence. Source: QOF 2017/18

It can be estimated that Birmingham during 2017/18 had around 6.0% of its registered population on this register; this compares to 5.9% nationally.

Respiratory hospital admissions

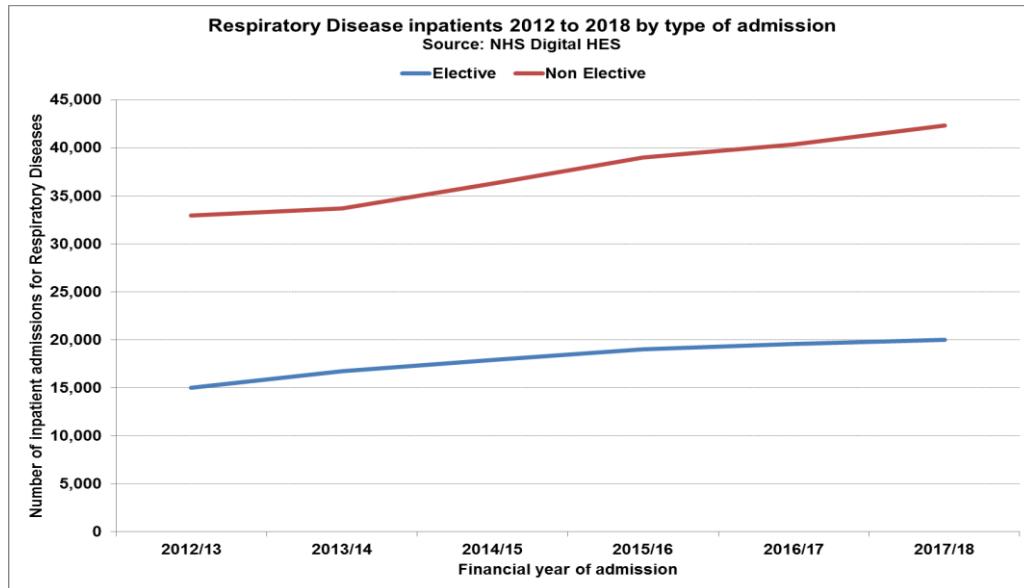


Figure 47- Respiratory inpatient admissions. Source: NHS Digital 2012-18

Since 2012/13 Birmingham has seen a rise in the quantity of inpatients for respiratory related conditions. Equally, they are predominantly for non-elective admissions at around 67.9% of all admissions over the last six years.

Respiratory deaths

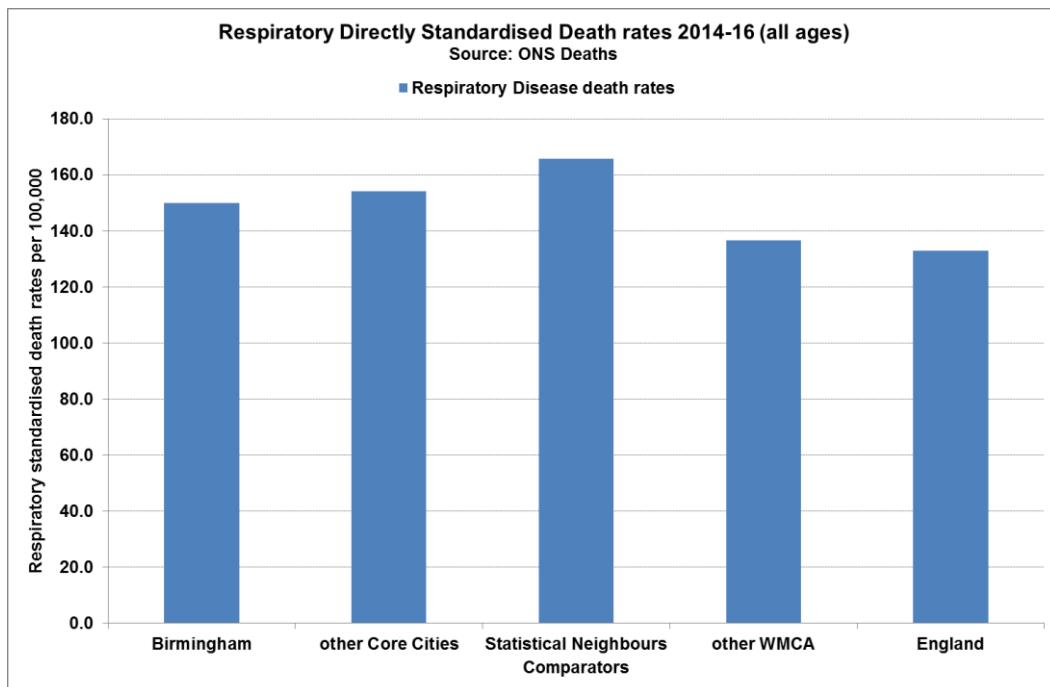


Figure 48 - Respiratory DSRs. Source: ONS Deaths 2014-16

The death rate for respiratory deaths within Birmingham is higher than local and national rates at 150.0 per 100,000 population (England 132.8). The rates are for all ages but the majority of deaths from respiratory diseases are for those patients 75+. Many of the respiratory diseases last for the majority of your life meaning as the disease progresses your quality of life diminishes.

For more information please contact:

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