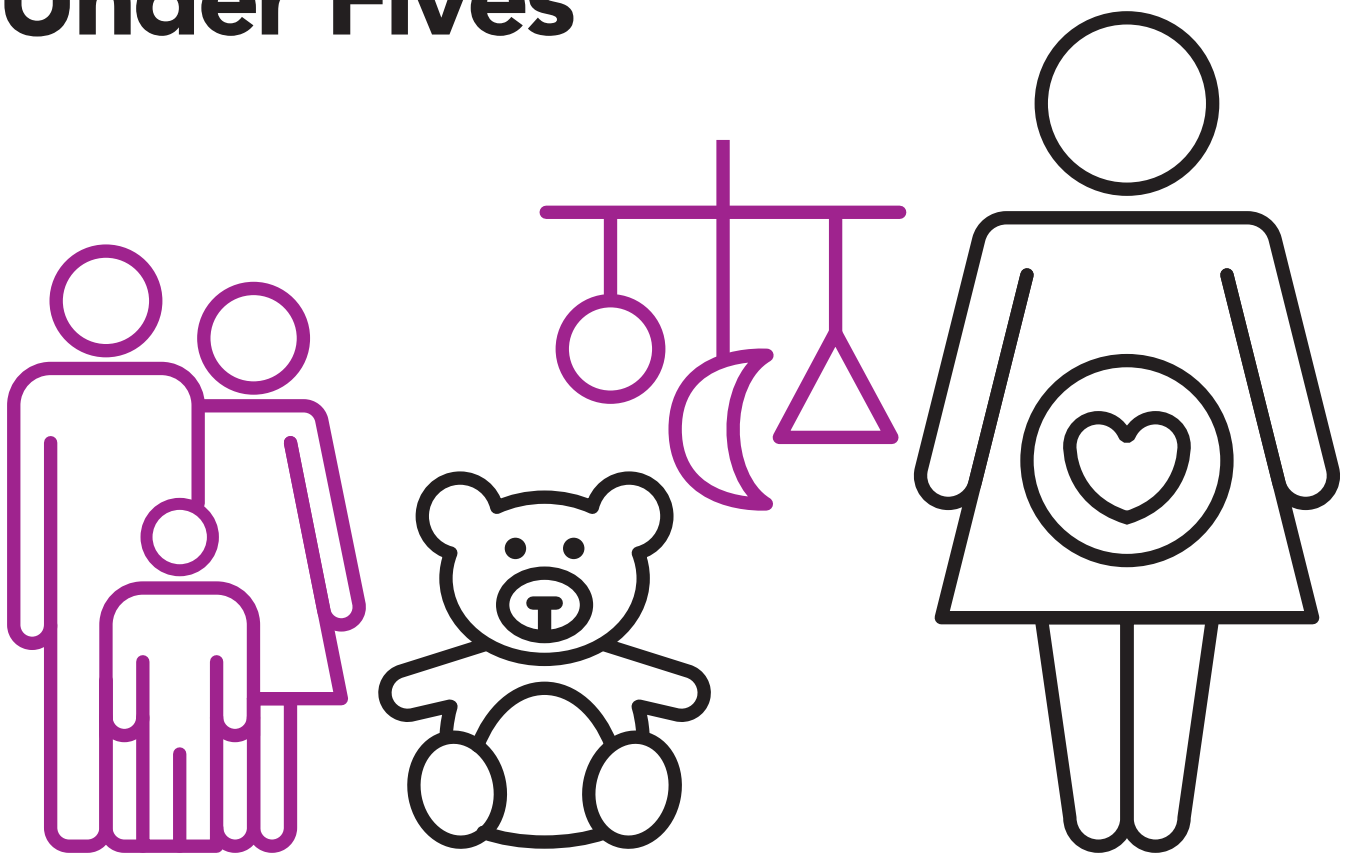
2018

Director of Public Health Annual Report

Fulfilling Lives for Under Fives



birmingham.gov.uk/publichealth

Birmingham City Council

Contents

PLEASE NOTE: The information contained in this document may contain restricted data or information which is not available to organisations outside of Birmingham City Council. The document and its contents may not be used, published or redistributed without the prior written consent of the author.

Foreword

It gives me great pleasure to present my Director of Public Health Annual Report for 2018.

The Health and Social Care Act of 2012 set out a requirement for all Directors of Public Health to produce an annual independent report on the health of their population and for their local authority to publish it. The purpose of the report is to raise awareness and understanding of local health issues, highlight areas of specific challenge and make clear recommendations for change to improve health and wellbeing.

This year, I have chosen to focus my report on the health and wellbeing of children aged under five living within the City of Birmingham. There is strong evidence that the foundations of good health start even before birth and influence each stage of life from childhood, adulthood and into older age. The Marmot report Fair Society, Healthy Lives, published in 2010, stated that 'giving every child the best start in life is crucial to reducing health inequalities across the life course'. If we are truly going to reduce the significant inequalities in health across our city then we must have a good understanding of the current and future health needs of this group and look at the best available evidence of what works to promote the best start in life.

Of course, the importance of the welfare of children is set out in international agreements too. These are important for us to understand and apply in Birmingham. The UN Convention on the rights of children sets out that every child has the right to the best possible health and a standard of living that is good enough to meet their physical and social needs. The Convention also reminds us that children are not just passive recipients of services and we need to find ways to make sure that children can express their views and feelings.

The need for us to protect children from exploitation and abuse are also set out in the Convention. In places this report makes challenging reading when we compare our responsibilities to protect children against the harms that still exist.

We need to remind ourselves of children's rights so that they can become an important driver to improving the lives of children in Birmingham.

The report looks at a wide range of measures which describe the current health of our young children and compares our performance to the national picture, as well as other similar cities across the country. It identifies areas where should drive up performance and reflects on our local practice against the recommendations set out in the recent report by the Royal College of Paediatrics and Child Health 'State of Child Health'.

I welcome any feedback about the contents and presentation of this report and look forward to working with all city partners and communities to address these recommendations. It is my intention that the 2019 Annual Report will reflect on progress made over the next 12 months and highlight future health needs of the people of Birmingham.

Becky Pollard,
Interim Director of Public Health
Birmingham City Council

Executive summary

There is strong evidence that the foundations of good health start even before birth. The report looks at a wide range of measures which describe the current health of our young children and compares our performance to the national picture, as well as other similar cities across the country.

Although the report highlights specific issues that face under five year olds in Birmingham, it is clear that an underlying theme is the impact of poverty across all these areas. Although we want to ensure that we address the impacts of inequality on health and wellbeing, we also need to address the underlying social and economic drivers in order to achieve meaningful change.

Demographics

Birmingham has the largest population under five years old of any English local authority, with 85,820 children making up 7.6% of the total population, the highest percentage amongst the core cities.

The general fertility rate is the proportion of births to women aged 15-44. In 2016, Birmingham had a fertility rate of 69.7 per 1,000 women, which is higher than that of England (62.5) and other core cities (59.2). There were 17,500 births in Birmingham in 2016.

Birmingham is the most ethnically and culturally diverse city in the UK outside London. In 2011, 42% of the general population and 60% of children under five years old were from Black, Asian and Minority Ethnic Groups (BAME) groups. Health outcomes, such as infant mortality, low birth weight for term babies, tooth decay and excess weight can vary considerably between ethnic groups.

Children living in challenging housing conditions are more likely to experience poor health. 2011 census data shows that 6.7% of households in Birmingham with dependent children live in overcrowded conditions, in comparison with 3.2% nationally. Latest figures show there are 335 under five year olds in Birmingham who are being looked after by the Local Authority.

Conception, Pregnancy and Neonatal

In comparison with the rest of England, Birmingham has poorer outcomes on a number of measures of healthy maternity: still birth, low birth weight, neonatal death and infant mortality. The NHS Saving Babies' Lives Care Bundle, launched by NHS England to reduce the rate of still birth and early neonatal death by incentivising the reduction of smoking in pregnancy, and raising awareness and improving monitoring of foetal growth and movement, has been implemented by Birmingham. This is accompanied by the development of a systematic approach to maternity care – a partnership of two maternity providers to deliver care using the same pathways in a more community orientated approach. The key aspirations are to address the additional socio-economic needs of some women and respond to the challenge of pregnant women who smoke.

Early Years Health and Care

Birmingham encounters a number of challenges around the health and wellbeing of under five year olds – it has higher rates of childhood obesity, lower childhood vaccination uptake and higher rates of Accident and Emergency attendances and emergency admissions than the national average. In line with best practice, work is already underway to address many of these public health issues. The procurement of Birmingham Forward Steps has, at the heart of its specification, a community-based and family-centred approach. It is designed to provide early help and support to optimise health and well-being and to facilitate access to other health and social care services when needed. Work is also underway to increase the use of Healthy start VoucherScheme which provide low income families with vouchers for the purchase of milk, fruit and vegetables.

Early Years Education and Development

The early years are vital for giving children the best possible start in life – it is during these years that the foundations for life are set. A key indicator of childhood development and education is the school readiness level, on which children in Birmingham are below the England average – 66% vs 70% assessed as being at a good stage of readiness. It is important to provide good quality early years education and childcare proportionately across the social gradient to increase the take-up by children from disadvantaged families. Work is underway to provide children with the best start in life by addressing issues such as

school readiness through partnership working between Early Years services, such as Birmingham Forward Steps, which provides support to all families with children under five years old. The City Council also monitors the uptake of government-funded Early Education Entitlement, and seeks further opportunities to improve uptake.

Family and Social Environment

More than one in every four children in Birmingham lives in poverty, which can have a range of lasting impacts on health, both direct and indirect – for example the impact of poor diet or not engaging at school. Work in Birmingham therefore must consider how to counter not only the causes of ill-health, but also the causes of the wider deprivation that contribute to it. Birmingham is ranked as the 6th most deprived local authority in the country. In addition, 30.5% of Birmingham children live in income-deprived households, ranking Birmingham 15th in England for deprivation affecting children.

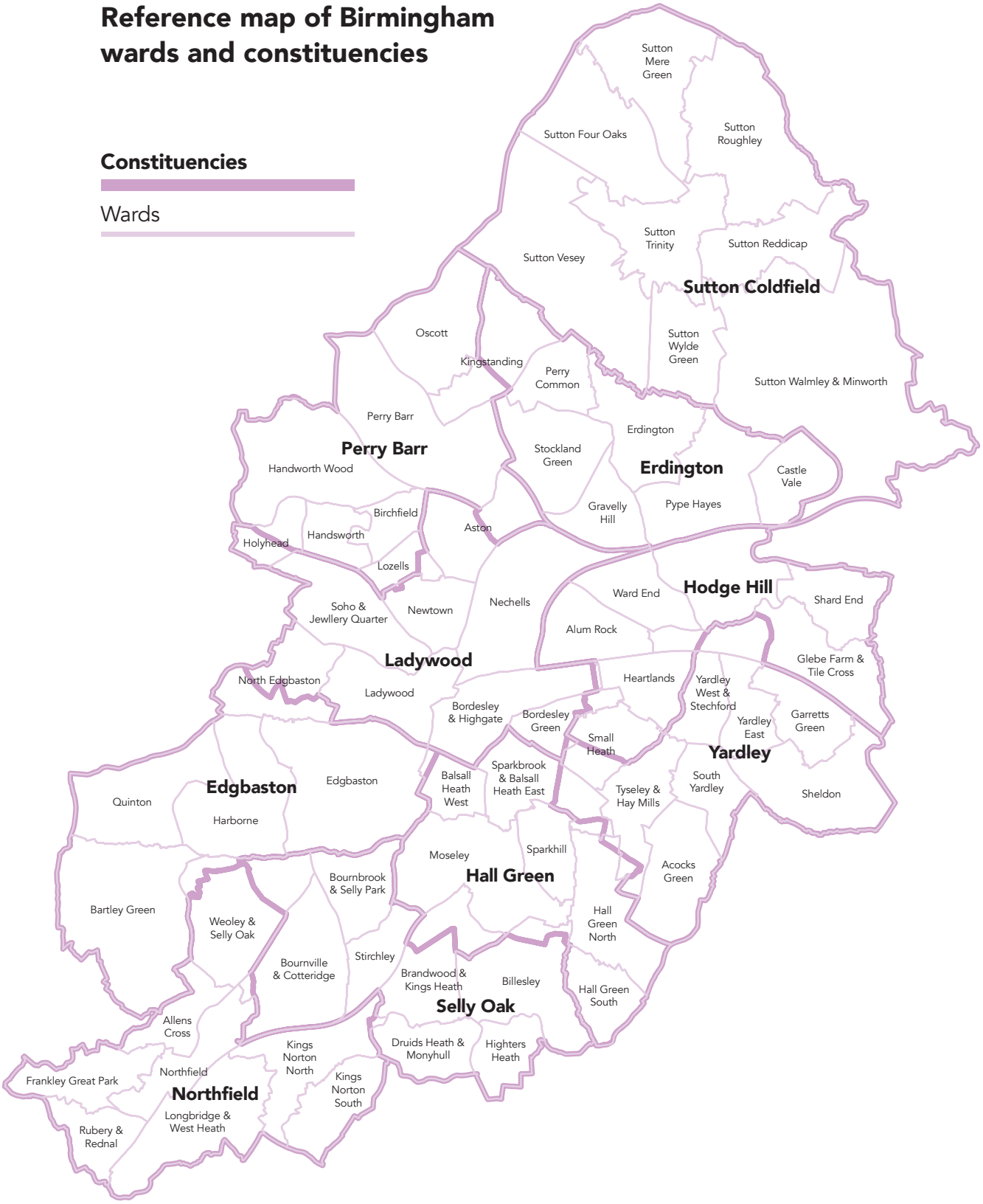
A key objective for us is to ensure that economic growth is inclusive and that the opportunities and benefits of growth are made available to every person in the city, not just those who are already affluent. As part of this Birmingham City Council has a social value policy, which it implements via the Birmingham Living Wage policy, and the Birmingham Business Charter for Social Activity. One innovative use of this approach has been via the Longbridge 106 scheme which uses funds raised by Birmingham City Council via housing development to fund family nutrition and physical activity.

There is strong evidence of the impact of adverse experiences in childhood on childhood health, and on the later ability to form part of a healthy workforce as an adult. We predict that there will be large numbers of our population who have experienced adversity in childhood, a large number concentrated in our many areas of disadvantage. A framework has been developed that identifies: opportunities for therapeutic interventions for those who have experienced adverse experiences in childhood; actual adverse events as they occur in order to reduce their impact; and opportunities to prevent adverse events occurring in the first place. We will continue to develop services for primary, secondary and tertiary prevention in partnership with local service providers.

Reference map of Birmingham wards and constituencies

Constituencies

Wards



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

Overarching recommendations – Fulfilling lives for under fives

1. **Commissioners and providers of Early Years services within Birmingham take account of the demographic makeup and distribution of the under fives population across the city (specifically in Central and Eastern areas) and target efforts and resources accordingly.**

2. **Commissioners and providers have in place robust data collection systems to monitor health needs and outcomes for children under five and their families, including the Ages and Stages Questionnaire and breastfeeding rates.**

3. **Local Sustainable Transformation Partnerships across the city encourage commissioners and service providers to strengthen the prevention offer from preconception through to early years for the citizens of Birmingham, particularly through the Local Maternity System and Birmingham Forward Steps.**

4. **Inclusive growth and economic development programmes across the city and those led by the West Midlands Combined Authority, maximise opportunities to promote the wellbeing of young children and their families, particularly those in poverty in greatest need.**

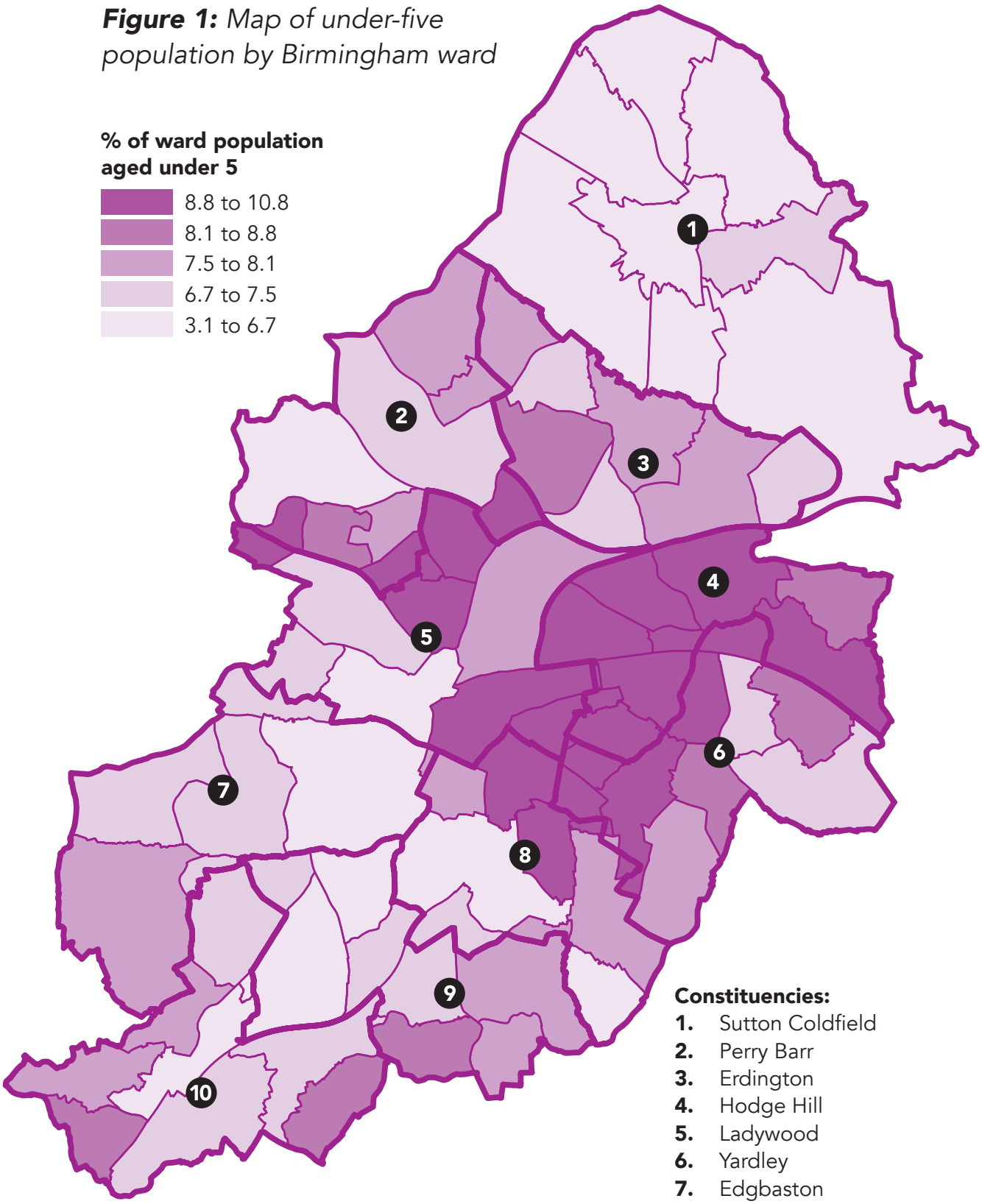
5. **The Birmingham Health and Wellbeing Board encourages and facilitates strong strategic partnership working and ensures robust governance arrangements are in place between statutory and non-statutory bodies to monitor and promote the health and wellbeing of under five year olds.**

Demography of Birmingham

Population aged under-five in Birmingham

Birmingham has the largest population aged under-five of any local authority in England with an estimated 85,820 children making up 7.6% of the total population[1]. This is equivalent to the total population of the town of Redditch. This age group makes up 6.1% of the England population. Amongst the Core Cities, Birmingham has the highest percentage of children this age. Within the city the highest proportion of under five year olds can be found in the central and eastern areas with the biggest concentration in the wards of Heartlands and Bordesley Green (10.7% and 10.3% respectively). Bournbrook and Selly Park ward and Sutton Four Oaks ward have the lowest percentage of under five year olds (3.1% and 4.4%). The distribution across the city by ward can be seen in Figure 1. The number of children under five years old has been slowly rising over the past five years and this is set to continue in the coming period. ONS 2016-based population projections estimate there will be 87,900 children under five years old in Birmingham by 2026.

Figure 1: *Map of under-five population by Birmingham ward*



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

Births in Birmingham

Birmingham has the highest number of births per year of all the local authorities in England. The number in Birmingham has remained fairly constant over the past 10 years. In 2016 there were 17,500 births in the city and there were 17,000 10 years previously. In 2016 the largest number of births were in Alum Rock ward (641) and Sparkbrook and Balsall Health East ward (548). The lowest number of births were seen in Sutton Four Oaks (66) and Sutton Wylde Green (77).

Births to mothers who were not themselves born in the UK, as a percentage of all live births, was 41.3% in 2016 for the city[2]. This was the highest percentage out of all the West Midlands local authorities (England 29%).

[1] ONS 2016 mid-year estimates
[2] ONS local migration statistics 2016

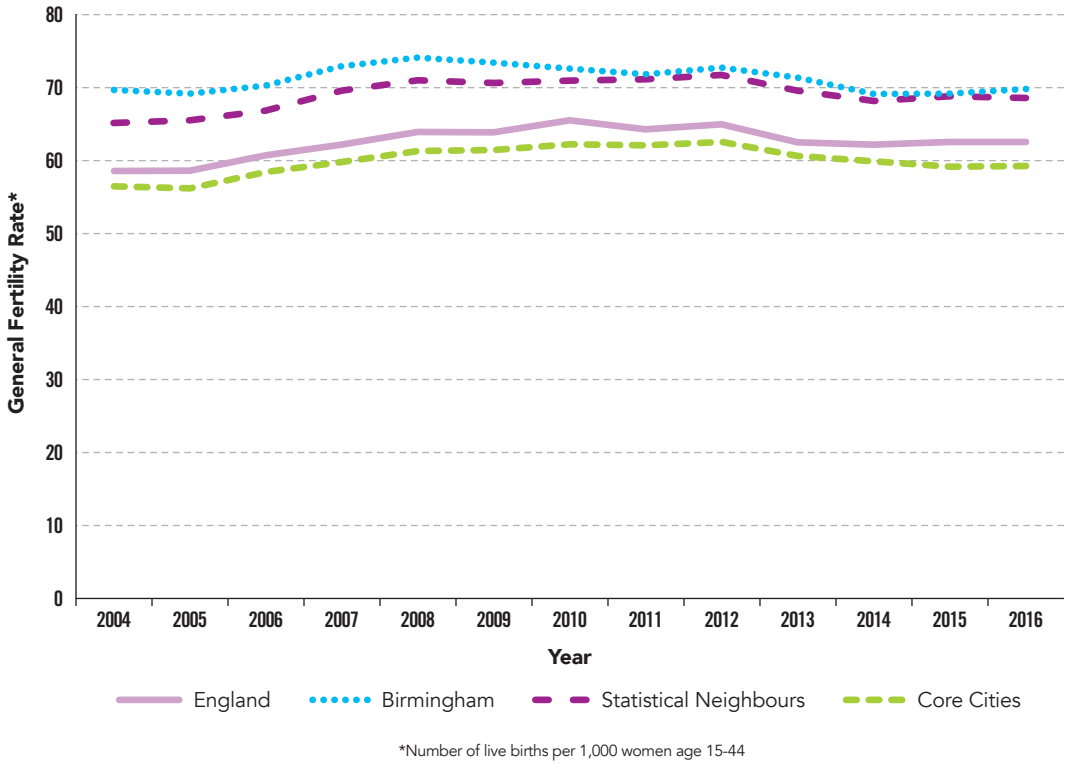
Source: ONS total births data (rounded)

Fertility rates in Birmingham

The general fertility rate is the proportion of births to women aged 15-44. In 2016 there were 17,500 births in Birmingham which equates to a fertility rate of 69.7 per 1,000 women. Figure 2 shows that Birmingham's rate is higher than England (62.5) and the Core Cites (59.2). The city rate has been constant over the past seven years. General fertility rate can be an indication of possible growth or decline of a population compared to other areas.

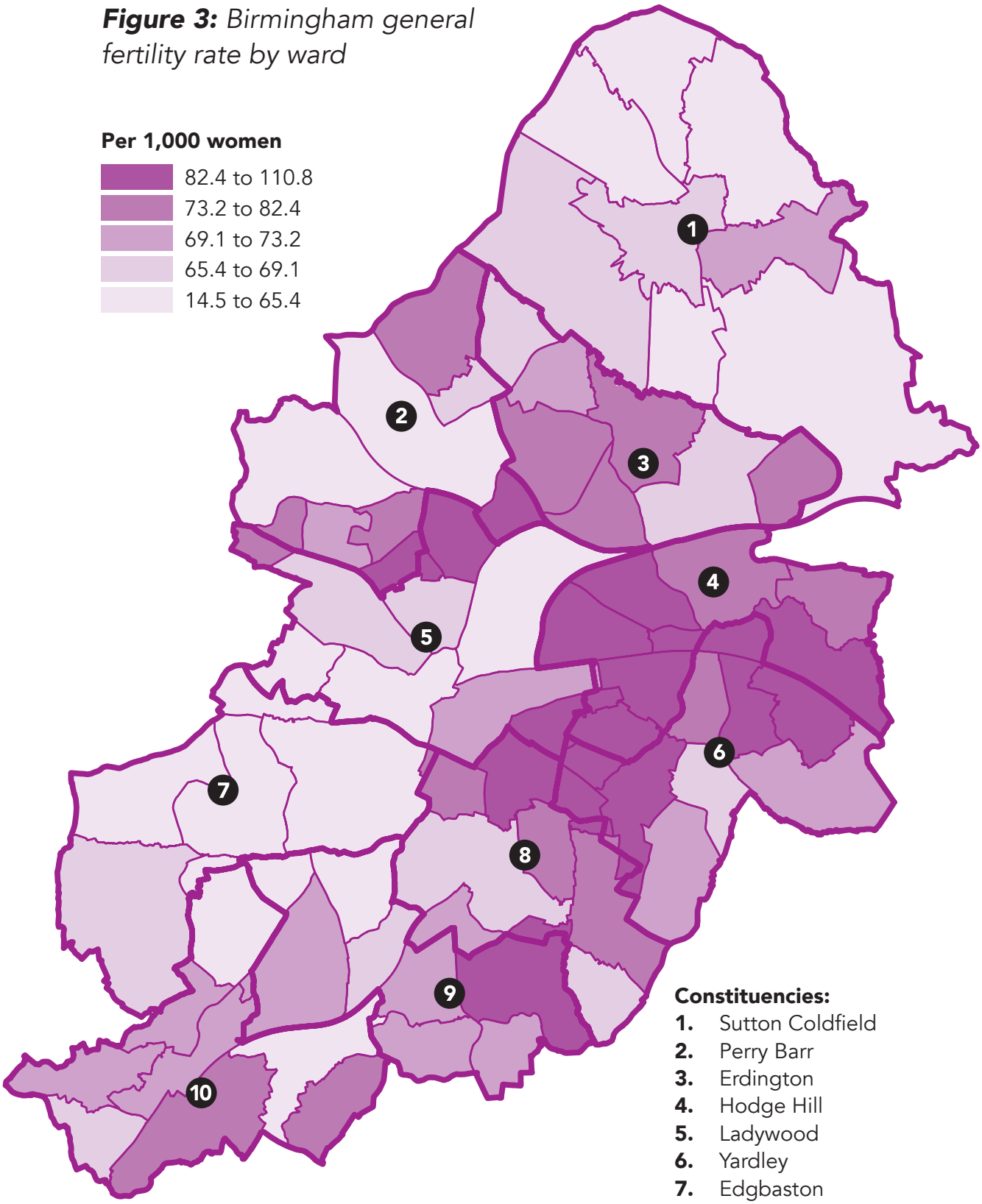
The general fertility rate varies within the city with the highest rates in central and eastern areas; the highest rate being in the Bordesley Green ward (111 per 1,000); the lowest rate in Bournbrook and Selly Park ward (14 per 1,000).

Figure 2: *General Fertility Rate over time*



*Number of live births per 1,000 women age 15-44

Figure 3: *Birmingham general fertility rate by ward*



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

Diversity in Birmingham

Outside London, Birmingham is the most ethnically and culturally diverse city in the UK. This is reflected not only in its general population, in 2011 42% are from Black, Asian and Minority Ethnic Groups (BAME), but also in the under five age group. The 2011 census reported that 60% of Birmingham children aged under five were from BAME groups compared to 17% in England. Within the city this percentage varies dramatically; in Sparkbrook ward 96% of under five year olds were in BAME groups, whereas there were only 17% in Longbridge ward[3]. There are an estimated 90 different languages spoken in the city.

Health outcomes, such as infant mortality, low birth weight for term babies, tooth decay and excess weight, can vary considerably for ethnic groups. Similar inequalities can be seen when examining the social determinants of health, such as children in low-income families and school readiness[4].

Migration

Evidence shows that many migrants are healthy upon arrival, compared with the native population.

Good health can deteriorate over time in the receiving society[5]. Intelligence on the migration patterns of under five year olds in Birmingham is split into internal and international migration. In 2016 Office for National Statistics[6] reported that there was a net outflow of 510 under five year olds in Birmingham as the result of internal migration (residents moving within the UK). This was made up of 2,940 children coming into the city and 3,450 children leaving the city. This makes for a large cohort of transient families which could lead to difficulties monitoring their health and providing health services. Such a fluid population can also lead to poor housing experiences and poor outcomes in education.

International migration also points towards a fluid population in Birmingham. At August 2017 15,409 migrants had come into the city, with 6,364 leaving Birmingham. This in migration represented 1.4% of the total population (second highest value out of West Midlands local authorities and compared to 1% for England). Birmingham participates in the national asylum dispersal scheme. The number of asylum seekers on section 95 support (the primary form of asylum seeker support) at September 2017 was 1,535: the highest of any English Local Authority[7].

Housing in Birmingham

Children living in challenging housing conditions are more likely to experience poor health. The map of 2011 census data (Figure 4) shows the proportion of households in which there are dependent children living in overcrowded conditions; a household that has at least one bedroom too few for the number of people living in the household. Birmingham has 6.7% of households living in such overcrowded conditions (England, 3.2%). The areas surrounding the city centre had the highest proportion of overcrowded households with children. More than one in five of the households were overcrowded with dependent children in Small Heath ward (22%) and Alum Rock ward (21%).

Looked after children

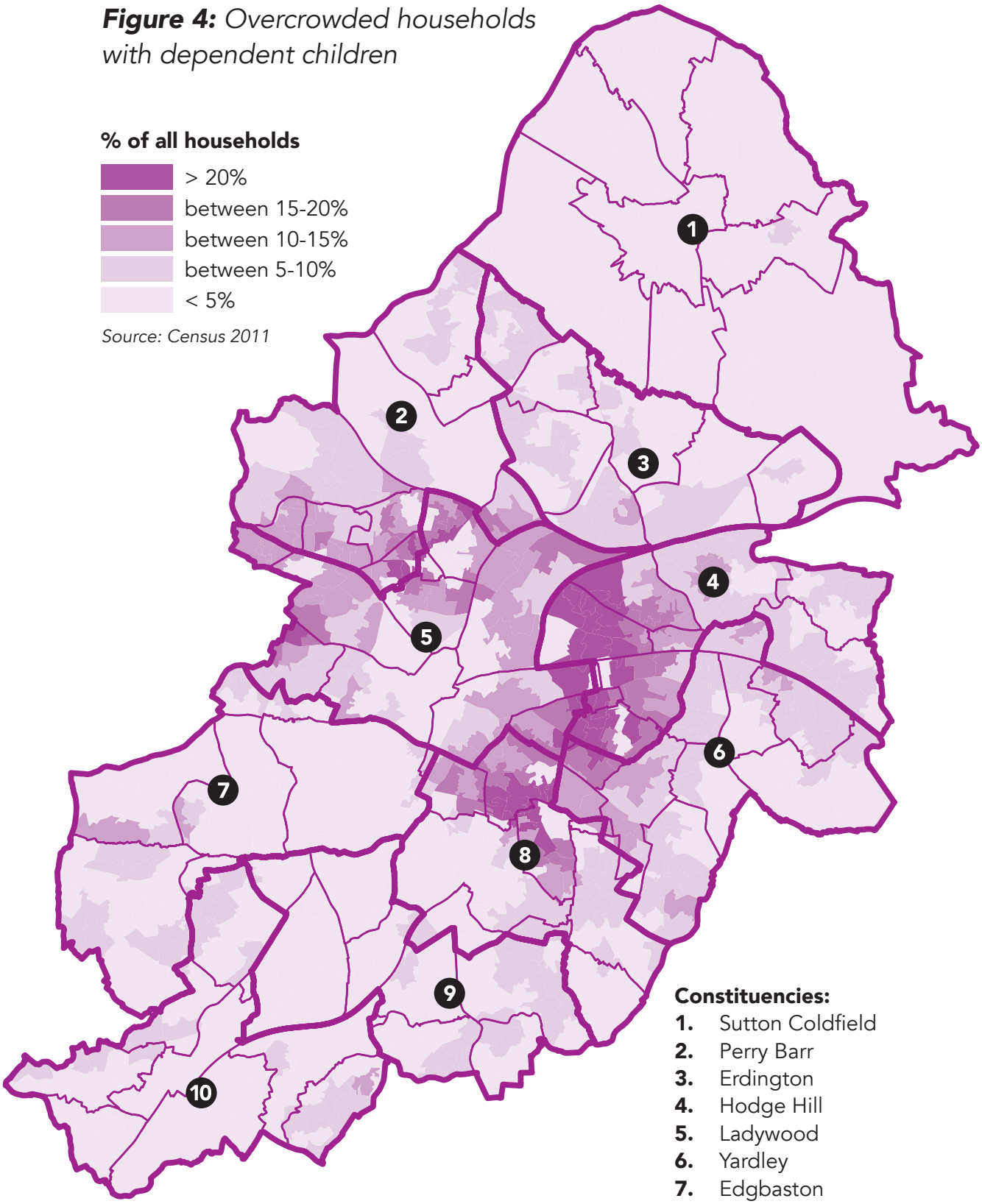
Local authorities are responsible for ensuring an assessment of the physical, emotional and mental health needs of every child they look after is carried out. The majority of children and young people who become looked after do so following experiences of abuse or neglect and have statistically poorer health and education outcomes compared to other children and young people.

The latest figures (2016/17) show that there are 335 under five year olds who are being looked after. This represents 39 per 10,000 children of this age, which is statistically similar to the national average (36.9 per 10,000)[8].

Despite our poor rates of overall child immunisation the percentage of looked after children with up to date immunisation is high. Although the figures are not for under five year olds, 94% of looked after children of all ages were up to date with their immunisations. The figure for England was 84% (2017). Completion of health assessments for looked after children is also high with 97% having an annual assessment (England 89%).[9]

[3] ONS 2011 census
[4] Public Health England. Public Health Outcomes Framework: Health Equity Report Focus on ethnicity (2017)
[5] Rechel, B., P. Mladowsky et al. "Migration and health in an increasingly diverse Europe." Lancet 381 (2013)
[6] "2015 to 2016 Birmingham internal migration". BCC Service Development Team, Transportation and Connectivity, Economy Directorate
[7] West Midlands Strategic Migration Partnership. Understanding Migration: Building a cohesive strategy for the West Midlands, Stage one report, Review of trends and patterns of migration
[8] PHE fingertips
[9] Department of Education

Figure 4: *Overcrowded households with dependent children*



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

Conception, pregnancy and neonatal

What's happening in Birmingham?

The Fertility Rate of women is higher in Birmingham (69.7/1,000) compared to West Midlands (69.7) and England (62.5). Fertility varies across the City (Figure 3 in Demography chapter). The pattern also reflects the patterns of socio-economic disadvantage. This has implications for the delivery of maternity services in the community as it results in more vulnerable women requiring more complex, or intense support during pregnancy. This has an adverse impact upon the outcomes of pregnancy.

Figure 5 shows that since the 1960s Birmingham has had an Infant Mortality Rate that is higher than the England rate with a varying and recently increasing gap.[10] The current Birmingham rate (2014-2016) is 7.9/1,000 live births compared to

Figure 5: *Infant Mortality Rate over time*

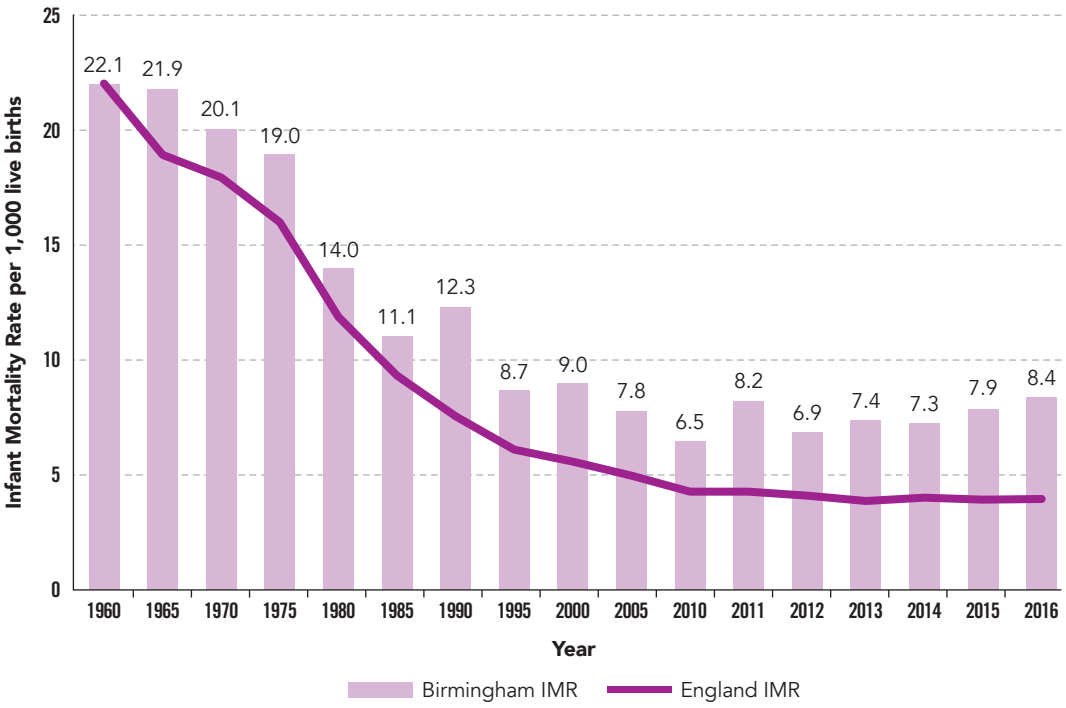
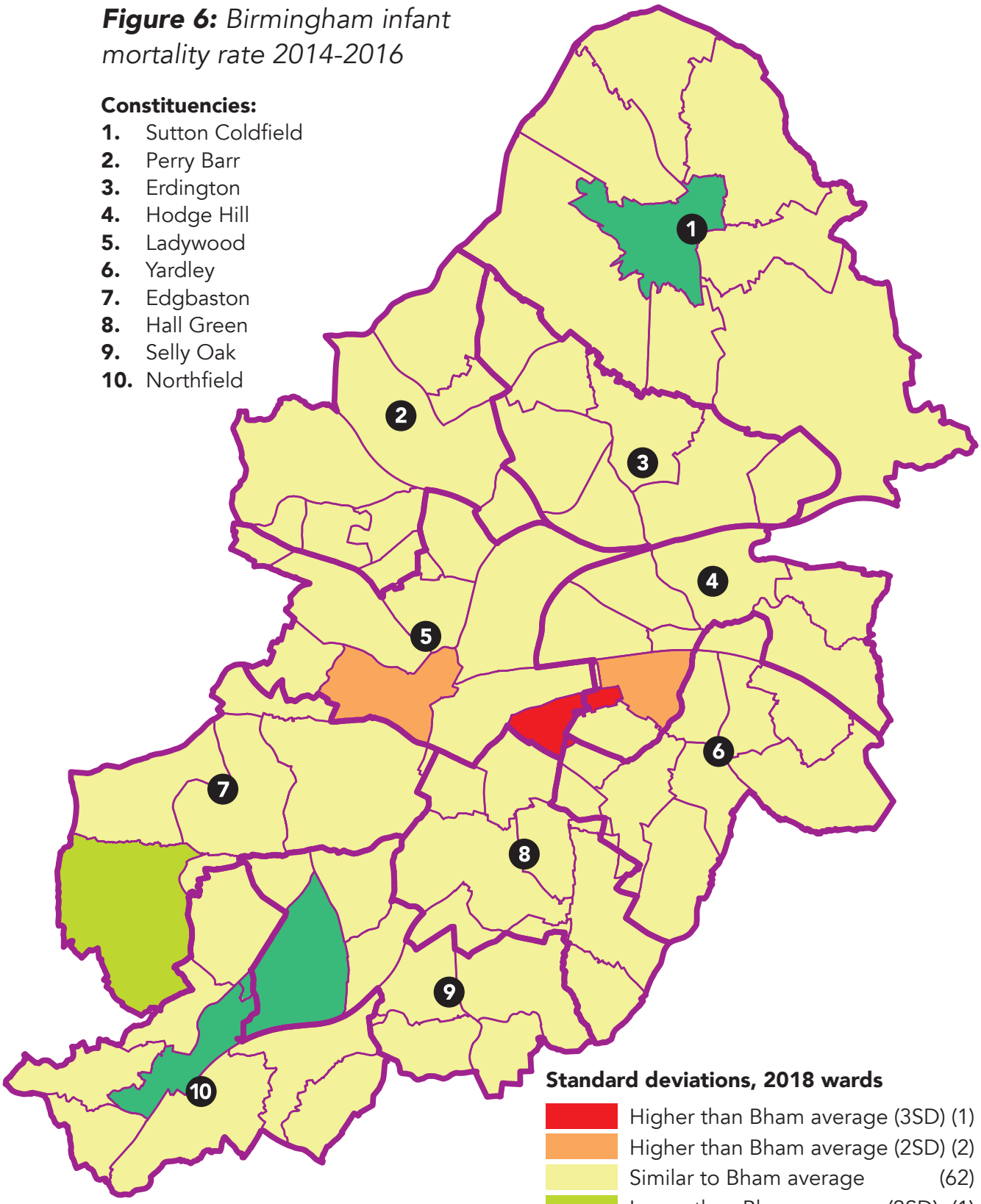


Figure 6: *Birmingham infant mortality rate 2014-2016*

Constituencies:

1. Sutton Coldfield
2. Perry Barr
3. Erdington
4. Hodge Hill
5. Ladywood
6. Yardley
7. Edgbaston
8. Hall Green
9. Selly Oak
10. Northfield



Source: ONS Births

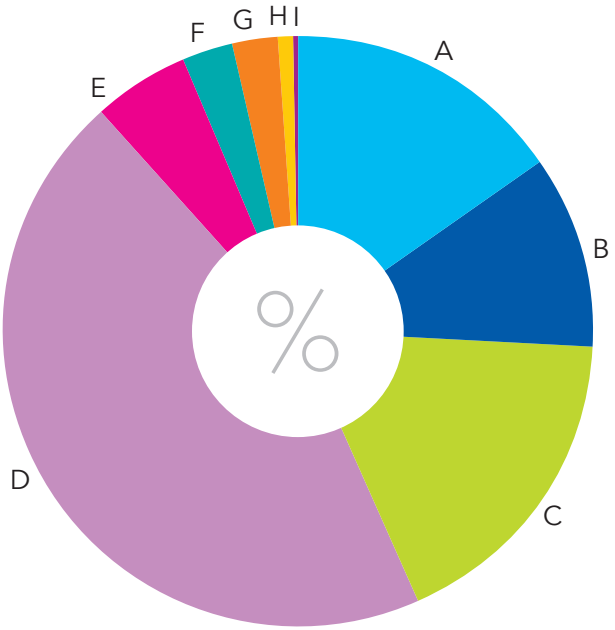
Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

3.9/1,000 live births in England. It is higher than all the comparable statistical neighbours and Local West Midlands neighbours.[11]

This persistent difference with other parts of England is also reflected in variation in the areas of the city which is statistically important (Figure 6). Further analysis of the small area data shows that three wards have much higher rates and this is not due to random variation. The more specific drivers cannot be identified from this data.

Almost three quarters (72% in 2015-2017) of child deaths in Birmingham occurred in the first year of life with 63% of these in the first week of life.[12] This means that 46% of all child deaths occur in the first week of life. The cause of death recorded on the Medical Cause of Death certificate suggests that immaturity (born too soon), congenital anomalies and intrapartum events are the main conditions (73%: Figure 7).[13] This is confirmed by the analysis of categories used by the Child Death Overview Panel[3] which is also able to examine the relationship between the two principal categories (prematurity and congenital anomalies) and duration of pregnancy at birth (gestation). All of those identified as being born at less than

Figure 7: *Causes of infant deaths in Birmingham*

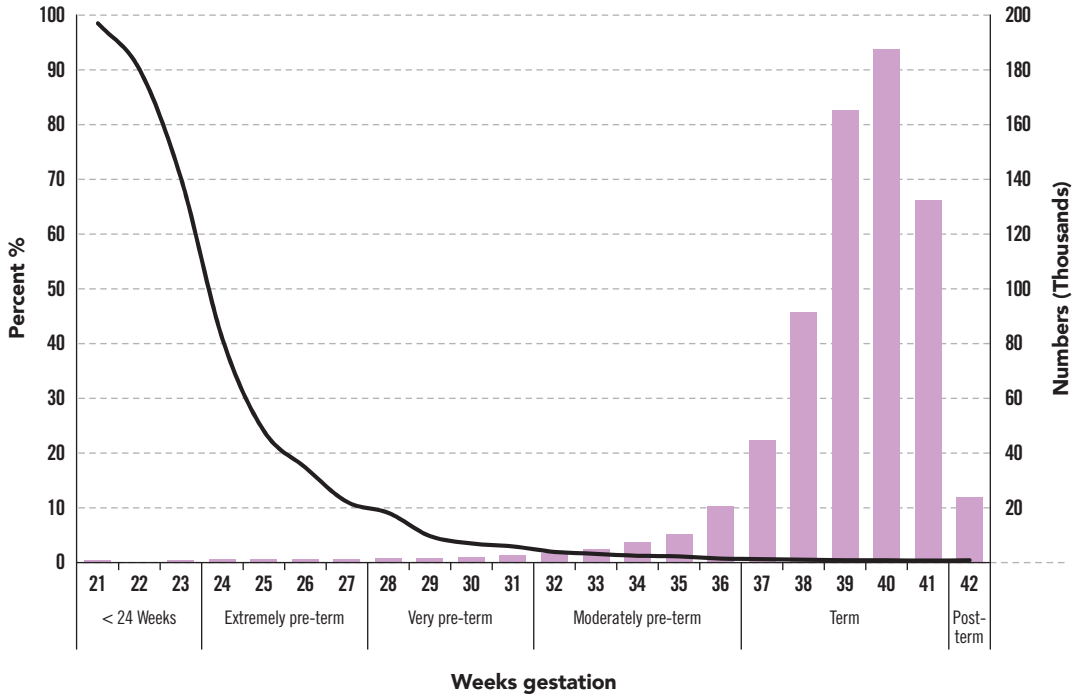


A. All other codes 15.4%
B. Asphyxia, anoxia or trauma (intrapartum) 10.4%
C. Congenital anomalies 17.6%
D. Immaturity related conditions 44.9%
E. Infections 5.2%
F. Sudden infant deaths 2.7%
G. Other specific conditions 2.7%
H. Antepartum infections 0.7%
I. External contions 0.2%

[10] Jeanette Davis, Birmingham Public Health Intelligence 2017
[11] Public Health England Overview of Child Health Indicators https://fingertips.phe.org.uk/profile-group/child-health/profile/child-health-overview accessed 14 August 2018
[12] Wilkes D The Annual Report of the Birmingham Child Death Overview Panel 2018 Birmingham Safeguarding Children Board
[13] Jeanette Davis Infant Mortality Update to the Birmingham Health and Wellbeing Board 2017

22 weeks of gestation of pregnancy died from the consequences of being born so soon (Figure 8).[14] If born after 22 weeks and dying in the neonatal period then equal numbers of prematurity related and congenital anomaly deaths occurred.

Figure 8: *Infant death and gestation*
England and Wales 2013



Key indicators of neonatal outcomes are:

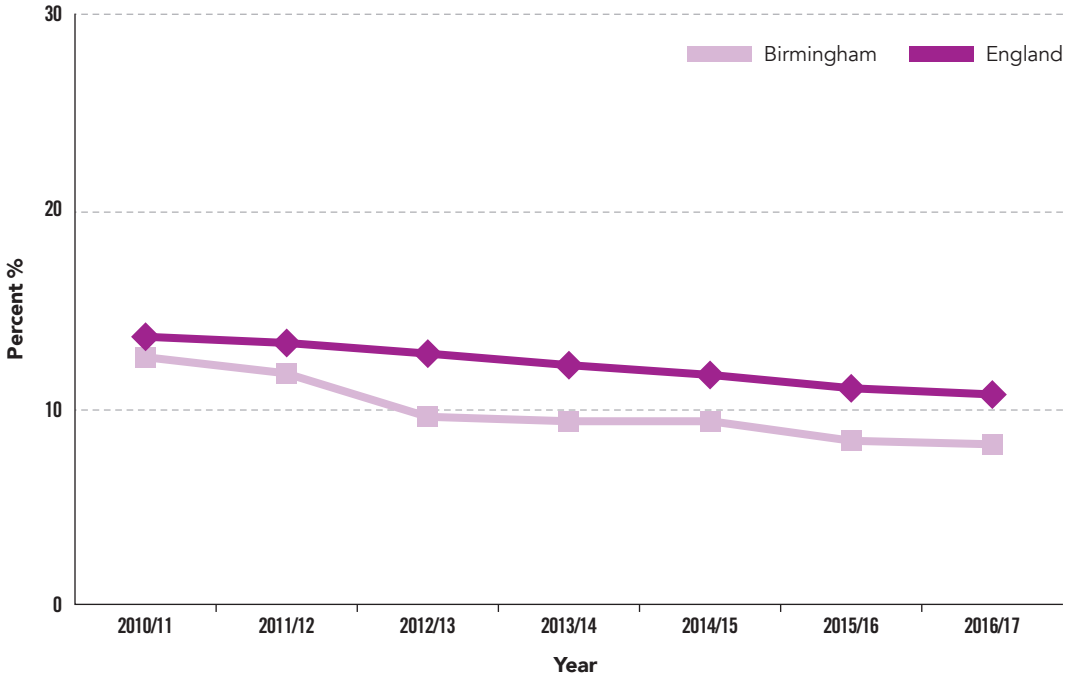
1. **Still birth** (6.2/1,000 live births; West Midlands 4.8, England 4.5)
2. **Low Birth Weight** (9.7%; West Midlands 8.6%; England 7.3&)
3. **Congenital anomalies** detectable in the antenatal period born alive
4. **Neonatal death** (5.94/1,000 births; West Midlands 4.46; England 2.74)

Smoking in pregnancy

Rates of smoking in pregnancy have changed over time with Birmingham's rates following the England trends (Figure 9).

[14] Wilkes D The Annual Report of the Birmingham Child Death Overview Panel 2013 Birmingham Safeguarding Children Board

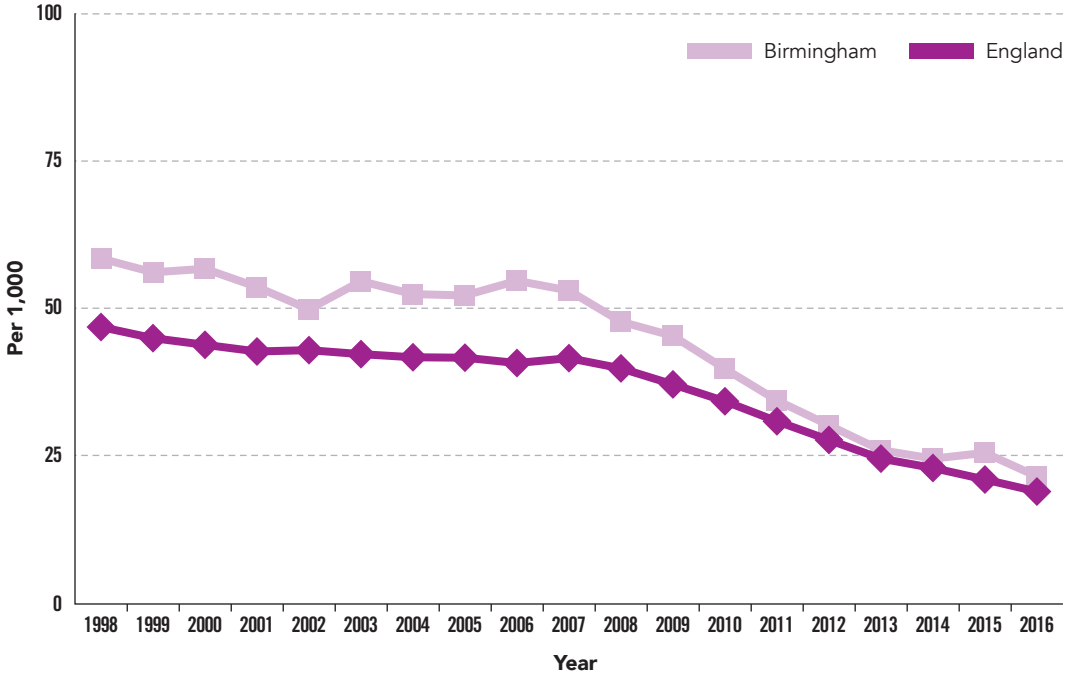
Figure 9: *Smoking status at the time of delivery trend, females*



Under 18 conceptions

As can be seen in Figure 10 the rates of pregnancy in women aged less than 18 years have dropped greatly in Birmingham and more so than in England.

Figure 10: *Under 18 conception rate*



Maternal mental health

In 2016, when 16,333 women gave birth, it is estimated that the number of women with:

- Postpartum serious mental illness/psychosis was 35 (0.2%).
- Chronic serious mental illness was 35 (0.2%).
- Severe depressive illness was 490 (3%).
- Mild-moderate depressive illness and anxiety was 2,450 (15%).
- Post-Traumatic Stress Disorder was 490 (3%).
- Adjustment disorders and distress was 4,900 (30%).

It is clear that many more women require help and support for less severe, but debilitating conditions, than the serious conditions requiring specialist help. Support and help in community settings is, therefore, as important as the provision of dedicated specialist units for mothers and babies.

What should we be doing?

The important drivers of poor outcomes are:

1. Socio-economic disadvantage, in particular.[15]
    - **a.** Young parents;
    - **b.** Women with established mental illness or who develop less serious emotional ill-health during pregnancy or postnatal;
    - **c.** Women (and/or partner) with recreational drug or harmful alcohol use;
    - **d.** Those at risk of experiencing Domestic Abuse;
    - **e.** Those recently arrived in the UK, migrant, travellers and/or homeless;
    - **f.** Those who are currently or were recently in Care;
    - **g.** Victims of sexual abuse (including rape and/or sexual exploitation);
    - **h.** Those who are likely to have experienced Female Genital Mutilation;
    - **i.** Those at risk of their unborn child being taken into the care of the Local Authority, including those with a past history of such an experience.
2. Women smoking during pregnancy (Smoking at delivery in Birmingham 8.1%; West Midlands 11.8%; England 10.7%).
3. Lack of response by pregnant women and/or maternity staff to reduced foetal movements.
4. Lack of antenatal surveillance of foetal growth restriction.

[15] Prevention and Early Intervention work stream Women in need of additional support in pregnancy Birmingham and Solihull United Maternity Programme 2017

5. Inadequate use of genetic advice to families concerning the risk of congenital anomalies.
6. Inconsistent advice to and discussion with families following detection of a life limiting congenital anomaly antenatally.
7. Women who are morbidly obese.

In an attempt to reduce the rate of stillbirth and early neonatal death, NHS England launched Saving Babies' Lives: a Care Bundle for Reducing Stillbirth. They hold local NHS commissioners and providers accountable for implementing and making progress on the measures. The components are:

1. Reducing Smoking in Pregnancy.
2. Identifying the risk of Foetal Growth restriction and monitoring.
3. Raising awareness of the implications of reduced foetal movements.
4. Effective foetal monitoring during labour.

In an attempt to improve the delivery of sensitive and effective care during pregnancy and birth, NHS England began pilots of more co-operative partnerships of maternity providers in defined geographical communities. These pilots demonstrated the feasibility of the approach and the delivery of care by Local Maternity Systems covering the larger NHS commissioning and delivery communities of the Sustainability and Transformation Programmes.

What are we doing?

Improving services

The Birmingham and Solihull Sustainability and Transformation Partnership serves most of Birmingham, except for West Birmingham which is part of the Black Country Sustainability and Transformation Partnership area. The Birmingham and Solihull Local Maternity System brings together a partnership of two maternity providers on four hospital sites (The Women's Hospital, Heartlands Hospital, Good Hope Hospital, and Solihull Hospital) to deliver care using the same pathways of care in a more community orientated approach, including birth at home or in midwife led settings. Addressing the additional socio-economic needs of some women, responding to the challenge of pregnant women who smoke, and the standardised antenatal/postnatal standard care pathways are the key aspirations.

Smoking in pregnancy

The Birmingham smoking cessation system has always had additional criteria and expectations of providers delivering cessation support to pregnant women. It has taken time to create the sustainable commitment of maternity staff to identify and motivate women who smoke to take positive steps to change. It is becoming possible to build a direct bridge into the community smoking cessation providers. These more direct arrangements will reduce any perceived barriers by maternity staff and pregnant women to taking advantage of this opportunity.

Maternal obesity

Maternal obesity is difficult to address during pregnancy. Women who are obese at the start of their pregnancy are encouraged not to gain more weight and adopt a nutritious diet that avoids a lot of high energy foods. It is undesirable to aim to lose weight while pregnant to avoid restricting the growth of the baby. These are the messages that are shared in antenatal contacts and parent education sessions.

The Prevention and Early Intervention work stream of the Birmingham and Solihull Local Maternity System has not identified any additional interventions or programmes that effectively maintain weight in pregnancy. The time to address weight management is in the postnatal period when weight loss and improved physical fitness has positive physical and emotional health benefits to the mother and prepares her for any subsequent pregnancy.

A large number of pregnancies are unplanned, but not necessarily unwanted. Addressing the issues of overweight and/or smoking before most pregnancies is therefore a difficult thing to do for individual women. This is most difficult in women becoming pregnant for the first time. These messages therefore are more generally targeted at all women of childbearing age.

Maternal mental health

The need to develop responses to women who develop emotional or mental ill health, including those with a known mental illness prior to pregnancy, is important. The Perinatal Mental Health work stream of the Birmingham and Solihull United Maternity Programme has developed a series of care pathways to support women with varying levels of ill health. It is clear from the numbers estimated to need this support (What's happening in Birmingham section) that community resources to support women with less severe mental illness or distress is required and justified.

Neonatal care

The outcomes of neonatal care improved after the adoption of a Regional Network model of Special Care Baby Units, Neonatal Units and Neonatal Intensive care units linked together in 2004. The Birmingham and Solihull United Maternity Programme has incorporated parts of the local network into the programme to protect the improvements made over the years. The Programme is seeking further opportunities to improve care for mother and baby by developing an integrative partnering of obstetric and midwifery teams.

Learning from the lessons of Child Death Overview Panel

The Partners of the Birmingham Safeguarding Children Board have a statutory responsibility to review all deaths of children up to the age of 18 years.
The multi-agency Child Death Overview Panel does this and reports to the Safeguarding Board annually. The themes that emerge from the past five years reports are summarised below.

a. Extreme prematurity, less than 22 weeks gestation, remains a challenging aspect of reducing the rates of death in the early neonatal phase. They accounted for 12% of all deaths in 2016-2017[16] and are unable to survive. There is no doubt that clinicians and parents can identify signs of life in these babies. If these deaths were excluded from the calculation by Public Health England this would reduce our absolute Infant Mortality rate (7.4 to 6.9 per 1,000 live births). However it would also have an impact on the England Infant Mortality rate and there would still remain a significant excess between

[16] Wilkes D The Annual Report of the Birmingham Child Death Overview Panel 2017 Birmingham Safeguarding Children Board

Birmingham and England's rate. Much of this excess will still be due to prematurity but also the impact of congenital anomalies.

b. Some of the babies who die with congenital anomalies, particularly complex congenital heart conditions, in the neonatal period have been identified during the antenatal period. Discussions concerning intervention at that earlier stage are delicate and the decision is the parents'. There are some suggestions from local discussion that different antenatal counselling approaches might deliver a more informed environment for this choice. Local discussions continue to explore this impact.

c. The more common scenario of death in the later neonatal and infant period due to congenital anomalies is equally sensitive and discussed in detail in the 2013 Child Death Overview Panel Annual Report[14]. The contribution of consanguinity of the biological parents of the child to the proportion of babies with congenital conditions is strongly supported in the professional research literature but is less well evidenced in the local reports. The significance of this and any responses to this remains an unresolved local debate.

Recommendations/Conclusions/Next Steps

1. **The Birmingham and Solihull United Maternity Programme**, as it develops into the **Local Maternity System**, must be explicit about the arrangements for supporting women with additional needs described in this section.
2. **The Birmingham and Solihull United Maternity Programme**, as it develops into the **Local Maternity System**, must be explicit about the arrangements for identifying women who smoke, motivating them to stop, and the referral arrangements with the Birmingham and Solihull Smoking Cessation providers.
3. **The Birmingham and Solihull United Maternity Programme**, as it develops into the **Local Maternity System**, must ensure robust delivery of the NHS Saving Babies' Lives Care Bundle.
4. **Birmingham Forward Steps** must establish a systematic approach to supporting women's nutrition and physical activity in the postnatal period, particularly those who are overweight or obese.

Case Studies – Service
Birmingham and Solihull United Maternity and Newborn Partnership (BUMP)

Birmingham and Solihull United Maternity and Newborn Partnership (BUMP) is a collection of local NHS Acute Trusts who provide maternity care, that have come together under one vision:

'To deliver a consistent world class holistic service that empowers women and families to make informed choices, enabling them to access high quality care from a range of providers that is most suited to their personal choice and clinical need.'

BUMP aims to introduce:

- A single point of access for all maternity referrals making sure you have access to the right care from day one, through your dedicated midwife
- Dedicated Community hubs – bringing midwifery and specialist care to convenient locations and
- A host of additional services, including online antenatal courses and much more.

Early years health and care

Health and wellbeing

What's happening in Birmingham?

Measuring the health and wellbeing of under five year olds is challenging compared to measuring the incidence of illness and disease or death in adults. Children and young people, on the whole, have fewer serious or life threatening illnesses which would trigger episodes of healthcare activity which can be measured. The patterns of death in this age group are dealt with in another section.

There are some key areas that affect these children's health, wellbeing, and fitness for life.

Breast feeding

The first important event in this age group, after birth, is infant feeding – and in particular, breast feeding. According to 2015 data, breast feeding started at birth occurs in 71% of babies in Birmingham (74% in England). This reduces over the next eight weeks when 51% are still breastfeeding which is a higher rate that the England average of 43%. Unfortunately, due to data quality issues in relation to more recent breastfeeding data, we are unable to confirm if these breastfeeding rates have been maintained.

Attachment

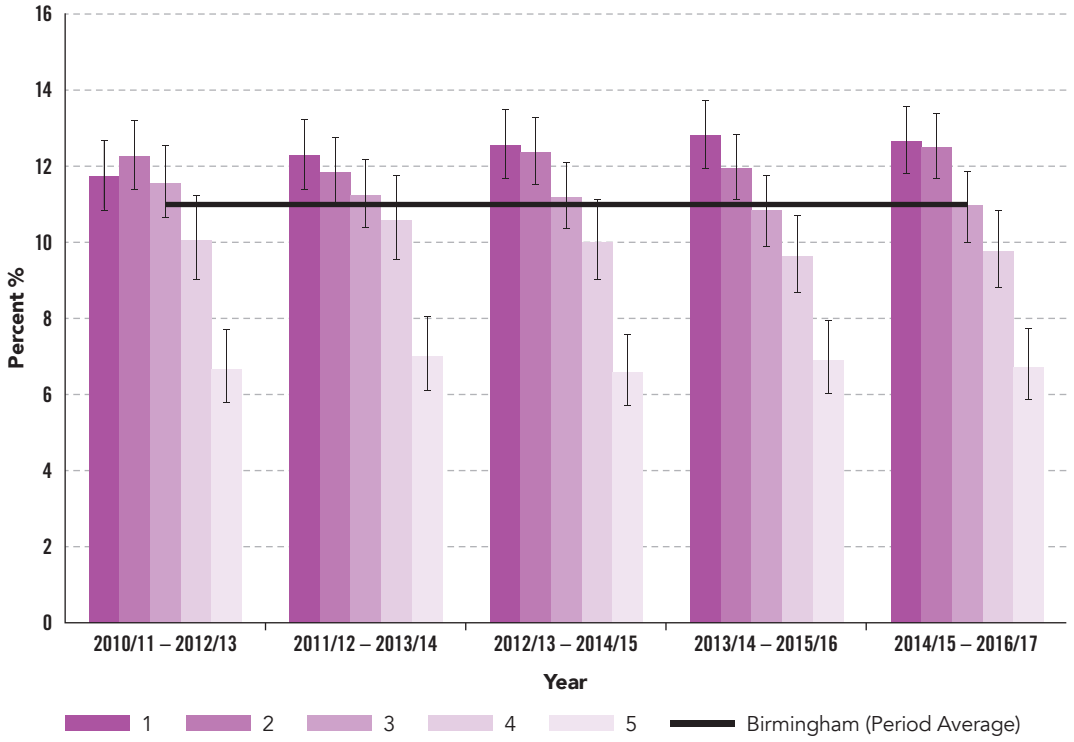
The impact of family emotional health and parenting capability on the development of the important early attachment of infants is profound. It is an early adverse experience, the impact of which is dealt with in more detail in another section. Despite the importance of the attachment and the factors capable of undermining it, there is no routinely collected data on the state of attachment, parental capability, or family emotional illness. The use of the Parent Hassles Questionnaire at mandatory health visitor contacts was a local step to address this in the recently procured Early Years Partnership, Birmingham Forward Steps. Local data will not, however, be available for a year or so.

Obesity

In order to avoid future impacts of excess weight, addressing the issues of family nutrition and physical activity are important. The only measure of relevance routinely available, however, is the first measurement of the National Child Measurement Programme (NCMP) at four years old. In particular, highlighting that 1 in 4 reception children in Birmingham are overweight or obese, see below.

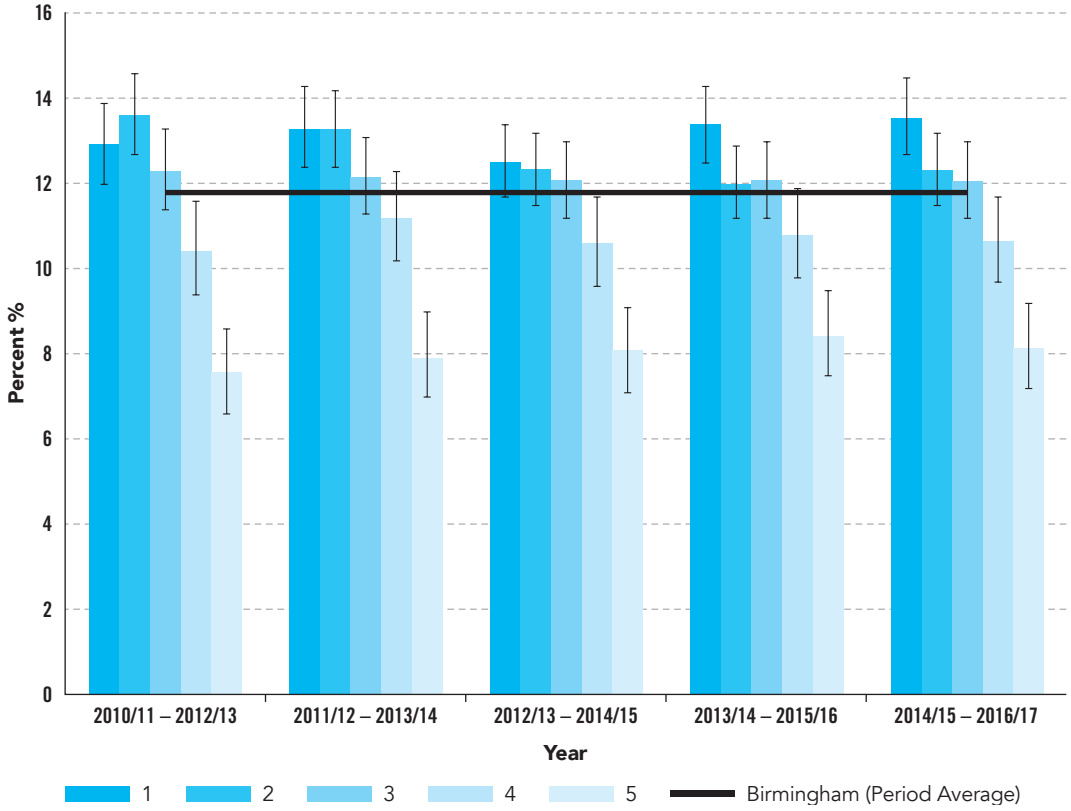
In 2016/17, 24.7% of Birmingham four year olds were overweight or clinically obese compared to 22.6% in England. In the West Midlands 24.2% were overweight or obese at reception. There was only one West Midlands Local Authority with a rate that was significantly lower than the England rate (18.4%). Evidence from the NCMP, indicates that children who are overweight or obese at reception will tend to be overweight or obese at Year 6.[17]

Figure 11: *Reception: Girls Obesity by Birmingham IDACI Quintile*



[17] PHE: 'Changes in the weight status of children between the first and final years of primary school. A longitudinal analysis of data from the National Child Measurement Programme in four local authorities in England between 2006/07 and 2014/15' https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/609093/NCMP_tracking_report.pdf

Figure 12: *Reception: Boys Obesity by Birmingham IDACI Quintile*



We know the risk of obesity is greatest in our most deprived communities and more importantly, this gap has been widening over time.This means that children from low income families face a much higher risk of developing obesity when compared to children from high income families (Figures 11 and 12).[18] The Income Deprivation Affecting Children Index 2015 (IDACI) measures the proportion of children under the age of 16 who live in low income households. In Figures 11 and 12 deprivation is classified as 1 to 5, one being the most deprived, five being the most affluent.

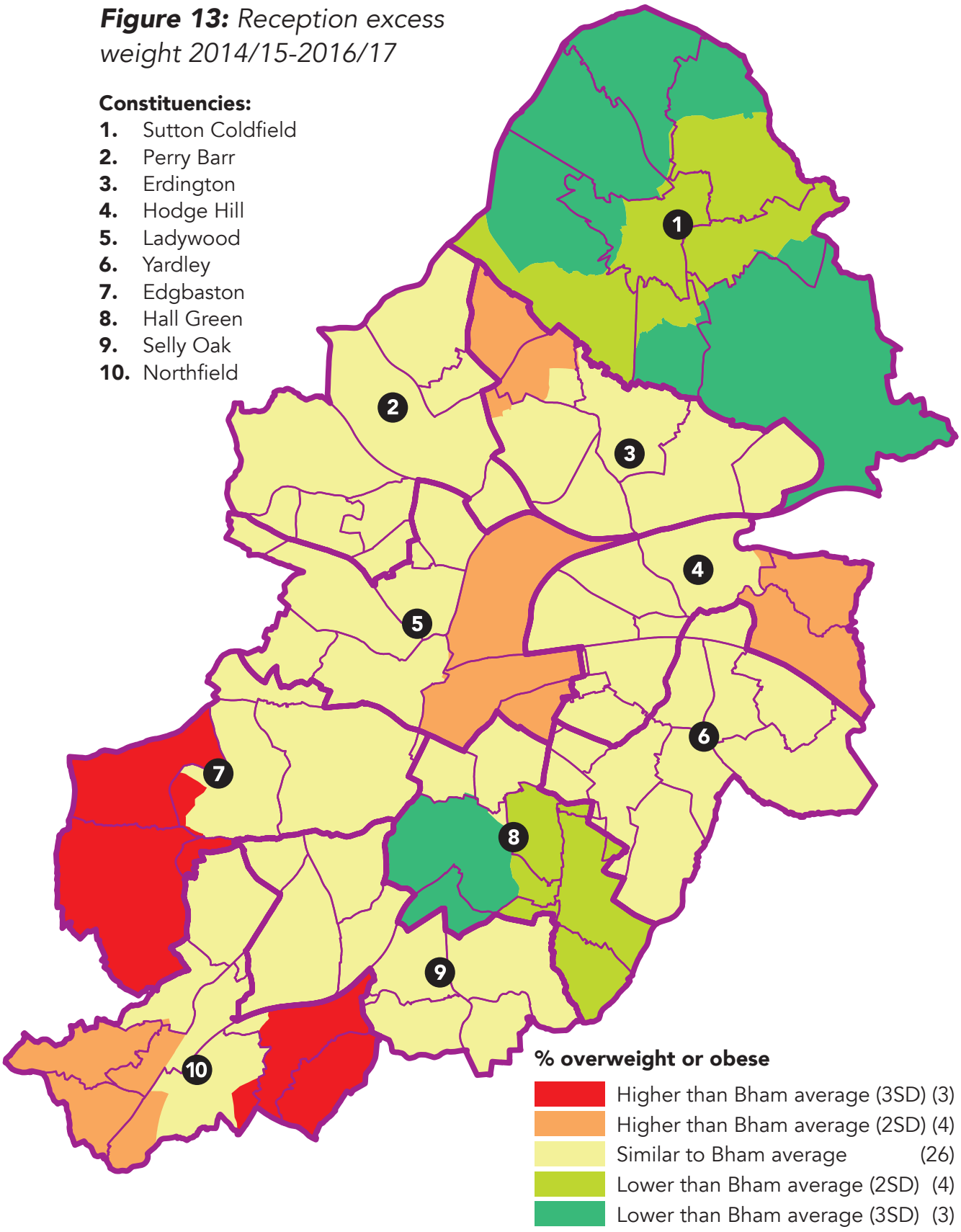
Figure 13 illustrates the level of excess weight (obese or overweight) at reception in the different areas of Birmingham. Further analysis of the small area data shows that seven wards have much higher rates and this is not due to random variation.

[18] Mahmood H, Lowe S. Population segmentation: an approach to reducing childhood obesity equalities. Perspectives in Public Health May 2017 Vol 137 No 3: 190- 195

Figure 13: *Reception excess weight 2014/15-2016/17*

Constituencies:

1. Sutton Coldfield
2. Perry Barr
3. Erdington
4. Hodge Hill
5. Ladywood
6. Yardley
7. Edgbaston
8. Hall Green
9. Selly Oak
10. Northfield



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

Accident and Emergency attendance

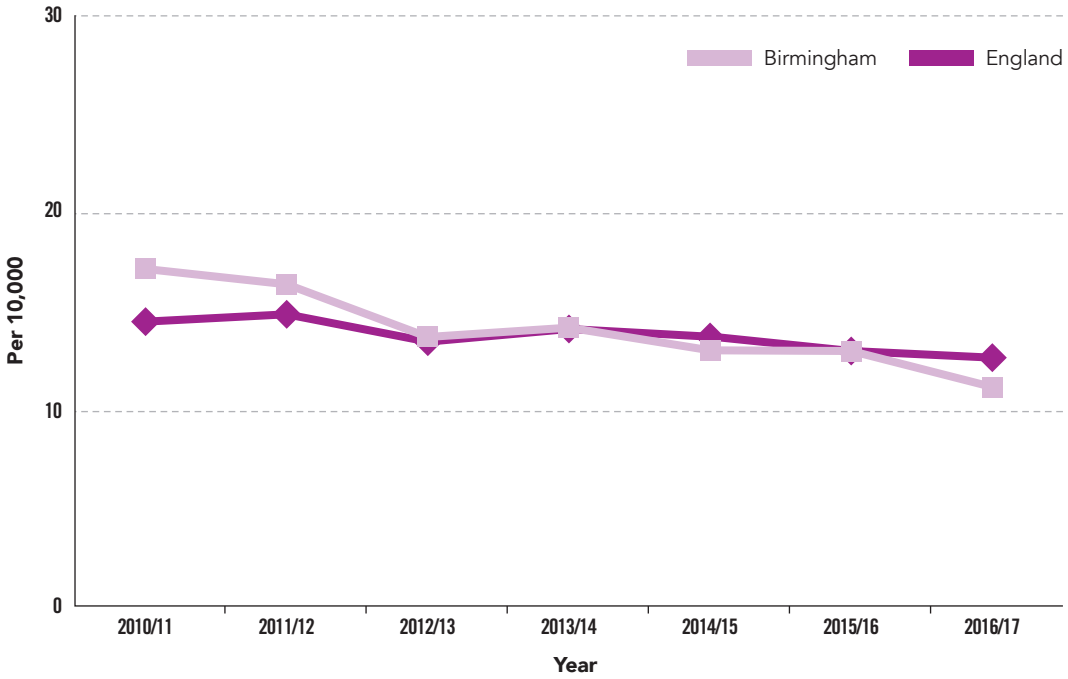
The latest data shows that in Birmingham, Accident and Emergency (A&E) attendances for all reasons for the 0-5 age group were significantly greater than the England average; and have been greater for the last seven years.[19]

Childhood injury

Recent data shows that in England an estimated 370,000 visits to A&E departments and approximately 40,000 emergency admissions were due to unintentional injuries amongst the under five year olds.[20] Unfortunately, A&E attendances for injuries cannot be measured at a local level.

On a positive note, hospital admissions caused by unintentional and deliberate injury in Birmingham in those under five have been better than the England average over the past five years (Figure 14).

Figure 14: *Hospital admissions caused by unintentional and deliberate injuries in children aged 0-4 years*



[19] Public Health England Public Health Profiles

[20] Public Health England (2014) Reducing unintentional Injuries in and around the home among children under five years. [Online] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696646/Unintentional_injuries_under_fives_in_home.pdf [accessed 30-08-2018]

What should we be doing?

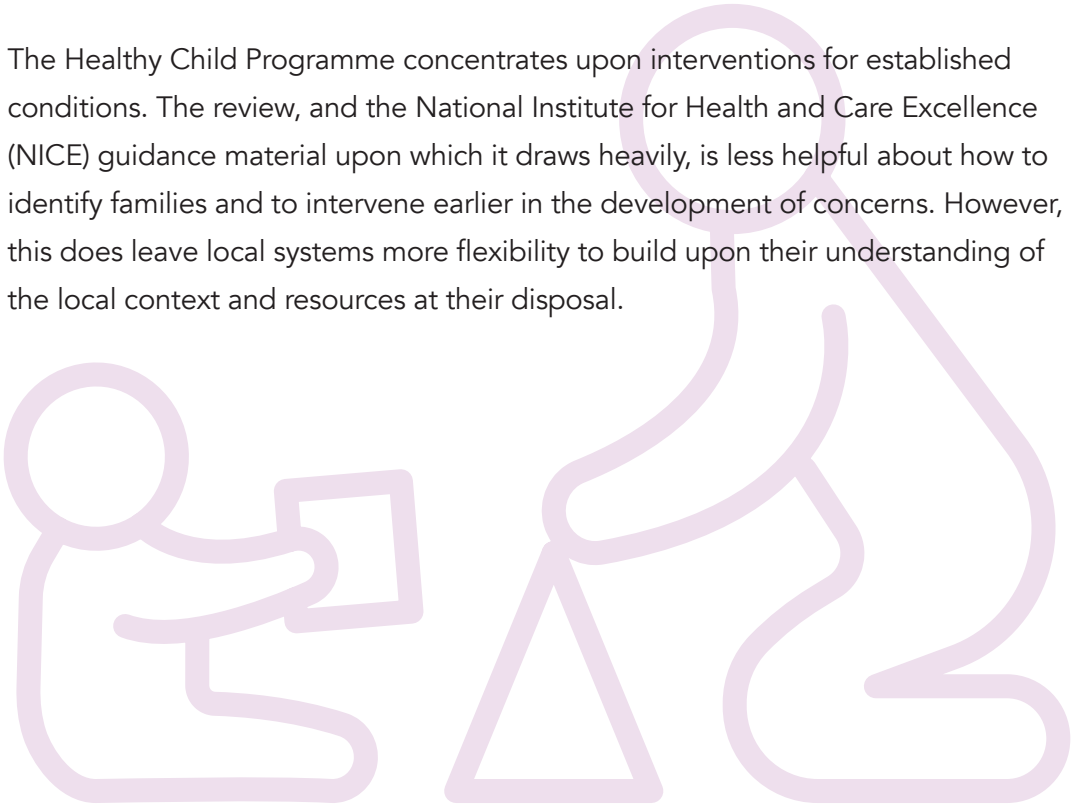
The importance of family based support for socio-economic and relationship issues, often expressed as avoiding social isolation and addressing parenting, are key issues in Marmot's review of drivers of health inequality.[21] The Royal College of Paediatrics and Child Health review of the state of child health[22] was concerned that services which are prioritised as targeted help for children and families experiencing poverty were under threat and unsustainable.

The Healthy Child Programme

The Healthy Child Programme[23] is a universal national Public Health Programme framework for improving the health and wellbeing of children. The impacts and benefits of the programme have recently been reviewed and updated.[24] Key elements of the programme include:

1. Mandated health development reviews;
2. Health promotion;
3. Parenting support;
4. Screening and immunisation programmes.

The Healthy Child Programme concentrates upon interventions for established conditions. The review, and the National Institute for Health and Care Excellence (NICE) guidance material upon which it draws heavily, is less helpful about how to identify families and to intervene earlier in the development of concerns. However, this does leave local systems more flexibility to build upon their understanding of the local context and resources at their disposal.



Behaviour change to avoid excessive weight gain

Relying on children and families to avoid excessive weight gain by changing their own behaviour concerning nutrition and physical activity has, in many areas, been challenging and ineffective. Information about health is important, but is not enough to change people's behaviour because we all often fail to act on it in a rational matter. Some of the key insights into why this is are:

1. We prefer short-term rewards, especially immediate rewards, and undervalue things which improve our future.
2. Framing choices strongly influences our buying behaviour. Retailers and fast food outlets present their products in a particular way in order to influence our purchases.
3. Rational choice and self-control requires effort which is easily exhausted and affected by the environment, time of day or what we have just been doing.

The practical application of these insights in Public Health interventions results in small step change opportunities, 'nudges', which allow free choice but try to encourage those actions likely to be in the persons true best interest.
The complexity of all our lives means that no single nudge will solve the problem of childhood excessive weight. By adjusting the way the most important moments of choice are presented to people we can counteract some of the biases which lead to unhealthy actions. Some environments can be more easily adjusted (such as school canteens) and others require the cooperation or compliance of outside interests (such as take away ordering processes or in-store food shopping).
In summary, the most effective interventions to address the treatment and prevention of overweight and obesity are based on multi-component, holistic approaches which address diet and physical activity through simultaneously addressing the different domains which impact on a child's life including family, social and wider environment.

[21] Marmot M, Allen J, et al Fair Society, Healthy Lives: A strategic review of Health Inequalities in England post 2010 London Institute of Health Inequity 2010
[22] Royal College of Paediatrics and Child Health State of Child Health 2017 RCPH London 2017
[23] Shribman S.and Billingham K. Healthy Child Programme – Pregnancy and the First Five Years, DH 2009
[24] Axford et al Rapid Review to Update Evidence for the Healthy Child Programme (0-5) PHE 2015

What are we doing?

Birmingham Forward Steps

Birmingham City Council recently procured a health and wellbeing offer now provided by an integrated Early Years System partnership, Birmingham Forward Steps. It is concerned with providing children and families with the support they need to develop well, establish healthy lifestyles and become confident skilled parents.

The ten districts, upon which the model is based, have different challenges and different expectations or local resources to draw upon. This model adapts to these differences in distributing its resources and efforts. The universal offer of the five mandated health visitor assessments, as part of the Healthy Child Programme, remains and includes five contacts namely: ante-natal, new baby review, 6-8 weeks, 1 year and 2 year review.

The health visitor assessments, alongside other engagement with the wider early years system, provides opportunities to identify children and families who require additional help. The latter may range from those who simply require help at a universal level to those with more complex needs. The closer working with other partners, e.g. maternity and voluntary sector workers, will provide a 'wider reach' to facilitate provision of help and support to those who need it most, including those parents with emotional health issues.

Baby Friendly Initiative

The achievement of Baby Friendly Initiative status is a key step to encourage optimal levels of breast feeding in local communities. Support during breastfeeding, especially in the early stages, by volunteer and paid peer supporters, is part of this approach. Birmingham Forward Steps and other partners are working to achieve various stages of UNICEF Baby Friendly Initiative status – Birmingham Community Healthcare NHS Trust is currently at Stage 2 and working towards Stage 3.

Childhood obesity

Birmingham City Council has recently adopted tackling childhood obesity as part of the council plan. There are a number of interventions in place in Birmingham to address childhood obesity these include:

1. Advice and support to Early Years childcare providers concerning the offer of food and physical activity during the day using the evaluated Startwell programme (part of the Birmingham Forward Steps Service).
2. Healthy Start Vouchers which is a government-led means tested initiative providing food vouchers for the purchase of milk, fruit and vegetables to families receiving benefits with children 0-4 years old. It is estimated that there is underuse of the vouchers by eligible families resulting in an under-claim of £1.5 million in Birmingham. Work is underway in Birmingham to increase registration for the vouchers, their use, and the number of participating retailers. This will boost local retail income and provide healthy food to deprived families at no cost to the family, retailer, or Birmingham Public Services.

There is an intention to build on this work and to develop a whole systems approach to addressing childhood obesity in line with emerging evidence base.

Health service use

The Birmingham and Solihull Sustainability and Transformation Partnership Plan has identified giving children the best start in life as a priority for action. This will include addressing the variation in access and clinical provision across the urgent and emergency care pathways for children which should, in time, impact positively on the high local Accident and Emergency attendance rates for 0-4 year olds. Birmingham Forward Steps is involved in encouraging appropriate use of Accident and Emergency. For example, where a child attends Accident and Emergency more than twice during a 12 month period, Birmingham Forward Steps staff will follow this up with the family to establish reasons for attendance and to encourage appropriate use of Accident and Emergency, where necessary.

Recommendations/Conclusions/Next Steps

1. The work on increasing the uptake and use of the **Healthy Start vouchers** should continue and report to the Health and Wellbeing Board and Overview and Scrutiny committee on progress and impact in June 2019.
2. **The Birmingham and Solihull United Maternity Programme**, as it develops into the **Local Maternity System**, should collaborate with the City Forward Steps to establish a robust and sustainable offer of breast feeding support to improve breastfeeding rates at initiation, 6-8 weeks and beyond.

3. **Birmingham City Council** should work with the commissioned Early Years' Service – **Birmingham Forward Steps** to address data quality issues, particularly in relation to breastfeeding rates.
4. **Birmingham City Council and partner organisations** should develop an offer of enhanced nutritional and physical activity opportunities to optimise weight and fitness for life based on a whole systems approach to obesity.

Vaccination and Immunisation

'The two public health interventions that have had the greatest impact on the world's health are clean water and vaccines.'
World Health Organization

What's happening in Birmingham?

The Public Health Outcomes Framework lists 13 sets of data about vaccination uptake for children aged 0-5 years of age. In general, vaccination uptake rates in under five year olds in Birmingham are not at the national target levels; the most recent data for the thirteen indicators show that only two meet the target levels.[25]

Two vaccinations have been highlighted in the following section: seasonal influenza (flu) and Measles Mumps and Rubella (MMR). These have been chosen because they are well known vaccinations that many people will have heard of, and the reasons for poor uptake and suggestions to improve uptake will often be very similar to all of the other vaccinations for young children.

Seasonal Influenza vaccination (2-4 year olds)

As part of the seasonal flu vaccination programme all children in certain age groups are offered the vaccination every winter; for the 2018/19 season it will be:

- All children aged two and three years (on 31st August 2018, this includes children 2-4 years old during the flu season).
- All children in reception class and school Years 1, 2, 3, 4 and 5 (ages 4-9).[26]

The most recent available data is for the 2016/17 flu season (Table 1).

[25] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#gid/1000043 (accessed 13/9/2018)
[26] https://www.nhs.uk/conditions/vaccinations/child-flu-vaccine/

Table 1. Flu vaccination uptake for 2-4 year olds 2016/17.[27]

	Birmingham	England
Number vaccinated	19,813	
Percentage uptake	36.2%	38.1%
Number vaccinated	34,919	

The uptake in Birmingham is slightly below the England average, but not significantly different. This is an average across the whole City, and there is a very wide range of uptake between GPs in Birmingham.

Partial data are available for the 2017/18 flu season and show the following ranges of uptake across Birmingham GPs:

- 2 year olds: 3.6%-85.7%
- 3 year olds: 3.1%-92.3%

This means that some GP Practices vaccinate more than eight out of 10 but others less than one out of 30 of their eligible 2-4 year olds.

MMR (2 doses at 5 years of age)

MMR is a safe and effective combined vaccine that protects against three separate illnesses – measles, mumps and rubella in a single injection. The full course requires two doses – the first at 1 year old, and the second before children start school, usually at 3 years and 4 months.[28] Vaccination uptake for two doses is reported at five years of age. The latest uptake data for Birmingham is from 2016/17 (Table 2).

Table 2. MMR vaccination uptake for two doses at five years of age.[29]

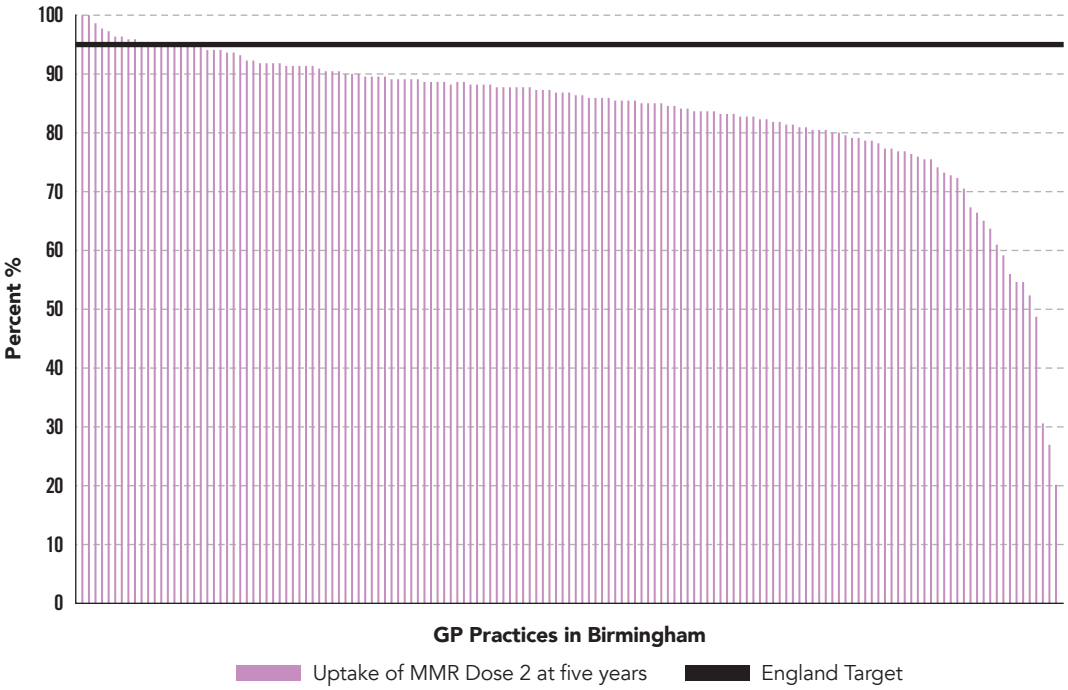
	Birmingham	England
Number vaccinated	14,582	
Percentage uptake	82.9%	87.6%
Number vaccinated	3,008	

[27] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000043/pat/6/par/E12000005/ati/102/are/E08000025
[28] https://www.nhs.uk/conditions/vaccinations/mmr-vaccine/
[29] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000043/pat/6/par/E12000005/ati/102/are/E08000025

The national target for MMR vaccination is 95%; England and Birmingham are significantly below this level. The average of 82.9% across Birmingham is made up of a very wide range across Birmingham GPs: 20-100% (Figure 15). This range means that in some practices every child has received two doses by the age of five, but in other practices only one in five children have received the same dose.

Figure 15: *Measles, Mumps and Rubella (MMR) coverage, dose 2, 5 year olds, Birmingham Practices 2016/17*

Source: NHS England



What should we be doing?

The State of Child Health Report in 2017[30] suggests several actions which, if adopted, will deliver good vaccination programme uptake and improved health for all children:

1. Central to any strategy needs to be robust data collection systems which enable children who have missed immunisations to be followed-up locally, as outlined by the National Institute for Health and Care Excellence (NICE).
2. Strengthen implementation of NICE guidance.
3. Recognise the impact of various social factors, including deprivation, on

[30] https://www.rcpch.ac.uk/resources/state-child-health-report-2017

vaccine uptake, developing and evaluating methods to increase uptake within these groups.

4. Further research into methods to improve vaccination uptake amongst families who make a conscious decision not to vaccinate their child.
5. All child health professionals to improve vaccination rates, and, if necessary, to signpost families to register their children with a general practitioner.

NICE has produced Public Health Guideline PH21 on reducing differences in immunisation uptake in under 19 year olds[31] which includes the following recommendations:

Immunisation programmes should be multifaceted and coordinated across different settings to increase uptake amongst groups with low uptake:

1. Ensure there is an identified healthcare practitioner in every GP practice who is responsible and provides leadership for the child immunisation programme.
2. Improve access to immunisation services, e.g. through extending clinic times and making sure clinics are child and family-friendly.
3. Send tailored invitations, e.g. tailored reminders or recall invitations if appointments are missed.
4. Ensure parents have an opportunity to discuss any concerns that they might have about immunisations.
5. Check the immunisation status of children at every appropriate opportunity.

The World Health Organisation recommends an immunisation rate for vaccine-preventable diseases of at least 95%. This high rate of uptake creates a situation where not only are the children that are vaccinated protected from preventable disease, but it also makes it less likely that disease will spread in the population so children who can't be vaccinated for medical reasons still get some protection.

What are we doing?

Birmingham Public Health works closely with partners involved in all aspects of organising and providing vaccination programmes, including the 'strategic lead' team in the local NHS England centre, to monitor and increase uptake. The NHS England team develops plans and strategies to ensure that children are protected from vaccine-preventable diseases.

[31] https://www.nice.org.uk/guidance/ph21

Birmingham Forward Steps asks families about their children's vaccination status and highlights the importance of taking part in vaccination programmes.

In Birmingham the children's flu vaccination programme is delivered in different settings:

1. Ages 2 and 3: delivered at the general practice, usually by a practice nurse.
2. School years reception to Year 5: delivered in school by the School Age Immunisation Service (SAIS). Home-schooled children can still access and use SAIS vaccination services.
3. Children aged 2 to 17 with a long-term health condition: delivered at the general practice, usually by a practice nurse.

Both of the MMR doses are delivered in general practice surgeries normally.

All children aged 2 to 17, regardless of where they are vaccinated, are offered the nasal spray vaccine because that is most effective for them. Children between the ages of 6 months and 2 years who are at high risk from flu (because of a long-term health condition) are offered the flu jab, usually at their GP surgery. Children under the age of 6 months are not offered vaccination which is why it is very important for pregnant women to be immunised as they will pass on some of the protection that the vaccine provides.

Recommendations/Conclusions/Next Steps

1. **NHS England** works with partners to develop action plans in areas, communities or populations with low uptake to deliver increased uptake. This will reduce levels of inequality in uptake.
2. **NHS England and Clinical Commissioning Groups** to produce and implement plans to target the lowest performing 10% of GPs and deliver increased uptake in Practices with the very lowest performance.

Oral Health

What's happening in Birmingham?

Surveys of three and five year olds are carried out in Birmingham to measure the level of oral health in children across the City.[32] The proportions of the two age groups that are free from dental decay are shown in Table 3. Birmingham's decay

rates in five year olds were not significantly different from the national average, but the City average hides stark inequalities which exist in some of the most vulnerable, disadvantaged and socially excluded groups facing significant oral health problems. Analysis of Birmingham's data shows that dental decay is more prevalent in the most deprived areas compared to the least deprived. National data also shows that children in some ethnic groups (including Chinese and Eastern European) have higher decay prevalence rates than the general population. Birmingham has a very diverse population so the same inequalities may exist in our city.

Table 3. Percentage of children free from dental decay.[33]

Age group	Birmingham	England
3 year olds (2016/17)	87.5%	88.4%
5 year olds (2014/15)	71.3%	75.2%

What should we be doing?

The State of Child Health Report in 2017[34] suggests several actions which, if adopted will deliver good oral health for all children:

- All children in the UK should receive their first check-up as soon as their first teeth come through, and by their first birthday, and have timely access to dental services for preventative advice and early diagnosis of dental caries, with targeted access for vulnerable groups.
- Fluoridation of public water supplies, particularly in areas where there is a high prevalence of tooth decay.

NICE has also made recommendations to local authorities and partners to improve oral health.[35]

- Promote and protect oral health by improving diet and reducing consumption of sugary food and drinks (and so improve general health too).
- Improve oral hygiene.
- Increase the availability of fluoride, including through fluoride varnishes.
- Encourage people to go to the dentist regularly.
- Increase access to dental services.

PHE has published a toolkit of evidence-based interventions that can be

commissioned to improve oral health.[36] It summarises recommendations for any oral health improvement programme:

- Oral health training for the wider professional workforce.
- Integration of oral health into targeted home visits by health/social care workers.
- Targeted community-based fluoride varnish programmes.
- Targeted provision of toothbrushes and tooth paste.
- Supervised tooth brushing in targeted childhood settings.
- Healthy food and drink policies in childhood settings.
- Fluoridation of public water supplies.
- Targeted peer support groups/peer oral health workers.
- Influencing local and national policies.
- Fiscal policies to promote oral health.
- Infant feeding policies to promote breastfeeding and appropriate complementary feeding practices.

What are we doing?

The early years 0-5 contract, Birmingham Forward Steps, is commissioned by Birmingham City Council. The service aims to ensure that every child in Birmingham is registered with a dentist. The Startwell service promotes healthy food and drink policies and choices which will deliver better oral health outcomes.

Water fluoridation has been in place in Birmingham since 1964. It is a safe and effective way of tackling the burden of tooth decay, and as it has an impact on the whole population it contributes to the reduction of health inequalities and particularly benefits children in the most deprived parts of the City.

Recommendations/Conclusions/Next Steps

1. **Public Health England** to publish the results of Children's Oral Health Needs Assessment to identify areas or communities with the worst oral health inequalities.
2. **Birmingham Forward Steps** to adopt NICE and Public Health England oral health improvement recommendations.

[32] http://www.nwph.net/dentalhealth/5year%20docs.aspx
[33] https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000043/pat/6/par/E12000005/ati/102/are/E08000025
[34] https://www.rcpch.ac.uk/resources/state-child-health-report-2017
[35] https://www.nice.org.uk/guidance/ph55
[36] https://www.gov.uk/government/publications/improving-oral-health-an-evidence-informed-toolkit-for-local-authorities

Case Study – Service
Birmingham Forward Steps

Birmingham Forward Steps offers support, guidance and care from antenatal, through early years to pre-school and until your child starts school. Identifying a child's needs early is key to giving them the best start in life and ensuring parents receive the support they need. You will have contact with your Early Years Health and Wellbeing Service Team at five key points during your child's pre-school years either at home or in a clinic which will be pre-arranged with you. There's a wide range of support available, including well-baby clinics, stay and play sessions and much more.

Case Study – Example of Practice
Birmingham Forward Steps and Children's Hospital Working Collaboratively

Our Early Years Health and Wellbeing Service (EYH&W) provides varying degrees of support dependent on the child's, parent's or family's needs during pre-natal, post-natal and throughout the early stages of development of the child. When there is reason for more support we offer services such as Universal, Universal Plus and Universal Partnership Plus care in the community.

A particular way we do this is following a child's stay at Birmingham Children's Hospital (BCH) for treatment; when they are ready for discharge we work collaboratively with BCH, community organisations and the parent and/or family to assure an early intervention and assessment of needs can be completed. We will then assure they have the right level of support from our three packages we offer depending on their needs.

The result is that the ability for the parent and child to be safely discharged into the community, supporting the parent when necessary to access appropriate benefits in a timely manner, during the child's development we can make sure the child's voice is heard. We aim for the result in everything we do as it aligns with our values of being responsive, accessible, and providing quality care.

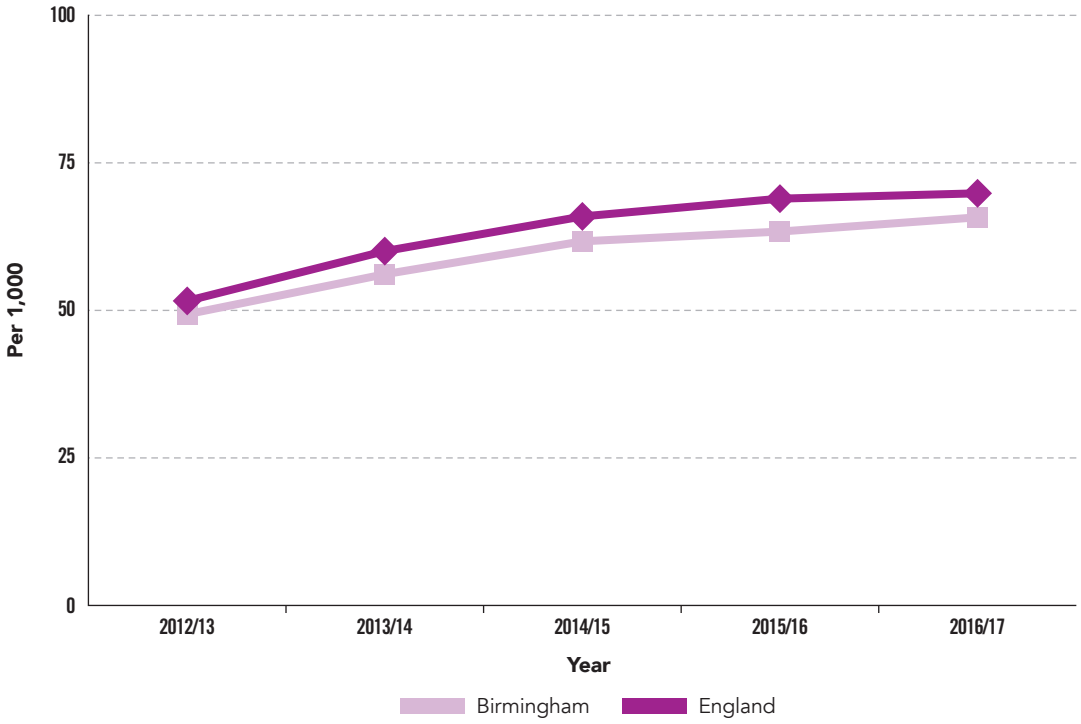

A
B C

Early years education and development

What's happening in Birmingham?

Birmingham is committed to ensuring that all children are ready for school at the age of five years. An assessment of school readiness, on entry to a Primary School reception class, is made. In Birmingham 66% of children are at a good stage of readiness for school, compared with 71% in England (2016/17: Figure 16). However the principal routes and influences to this achievement are not routinely reported for national or area comparison.

Figure 16: *School readiness – the percentage of children achieving a good level of development at the end of reception*



The Ages and Stages Questionnaire (ASQ-3) is offered at age 2-2.5 years by Birmingham Forward Steps as part of the Healthy Child Programme. The ASQ-3

assesses different aspects of the child's development against expected milestones. Unfortunately, due to data quality issues, published recent data around this is not available. However, non-validated ASQ-3 data from Birmingham Forward Steps for 2017/18 has shown that 67% of Birmingham's children received their 2-2.5 year assessment which included the ASQ-3.

In the spring of 2018, 62% (5,519) of eligible Birmingham 2 year-olds were taking up an entitlement of free early education. In England this uptake was 72%. All 3 and 4 year olds have a free offer and the take up in the city was 90% (20,717), compared to an England take up of 94%.

Since 2013/14 the number of children aged under five years receiving Special Educational Needs and Disability support in Birmingham has increased each year.[37] In 2017/18 academic year there were 2,067 children referred to Early Years Inclusion Support.

What should we be doing?

The development of early cognitive, linguistic and social skills are the key components of good school readiness. Marmot[38] argues that we should provide good quality Early Years education and childcare proportionately across the social gradient to increase the take up by children from disadvantaged families.

The Centre for Research in Early Childhood produced a review of the evidence of benefit for improving outcomes in the Early Years.[39] They posed the question:

How far and in what ways can early years education and care, social care and health programmes counter socio-economic disadvantage?

They acknowledged that: *…any early intervention strategy can only make a contribution to countering deep, social and economic inequalities in society factors such as parenting style and the home environment, maternal and child health, early childhood care and education, maternal education and other demographic factors – which together help explain why low income children come to school less ready to learn and why high income children come to school with an advantage.*

In many countries, including the UK, children from low income families continue to be less likely to attend high quality early education and care programmes, even

though we know that they benefit more than their more advantaged peers. This review estimates that if all low income children were to be enrolled in high quality early education programmes, such reforms could close the gap in achievement by as much as 20-50%.

The conclusion to be drawn from the Early Years review[39] and Marmot[38] is that an approach which combines parent support and early education and care for children 0-2 years and an offer of Early Education programmes for children 3-4 years is likely to provide optimal benefits.

Parents are the most important 'educators' of their children for both cognitive and non-cognitive skills. Good parent-child relationships in the first year of life are associated with stronger cognitive skills in young children and enhanced competence.

The Statutory Framework for the Early Years Foundation Stage[40] sets out the expectations for Early Years settings and schools servicing children from birth to age five years.

The Rapid Review to Update Evidence for the Healthy Child Programme[24] provides evidence of 'what works' in key areas of the HCP including attachment, parenting support and speech, language and communication. The review highlights evidence supporting the use of targeted group based parenting programmes to improve emotional and behavioural outcomes in young children and the positive impact of speech and language interventions that take place in pre-school settings – a significant effect on mainly cognitive outcomes, but also on social skills and progress within school.

What are we doing?

The recently commissioned Birmingham Forward Steps has the vision:
To give every child in Birmingham an equal chance to have the best start in life so they can achieve their full potential.

[37] Special educational needs in England: Department for Education January 2017
[38] Marmot M, Allen J, et al Fair Society, Healthy Lives: A strategic review of Health Inequalities in England post 2010. London Institute of Health Inequity. 2010
[39] Bertram T and Pascal C Birmingham Early Years Literature Review Centre for Research in Early Childhood, Birmingham 2014
[40] Early Years Foundation Stage statutory Framework DfE 2014

This system partnership includes Birmingham Community Healthcare Trust, Barnardos, Spurgeons, the Springfield Project and St Pauls Community Trust. It integrates health visiting services and children's centres into a ten district model. Outcomes for the service include child development, effective parenting and safeguarding.

Whilst there will be a commonality in provision across the districts there will be some flexibility in how this is delivered, informed by district parents fora, to allow for local needs and differences. As such, this partnership has at the heart of its specification a locality and needs sensitive approach to identify and support families to enhance the family-child relationship and encourage optimal attachment and bonding.

The integrated approach is an important aspect of improving the uptake of 2-2.5 year assessments and the use of the Ages and Stages Questionnaire (ASQ-3). School readiness is the key outcome measure. Early identification to provide early help and intervention are key features of the service, enabled by the delivery of the five mandatory health visitor assessments. Potential follow-up help and support is integrated with the family support resources of other partners and voluntary organisations. Other important elements of the service are parenting support including provision of parenting programmes; support around speech, language and communication and; a focus on improving the uptake of the early years educational entitlement.

Early Education opportunities are provided by private, voluntary, or independent organisations in the community, licensed and quality assured by Ofsted. The City Council has the responsibility to encourage the uptake of a Government funded scheme of Early Education Entitlement to children aged two in low income families and all three and four year old children. The provider of the early education to the eligible child claims the payment from the Local Authority, acting as an agent of the Government. Birmingham Forward Steps is committed to encourage this uptake in their contacts with families in their locality. A team in the City Council continues to monitor uptake and seek further opportunities in areas of low provision to increase sufficiency of quality early education provision. However the Council is not required to provide this provision directly.

Recommendations/Conclusions/Next Steps

1. **Birmingham Forward Steps** should develop locality links with the local private, voluntary, or independent providers of Early Years Education to enhance and enable the uptake of the Early Years 2-2.5 year assessment and educational entitlement offers.
2. **Birmingham Forward Steps and Birmingham City Council** should work together to address data quality issues identified in relation to the Ages and Stages questionnaire (ASQ-3) collected at the 2-2.5 year health visitor assessment.

Case Study – Example of Practice
'New To Area Contact' by Birmingham Forward Steps

A homeless mother from the Ladywood area with two young children under the age of five was in a difficult position. The mother's Birmingham Forward Steps Health Visitor was there for support, guidance and to provide care; and when the mother reported to the Health Visitor that she was feeling hopeless and lost in the system; the Health Visitor stepped in to support. The mother managed to find homeless accommodation in West Bromwich; the Health Visitor felt that their duty of care wasn't to end there but to continue to stay in contact with the vulnerable mother to continue to aid her in getting her family on their feet.

The mother and her family were able to move into a property in a new area; however, the property wasn't suitable and placed the entire family at risk. The mother attempted to deal with the housing situation directly yet was getting nowhere and noticed her family descending back to the vulnerable position they were in before.

The Health Visitor also saw the family's decline and knew that support regarding housing was necessary. The Health Visitor liaised with the Housing Association to resolve the housing issues to improve the living arrangements of the family; the family's housing situation improved following the Health Visitors intervention. Without the Health Visitor's intervention and the care 'Universal Partnership Plus' offers the mother and her two children under five would be homeless again. Also, following the improvements, the family's physical and emotional wellbeing steadily improved.

Family and social environment

Child poverty

What's happening in Birmingham?

More than one in four children in Birmingham lives in poverty, significantly higher than England as a whole (16.7%) and any other local authority in the West Midlands. A total of 78,805 children under the age of 19 live in a low income family, which is more children living in poverty than any other local authority in England.

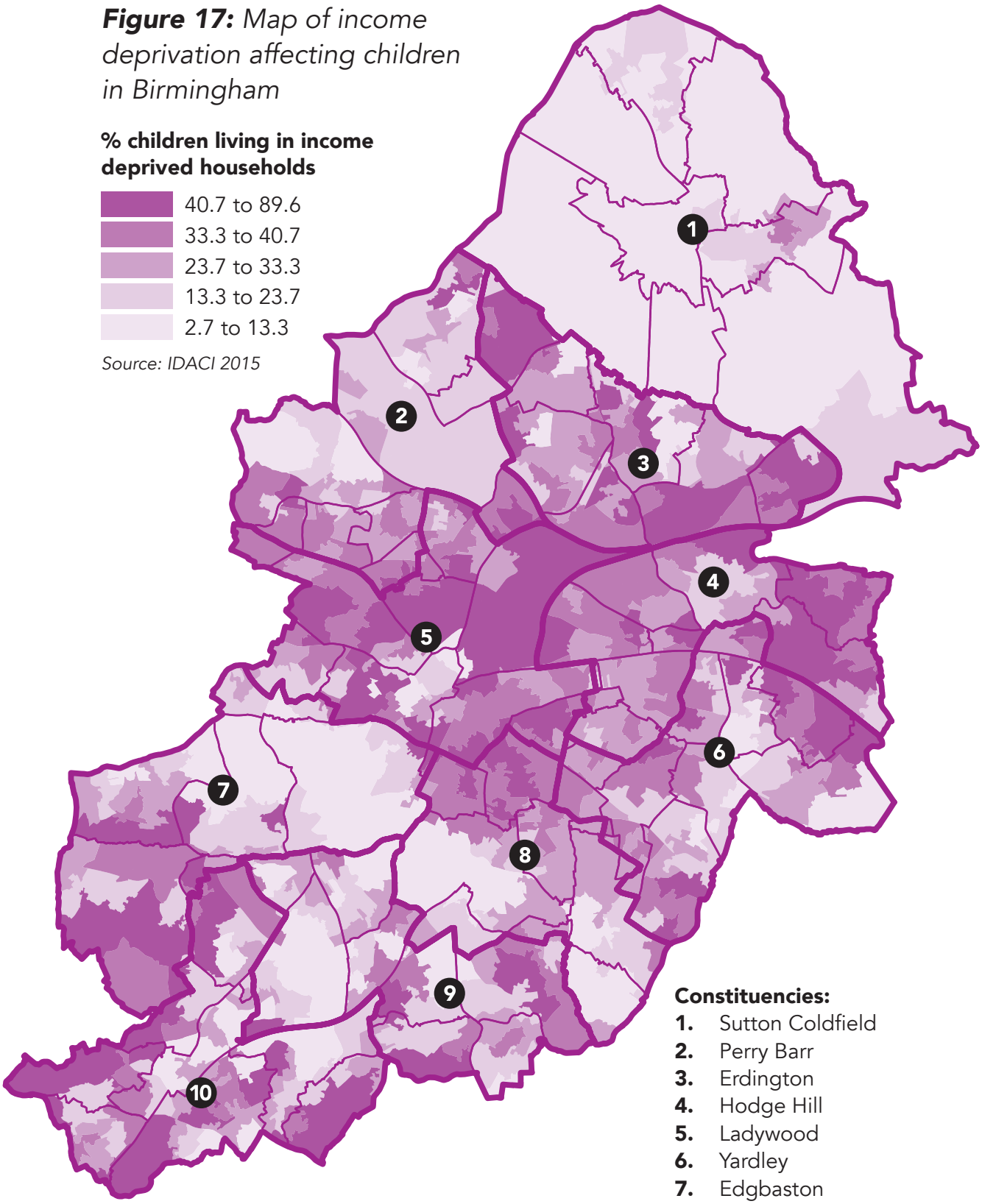
Family poverty can have a range of lasting impacts on health. Some of these are directly related to the impact that poverty has, such as poor diet, conflict between parents or damp and crowded housing. Other effects can be more subtle as children may not be able to take part in activities that build self-esteem and childhood resilience, or engage with learning at school. The wider neighbourhood context is also important and environments in more deprived areas can be poor for children because of the quality of local facilities such as parks or schools, or the exposure to air pollution. Children living in poverty may find there are more barriers to accessing health services, especially children of refugees, homeless families or traveller communities.[41]

Poverty in Birmingham

The English Indices of Deprivation 2015 provide statistics on relative deprivation for small areas in England. As measured by The Index of Multiple Deprivation (IMD) Birmingham is ranked as the 6th most deprived local authority in the country. In addition the Income Deprivation Affecting Children Index (IDACI), which measures the proportion of children under the age of sixteen that live in low income households, shows that 30.5% of Birmingham children live in income

[41] Webb, E. Children and the inverse care law. BMJ. 1998 May 23; 316(7144): 1588–1591

Figure 17: *Map of income deprivation affecting children in Birmingham*



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

deprived households (ranking Birmingham 15th in England). Figure 17 maps the distribution of IDACI across small areas of the city.

There are around 462,000 adults in Birmingham aged 16-64 years in employment. Whilst this represents 64.5% of the population, Birmingham lags behind England as a whole where 74.4% of adults are employed. This also makes Birmingham one of the two local authorities with the lowest employment rates in the whole of the West Midlands.

In Birmingham more women are unemployed than men, with 45% of working age women currently out of work.

Unemployment benefits contribute to low income families although there are a significant number of low income families where one or more of the adults are working in low paid jobs. The distribution of unemployment benefit claimants in the city (Figure 18) mirrors the pattern of disadvantage previously highlighted (Figure 17).

Over the last 10 years there have been changes to the job market in Britain. Part time employees now make a larger share of the labour market and there has been an increase in the amount of zero-hours contracts and 'gig economy' work. There are likely to be future changes due to increasing automation of some jobs, and the risk of automation is different between industries. The challenge in Birmingham remains, ensuring that the principles of Inclusive Growth are used to benefit our citizens equitably.

What should we be doing?

By definition the direct cause of poverty is the lower household income. A key challenge facing Birmingham is how to make all economic growth inclusive and therefore beneficial to all households. Inclusive growth describes the set of policies and plans to ensure that opportunities are available for every person in the city rather than the benefits of investment being concentrated amongst those already affluent.[42] The pattern of growth is as important as the pace of any growth. Inequalities in income have increased in England over several decades for this reason.[43] The consequent poor health and wellbeing of Birmingham's citizens living in poverty can be a barrier to inclusive growth. Where parents are unable

to work due to illness, this has a knock-on effect on the circumstances that their children grow up in, creating a cycle where families are trapped in poverty. Whilst employment is good for health of individuals as well as the knock on positive effects on their children, poor quality work can be harmful to health. Wages are an essential part of quality work, but employment status, learning opportunities, working conditions, work/life balance and participation in organisational decisions are other characteristics of importance.

Previous national strategies have focussed on the need to improve the financial independence of families.[44] Changes in family income can happen rapidly, and are often prompted by circumstances outside of the control of individuals, such as ill health or redundancy. The rapid rate of change, rather than the size of the change, does not allow families to adapt to their new circumstances. This can cause lasting debts or financial hardship. The Marmot review highlighted the cliff edges that families face when moving in and out of employment.

Sometimes there are other barriers to work such as the availability of childcare. In national surveys, half of non-working parents have said that they would be able to work if they could access affordable childcare and a larger proportion of parents with low household incomes agreed with this.

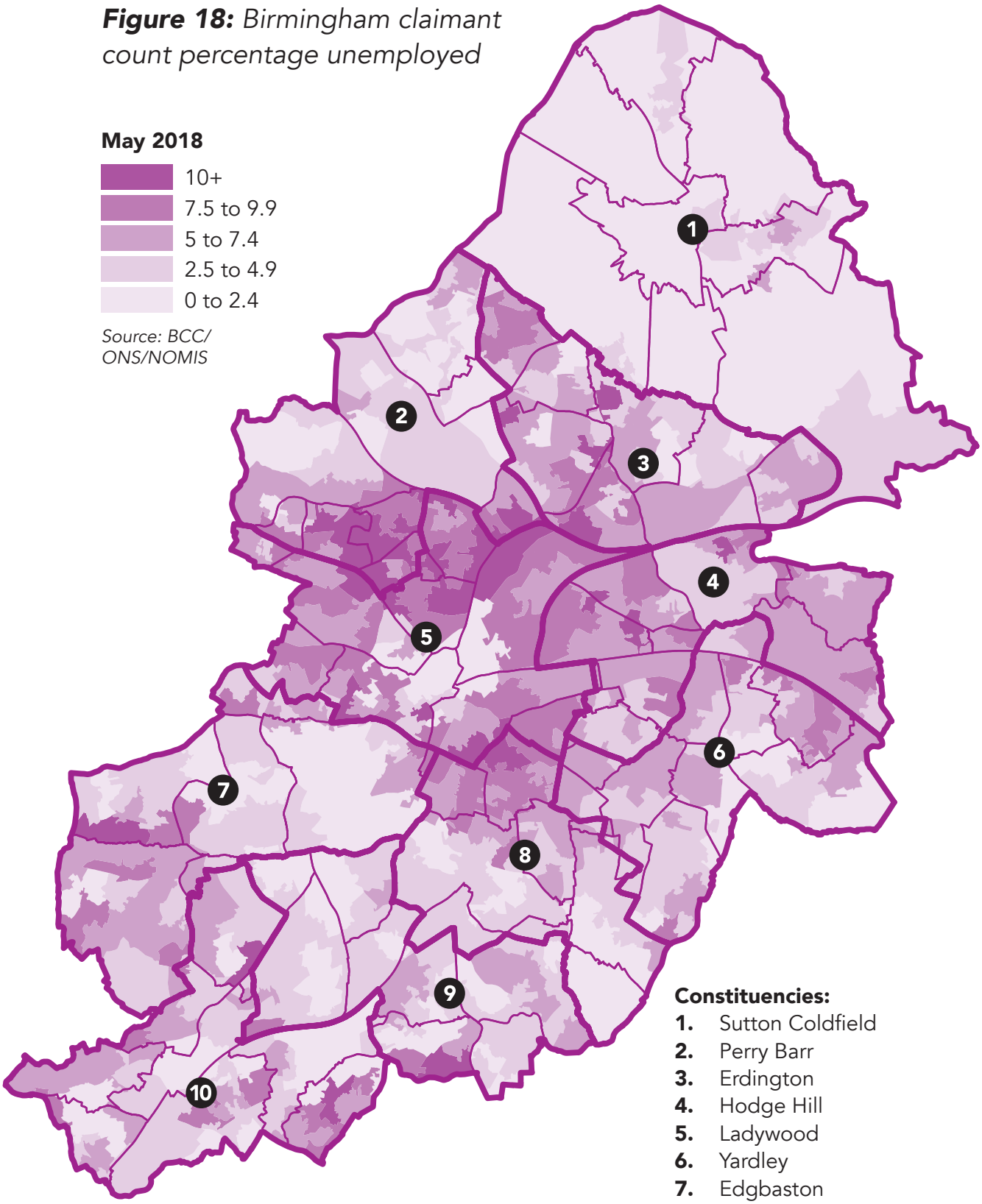
What are we doing?

The West Midlands Combined Authority (WMCA) has established an Inclusive Growth Unit. One of the aims of this unit is to embed inclusive growth considerations within the West Midlands Strategic Economic Plan[45] and the developing West Midlands Industrial Strategy set out in the Devolution 2 deal. Birmingham's public and private sector partners should implement those principles described by the Inclusive Growth Commission and the WMCA Inclusive Growth Unit.

Birmingham City Council has a social value policy. The Birmingham Business Charter for Social Responsibility and the Birmingham Living Wage policy are the

[42] Inclusive Growth Commission Making Our Economy Work for Everyone Royal Society for the encouragement of Arts, Manufactures and Commerce March 2017
[43] ONS. Household disposable income and inequality, table 9. January 2018. (https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/datasets/householddisposableincomeandinequality accessed August 2018)
[44] DWP and DfE: A New Approach to Child Poverty: Tackling the Causes of Disadvantage and Transforming Families' Lives DWP/DfE 2011
[45] WMCA. Strategic Economic Plan. 2016

Figure 18: *Birmingham claimant count percentage unemployed*



Based on map data produced by Birmingham Public Health Knowledge Impact and Outcomes Team (2018). © Crown copyright and database rights 2018 Ordnance Survey 100021326.

mechanisms for implementing the social value described in this policy. It has become an integral part of the Council's procurement process and contractual arrangements. The clearest example of innovative use of this approach is the Longbridge 106 scheme which used funds from housing development to establish a number of family nutrition and physical activity initiatives, including an evaluation of the impact of the Primary School based Daily Mile. Results of that evaluation are due in the autumn of 2018.

The recommendations of the Birmingham Child Poverty Commission report[46] focussed on five themes:

1. Health
2. Housing
3. In-Work Poverty
4. Economy and Worklessness
5. Education and Lifelong Learning

The most important outcome of this work is the establishment of the Child Poverty Action Forum. This Forum comprises Public, Private, Voluntary, and academic stakeholders, who are addressing the challenging thematic areas collectively.

Recommendations/Conclusions/Next Steps

1. The reduction in the impact of family poverty on children should become the outcome measure for the economic developments in the City by all partners collectively. The principles of the Inclusive Growth Commission and WMCA Inclusive Growth Unit should be explicitly explored for their implications in Birmingham by **Birmingham Financial Inclusion Partnership** and **Birmingham Child Poverty Action Forum**.
2. The poor health of deprived areas is a symptom of, and barrier to, inclusive growth. The Joint Strategic Needs Assessment (JSNA) must describe these patterns of impacts and should be used to support decisions to reduce family poverty by **Birmingham Health and Wellbeing Board** and **Birmingham Financial Inclusion Partnership**.
3. Evaluation of schemes using 106 funding in Longbridge should be shared widely with recommendations and next steps to start further innovative schemes along these principles by **Birmingham Health and Wellbeing Board** and **Child Poverty Action Forum**.

Adverse Experiences in Childhood

What's happening in Birmingham?

There is no routinely collected data on the distribution of those with defined[47] adverse experiences in childhood. Commissioned surveys have occurred in Wales,[48] Lancashire[49] and Hertfordshire/Luton/Northamptonshire.[50] All of these have demonstrated similar patterns of prevalence, 57% of the population had none of these experiences, 18.0% had one experience, 16% had 2-3 experiences and 9.0% had four or more experiences. The studies also demonstrated strong associations of increased prevalence with socio-economic disadvantage. The impacts demonstrated by the original research are more likely with multiple adverse experiences in childhood.

A significant number of 0-5 year old children are referred to Birmingham children's services each year. In the 12 months leading up to August 2018 there were 5,963 such referrals. Over a quarter of these were due to domestic violence and abuse and neglect being the other major reason for referral. All of these are adverse experiences.

In August 2018, Birmingham Children's Trust reported that there were 571 children under the age of 5 with an open Child Protection Plan. Just under half of these were due to the child being emotionally abused. There were 423 children aged 0-5 in the care of the City Council in August 2018. This was again primarily due to abuse or neglect and around 10% of children were placed into care due to their family being in acute stress or dysfunction.

Based on the other prevalence studies and the experience of Birmingham Children's Trust, we can confidently assert that there will be large numbers of our population who have experienced adversity in childhood. Those with multiple adverse experiences will be concentrated in our areas of disadvantage. This will result in significant adverse impacts in later stages of the life course. Research shows that groups of children who have had more of these adverse experiences will suffer from worse health[9] and wellbeing.

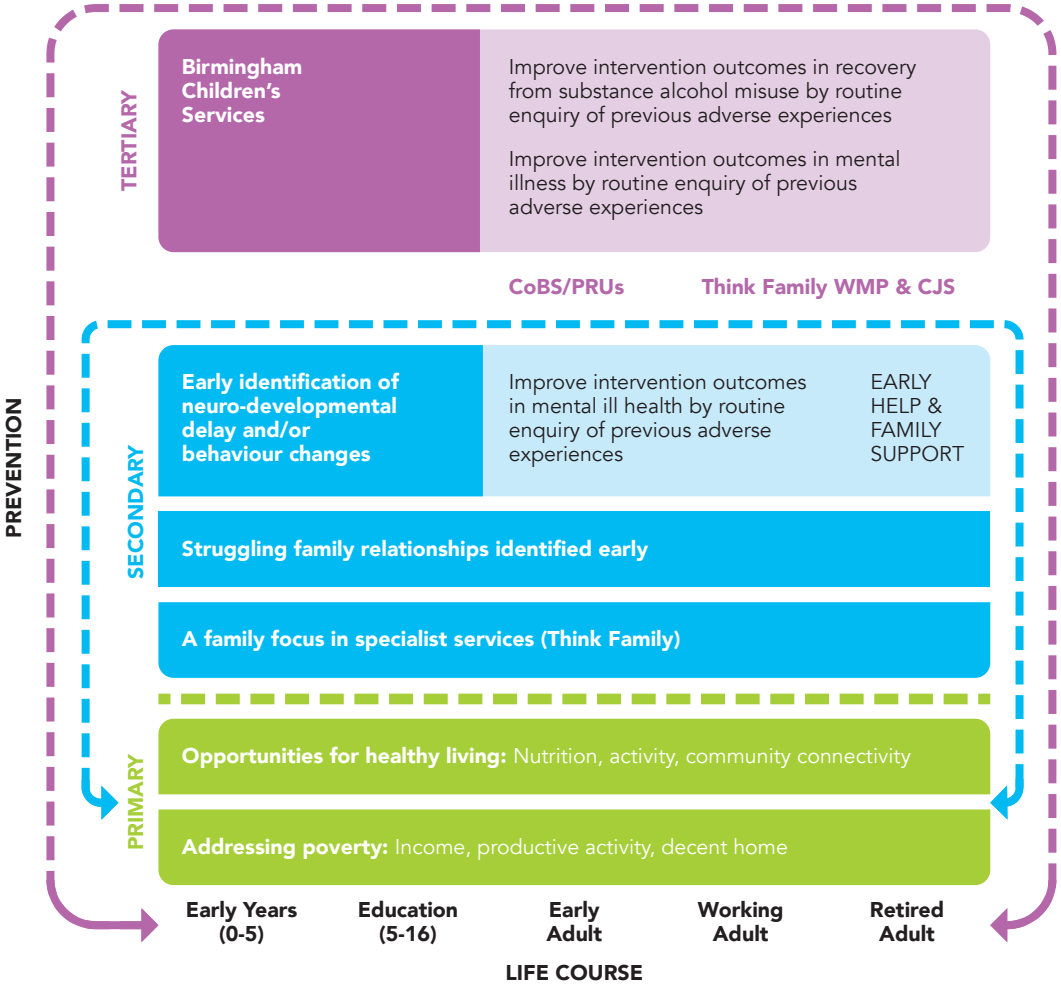
[46] Birmingham Child Poverty Commission A Fairer Start for ALL our children Birmingham City Council 2016
[47] Fellitti et al Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults, The Adverse Childhood Experiences Study American Journal of Preventative Medicine 1998: 14(4): 245-58
[48] Bellis MA, Ashton K, Hughes K, Ford K, Bishop J, Paranjothy S. Adverse childhood experiences and their impact on health-harming behaviours in the Welsh adult population. Cardiff: Public Health Wales, 2015
[49] Lowry et al ACEs in Blackburn with Darwen Blackburn with Darwen Council and Liverpool John Moores University 2014
[50] Ford et al Adverse Childhood Experiences in Hertfordshire, Luton, and Northamptonshire Centre for Public Health, John Moores University, Liverpool 2016

What are we doing?

Evidence of the impact of adverse experiences in childhood in young people and adults is strong and secure.[51] There is, however, no agreement on how to respond to this evidence.

A Birmingham Health and Wellbeing Board Task and Finish group[52] has explored opportunities to prevent the impact and developed a prevention framework with occasions identified across the life course. There are discussions in many arenas considering the question of responding and reducing the impact for future generations of children. The prevention framework (Figure 19) has prompted action in all three prevention domains.

Figure 19: *The Framework of Preventing the Impact of Adverse Experiences in Childhood in Birmingham*



1. **Tertiary preventative approach:** This approach considers routinely asking about these experiences in those with established physical and emotional disease and in contact with specialist services.

   Opportunities for tertiary prevention have been developed in adult substance misuse clients, complex family presentations (Think Family and Intensive Family Support) and Domestic Violence support for survivors.

   The approach involves enquiring about these experiences and sharing the impact they have. This provides an opportunity for the client to recognise the impact of that previous adverse experience and offers an opportunity to be different in the future. It does not focus on the previous experience nor expect the client to relive the experience again and again. It is seeking to deal with the impact it is having in the here and now and for a different future. It has been demonstrated to enhance the specialist therapeutic interventions usually employed. A trauma recovery specific intervention has not been required, although this is an option in some circumstances.

2. **Secondary preventative approach:** The approach identifies children and young people with recent adverse events, preferably when and as they occur. This is an opportunity to reduce the impact these experiences have in the present and the future. This should reduce the likelihood of multiple experiences occurring in these individuals over time.

   Opportunities for Secondary Prevention have been developed into an Early Emotional Help system framework for secondary schools, in partnership with voluntary sector and Forward Thinking Birmingham. This is intended to enhance the response to children with difficulties and concerning behaviours. The approach recognises the adverse experience impact and raises the questions with these young people. This has shown to change the responses in students with challenging behaviours supported by the City of Birmingham School and Pupil Referral Units.

[51] Bellis et al Adverse Childhood Experiences: Retrospective Study to Determine their impact on adult health behaviours and health outcomes in a UK population Journal of Public Health 2013 Vol 36(1); 81-91 doi:10.1093/pubmed/fdt038

[52] Wilkes et al Using the Impact of ACEs in Birmingham 2017 Birmingham Health and Wellbeing Board 2017

Opportunities for Secondary Prevention have been developed in the Early Years System (Birmingham Forward Steps) to support parents to relate differently to each other and their children using the insights of the impact of parental adverse experiences in their childhood. This enhances the effectiveness of programmes such as Positive Parenting Programme and the Solihull Approach.

3. **Primary preventative approach:** This approach is intended to reduce the likelihood of these Adverse Childhood Experiences occurring in the first place and/or reducing the likelihood of the impact if an adverse experience does occur

   Opportunities for Primary Prevention have been developed in a whole school ACE/Trauma approach to adult/student and student/student relationships through the understanding of the impacts of these experiences (Newstart programme). Half of Birmingham secondary schools have now become involved in the programme and early adopters are reporting encouraging changes in the school culture, relationships, and achievements.

   The West Midlands Combined Authority Adverse Childhood Experiences lead, Dr Andrew Coward, is proposing a community based development of awareness of the impact of these experiences in Castle Vale and Kings Norton. This will, of course be evaluated before more widespread adoption.

Recommendations/Conclusions/Next Steps

1. Opportunities for Tertiary Prevention should be developed with **adult Mental Health clients** (including personality disorder, complex family presentations), **children's social care** (Child Protection and Child In Need) and **Primary Care**.
2. Opportunities for Secondary Prevention should be developed into an Early Emotional Help system framework for Primary schools. This should be a **partnership of schools, the voluntary sector and NHS**, which responds to children with difficult and concerning behaviour. This should include the introduction of enquiry into the adverse experiences in the child and family.
3. Opportunities for Primary Prevention should be sought in sharing the understanding of impacts of adverse experiences with parents during the

antenatal period by the **Local Maternity System** and **Forward Thinking Birmingham**.

4. Opportunities to develop locality understanding and responses in wider linked communities such as extended families, faith or social groups and neighbourhoods to the evidence of harmful impact of these experiences should build upon the experiences of the pilots in Castle Vale and Kings Norton **(Dr Andrew Coward, Area Early Help Hubs** and **Forward Thinking Birmingham)**.

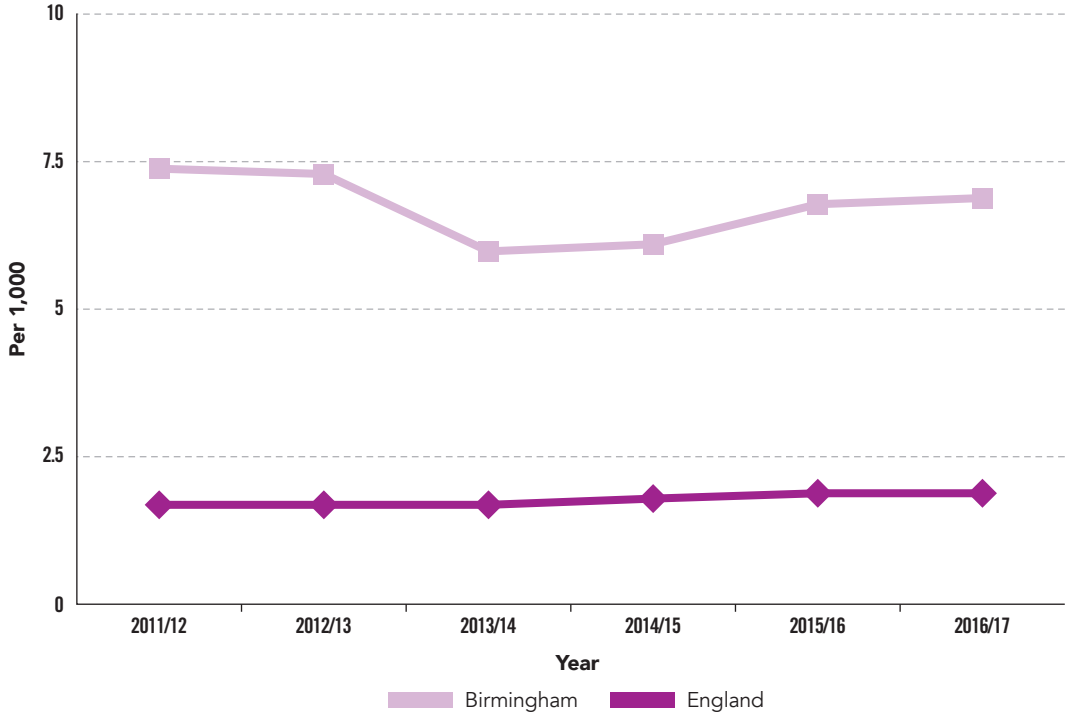
Child homelessness

What's happening in Birmingham?

Children have a right to a good standard of living space in Birmingham. The Birmingham Homelessness Prevention Strategy 2017[53] provides a multi-agency approach to the prevention of homelessness.

In Birmingham 7.4 households in every 1,000 have become statutorily homeless compared to 2.4 in every 1,000 households in England. The trend over time can be seen in Figure 20.

Figure 20: *Family homelessness*



In the financial year 2016/17, there were 2,961 households with dependent children or a pregnant parent accepted as homeless. Within the West Midlands, Birmingham has the highest proportion of households with homeless children and the second highest for any local authority in the country, after Newham.

The challenge of affordable housing of adequate quality is significant in Birmingham. The city has higher than average household sizes but a limited supply of four bed and larger homes.[47]

What should we be doing?

Any semblance of national strategy is focussed upon the legislative framework which Local Authorities are held to account for when responding to requests for assistance.

Reducing family homelessness requires the two handed approach of developing secure, affordable housing of decent quality and support to prevent loss due to changing economic or relationship circumstances.

The impact of a period of homelessness and temporary accommodation has been known for many years. The Centre for Housing Policy reported on these impacts in 2008.[54] Shelter found that these adverse impacts were no better in 2016.[55]

What are we doing?

The Birmingham Homelessness Prevention Strategy[49] offers a framework of multi-agency approaches to prevent homelessness occurring by offering early help to support and developing options for sustainable and affordable housing. This approach is supported by Shelter[56] and the national Housing Federation/New Local Government Network.[57] It sets out the vision to eradicate homelessness in the city.

[53] https://www.birmingham.gov.uk/downloads/file/2531/birmingham_homelessness_prevention_strategy_2017
[54] Pleace et al Statutory Homelessness in England: The experience of families and 16-17 year olds Communities and Local Government 2008
[55] Shelter UK Desperate to escape: the experience of homeless families in emergency accommodation. Shelter.org.uk 2016
[56] www.england.shelter.org.uk
[57] National Housing Federation Working Together for more Homes www.housing.org.uk2018

The strategy is structured around the positive pathway approach developed by St Basil's and includes universal prevention, alongside more targeted prevention activities, including vulnerable children and young people at risk, crisis prevention and relief and recovery from homelessness. The strategy identified that work needs to happen to reduce further trauma to children that may have a long lasting effect.

Families with dependent children are a priority group for homeless applications. In Birmingham four out of every five priority homeless acceptances were from households with dependent children. The strategy also commits to minimise the use of bed and breakfast (B&B) provision for families with children.

Recommendations/Conclusions/Next Steps

1. The **Joint Strategic Needs Assessment** should focus on supporting the evaluation of the Birmingham Homelessness Prevention Strategy by Adult Social Care, Birmingham Public Health, and Birmingham Forward Steps.

Acknowledgements

The production of this report could not have been possible without the support of my Public Health team. I would like to offer my special thanks to Nasreen Akhtar and Tahbeer Pervez for their project management from inception to completion, Dr Dennis Wilkes, Fiona Grant, Duncan Vernon, Ralph Smith, Chris Baggott, Dr Wayne Harrison and Salonika Acharya for leading on chapter collation and Bradley Yakoob and Julie Bach for coordination of design and printing and stakeholder engagement. All of whom have played an integral role in the completion of this DPH Annual Report.

A special thank you to Jeanette Davis for her expertise relating to infant mortality; Susan Lowe, Paul Campbell and Jenny Riley for analysis of statistical data; Mudassar Dawood for the production of maps and Mohan Singh for production of data analysis. Thank you to the Public Health Knowledge, Impact and Outcomes team for additional support provided.

I would further like to thank all those who took the time to take part in our Stakeholder engagement session. I am grateful to Sandra Passmore, Jeanette Young, Chris Chiswell and Helen Dolman for your feedback, engagement and direction.

I personally appreciate the support of all those with whom I had the pleasure to work with along the way. This includes all internal and external partners, in particular Birmingham City Council's directorates including Place, Housing Options, Children and Young People, Transport and Connectivity and Birmingham Children's Trust.

Stuart Reynolds, Birmingham City Council Corporate Communications team, is thanked for all his support and commitment, in ensuring this document was produced and for all his media support and coordination.

I truly appreciate everyone's efforts and commitments and in particular leadership from Councillor Paulette Hamilton, Cabinet Member for Health and Social Care and Professor Graeme Betts, Corporate Director for Adult Social Care and Health.

Glossary

Adverse Experiences in Childhood: These are stressful events occurring in childhood including domestic violence, parental abandonment through separation or divorce, being the victim of abuse or neglect, a member of the household being in prison.

Antenatal: Before birth; during or relating to pregnancy.

ASQ-3: A developmental and social-emotional screening for children between birth and age 6.

Attachment: Attachment theory is a psychological model centered on the emotional bonds between people. It suggests that our earliest attachments can leave a lasting mark on our lives.

Birmingham Business Charter for Social Responsibility (BBCSR): A set of guiding principles which aim to help the local economy by supporting local businesses, creating jobs and making sure workers are paid a fair wage.

Birmingham Forward Steps: The new health and wellbeing service for all pre-school children has been designed to bring together the current health visiting service and children's centres, so that families can access the help they need from pregnancy until their child starts school.

Birmingham Living Wage policies: The Council's Living Wage Policy ensures that people working on behalf of the Council are paid the same minimum rate as if they worked directly for the Council. Since Birmingham City Council's procurement policies mean that these are more likely to be Birmingham residents, this also helps local shops and businesses.

BUMP: Birmingham and Solihull United Maternity and Newborn Partnership, it aims to introduce a single point of access for all maternity referrals making sure you have access to the right care from day one, through your dedicated midwife and dedicated community hubs.

CDOP: Child Death Overview Panels, are statutorily required to conduct case reviews to help prevent further child deaths.

Congenital Anomalies/Abnormalities: Also known as birth defects, congenital disorders or congenital malformations,

they occur in the womb and may be identified before birth, at birth or sometimes only later in infancy.

Consanguinity: Related by blood, being descended from the same ancestor.

Core Cities: The Core Cities Group is a self-selected advocacy group of large regional cities in the United Kingdom and outside Greater London. It is a partnership of eight city councils: Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham, and Sheffield

Early neonatal death: Death of a live-born baby within the first seven days of life.

Health Inequalities: Differences in health status or in the distribution of health determinants between different population groups, for example, differences in mortality rates between people from different social classes.

Healthy Child Programme: A programme of screening tests, immunisations, developmental reviews, and information and guidance offered to every family to support parenting and healthy choices.

Infant mortality: Death of a child between birth and the end of the first year of life.

Intrapartum: During labour and delivery or childbirth.

National Child Measurement Programme: The annual measurement and recording of the height and weight of children in reception year and Year 6.

Parenting Daily Hassles Questionnaire: A measure used to assess the frequency and intensity of parents' daily hassles.

Peri-natal: During the phase surrounding the time of birth, from the twentieth week of gestation to the twenty-eighth day of newborn life.

Personality disorder: A class of mental disorder characterized by enduring maladaptive patterns of behavior, cognition, and inner experience, exhibited across many contexts and deviating markedly from those accepted by the individual's culture.

Post-natal: Relating to or denoting the period after childbirth.

Pre-natal: Before birth; during or relating to pregnancy.

Primary prevention: Interventions

to prevent disease or injury before it ever occurs, e.g. immunisation against infectious diseases.

School readiness level:
The percentage of children by the end of reception defined as having achieved at least the expected level in the prime areas of learning (personal, social and emotional development; physical development; and communication and language) and in the specific areas of mathematics and literacy.

Secondary prevention:
Interventions to reduce the impact of a disease or injury that has already occurred, e.g. regular screening to detect disease in its earliest stages.

Section 106 agreements:
Legal agreements between Local Authorities and developers; they can also be known as planning obligations. They aim to balance the pressure on the area created by the new development with improvements to the surrounding area.

Social determinants of health:
The conditions in which people are born, grow, live, work and age, which are shaped by the distribution of money, power and resources at global, national and local levels.

Statistical neighbours: Local authorities with similar demographic characteristics, e.g. age distribution, levels of deprivation.

Statutorily homeless: Households or individuals whom the local authority has a legal duty to assist, on the basis that the applicant is eligible for assistance, unintentionally homeless and falls within a specified priority need group.

Stillbirth: The birth of a dead baby after 24 completed weeks of pregnancy.

Targeted prevention: Strategies which target subgroups of the general population that are determined to be at risk.

Tertiary prevention: Interventions to soften the impact of an ongoing illness or injury that has lasting effects, e.g. cardiac or stroke rehabilitation programs, chronic disease management programs.

Universal prevention: Strategies which are designed to reach the entire population, without regard to individual risk factors.

birmingham.gov.uk/publichealth

82.19 / Oct 2018