

# Evidence base for a Healthy Early Years Programme in London.

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## Executive Summary

What happens in pregnancy and the first five years of life is a significant predictor of future life outcomes. Good health in the early years is important, not just for the wellbeing of the child in the short term, but also because of its influence on school readiness and therefore future life chances. A wide range of health problems in the early years, both physical and emotional have been shown to have an impact on school readiness. Nearly 4 in 10 children living in London have not achieved a good level of development by the end of reception and are therefore not ready for school. The purpose of this review is to identify the important health problems faced by young children living in London and review the evidence that early years settings can have an impact on these.

The data shows that a significant proportion of London's children have health problems which may impact on their wellbeing and future school readiness.

- Babies born in London are more likely to be of low birthweight than in England as a whole.
- Breastfeeding rates are higher in London than England as a whole.
- Almost 1 in 4 children in reception year are overweight or obese.
- 9 in 10 children aged 2-4 years do not meet recommended levels of physical activity.
- 1 in 3 five year olds in London have tooth decay.
- 1 in 10 children aged 0-4 years have a long standing illness or disability.
- Immunisation uptake rates are consistently lower in London than the rest of England.
- 12-14% of children are not reaching expected goals for social and emotional development.
- 105 per 10,000 0-4 year olds per year were admitted to hospital with unintentional or deliberate injuries.
- 16-18% of children were not meeting communication or language goals.

There are also considerable inequalities between areas with, figures being much higher than this in some parts of London.

A considerable proportion of London's children are spending time in childcare settings on either a full time or part time basis, therefore implementing a healthy early years programme provides an ideal opportunity to improve the health of young children. A number of London boroughs, as well as areas outside of London have already implemented healthy early years programmes incorporating many of the health issues identified above.

The evidence suggests that implementing interventions in early years settings can be an effective means of tackling some of these problems. The strength of the available evidence varied across the different health areas studied. A considerable amount of research had taken place for example on improving nutrition/tackling obesity and promoting physical

activity and it was possible to identify clear and specific evidence based recommendations that can be implemented in early years settings. In other areas such as improving immunisation uptake, there was much less evidence available. Across all areas a number of components could be identified which were consistently associated with success of the intervention. These were:

- A whole settings approach.
- Involving children, parents, and the local community.
- Training and engagement of staff.
- Partnering with external agencies to support staff to develop knowledge and expertise.
- Ensuring appropriate policies and procedures are in place and followed by staff.
- Childcare is of high quality and delivered in a suitable environment with adequate space and equipment.

Although the evidence review looked at what early years settings can do to improve the health of the children in their care, the important role that parents play should not be ignored. Parents are role models to their children and their health behaviours may also have a direct impact on the health of their children. Maternal mental health, parental smoking, drug or alcohol misuse and the state of family relationships are all areas which can impact directly on the health of children. There are a number of evidence based parenting programmes which can be effective in improving parenting skills, and early years settings should be aware of and able to signpost parents to these. It may also be appropriate for some settings to provide these programmes.

A healthy early years setting should promote good health in staff as well as children. The evidence indicates that the health of early years workers is not as good as it might be, in particular they have high rates of emotional stress and overweight/obesity. Measures to improve the health of children in early years settings can also have an impact on the staff. Low pay in this workforce is likely to be a contributor to the poor health experienced and payment of a living wage may help in addressing this.

There are numerous possible health effects which may be associated with climate change and those in their early years now, and yet to be born, will be most affected by this. Values, attitudes, behaviours and skills acquired in early childhood can have a long lasting impact in later life. Therefore early years settings have an important role to play in helping children to implement principles of sustainable development and developing local solutions to this issue.

On the basis of this evidence review it is recommended that a healthy early years programme should be implemented in London. It should incorporate the components identified above. It should be piloted first before being amended as needed and then rolled out across London. It should be subject to a rigorous evaluation to ensure it is delivering the desired outcome for children in terms of improving health and school readiness.

# 1. Health in the early years

## 1.1 *The ideal pathway*

Pregnancy and the early years of life are one of the most important stages of life, where the foundations of future health and wellbeing are laid. There is good evidence that future outcomes in both child and adulthood are influenced by what occurs at this stage of life. The Healthy Child Programme, for pregnancy and the first five years of life, focuses on a universal preventative service, providing families with a programme of screening, immunisation, health and development reviews, supplemented by advice around health, wellbeing and parenting.<sup>1</sup>

Ideally a mother would start a pregnancy a non-smoker and drinker and a healthy weight. She would have received appropriate pre-conceptual advice, including optimisation of any medicines she is taking and recommended supplements such as folic acid. She would be in a stable, non-abusive relationship, have adequate income and housing, and support from family and friends. She would book with her midwife at an early stage of pregnancy, attend all antenatal appointments and be offered recommended screening and immunisations. Her child would be born at full term, at a healthy weight and receive screening and reviews of their health and development as detailed in the Healthy Child Programme. They would be protected from infectious diseases as a result of receiving the vaccinations recommended in the childhood immunisation programme.<sup>1</sup> They would have a healthy diet and be physically active, minimising sedentary behaviour. The parents would be making use of local services, such as their local children's centre and receive any targeted support they or their child need. Attending free early years education once the child is three and four (or two for low income families) will help the child to meet developmental outcomes. As a result of this optimal pathway from pre-conception to school age, the child would be ready to begin school and able to learn and achieve their full potential in life.

## 2. Impact of health problems on school readiness.

Ensuring children have the best health possible in the early years of life is not just an issue for children and their families. It also has an impact on children's future school readiness, which in turn influences their achievement at school and future life chances. A range of health issues from pre-conception onwards have been shown to impact on children's readiness for school, meaning it is never too early in the life course to take action. Some areas which have been linked to school readiness include:

- Family spacing. Children born less than two years after the birth of their older sibling have been shown to be significantly less ready for school than those spaced further apart. Possible mechanisms for this might include maternal nutritional status, maternal and family stress, and lack of availability of time or other resources.<sup>2</sup>
- Low birth weight and premature delivery. Both low birth weight<sup>3</sup> and pre-term children have been shown to be significantly less likely to be ready for school.<sup>4,5</sup>
- Children with a range of health issues such as epilepsy,<sup>6</sup> diabetes,<sup>7</sup> asthma (severe enough to limit activities),<sup>8</sup> and raised blood lead levels<sup>9</sup> have been found to be

significantly less likely to be ready for school. However, frequency of minor illnesses such as ear infections, upper respiratory infections and gastrointestinal infections does not appear to be linked to school readiness.<sup>10</sup>

Differences in prevalence of health conditions may also account for some of the differences in school readiness between children from different ethnic groups and socio-economic backgrounds. A German study found that health conditions are more common in children of less educated parents. Health conditions found to be linked to school readiness in this study were low birth weight, hearing and vision problems, behavioural problems and asthma. They have a negative impact on school readiness and this is greater for children with less educated parents. They estimated that 55% of the school readiness gap between children of educated and less educated parents was attributable to health factors, with 19% of this due to differences in prevalence and 36% to differences in severity. In children with more educated parents hearing problems and asthma had no impact on school readiness. There was no significant relationship between body mass index and school readiness.<sup>11</sup> A US study found that poor infant health was responsible for delays in school readiness across all groups. There was a relationship between ethnicity and poorer infant health, with black children having poorer health, and Asian children better health, than white children. These differences in health were responsible for a considerable portion of the differences between ethnic groups in terms of school readiness.<sup>3</sup>

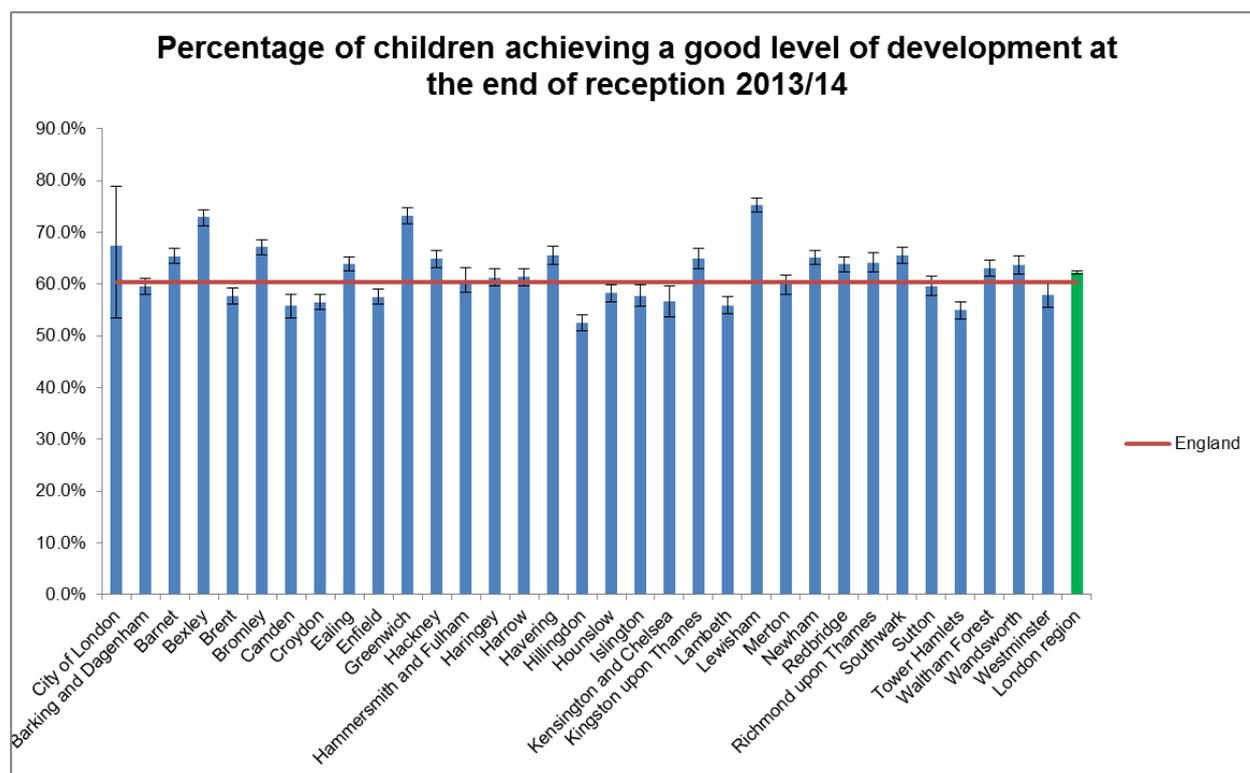
Taking action to improve health in the early years may help to reduce inequalities between groups in terms of school readiness. For example an American study of low income children (Medicaid recipients) found that those who had all the recommended visits in the first two years of life, which are designed to promote physical, emotional and cognitive health were significantly more likely to be ready for school than those who did not. Although a limitation of this study was that it excluded those with a range of health conditions.<sup>12</sup>

Although the evidence cited above predominantly relates to physical health conditions, social and emotional health is also critical to school readiness. Children with social and emotional difficulties are less likely to be school ready.<sup>13</sup> Parents also emphasise the importance of social and emotional health when considering children's school readiness.<sup>14</sup>

The Marmot review 'Fair Society Healthy Lives' identified that cognitive development in the early years (along with physical and social development) is an important influence on school readiness, future educational success and health. Socio-economic status has an important influence on this, with children whose parents are of low socio-economic status doing less well than those with more educated or wealthy parents, even if their early cognitive scores are higher. Factors which have been shown to influence early cognitive development include birth weight, parenting style and behaviours (such as reading to children), good parent-child relationships particularly in the first year of life, socio-economic influences and high quality early education and childcare.<sup>15</sup>

Figure 1 shows the percentage of children achieving a good level of development at the end of reception year in 2013/14. Across London as a whole 62.2% of children achieved a good level of development, which was significantly better than England (60.4%). There is considerable variation within London from 52.5% in Hillingdon to 75.3% in Lewisham. There were 11 London boroughs which performed significantly worse than England.

Figure 1: School readiness. The percentage of children achieving a good level of development at the end of reception 2013/14.



Source: Department for Education (DfE), EYFS Profile: EYFS Profile statistical series. In Public Health Outcomes Framework, Public Health England.

Children are said to be achieving a good level of development if they achieve at least expected within the following areas of learning: communication and language; physical development; and personal, social and emotional development; literacy; and mathematics. Physical development comprises moving and handling and health and self-care, so there is a health component to school readiness, both physical and emotional.<sup>16</sup> The health and self-care early learning goal is defined as ‘children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. They manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently’.<sup>17</sup>

There are other approaches to looking at school readiness. For example Los Angeles County in the US has included socio-economic, family and health factors in their school readiness goals. Their approach starts pre-birth, with one of the goals being children born at a healthy birth weight, and a specific indicator being newborns with low and very low birthweights. This approach recognises that readiness for school is influenced even before the child is born. Other specific health indicators include hospitalisations of children with asthma, as well as ones that would not be applicable to the UK such as children aged 0-5 years who have health insurance.<sup>18</sup> The Early Development Instrument used to assess school readiness in Canada also has specific questions about whether the child has chronic medical/health concerns, unaddressed dental needs, physical or learning disabilities, vision, hearing or speech impairment, communication skills and social and emotional development.<sup>19</sup> Although the questionnaire is completed for individual children it is used as a

population level research tool to understand how populations of children are doing over time, it is not used to evaluate individual children, teachers or schools.<sup>20</sup> Another example from the US was a multistate initiative across 17 states, which incorporated a multidimensional set of indicators from birth to age eight. The goal was that these should be used by states to inform public policy decisions. Examples of indicators include percentage of children with age appropriate fine motor skills, percentage of children exhibiting positive social behaviours when interacting with their peers, percentage of low birth weight infants, percentage of infants born to women who receive late or no prenatal care and percentage of children who have been fully immunised.<sup>21</sup>

### **3. The health of London's children**

This section considers the important health issues for children and why they matter. Where available, data is also presented for London children, looking at how big a problem each of these areas is for London. At the end of each section key messages are identified summarising why these areas are important for health and if there is an impact on school readiness.

Unfortunately for many London children this ideal pathway is far from the reality they experience. In London in 2012, 23.7% of children under the age of 16 were growing up in poverty (higher than the England average of 19.2%). Police recorded 20 incidents of domestic abuse per 1,000 population in 2013/14, which is likely to be the tip of the iceberg with many incidents going unreported. In 2012, 3.1% of babies born live at full term were of low birth weight, compared with 2.8% in England. Although less than the national average of 12.0%, in London 5.1% of women in 2013/14 smoked at the time of delivery, with considerable variation across London from 1.9% in Richmond and Westminster to 11.4% in Havering.<sup>22</sup>

#### **3.1 Breastfeeding**

Breastfeeding has an important role to play in promoting public health, as it has health benefits in the short and long term for both mother and baby. Benefits for the baby include a reduced risk of gastroenteritis, respiratory infections, middle ear infections, urinary tract infections, atopic disease, juvenile onset insulin dependent diabetes mellitus, raised blood pressure and obesity. Benefits for the mother include a reduced risk of breast and ovarian cancer. Breastfeeding initiation rates in the UK are among the lowest in Europe, with rapid discontinuation rates for those who do start breastfeeding. Surveys suggest that most women who do stop breastfeeding would have liked to continue for longer.<sup>23</sup>

Research has repeatedly shown an association between breastfeeding and intelligence. It is not clear whether this is due to the effects of breastfeeding or differences in parenting between those who choose to breastfeed and those who do not. One study found that although predominantly breastfed children had greater scores on maths and reading ability at age four, after controlling for confounding factors such as parenting behaviours this relationship was no longer significant.<sup>24</sup>

Breastfeeding statistics for 2013/14 show that initiation rates in London varied from 73.3% in Havering to 95.5% in City of London. In a considerable number of boroughs the data did not pass data quality checks so no initiation rate is given. This was also the case for London as a whole. The percentage of women still breastfeeding at 6-8 weeks (either totally or partially) varied from 61.9% in Hillingdon to 82.2% in City of London, but data only passed quality checks in 5 boroughs.<sup>25</sup> In 2012/13 the initiation rate in London was 86.8% which was the highest in England (England rate 73.9%). By 6-8 weeks, 68.5% of women in London were still breastfeeding, compared with 47.2% in England as a whole.<sup>26</sup>

#### Key Messages:

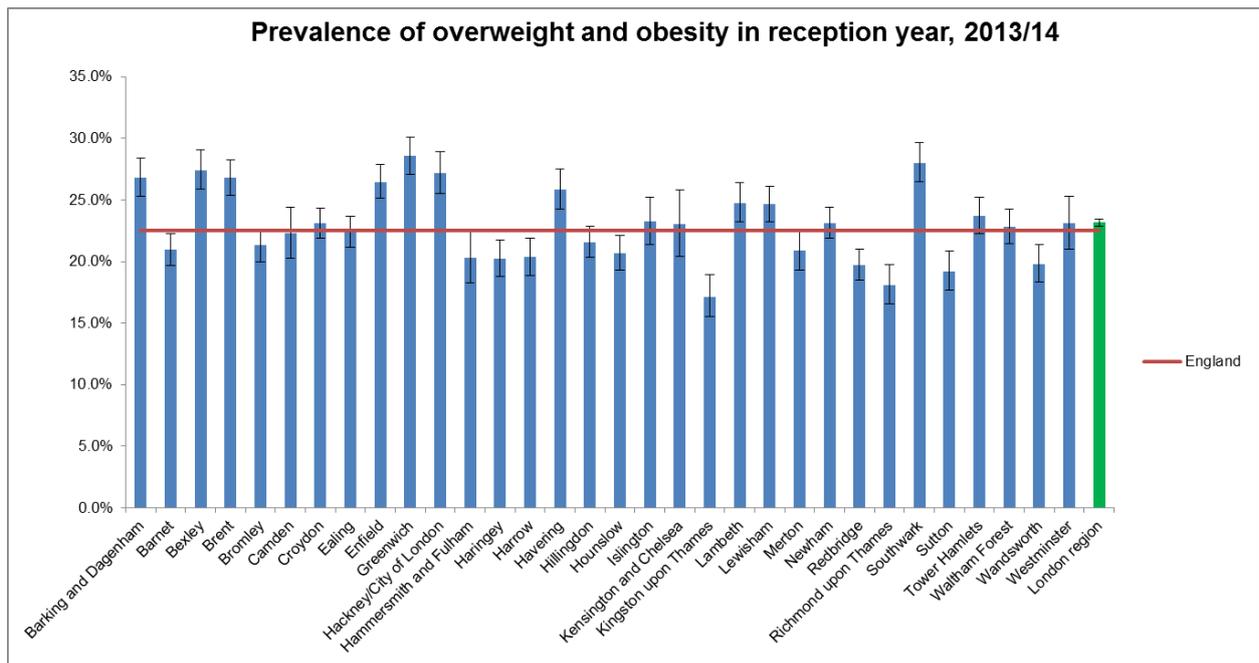
- Breastfeeding has a multitude of health benefits for both mother and baby.
- There is an association between breastfeeding, intelligence and school readiness, but this may be due to parenting behaviours in those who choose to breastfeed.

### 3.2 Obesity

Childhood obesity has important consequences in both the short and long term. These include emotional and psychological consequences, for example as a result of teasing and discrimination, poor sleep and fatigue. Obese children are more likely to be ill and be absent from school due to illness, which is likely to impact on performance at school. They are at increased risk of a range of health problems, for example type 2 diabetes, asthma and musculoskeletal problems. They are also more likely to go on to become obese adults, who are at risk of poor health, disability and premature mortality.<sup>27</sup> Prevention and early intervention are critical as once established obesity is difficult to treat. Although the importance of the home environment should not be ignored, many young children do spend a large proportion of their time in childcare and therefore attention needs to be given to the role early years settings can play in reducing childhood overweight and obesity.

In London in 2013/14, 23.1% of reception year children were either overweight or obese. This is significantly higher than the figure for England (22.5%) as a whole. There was considerable variation between boroughs from 17.1% in Kingston to 28.6% in Greenwich, as shown in figure 2.

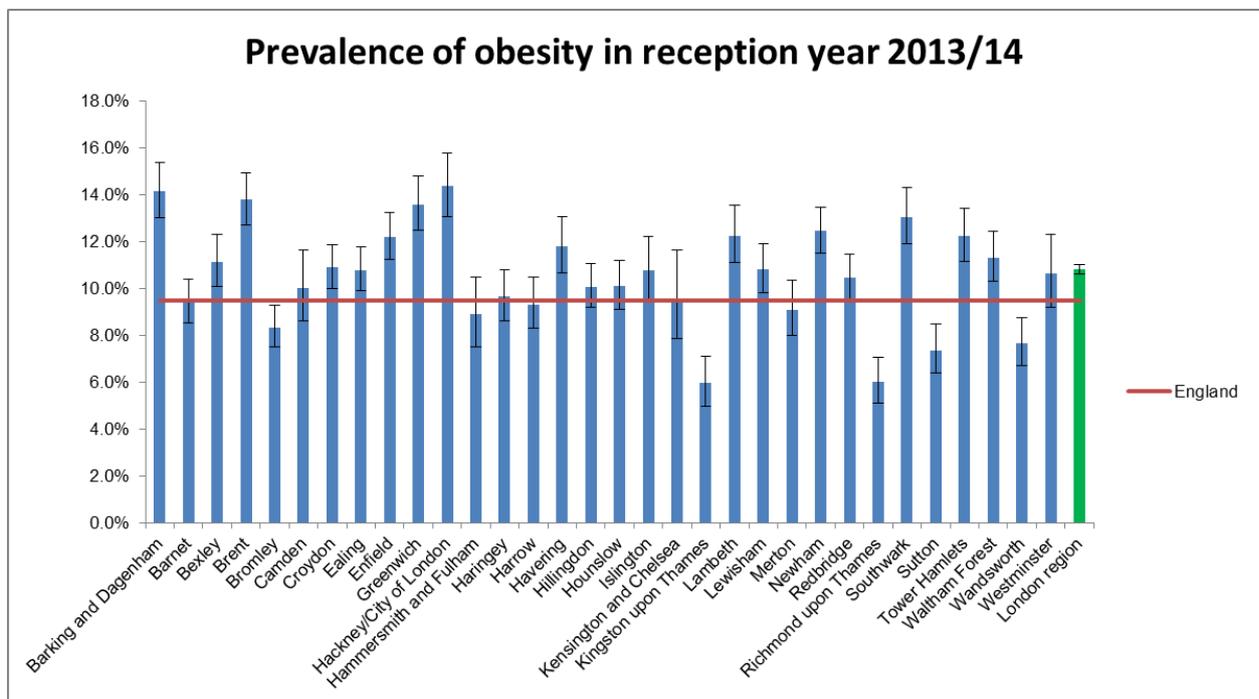
Figure 2: Prevalence of overweight and obesity in reception year, 2013/14.



Source: National Child Measurement Programme.

The prevalence of obesity in London children in reception year in 2013/14 was 10.8%. Again this is significantly higher than the England prevalence of 9.5%. This varied from 6% in Kingston to 14.4% in City and Hackney, as shown in figure 3.

Figure 3: Prevalence of obesity in reception year children, 2013/14



Source: National Child Measurement Programme.

Tackling childhood obesity early is important as the prevalence of overweight and obesity continues to increase throughout life. In 2013/14, 10.8% of reception year children were obese (and a further 12.3% were overweight). The prevalence of obesity in year 6 children was more than double that of reception year children at 22.4% (with a further 15.2% overweight).<sup>28</sup> Among adults, in 2013, 24.9% were obese (with a further 37.2% overweight).<sup>29</sup> Obese children are more likely to become obese adults, so intervening at a young age to establish good lifestyle habits is essential if the rise in obesity is to be reversed.

Key messages:

- Obese children are at risk from a range of health consequences, both physical and psychological.
- Obesity is likely to impact on school readiness due to illness, poor sleep and consequent absences from early years settings.

### *3.3 Physical activity and motor development*

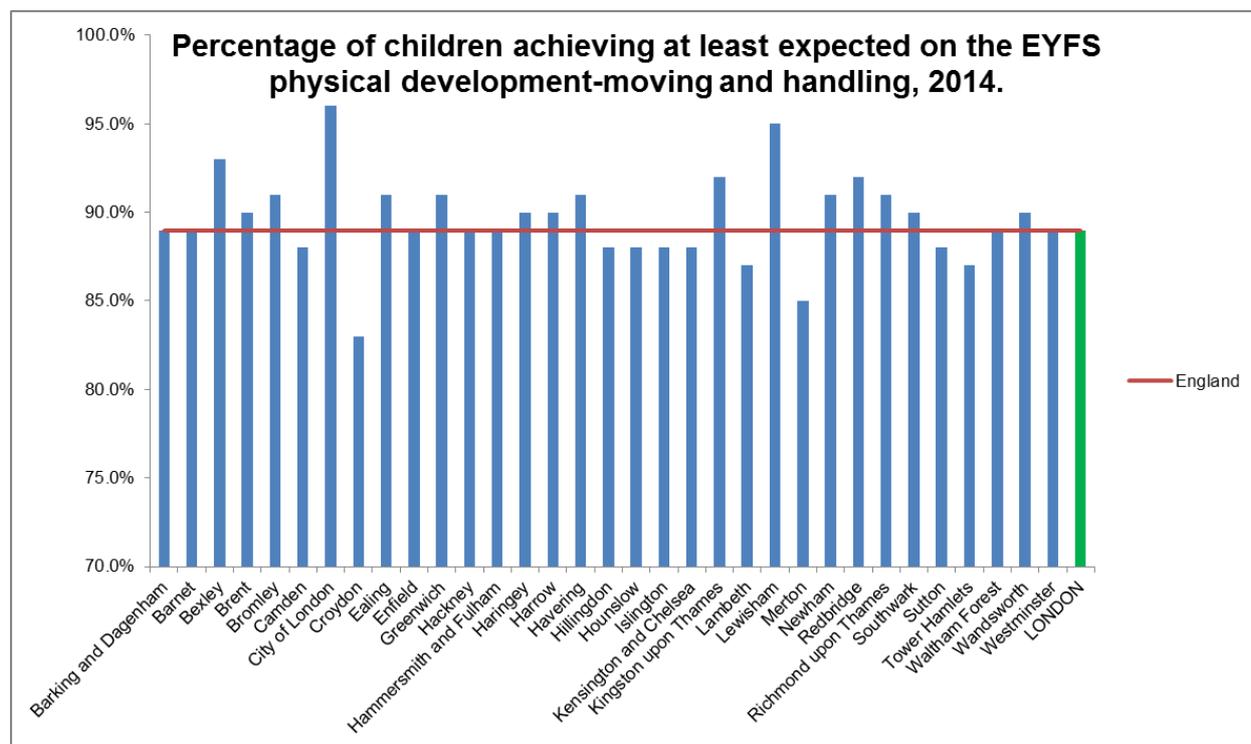
The UK Chief Medical Officers recommended in 2011 that children of pre-school age who are capable of walking should be physically active for at least 180 minutes a day, spread throughout the day. All under 5s should minimise the time spent being sedentary for extended periods. Activities can be of any intensity and include unstructured active play. In infants who are not yet walking, physical activity should be encouraged from birth. This includes movement of any intensity, particularly floor based play and water based activities in a safe environment.<sup>30</sup> There is evidence from studies that physical activity in young children is beneficial in terms of its effects on body fatness, cardiovascular health, musculoskeletal health and motor development. There is also a lower level of evidence that it may have benefits in terms of respiratory health, psychosocial health, cognitive development and social and emotional development. In terms of sedentary behaviour, there is evidence that this may have adverse effects in terms of body fatness, poor diet, cognitive development, cardiovascular health, self-regulation and motor development, though this evidence is not of a high quality.<sup>31</sup> There may also be links between the amount of time spent watching television in the early years and school readiness, with more television watching being associated with decreased receptive vocabulary, number knowledge, classroom engagement and gross motor locomotion scores.<sup>32</sup> Recent systematic reviews on the link between both physical activity and sedentary behaviour and cognitive development in children aged 0-5 have found that evidence suggests that physical development may be beneficial and sedentary behaviour harmful to cognitive development, although the quality of the available evidence is low to moderate, rather than high. However, the type of sedentary behaviour appears to be important. For example, reading shows beneficial rather than harmful effects on cognitive development. While the majority of studies found that screen time and in particular TV was either not associated with or had harmful effects on cognitive development, whether TV content is adult or child specific may be important. Some beneficial effects were seen for child specific content, although the results were inconsistent.<sup>33 34</sup> In school aged children, as well as the health effects of exercise, physical activity can help increase academic achievement, increase attention, improve behaviour and attitudes, improve brain function and reduce reaction times.<sup>35</sup> It is therefore likely that in pre-school children there will be an impact on school readiness.

In England in 2012, only 9% of boys and 10% of girls aged 2-4 met the 2011 recommended levels of activity. 84% of children of this age either did less than an hour of activity a day or did not do sufficient activity on each day. For both boys and girls, 7% of children aged 2-4 were sedentary for 6 or more hours a day on week days. Data specific to London is not available. Sedentary activities include activities such as watching TV, using a computer, drawing and reading.<sup>35</sup>

Normal motor development in children requires the development of both gross and fine motor skills. Gross motor skills include activities such as crawling, walking and throwing. Fine motor skills are required for activities such as picking up a small object between finger and thumb, cutting and drawing. If they do not develop good skills in these areas children are likely to struggle with activities such as sports and writing. Fine motor skills have been shown to be a strong and consistent predictor of later academic achievement.<sup>36</sup>

Figure 4 shows the percentage of children in London who meet the EYFS physical development goal for moving and handling. This covers children’s ability to show good control and co-ordination in large and small movements, move confidently in a range of ways, safely negotiating space and handle equipment and tools effectively, including pencils for writing.<sup>37</sup> The overall percentage of London children who meet this goal (89%) is the same as for England. However, this varies from 83% in Croydon to 96% in City of London.

Figure 4: Percentage of children achieving at least expected on the EYFS physical development-moving and handling, 2014.



Source: Department for Education

Although the majority of children are developing normally in terms of gross and fine motor skills as assessed by the EYFS, there are still a significant number who are not. In spite of

this, the majority of children in England do not get sufficient physical activity and are thus missing out on the health benefits of this.

Key messages:

- Physical activity has a range of benefits to health and is needed for good motor development. Sedentary behaviour has a range of adverse effects on health.
- Physical activity is important for school readiness and excess sedentary behaviour such as television watching may have a negative impact on school readiness. Good motor development, in the form of fine motor skills is an important predictor of academic achievement.

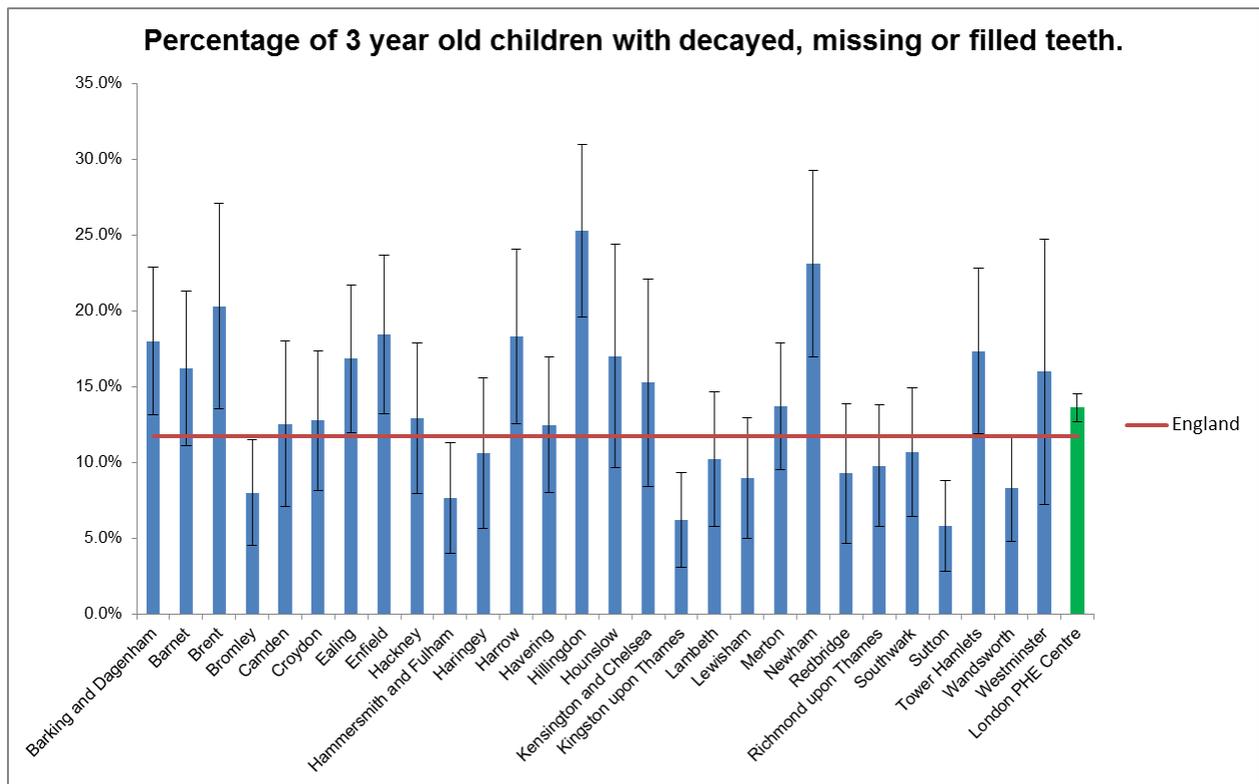
### *3.4 Oral Health.*

Good oral health is important because problems with oral health can affect children's ability to eat, sleep, speak, play and socialise. It is an important part of overall health and can impact on children's school readiness.<sup>38</sup>

During the school year 2012-2013, Public Health England undertook the first survey of the dental health of 3 year old children. The sample included children who were 3 years old and attended state or privately funded nurseries, nursery classes attached to schools and playgroups.<sup>39</sup>

Figure 5 shows the percentage of children with any decayed, missing or filled teeth. As can be seen in London as a whole, 13.6% of children showed signs of tooth decay, which is higher than England (11.7%). There is considerable variation across London, from 5.8% in Sutton to 25.3% in Hillingdon. Data is not available for all areas, as some Local Authorities did not participate or numbers of children sampled were too small.

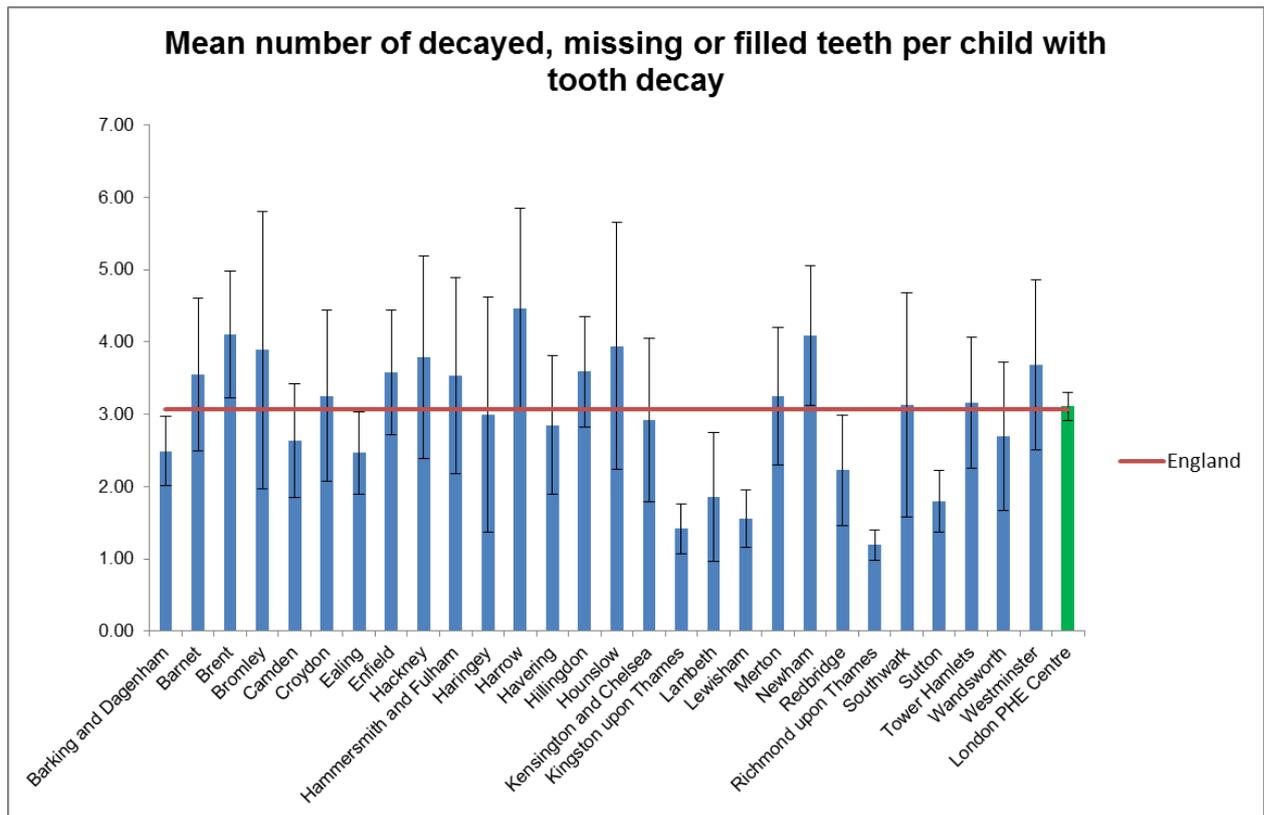
Figure 5: Percentage of 3 year old children with decayed, missing or filled teeth, 2012-13.



Source: Public Health England.

Figure 6 shows the average number of decayed, missing or filled teeth in those children who have tooth decay. At age 3 most children have all 20 primary teeth. This varies from 1.19 in Richmond to 4.47 in Harrow.

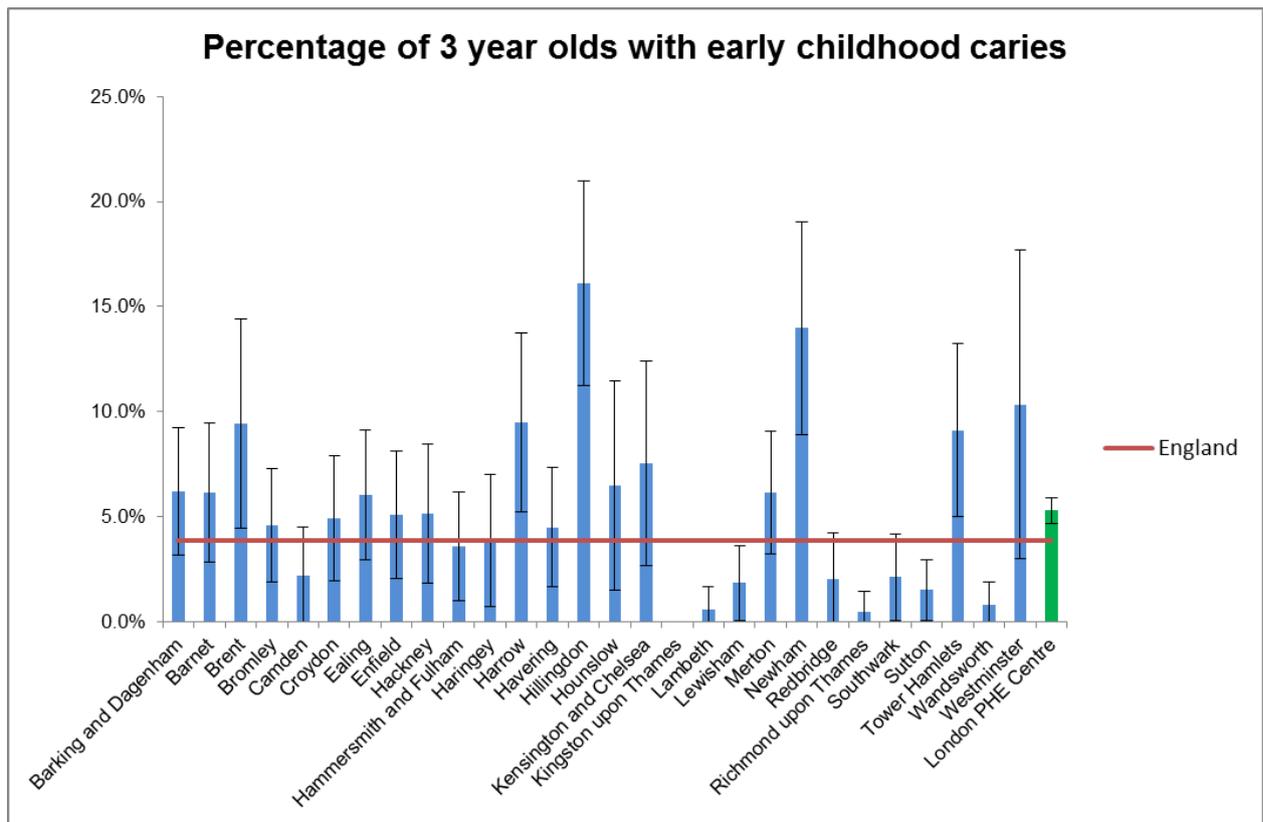
Figure 6: Mean number of decayed, missing or filled teeth per 3 year old child with tooth decay, 2012-13.



Source: Public Health England.

They also collected data on a specific form of tooth decay known as early childhood caries (ECC) which is an aggressive form of decay affecting the upper incisors. It is associated with long term bottle use with sugar sweetened drinks, in particular when these are given overnight or for long periods during the day. Figure 7 shows the percentage of children with this form of caries. Again there is considerable variation from 0% in Kingston to 16.1% in Hillingdon.

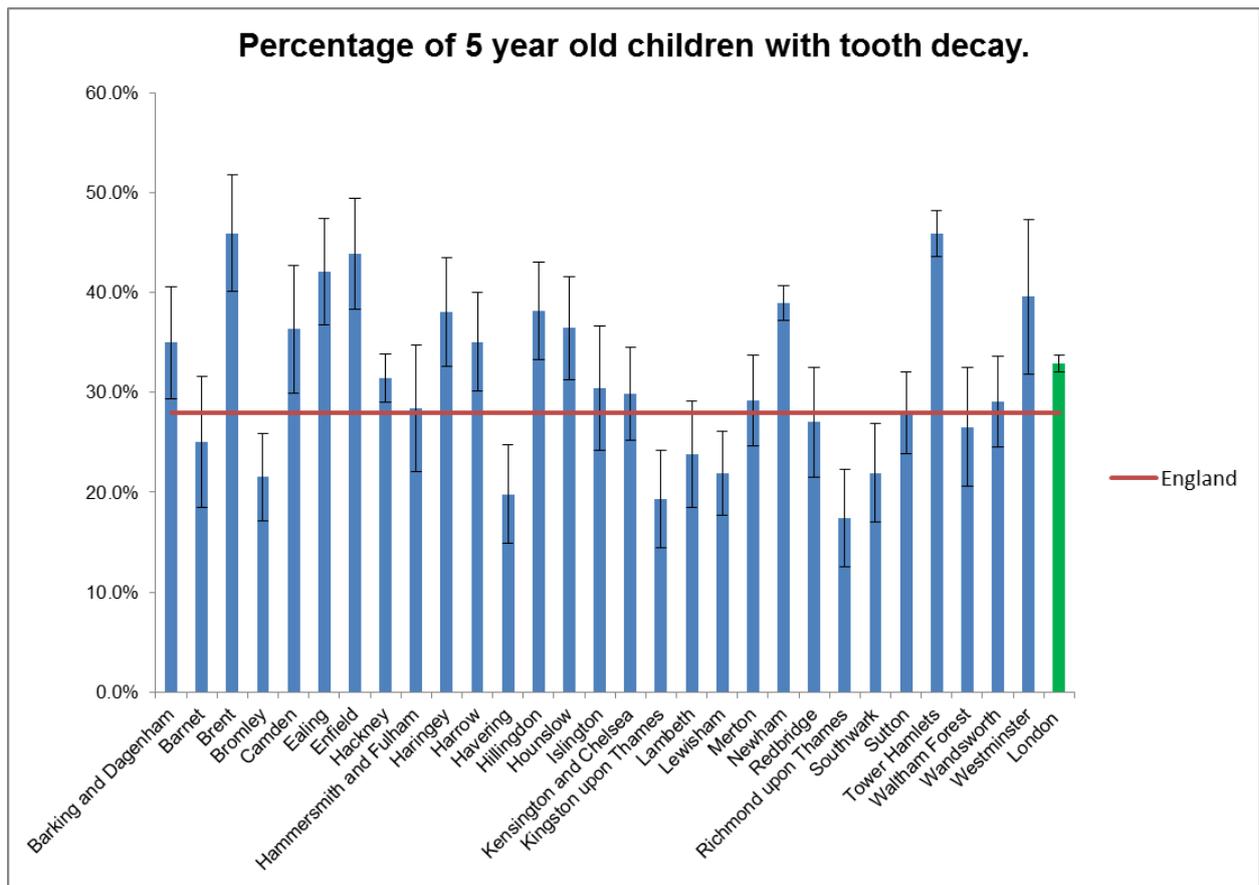
Figure 7: Percentage of 3 year olds with early childhood caries, 2012-13.



Source: Public Health England.

The most recent survey of the dental health of 5 year old children was carried out in the school year 2011-2012. Figure 8 shows the percentage of 5 year old children with tooth decay. Again the figure for London (32.9%) is higher than for England (27.9%), with considerable variation across London from 17.4% in Richmond to 45.9% in Tower Hamlets and Brent.

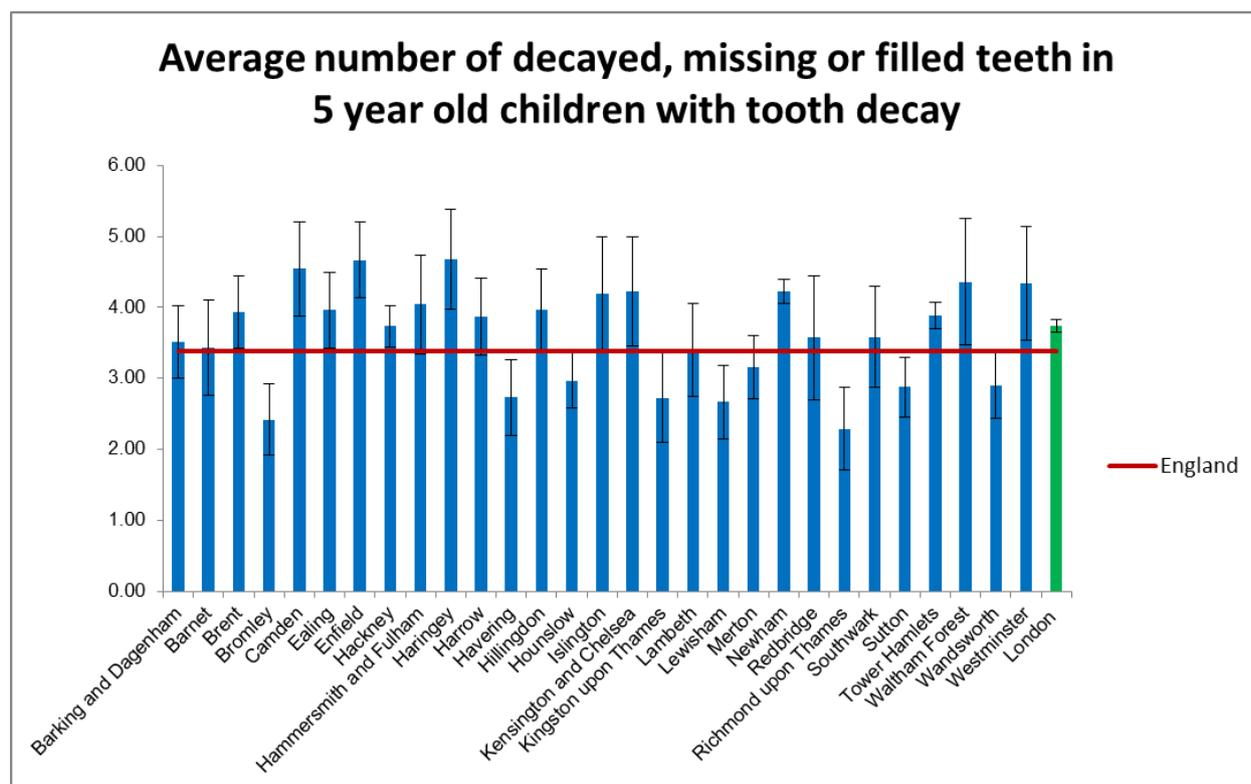
Figure 8: Percentage of 5 year old children with tooth decay, 2011-12.



Source: Public Health England

Figure 9 shows the average number of decayed, missing or filled teeth in those children who have tooth decay. This varies from 2.28 in Richmond to 4.67 in Haringey and Enfield.

Figure 9: Average number of decayed, missing or filled teeth in 5 year old children with tooth decay, 2011-12.



Source: Public Health England

Key messages:

- Oral health is an important aspect of health and poor oral health can have a negative impact on a number of aspects of children’s lives.
- Poor oral health can also impact on children’s school readiness.

### 3.5 Chronic conditions

Data from the General Lifestyle Survey, 2011, shows that 9% of 0-4 year olds (11% of boys and 7% of girls) report having a long standing illness or disability and 3% a limiting long standing illness or disability. No information on types of conditions was included for this age group.<sup>40</sup> This means it is likely that most childcare settings will have children affected by long term conditions or disability, although the exact conditions are likely to vary. This is important because young children are likely to need help both in taking medication and in knowing when they need to take it. Staff will need to have sufficient knowledge about the condition the child is suffering from to be able to administer medication routinely and in an emergency and to know when to call for additional help such as an ambulance. Examples of some long term conditions which children might suffer from include asthma, diabetes and epilepsy but there will be many others.

The most common long term medical condition in children is asthma, with an estimated 1 in 11 children affected.<sup>41</sup> The prevalence of epilepsy in UK children has been estimated to be 1 in 240 children. Two thirds of children with epilepsy will have normal intellectual ability, but specific patterns of cognitive strengths and weaknesses, such as memory impairment may

be associated with epilepsy. Up to half of children with epilepsy will require some additional support in school.<sup>42</sup> The estimated prevalence of type 1 diabetes in children under the age of 15 in England and Wales is 187.7 per 100,000. Although the peak age for diagnosis is between 9 and 14 years, pre-school children do also develop this condition.<sup>43</sup>

Key messages:

- A significant proportion of children have a long standing illness or disability.
- Some of these conditions have been shown to impact on school readiness.

### *3.6 Immunisations*

Immunity is the ability of the body to protect itself against infectious disease. Active immunity is produced by an individual's own immune system and is usually long lasting. It can be acquired either through immunisation or natural infection. Vaccines usually produce immunity similar to that acquired through natural disease, but without the risk from the disease or its complications. Although the main aim of vaccination is to protect the individual receiving the vaccine, there are also secondary benefits to other individuals. Vaccinated individuals are less likely to be a source of infection to others. This means that if sufficient numbers of people are vaccinated, the risk of the disease circulating in the community is much lower. Therefore those who are unable to be vaccinated due to age or health conditions, or who have not responded to the vaccine, are at reduced risk of being exposed to the disease in question. This is known as herd immunity.<sup>44</sup> The World Health Organization recommends uptake targets of 95% for diseases preventable by immunisation and targeted for elimination or control ie diphtheria, tetanus, pertussis, Haemophilus influenzae type b, measles, mumps and rubella.<sup>45</sup> The schedule for routine childhood immunisations is defined by the Department of Health, based on advice from the Joint Committee on Vaccination and Immunisation (JCVI) and changes over time as new vaccines become available. The routine schedule starts at the age of 2 months and the bulk of the childhood immunisation schedule is delivered before the age of 5.

Information on vaccine uptake is collected by Public Health England through the Cover of Vaccination Evaluated Rapidly (COVER) programme. Table 1 shows vaccination coverage in 2013/14 for a number of vaccinations in the childhood immunisation programme. Public Health England has set uptake goals of 90% for the various vaccinations.

Table 1: Vaccination coverage in London, 2013/14.

<b>Vaccine</b>	<b>England uptake</b>	<b>London uptake</b>	<b>Lowest in London</b>	<b>Highest in London</b>	<b>Number of London boroughs where uptake falls below 90%</b>
Dtap/IPV/Hib at 1 year old	94.3%	89.8%	78.6%	98%	14
Dtap/IPV/Hib at 2 years old	96.1%	93.1%	81.6%	97.3%	6
Men C (by 1 year old)	93.9%	89.9%	75.9%	95.5%	13
PCV (by 1 year old)	94.1%	89.7%	78.2%	96.0%	14
Hib/Men C booster (2 years old)	92.5%	86.8%	76.6%	94.9%	25
Hib/Men C booster (5 years old)	91.9%	87.2%	72.7%	93.5%	24
PCV booster	92.4%	86.3%	76.4%	94.3%	28
MMR for one dose (2 years old)	92.7%	87.5%	78.3%	93.8%	26
MMR for one dose (5 years old)	94.1%	90.6%	74.8%	96.2%	10
MMR for two doses (5 years old)	88.3%	80.7%	64.2%	93%	31

Source: COVER data. Public Health Outcomes Framework, Public Health England.

This table shows that for all the childhood vaccines, coverage in London is consistently well below that in England, with a large number of boroughs failing to meet the 90% uptake goal set by Public Health England. There is considerable variation between the highest and lowest performing boroughs. It is important to note that although COVER data is collected when the child reaches the age of 1, 2 and 5 years, the recommended age for vaccination is usually well before these ages. For example the Hib/Men C and PCV boosters and the first MMR vaccine should be given at 12-13 months. Therefore this data indicates that a considerable proportion of London children are either, not receiving routine immunisations or receiving them much later than recommended, increasing the amount of time that they are at risk from vaccine preventable diseases.

This also presents an increased risk to other children they may come into contact with in early years settings who are either too young to receive immunisation against a particular disease, or who may be unable to receive immunisation due to other medical conditions. These groups may also be vulnerable to more severe illness if they do develop the disease, for example young infants are at the greatest risk of severe illness or death from whooping

cough. There was a national epidemic of whooping cough in 2012, leading to 14 infant deaths from whooping cough in that year. An immunisation programme for pregnant women has resulted in a reduction in the number of deaths since then, but cases remain high.<sup>46</sup> Uptake of whooping cough vaccine in pregnant women in London is consistently below the national average, and frequently falls below 50%,<sup>47</sup> meaning a significant number of London infants are at risk from pertussis. Infants under 1 year and those who are immunosuppressed are also at greater risk of complications and death from measles.<sup>48</sup>

Key messages:

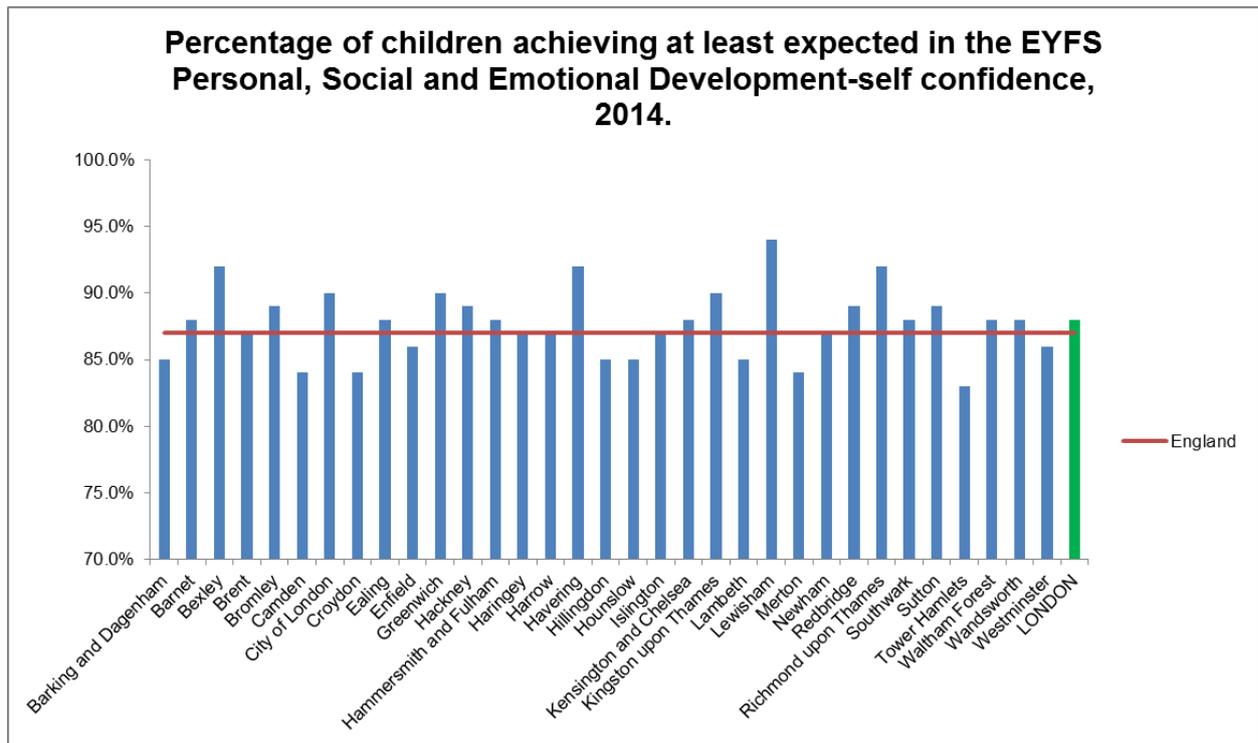
- Vaccination is an important health priority in reducing spread of infectious diseases.
- The impact of vaccination on school readiness is likely to be relatively small, but lack of vaccination could have consequences which could impact on school readiness in some cases, for example if a child contracts meningococcal infection.

### *3.7 Social and emotional wellbeing*

Social and emotional wellbeing is influenced by a range of factors such as individual personality, family background, local community factors and wider society. It is important because it provides personal competencies such as emotional resilience, self-esteem and interpersonal skills that provide protection in adverse events and enable children and young people to take advantage of life chances. Poor social and emotional wellbeing predicts a range of negative outcomes later in life such as mental health problems, poor social and economic outcomes, criminal behaviour and substance misuse. Early intervention in childhood can help reduce physical and mental health problems and prevent social dysfunction being passed from one generation to the next.<sup>49</sup> Social and emotional competencies also increase a child's ability to learn and contribute to educational attainment.<sup>50</sup>

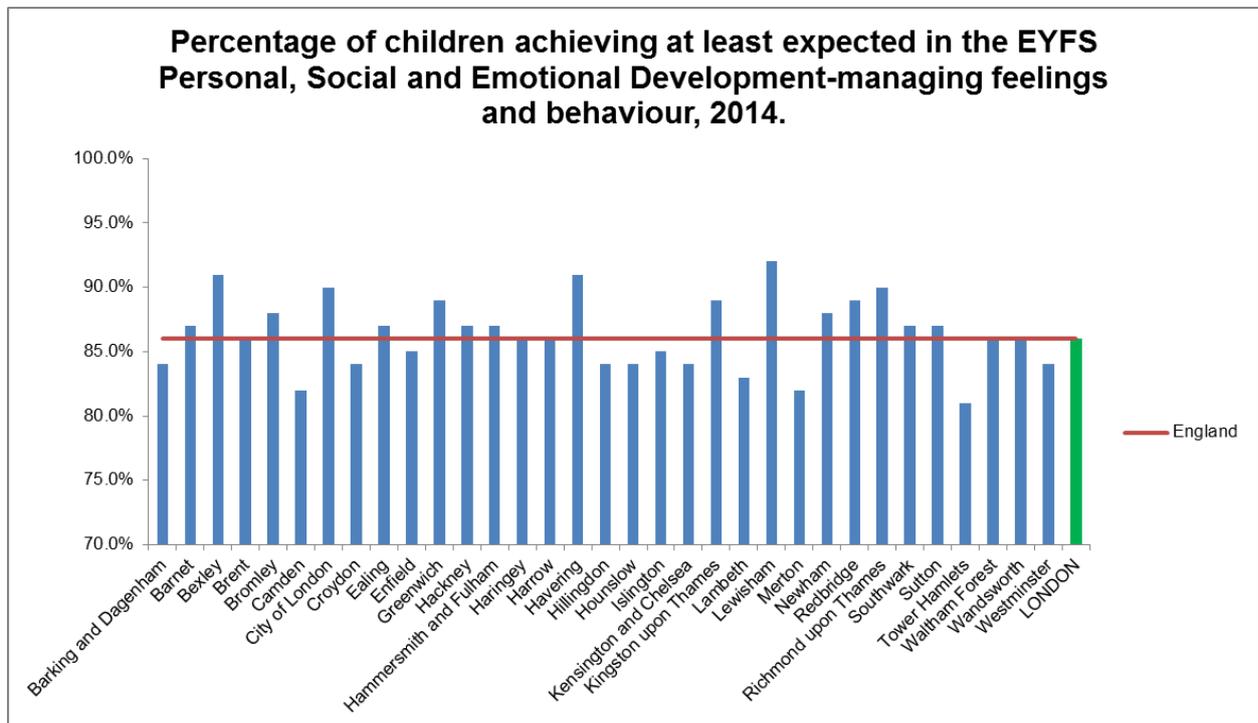
Figures 10 to 12 show the percentage of children achieving at least expected on the three different components of the Early Years Foundation Stage (EYFS) personal, social and emotional development learning goals. London children have comparable or slightly better levels of personal, social and emotional development than children in England, but 12-14% of children are still not meeting expected goals in these areas. Variation between the highest and lowest performing boroughs in the number of children meeting expected level of development is up to 11%.

Figure 10: Percentage of children achieving at least expected in the EYFS personal, social and emotional development- self-confidence, 2014.



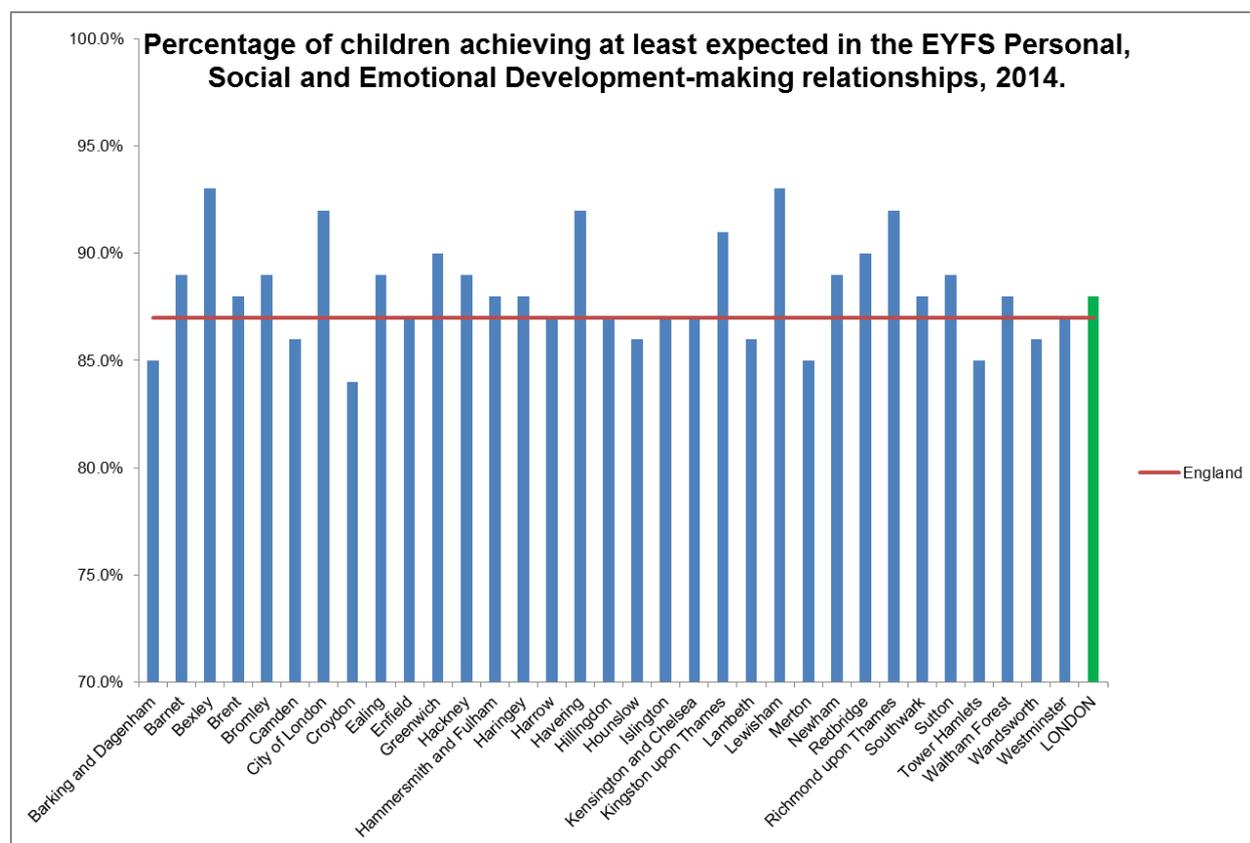
Source: Department for Education.

Figure 11: Percentage of children achieving at least expected in the EYFS personal, social and emotional development-managing feelings and behaviour, 2014.



Source: Department for Education.

Figure 12: Percentage of children achieving at least expected in the EYFS personal, social and emotional development-making relationships, 2014.



Source: Department for Education.

#### Key messages:

- Social and emotional wellbeing is an important aspect of health, with poor social and emotional wellbeing being a predictor of a range of negative outcomes in later life.
- There are important links between social and emotional wellbeing and ability to learn, so it also contributes to school readiness.

### 3.8 Injuries

Unintentional injuries in and around the home are a leading preventable cause of death in children under the age of five years in the United Kingdom. They accounted for 8% of all deaths of 1-4 year old children between 2008 and 2012. They were also responsible for a large number of hospital admissions. Injuries in this age group are linked to a number of factors including child developmental stage, physical environment within the home, knowledge and behaviour of parents and carers, overcrowding or homelessness, availability of safety equipment, new consumer products within the home. Unintentional injuries are also a major health inequality. Data from Public Health England has shown that the hospital admission rate for unintentional injuries in the under 5s is 45% higher in the most deprived areas, compared with the least deprived. Other research has shown that for some injury types such as burns, scalds and poisoning the inequality is even greater. Children of never employed or long term unemployed parents are 13 times more likely to die from an unintentional injury than children whose parents are employed in higher managerial or

professional occupations. Injuries may lead to lasting physical and emotional effects, for example from disability or disfigurement, which may have long term impacts on learning, employment opportunities and relationships.<sup>51</sup>

In London in 2013/14, the rate of hospital admissions with unintentional or deliberate injuries among children aged 0-4 years, was 105 per 10,000. Although this was lower than the England rate of 140.8 per 10,000, there was considerable variation across London. The area with the highest rate of admissions (Wandsworth with 142.1 per 10,000), had more than double the rate of the lowest (Westminster with 67.6 per 10,000).<sup>22</sup>

Key messages:

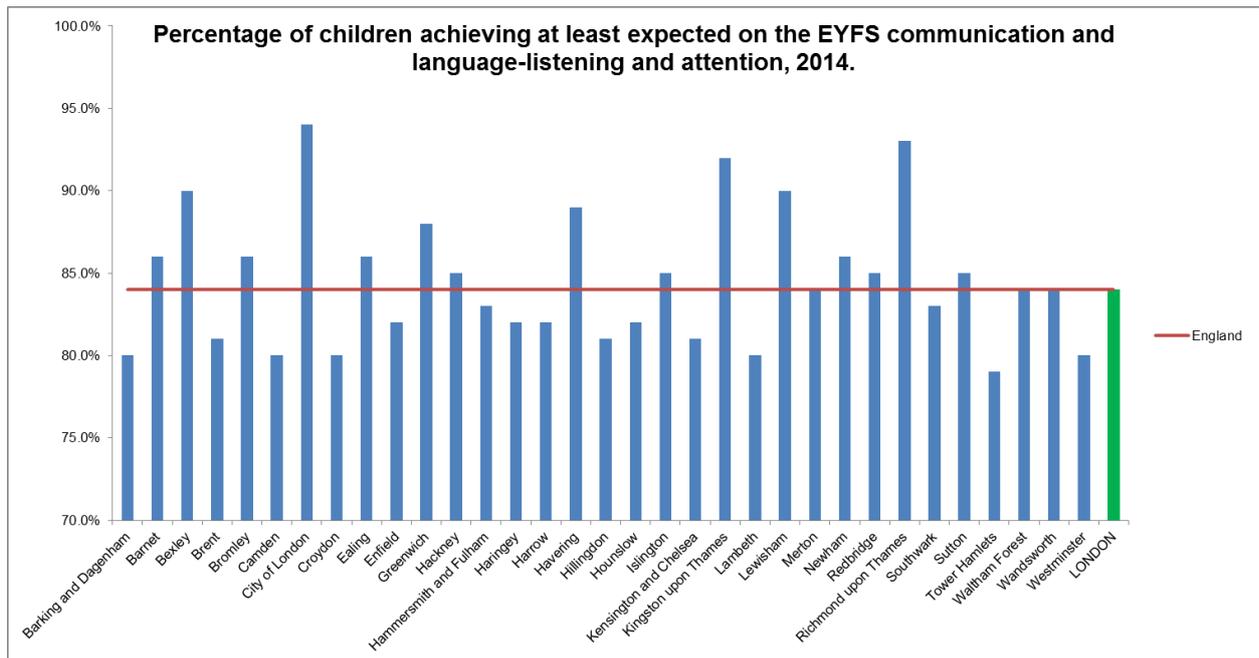
- Injuries in children may lead to lasting physical and emotional effects.
- Some injuries such as head injuries are likely to impact on school readiness, but this will not be the case for all.

### *3.9 Communication skills*

Communication skills are a crucial part of a child's development. The ability to communicate is essential for building relationships and for learning. Children with speech and language difficulties are at high risk of having difficulty with reading and writing, difficulty making friends, having behavioural problems, low self-esteem and lack of confidence. Between 50% and 90% of children with persistent communication difficulties go on to have difficulty reading and the gap in reading age between those with good and poor communication skills at age 5, widens to 5 years by age 14. Longer term those with poor communication skills are less likely to achieve good GCSEs and find employment. Poor communication is a risk factor for poor mental health, with as many as 40% of 7-14 year olds referred to child psychiatric services having an unsuspected language impairment. Poor language has a negative effect on behaviour even in young children. Two thirds of language delayed three year olds have behaviour problems. There are also significant inequalities in this area, with children from more deprived areas being more likely to have speech and language difficulties. At age 5, children from low income families have a vocabulary that is one year behind those from middle income homes. The communication environment in the early years is crucial in promoting children's early development and reducing the risk of low attainment.<sup>52</sup>

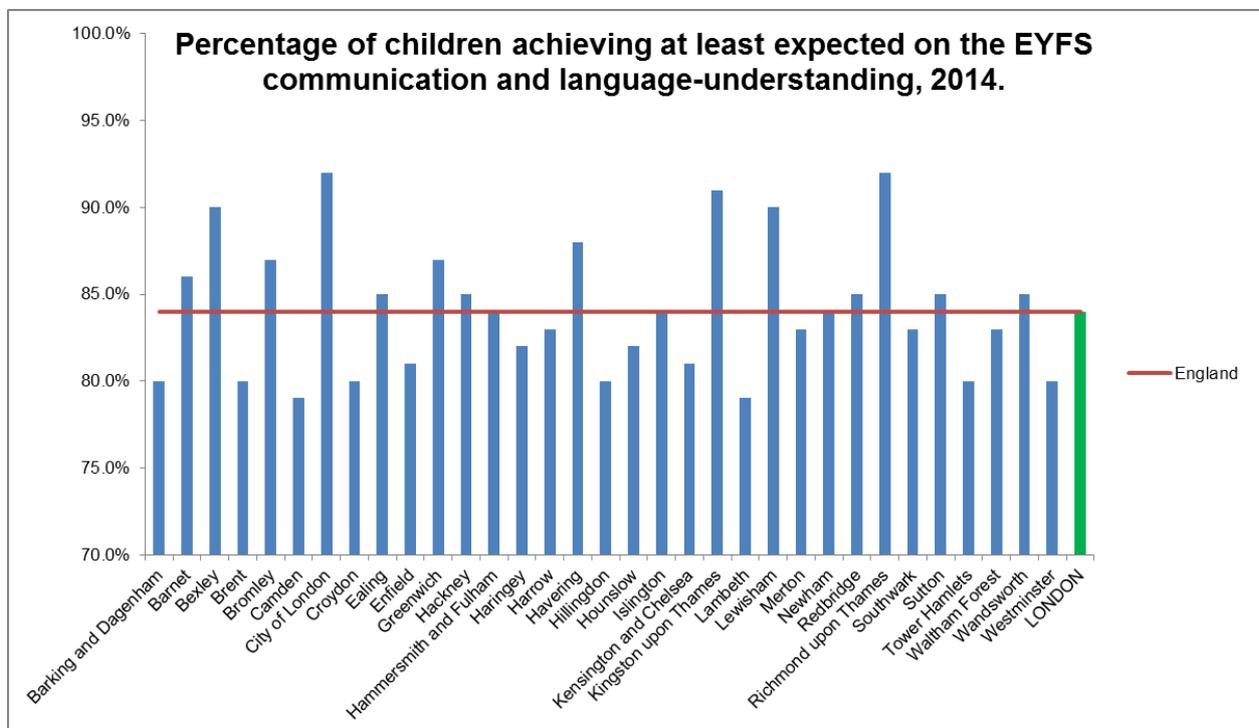
Figures 13 to 15 show the percentage of London children in 2014 who achieved at least expected on the three EYFS communication and language goals. Although comparable to the England percentage on each, 16%-18% of children are not achieving the expected level of development in these areas. There is considerable variation across London and in some areas as many as 24% of children are not achieving an expected level of development. In the highest performing borough 15% more children achieve expected levels of development in listening and attention than the lowest performing borough. The differences are 13% for understanding and 14% for speaking.

Figure 13: Percentage of children achieving at least expected on the EYFS communication and language-listening and attention, 2014.



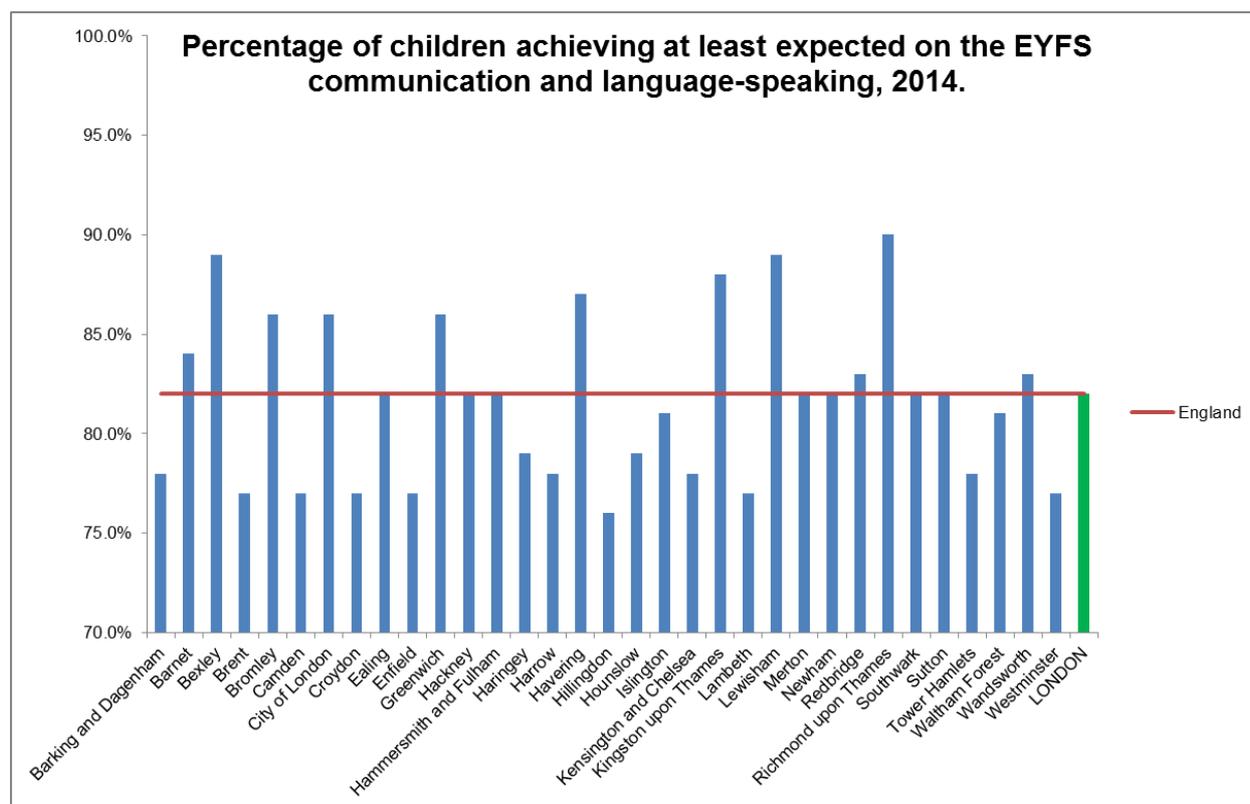
Source: Department for Education

Figure 14: Percentage of children achieving at least expected on the EYFS communication and language-understanding, 2014.



Source: Department for Education

Figure 15: Percentage of children achieving at least expected on the EYFS communication and language-speaking, 2014.



Source: Department for Education

**Key messages:**

- Poor communication skills are a risk factor for emotional and behavioural problems in children.
- Good communication skills are a crucial component of school readiness.

#### 4. Use of childcare in London

In 2013, formal childcare was used by 49% of London parents with children under fifteen. This was lower than England (53%), but where it was used by parents they tended to use it for longer hours. In London in 2013 (the latest data available) there were:

- 8,585 registered childminders caring for 40,000 children
- 2,500 nurseries providing full daycare to the underfives of which 61% are private sector providers, 31% are voluntary (not-for-profit) providers and 8% are from the public sector.
- 180 nurseries based in Sure Start children’s centres that provide full daycare to the under-fives
- 700 sessional crèches and pre-schools, providing childcare for part of the day
- 80 nursery schools run by local authorities, most of which take children aged two or above and usually run for 38 weeks of the year.

- 1,300 primary schools with nursery classes attached to them, many of which provide part-time provision over 38 weeks of the year.
- An estimated 30,000 nannies offering childcare in the family home.

For children under the age of five, in London in 2014 there were a total of 42,504 childminder places and 156,656 childcare places in group provision, excluding nursery classes in primary schools and state nursery schools. This makes a total of 32 full time childcare places per 100 children under the age of five. Across London in 2014, 92% of eligible three and four year olds were benefiting from free early education (15 hours a week), as were 46% of eligible two year olds (20% of two year olds were eligible based on September 2013 criteria).<sup>53</sup>

These figures indicate that a considerable proportion of London's children under the age of five are spending time in childcare settings, either part time or full time. A child in full time childcare for 40 hours a week may be spending nearly half their waking hours in childcare. This means that the role of early years settings in promoting good health in young children cannot be ignored. Young children in group based childcare, in particular, are a captive audience in one place, providing a unique opportunity to have an impact on the health of a large number of children if a healthy early years programme is done well.

## 5. Existing healthy early years programmes

A number of London boroughs already have healthy early years awards. Areas covered in those programmes in order of frequency are:

- Oral Health
- Physical Activity/Development
- Healthy Eating
- Mental Health/Emotional Wellbeing
- Breastfeeding
- Immunisations
- School Readiness/Child Development
- Parenting Aspirations/Skills
- Reducing the effects of smoking
- Obesity
- Tackling alcohol & drug misuse

Other areas covered include maternal health, early pregnancy appointment booking, reducing teenage pregnancy and children's communication skills.

Outside of London other areas have also developed healthy early years awards. A good example is the Welsh government healthy and sustainable pre-school scheme. Areas covered in this scheme include nutrition and oral health; physical activity/active play; mental and emotional health, wellbeing and relationships; environment; safety; hygiene; workplace health and wellbeing. There is a focus on environmental sustainability throughout the scheme. Within each of the areas covered there is a focus on leadership and

communication; planning and delivery; ethos and environment and family and community involvement. In some of the areas there are also specific standards that have to be met.<sup>54</sup>

## **6. Evidence for the effectiveness of interventions to improve health in early years settings.**

A systematic review looking at whether centre based pre-school intervention programmes can improve child health outcomes beyond the pre-school years, found that the evidence base was limited. Studies were predominantly conducted on relatively homogeneous, disadvantaged US populations. Interventions included a wide range of services, offered at different levels of intensity and different combinations and the majority also involved services other than pre-schools, such as health and social services. A wide variety of health outcomes were assessed and studies were of variable quality. Although the majority did not show an effect, there was a general trend towards beneficial effects, particularly for overweight and obesity, mental health, social competency and crime prevention. The majority of beneficial health outcomes were found in studies which had comprehensive interventions incorporating parenting components and direct educational services to children, whereas the majority of studies which did not show an effect were pre-school only interventions. The authors of the review point out that the lack of associations seen in studies may in part be due to the low prevalence of many childhood illnesses. They conclude that due to the limitations of both the included studies as well as the shortage of robust studies examining health effects more directly, the true extent of any potential benefits of early childhood development interventions on health outcomes has not been adequately characterised.<sup>55</sup>

### *5.1 Healthy eating and obesity*

The best food for young infants up to the age of 6 months is breastmilk. A range of interventions have been shown to be effective in increasing the initiation and/or duration of breastfeeding. These include peer support, professional support, education, professional training, hospital practices, multi-sectoral interventions and media programmes. Recommended evidence based actions include implementation of the UNICEF Baby Friendly Initiative in maternity and community services, education and support programmes delivered by both health professionals and peer supporters, changes to policy and practice within community and hospital settings, complementary telephone peer support, education and support from one professional, education and support for one year and local media programmes. Breastfeeding literature alone is ineffective at increasing breastfeeding rates.<sup>23</sup>

Although parents do often introduce solid foods earlier, it is recommended that babies should receive nothing but breast or formula milk for the first six months of life. If solid foods are introduced before six months certain foods should also be avoided as they may cause food allergies or make babies ill. Once weaning commences providers should follow guidance on weaning and healthy diets for young infants.<sup>56</sup> Providers caring for young infants may have a role to play in making parents aware of current advice on weaning and encouraging them to delay this when appropriate.

A cross sectional survey and menu analysis carried out for nurseries across Liverpool found that the majority of respondents reported they did not have adequate knowledge of nutrition for under 5s. Only a tiny minority of nurseries had had their menus assessed by a nutritionist. Menus tended to be deficient in energy, carbohydrate, iron and zinc and had salt levels which exceeded recommendations.<sup>57</sup> A linked qualitative study of six community pre-school nurseries in Liverpool (four private, two attached to children's centres) found that private nurseries access to information and guidelines on healthy eating was minimal. Most nurseries used menu planning to keep focus on healthy eating rather than having specific policies. No staff had training in healthy eating for under 5s. There were few opportunities for staff to attend training courses on healthy eating. Snacks were more likely to be unhealthy processed food. Where nurseries were profit making there were restrictions on the food budget which in some cases affected food quality. Children's centres had access to greater resources to support healthy eating but often food came from attached primary schools and wasn't always suitable for young children.<sup>58</sup>

In general the evidence that interventions in early years settings can be effective in reducing obesity is limited, with few controlled trials specifically looking at impact on body mass index (BMI). There was also a lack of cost effectiveness data. There is more evidence that interventions may be effective in leading to improvements in diet or physical activity, which has the potential to impact on BMI if sustained.

A systematic review looking at interventions to improve healthy eating in childcare settings concluded that interventions in pre-schools can be successful in increasing fruit and vegetable intake and nutrition related knowledge. The most effective interventions were educational or multicomponent interventions-for example education and provision of healthy food and water. Although multicomponent interventions showed an increase in fruit and vegetable consumption this was not sustained in the long run, which suggests that interventions need to be sustained, rather than one off events. Only one study showed a fall in BMI (this study was in Arab-Israeli children and involved provision of nutritional information).<sup>59</sup>

Another systematic review focussing on controlled trials only, found very limited published evidence on weight management schemes and interventions for preventing obesity in under 5s. In total they identified only four controlled trials, of varying quality, for inclusion in the review. These looked at a combination of physical activity interventions in the nursery/pre-schools, along with education in the nurseries and at home. In only one study did the results reach statistical significance, although some of the others showed a trend towards improvement in BMI in the intervention groups. The only study to show a significant benefit was the one that most heavily involved parents and included nutrition education for both children and parents. The authors conclude, based on review of the studies, that important elements for interventions to include are effective training of staff involved in delivering the intervention, cultural sensitivity, sustained moderate to vigorous physical activity, nutritional education for children and active engagement of parents.<sup>60</sup>

A Cochrane review looking at interventions to prevent obesity in children of all ages found that the majority of studies on this topic were for children aged 6-12 years. Studies had a broad range of components and it was not possible to say which contributed most to the effects observed, but overall the evidence did support the beneficial effects of childhood obesity prevention programmes on BMI. In the 0-5 year age group there was a trend towards

a positive effect on BMI but this did not quite reach statistical significance. Results in this age group suggested that interventions outside of education settings are the most effective.

The authors felt that the most promising strategies included:

- School curriculum that includes healthy eating, physical activity and body image.
- Increased sessions for physical activity.
- Improvements in the nutritional quality of food supplied.
- Environments and cultural practices that support healthy eating and physical activity.
- Support for teachers and other staff to implement health promotion strategies and activities.
- Parent support and home activities to support children to eat nutritious food, be physically active and to have less screen time.<sup>61</sup>

In a review of evidence for the Healthy Child Programme factors identified as effective components of interventions to tackle obesity in pre-school children are:

- Decreasing screen time (parent training can have a significant effect on this).
- Decreasing consumption of high fat/calories foods and drinks.
- Increasing physical activity.
- Increasing sleep.
- Modifying parental attitudes to feeding.
- Promoting authoritative parenting.<sup>62</sup>

## *5.2 Physical activity, motor development and reducing sedentary behaviour*

Systematic reviews show that studies have mixed results in terms of interventions to promote physical activity in children. Broekhuizen et al looked at a range of playground interventions designed to promote physical activity in children including providing play equipment, promoting physical activity in playgrounds, variation in recess duration and playground density. The only randomised controlled trial in pre-school children included in their review, found that provision of play equipment and playground markings had no effect on physical activity. The authors concluded that taking into account study design, size and quality there is inconclusive or no evidence that these interventions benefit children's health. When studies from primary schools are also included there is moderate evidence that providing play equipment increases physical activity, but still inconclusive or no evidence for the other interventions.<sup>63</sup>

Ward et al also looked at a range of interventions including education, structured activities and increased outdoor time. They found that most studies showed positive outcomes in terms of physical activity. However the majority of those that didn't show an effect had good research designs and a large number of children.<sup>64</sup>

As well as ensuring children have sufficient physical activity, a focus on fundamental movement skills such as throwing, catching, kicking, jumping and hopping is also important to children's development. They are building blocks for more complex movements and will

allow children to participate in sports as they grow. Development of these skills has also been associated with increased participation in physical activity, reduced risk of obesity and improved cardiorespiratory fitness. A systematic review and meta-analysis has shown that interventions aimed at teaching these skills to children are effective. However, further research is needed to determine the best approach for teaching these skills and the optimum amount of time that should be spent teaching them.<sup>65</sup>

Among pre-school children in child care, factors which have been found to be related to higher levels of physical activity are quality of the childcare, training of staff, availability of fixed play equipment (where possible placed in such a way that it encourages children to move from place to place to use it), and use of indoor spaces for motor activities.<sup>35</sup>

The British Heart Foundation has developed a range of evidence based recommendations to increase physical activity in early years settings. These are:

- Ensuring appropriate levels of practitioner support and training are in place. A single training session is not enough to ensure sustained change in practice.
- Partner with external agencies to help practitioners develop knowledge and expertise about physical activity.
- Involve parents and carers both directly and indirectly in the activities to ensure they are also carried out in the home environment.
- Offer more frequent, short periods of outdoor play.
- Provide more activity friendly, portable equipment.
- Include adult led activities to improve motor skills.
- Use physical activity as a medium through which to integrate all areas of learning and development.
- Ensure a balance of free play and adult led physical activity opportunities.<sup>66</sup>

Evidence based recommendations from other research also add:

- Use of written policies on physical activity.
- Televisions and videos rarely or never shown, and children not seated for more than 30 minutes at a time.
- Provision of outdoor play space with variety of fixed equipment, as well as indoor space suitable for gross motor activities such as running and group games.
- Staff behaviour-join in active play with children, active play should not be restricted as a punishment, additional active play should be offered as a reward.<sup>67</sup>

Interventions to improve fine motor skills may also be effective in a pre-school setting. A small, non-randomised trial of a multi-sensory based programme designed to improve pre-handwriting skills found that it was effective in improving pre-writing skills, kindergarten readiness and fine motor skills. The programme consisted of activities such as making letters with wooden pieces, rolling modelling clay into letter shapes and singing songs with co-ordinated actions.<sup>68</sup>

The all-party parliamentary group on a fit and healthy childhood have recognised that as well as promoting children's physical wellbeing, play has an important role to play in helping cognitive, emotional, social development and can support good nutrition. Physical, constructional and social play can contribute to self-management and self-regulation and are

important in predicting educational achievement, emotional wellbeing and life outcomes. Amongst other recommendations, they recommend that early years settings should:

- Have a clear play policy supported by a structured improvement and implementation plan.
- Staff should have professional training and guidance on provision of beneficial play experiences, to include training in access and inclusion for disabled children.<sup>69</sup>

### 5.3 Oral health

A qualitative study with parents in a Sure Start local programme in South East London, found that parents oral health concerns included introducing healthy eating, establishing tooth brushing, teething and access to dental care. Barriers to acting on their knowledge about preventing oral disease included tiredness, difficulty accessing child friendly dentists, lack of confidence in their parenting skills, confusing information and widespread availability of sugary foods and drinks. Parents valued the Sure Start programme as a source of support and information.<sup>70</sup>

Public Health England has recommended a range of interventions to improve oral health, based on a review of the available evidence. Those which are applicable to early years settings include:

- Oral health training for the wider professional workforce (health, education, others) to support oral health improvement in their daily role.
- Targeted community based fluoride varnish programmes, for example in early years settings.
- Supervised tooth brushing in targeted childhood settings.
- Healthy food and drink policies in childhood settings.<sup>38</sup>

A good example of an oral health programme is Childsmile in Scotland. This is a national programme funded by the Scottish government. It has a range of components, some of which take place in early years settings. Childsmile includes daily supervised toothbrushing for 3 and 4 year olds attending nursery and twice yearly fluoride varnish applications for targeted nurseries and schools (based on level of deprivation).<sup>71</sup> The Designed to Smile programme in Wales is similar.<sup>72</sup>

Supervised tooth brushing is more effective in areas with high rates of tooth decay, and less effective in areas where children are already brushing their teeth twice a day with a fluoride toothpaste.<sup>62</sup>

Public Health England recommends that for local authorities where the specific problem of ECC is widely prevalent interventions should be developed that tackle specific problems related to infant feeding practices. Essential action would be to stop the prolonged use of feeding bottles that contain sugar sweetened beverages. Substitution with water or unsweetened milk and introduction of free flow trainer cups and beakers instead of feeding bottles from about six months onwards are recommended. By the age of one, the use of bottles with teats should have stopped.<sup>39</sup>

## 5.4 Chronic conditions

The statutory framework for the early years foundation stage requires providers to have and implement a policy for administering medicines. This must include systems for obtaining information about a child's need for medication and for keeping this information up to date. Training should be provided for staff where administration of a medicine requires medical or technical knowledge. Medicines must not usually be administered unless they have been prescribed for a child and providers should have written permission from the child's parent or carer. Providers need to keep a record of each time a medicine is administered to a child and inform the parents the same day or as soon as reasonably practicable.<sup>73</sup>

For a common condition such as asthma, providers may wish to consider going beyond the basic requirements in the statutory framework. For example, Australia has developed an asthma friendly early childhood education and care programme. This includes criteria such as ensuring the majority of staff have received accredited training in asthma first aid and routine management, an asthma emergency kit is available, asthma first aid posters are on display and staff and parents can access information, and first aid and other health and safety policies explicitly include asthma.<sup>74</sup> Free online training for staff working in childcare is available through Education for Health.<sup>75</sup>

Advice and statutory guidance on supporting children with medical conditions in schools is provided by the Department for Education. Although early years settings are required to follow the statutory framework for the early years foundation stage, rather than that which has been developed for schools, some of the advice and guidance within this document may still be applicable to early years settings in supporting children with medical conditions. This includes developing a policy on supporting children with medical conditions, individual healthcare plans for children where appropriate which are drawn up in consultation between the school, parents and relevant healthcare professional, and staff training and support.<sup>76</sup>

## 5.5 Infection control and immunisations

Infections can spread easily in a setting where young children are mixing together. As well as immunisation, measures to help reduce the risk of infection are high standards of personal hygiene and practice, in particular hand washing and maintaining a clean environment. Public Health England has produced guidance on infection control in schools and other childcare settings, which providers should be aware of and follow. As well as advice on good hygiene practice, this includes advice about when, and for how long, children should be excluded. Where outbreaks are suspected providers should contact their Public Health England Centre for further advice. Providers should be aware of vulnerable children (and staff) and ensure parents are notified promptly if these children are exposed to particular infections.<sup>77</sup>

There is very little published evidence on the role early year's settings can play in increasing vaccine uptake. One study in Australia found that many child care centres failed either to record or update records on children's vaccination status.<sup>78</sup> The National Institute for Health and Care Excellence (NICE) in their guidance on reducing inequalities in the uptake of immunisations recommend that:

- When a child joins a nursery, playgroup or Children's Centre that the healthy child team, led by a health visitor, carry out a check of the child's immunisation record, in

conjunction with childcare or education staff and the child's parents. If children are not up to date with their immunisations they should explain to parents why immunisation is important and either offer vaccination or refer to immunisation services.<sup>79</sup>

## 5.6 Social and emotional health

NICE guidance has been produced on promoting social and emotional wellbeing in the early years. Recommendations relevant to early years settings are:

- Develop a trusting relationship with families of vulnerable children and adopt a non-judgemental approach while focusing on the child's needs.
- Identify factors that may pose a risk to a child's social and emotional wellbeing, as part of an ongoing assessment of their development. This may include being withdrawn or unresponsive, behavioural problems, delayed speech and poor language and communication skills. Parental factors may include indifference towards the child or insensitive or harsh behaviour.
- Ensure procedures are in place to make referrals to specialist services; to collect, consistently record and share information as part of the common assessment framework; for integrated team working; for continuity of care and to avoid multiple assessments.
- Offer flexible attendance times to enable parents or carers to take up education, employment or training opportunities, address any barriers that may hinder participation by vulnerable children, be run by well-trained qualified staff and be based on an ethos of openness and inclusion.
- Promote the development of positive, interactive relationships between staff and children, ensure individual staff get to know and develop a particular understanding of individual children's needs and focus on social and emotional as well as educational development.
- Provide a structured, daily schedule comprising a balance of adult led and child initiated activities, ensure parents and family members are fully involved and ensure the indoor and outdoor environment is spacious, well maintained and pleasant.
- Working with health practitioners put systems in place to deliver integrated universal and targeted services that support vulnerable children's social and emotional wellbeing, ensure a process is in place to systematically involve parents and families in reviewing services, be systematic and persistent in their efforts to encourage vulnerable parents to use early years services, use outreach methods to maintain or improve the participation of vulnerable parents and children in programmes and activities, work with community and voluntary organisations to help vulnerable parents who may find it difficult to use health and early years services.<sup>80</sup>

Some trials of interventions to promote social and emotional health in early years settings have found some effect. For example a trial of a 12 week mindfulness based kindness curriculum found improvements in social competence, and children achieved higher grades in domains of learning, health and social and emotional development. Those children who initially scored lower on social competence showed the largest gains.<sup>81</sup> Another study of a classroom based social skills programme found treatment group children showed a significant improvement in teacher rated social skills and internalising and externalising

problems, but not in parent rated behaviour or social skills. Trials were generally small and in older pre-school children (4-5 years).<sup>82</sup> A larger randomised controlled trial in children attending Head Start programmes in the US looking at a curriculum which had elements aimed at promoting language and emerging literacy skills as well as social and emotional skills, found the intervention produced significant changes in emotion understanding and competent social problem solving and positive social behaviour during time in Head Start and this translated into positive social behaviour in kindergarten. Pre-school gains in social-emotional skills uniquely predicted reading achievement and learning engagement at the end of kindergarten even after accounting for pre-school gains in academic skills. Blending strategies to promote language and emergent literacy skills and social-emotional skills had additive and synergistic effects on kindergarten adjustment.<sup>83</sup>

## 5.7 Safety

There are two main means by which early years settings may be able to impact on accidents and injuries in children. The first is by ensuring a safe setting for children in their care. The other is by taking action to promote an increased awareness of this issue among parents. Childcare providers should ensure as a minimum that they are aware of and complying with relevant legislation, such as health and safety legislation.

NICE has produced guidance on preventing unintentional injuries in the under 15. Recommendations which are applicable to early years settings are:

- Provide access to appropriate education and training in how to prevent unintentional injuries for everyone who works with (or cares for and supports) children and their families. Prioritise those who work directly with children and their families. Ensure the education and training supports the wider child health remit (for example, the promotion of children and young people's development), helps develop an understanding of the importance of preventing unintentional injuries and their consequences and the preventive measures available.
- Ensure specialist education and training is monitored and evaluated to see what effect it has on practitioner performance. Revise approaches that are found to be ineffective.
- Develop a policy on outdoor play and leisure which takes a balanced approach to assessing the risks and benefits of outdoor play, leisure environments and activities; counters excessive risk aversion; promotes the need for children to develop skills to assess and manage risks according to their age and ability; takes into account children's preferences about outdoor play and leisure activities; and is inclusive.
- Take into account the principles of British and European standards covering equipment and the environment (where they exist) as part of a risk-benefit assessment of outdoor play and leisure environments.<sup>84</sup>

Recommendations from other sources which may be applicable to early years settings include:

- Children's centres providing information and support to families around child accident prevention through both educational input at centres and family outreach work.
- Taking an approach that empowers parents and carers, for example involving them in policy development.<sup>51</sup>

One review identified a number of US based studies which looked at whether there was a link between the quality of the childcare environment and the incidence of unintentional injuries in childcare settings. The evidence was mixed. One study found the number of hours children spent in childcare was associated with a small reduction in the risk of injuries but that this was not dependent on the quality of the childcare setting. Another study found that childcare quality predicted injuries incurred at home and parenting quality predicted injuries incurred in childcare. Therefore the quality of environments children spend time in influences their risk of injury.<sup>85</sup>

## 5.8 Communication skills

The Communication Trust has developed some guidance on ensuring the child's environment works well to support communication. A communication friendly environment will work to make communication as effective, easy and enjoyable as possible. It will provide opportunities for everyone to talk, listen, understand and take part. It will support the development of all children's communication skills, and include features particularly beneficial to those children with speech, language and communication needs. It will support learning, social and emotional development. It also involves removing barriers to communication. Features to consider when developing a communication friendly environment may include:

- Space, light and layout. For example making sure there are comfortable places to talk and children can see people's faces when they are talking.
- Noise levels. This involves ensuring people can hear and be heard.
- Using visual support. For example signs, symbols, photographs and sometimes writing. These need to be appropriate to the age and development of the children and parents need to be shown how they work.
- Clear and consistent routines.
- Role of adults in the environment-the skills and approaches they use in listening and talking to children and developing their communication skills.
- Planning and creating opportunities to support communication throughout the day. This involves both using existing activities to support communication as well as developing activities to specifically focus on communication skills.<sup>86</sup>

The 'Every Child a Talker' guidance provides more detailed advice and specific examples about the sorts of ways in which practitioners can ensure a communication friendly environment and may be a useful resource for practitioners.<sup>87</sup>

Early years practitioners may need additional training in how to support children in developing their speech, language and communication skills. Research has identified that early years practitioners have received limited training in speech and language both during initial training and post qualification and may lack the tools needed for early identification of children with speech and language difficulties. Parents may also benefit from an increased understanding of how children learn language, but may need the support of professionals to enable this, so practitioners need appropriate knowledge and training to enable them to work with parents to support their children's speech and language development. Speech and language therapists have a role to play in supporting the early years workforce in developing their skills in this area and training others may enable them to maximise their impact, though shortages of therapists may

make this harder to do. There is a lack of evidence about the most effective means of training and professional development for the children's workforce. Single workshops to early years educators appear to be ineffective as it does not lead to meaningful, long term changes in knowledge or practice. Sustained, collaborative CPD appears to be the most effective.<sup>88</sup> There are a number of early years programmes, for example I Can's 'Early Talk' programme, the Early Language Development Programme and Nuffield Early Language Intervention, which have been evaluated and been shown to be effective in outcomes such as staff confidence and knowledge, parent confidence and improved communication skills for children. These programmes may be universal, targeted or specialist.<sup>89</sup>

Speech and language interventions in pre-school settings have a significant impact, not just on cognitive outcomes but also on social skills and progress within school. Interventions aimed at improving vocabulary through instruction such as dialogical reading and storybook reading have a large effect on vocabulary measures, however middle and upper income at risk children are more likely to benefit than poor at risk children. Early childhood education and care programmes aimed at children from disadvantaged backgrounds have considerable positive short term effects and smaller long term effects on cognitive development, but cannot compensate completely for deficits due to children's socio-economic background. A close relationship between parents, teachers and speech and language therapists is needed to increase the chance of interventions being effective.<sup>62</sup>

## **7. Parental health and engaging with parents**

Parents play a crucial role in helping their children to be as healthy as possible in the early years. Parents' health problems and health behaviours may have a direct impact on their children. For example it is known that children whose parents are overweight or obese are more likely to be overweight themselves. Some of the evidence above clearly shows that more effective outcomes can be achieved for children when parents are engaged. Parents who are involved in interventions to improve their children's health may make changes to the home environment, which could maximise the effectiveness of any intervention.

Maternal mental health during pregnancy and the first two years of life has an important impact on infant mental health, as well as mental health during adolescence and adulthood. Children of mothers with mental health problems are at increased risk of poor emotional, social and educational outcomes. As well as the impact on mother and baby, there may also be an impact on relationships with the rest of the family.<sup>90</sup> During pregnancy around 12% of women will experience depression and 13% anxiety (many experiencing both). Depression and anxiety will also affect 15-20% of women in the first year of their baby's life. More severe mental health problems such as postpartum psychosis, can also occur, although are less common. Although response to treatment for mental health problems is good, problems frequently go unrecognised and untreated.<sup>91</sup>

Exposure to second hand smoke as a result of parental smoking is a health hazard for children, with those from lower socio-economic backgrounds more likely to be affected. Children are at increased risk from the effects of second hand smoke because of factors

such as their increased breathing rate and lack of control over their environment. Smoking in pregnancy increases the risk of problems such as low birth weight, still birth and miscarriage. Exposure to second hand smoke increases children's risk of lower respiratory infections, asthma and wheezing, middle ear infection, cot death, invasive meningococcal disease and a range of other health conditions. There may also be effects on the child's mental development and mental health and may be associated with deficits in reading and reasoning skills. Children exposed to smoking are also significantly more likely to take up smoking themselves in alter life. Where parents choose to continue smoking, the best way to protect children from the effects of second hand smoke is to ensure homes and cars are kept smoke free.<sup>92</sup>

Parental misuse of drugs and alcohol can also have a negative impact on children, both through direct effects as a result of exposure during pregnancy and indirectly as a result of its impact on parenting capacity. Work to treat parents with these problems also needs to be combined with work promoting secure attachments, positive relationships and good parenting.<sup>93</sup>

Family relationships also have an impact on children's health. Domestic abuse, which can take a range of forms such as physical, emotional, sexual and financial abuse, has an impact on children. It is common for children to witness the abusive incidents and they are also more likely to be abused themselves. In young children witnessing domestic abuse is associated with problems such as anxiety, difficulty sleeping, bed wetting and behaving as if they are much younger than they are. Longer term they may do badly at school and are more likely to be involved in an abusive relationship.<sup>94</sup>

There are also a number of evidence based parenting programmes which can be effective in helping improve parenting skills, for example Triple P and the Incredible Years parenting programmes. As well as improving parenting skills, these programmes may also have an impact on improving health, for example studies have shown that families receiving parenting interventions had a significantly lower risk of injuries than control families.<sup>85</sup> Group based parenting programmes can improve a number of aspects of maternal mental health including depression and anxiety, although they are not recommended as primary treatments for those conditions. There is also strong evidence that they can be effective in treating early signs of behavioural problems in children and in reducing the risk of child maltreatment. Parenting programmes can also be effective in addressing specific issues such as fussy eating. Fidelity to the programme is an important component of effectiveness.<sup>62</sup>

Some early years settings such as children's centres may offer direct support to parents, whereas it will be more appropriate for others to be aware of what is available and signpost to appropriate information and services. On occasion there will also be a need to raise a safeguarding concern.

## **8. Health of early years workers**

As well as working to promote good health of children in their care, a healthy early years setting also has a role to play in promoting good physical and emotional health among staff.

This is important in terms of issues such as staff wellbeing, sickness rates, staff turnover and reducing spread of infection. Staff also have an important role to play as role models to children in their care by modelling behaviours such as healthy eating and physical activity. While parents are their children's most important role models, staff have a role to play as well, and the importance of this is likely to be increased where children are spending a considerable proportion of their waking hours in childcare.

Evidence suggests that health of early years workers is not as good as it might be. A study of German kindergarten teachers found they were more likely than the general population to be overweight. They were at increased risk of being obese if they were less physically active, had more screen time or worked in a deprived area.<sup>95</sup> A US study of childcare providers found that although the majority rated their health as good or excellent, half were overweight or obese and approximately a third under emotional strain. This is of particular concern as emotionally strained carers are less likely to be emotionally available to children.<sup>96</sup>

Mental health of early years staff has a critical role to play in terms of both quality of care and workforce sustainability. Safe, high quality work can promote good mental health and poor quality work have a negative impact on it. Stress at work can also contribute to unhealthy behaviours such as alcohol misuse. A systematic review of childcare provider mental health found prevalence of depressive symptoms varied between studies from 6% to 27%, but was 9.4% in the study felt to be most reliable (all studies were American). Mental wellbeing scores were only reported in two studies but were high in both. Findings on the relationship between poor provider mental health and quality of care were inconsistent. Two studies found that poorer provider mood was related to lower quality interactions between provider and child, whereas positive mood was related to higher quality interactions. In contrast another two other studies found no relationship between depressive symptoms and care quality. However, providers with higher depressive symptoms did report that children were less co-operative and more problematic. In studies of wellbeing, higher staff wellbeing has been found to be associated with both higher quality care and higher child wellbeing. It might also be important to note that in one study children rated as more fearful, were more sensitive to stressed caregivers. Determinants of poor provider mental health included challenges interacting with colleagues, parents and children, isolation and low pay. In contrast, high quality, supportive relationships with colleagues, parents and children and a commitment to stay in childcare were associated with better mental health.<sup>97</sup>

Immunisation of childcare workers as well as the children in their care is also important. Staff are at risk of being exposed to diseases preventable by immunisation. They may be at increased risk from some infectious diseases, for example if they are pregnant or have other medical conditions. If they acquire a communicable disease they may also spread it to the children in their care, which is of particular concern if there are vulnerable children present. Ensuring staff are up to date with recommended immunisations, including annual influenza vaccination for those at risk, is important in reducing this risk. A study from Australia found that only 63% of child care centres kept a record of staff immunisations and only 36% of these updated their records annually. A considerable number of staff had not received vaccination against whooping cough.<sup>98</sup> A Canadian study found that 10% of female childcare workers were not immune to rubella, which is of particular concern considering the high proportion of women of childbearing age in this group and the risks to the fetus if a woman acquires rubella infection in pregnancy.<sup>99</sup> Although immunisation recommendations in the

UK are not necessarily the same as those in other countries, the coverage rates for childhood vaccinations, and influenza vaccination in those at risk, would suggest that it is likely that a significant number of early years staff will not have received all recommended vaccinations.

Interventions to promote healthy diet and physical activity in staff may also be effective in improving outcomes for children. A worksite wellness intervention was trialled in child care centres in low income areas in the US. The intervention consisted of one day wellness training focusing on nutrition and physical activity with individual health consultations, monthly newsletters and information with payslips, a walking programme and staff follow-up visits. Although this was a small study it found a statistically significant decrease in consumption of sweetened drinks in the intervention group. There was also an increase in other healthy behaviours such as increased physical activity, increased consumption of fruit and vegetables and reduced consumption of junk food, but these were not statistically significant. Staff in the intervention group were also significantly more likely to feel comfortable engaging parents in discussion about their children's eating and physical activity and included more fresh fruit and vegetables in children's snacks.<sup>100</sup> Another trial of an educational intervention to promote healthy diet and physical activity among parents, staff and children among Head Start Centres in 5 US states, found significant decreases in BMI and obesity in staff, parents and children. This programme adopted a 'train the trainer' approach whereby staff were trained first and then delivered the intervention to parents. Staff also received ongoing support to initiate physical activity. This study had no control group.<sup>101</sup>

Measures employers may wish to take to increase vaccination rates among staff include:

- Developing a staff immunisation policy.
- Developing staff immunisation records which all new and existing staff are required to complete.
- Regularly update staff immunisation records.
- Provide staff with information about vaccine preventable diseases.
- Take all reasonable steps to encourage non-immune staff to be vaccinated.
- Document advice given and refusal to comply with vaccination requests.<sup>102</sup>

Childcare is frequently a low paid job. One measure that is likely to be effective in improving the health of early years workers is the payment of a living wage. This has been shown to be associated with improved psychological wellbeing, self-rated health, depression, alcohol consumption, activity limiting illnesses and reduced mortality. It improves staff morale and recruitment and retention of staff.<sup>103</sup>

## 9. Sustainability

The evidence that climate change is occurring is now considered to be unequivocal. It is highly likely that human activity has played an important part in the changes that have occurred. As well as an increase in average global temperature, climate change leads to an increased risk of severe weather events such as flooding, heatwaves and cold winters. Based on modelling, further increases in global temperatures are likely to occur, with projections indicating an increase in annual mean temperature of 2-5<sup>0</sup>c in the UK by 2080. If

greenhouse gas emissions remain high it is possible that any changes could even be greater than this. Those in their early years now, and those yet to be born, are likely to see significant climate change within their lifetime and therefore will be most affected by this issue.

There are numerous possible health effects which might occur with climate change; however precise estimates are difficult due to the range of factors which may exacerbate or mitigate the impact of climate change. Health effects include changes in heat and cold related mortality (with the elderly being most affected). Over the longer term in the UK, this is likely to mean an increase in heat related mortality, but a decrease in cold related mortality. London is one of the areas of the UK that will be most vulnerable to heat effects. Other health effects from climate change include those from changes in both indoor and outdoor air pollutants such as ground level ozone, which has significant effects on the respiratory system; increased allergic symptoms and possibly allergic diseases as a result of changes in duration and type of exposure to allergens such as pollen and fungal spores; changes in skin cancers as a result of altered exposure to ultraviolet radiation; direct and indirect health effects, including mental health problems as a result of flooding; changes in the incidence and types of disease transmitted by vectors such as ticks and mosquitoes.

Measures to reduce greenhouse gas emissions and therefore reduce the longer term health effects from climate change, will also have immediate health benefits. These could include reduced air pollution and increased physical activity as a result of reducing car use. Changes in diet, reducing consumption of meat and other animal products and increased fruit and vegetable consumption are also beneficial to health.<sup>104</sup>

Early years settings can have an important role to play in bringing about sustainable development, as values, attitudes, behaviours and skills acquired in early childhood may have a long lasting impact in later life. While there may be some general principles applicable to all settings, the local context will be extremely important in deciding the best ways of addressing the issue of sustainability, and will therefore require early years settings to involve children, parents and the local community. Other general principles which may support sustainability in early years settings include training of early years staff on this topic, education for young children on sustainable development, taking a whole settings approach and involving both staff and children in identifying issues and finding solutions.<sup>105</sup>

## **10. Conclusion and recommendations**

The available data shows a number of areas where the health of London's children is not as good as it might be. There are considerable inequalities in health between different geographic areas. All of these aspects of health may have an impact on school readiness to a greater or lesser extent. Therefore addressing them through a healthy early years programme will be of benefit both in terms of improving children's wellbeing now, but also improving their future life chances. It should also help in reducing inequalities.

From a review of the data and the existing evidence, as well as considering what is being covered in existing award schemes, key areas that a healthy early years scheme should include are:

- Healthy age appropriate diet (including breastfeeding and weaning).
- Physical activity-incorporating gross and fine motor development and reducing sedentary behaviour.
- Oral health.
- Speech, language and communication.
- Social and emotional wellbeing.
- Support for children with chronic conditions and disabilities.
- Infection control and immunisations.
- Safety-including reducing injuries.
- Staff health.
- Promotion of parenting skills.
- Sustainability.

Factors which have been shown to influence early cognitive development include birth weight, parenting style and behaviours (such as reading to children), good parent-child relationships particularly in the first year of life, socio-economic influences and high quality early education and childcare. Therefore interventions to improve maternal health (including mental health), promote parenting skills and promote access to high quality childcare are likely to lead to improvements in this.<sup>15</sup> Interventions to promote better child health such as increasing physical activity may also have an influence on cognitive development. Therefore addressing the areas identified above through a healthy early years programme are likely to impact on early cognitive development as well as improving child health and school readiness.

Critical to the success of a healthy early years programme are the following components:

- Whole settings approach.
- Involving children, parents, and the local community.
- Training and engagement of staff.
- Partnering with external agencies to support staff to develop knowledge and expertise.
- Ensuring appropriate policies and procedures are in place and followed by staff.
- Childcare is of high quality and delivered in a suitable environment with adequate space and equipment.

The evidence base for the approaches that early years settings may be able to take to impact on the different areas is variable in quantity and quality. Much work has been done on some areas such as nutrition and physical activity, but there is much less on others such as immunisations. In most cases while it is clear the components which should be included if it is to impact on health (as set out above), it is not possible or desirable to be prescriptive about exactly how this is implemented in an individual setting. In some cases, however, such as parenting programmes, there are well evaluated programmes which have been shown to be effective and therefore it may be reasonable to require that an early years setting which decides to offer a parenting programme should choose one that has a strong evidence base.

On the basis of this evidence review consideration should be given to introducing a Healthy Early Years Programme for early years settings in London. This should be piloted first before

being amended as needed and rolled out more widely. Possible criteria for choosing settings to pilot the programme might be:

- Settings with a good or above OFSTED rating (due to importance of high quality childcare as a component of an effective programme).
- Settings in London boroughs which are performing badly on several measures of health above.

If a Healthy Early Years Programme is implemented then rigorous evaluation is essential to ensure it is delivering the desired outcomes in terms of impact on health and improved school readiness.

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