

Childhood Immunisation JSNA January 2021

London Borough of Hammersmith and Fulham

Contents

Abbreviations	3
1. Introduction	5
1.2 Ethnicity	5
1.3 Aims	6
1.4 Facts, Figures and Trends	6
2. Population Profile	10
3. Immunisation Uptake by Ethnicity	12
3.2 Age 2 Years	13
3.3 Age 5 Years	14
3.4 Overall Uptake	15
3.4 Discussion	16
3.5 Immunisation uptake in Somali population	17
4. Somali Parent Focus Group	18
4.1 Participants	18
4.2 Support for childhood immunisations	18
4.3 Concerns about childhood immunisations	18
4.4 Participant input to improve the current immunisation service	19
4.5 Key themes	19
5. Wider Determinants of Health	20
5.1 Geographic distribution	20
5.2 Deprivation	21
5.1 Regression Analysis	23
6. Recommendations and Conclusions	24
6.1 National and Local Strategies	25
6.2 Conclusion	26
References	27
Appendix	29

Abbreviations

COVER - Cover of vaccination evaluated rapidly

CHIS - Child Health Information Systems

BAME - Black, Asian and Minority Ethnic

GP - General Practitioner

IMD - Index of Multiple Deprivation

LBHF - London Borough of Hammersmith and Fulham

LSOA - Lower Layer Super Output Area

NHS - National Health Service

NICE - National Institute of Clinical Excellence

ONS - Office of National Statistics

PHE - Public Health England

SAGE - Strategic Advisory Group of Experts

WHO - World Health Organisation

Immunisations:

DTaP - Diphtheria, tetanus, and pertussis (whopping cough)

IPV - Inactivated poliovirus vaccine

Hib - Haemophilus influenzae type b

PCV - Pneumococcal vaccine

MenB - Meningococcal vaccine

MMR - Measles, Mumps and Rubella Vaccine

Executive summary

Aim of this report

This Joint Strategic Needs Assessment outlines the trends in immunisation uptake for routine childhood immunisation in the borough of Hammersmith & Fulham (LBHF). It also aims to identify ethnicity differences across the population and provides recommendations for future actions to increase uptake of immunisation. This is in line with the national goal of increasing coverage and reaching the projected 95% target in line with World Health Organisation (WHO) guidance.

Current trends

The current uptake for overall childhood immunisation for LBHF is 82.4%. The is significantly lower than the national uptake of 91.7% and the London average of 85.2%. LBHF is ranked 28th across the boroughs in terms of childhood immunisation uptake. Within the borough overall coverage shows a decline in the past 2 years suggesting a need for improvement.

Main findings

There are differences in immunisation uptake across difference ethnicities within the borough. African, Caribbean, and Black British communities have a lower percentage uptake of childhood immunisations across most vaccinations, than the average for LBHF. This is similar to the findings of previous research and the guidance of NICE, which state there are lower levels of coverage in certain ethnic minority groups. Focus groups conducted with Somali parent groups found most concerns on vaccination came from the MMR vaccine and previous associations between this vaccine and learning disabilities.

Recommendations

To increase overall coverage in LBHF, work alongside GP practices is important to reduce barriers to uptake and increase communication around childhood immunisation. This may include greater flexibility in appointments, greater time to discuss concerns with healthcare staff and timely reminders. Targeted interventions focused on certain ethnic groups are also necessary. The Somali parent focus group highlighted the need for written information to be translated to cross language barriers and a greater need for engagement from health professionals and concerns to not be dismissed. Any engagement sessions delivered by healthcare professionals from the same communities would also help to improve uptake.

1. Introduction

Childhood vaccination programmes are an incredibly effective public health measure to reduce mortality and morbidity of infectious disease¹. They have successfully worked to reduce the burden of numerous childhood diseases such as measles and diphtheria².

In the UK, there is a comprehensive free childhood vaccination programme that is offered through the NHS, outlined in Appendix 1. This report is focused on vaccinations delivered up to the age of 5 years. Public Health England (PHE) collates childhood immunisation coverage data at ages one, two and five years through the UK Cover of vaccination evaluated rapidly (COVER) data collections³.

Despite large amounts of evidence in the efficacy of vaccinations and their safety, 'vaccine hesitancy' remains prevalent in the population⁴. The Strategic Advisory Group of Experts on Immunization (SAGE) Working Group on Vaccine Hesitancy defines the term as referring to 'delay in acceptance or refusal of vaccination despite availability of vaccination services'⁵. Parental choice to decline childhood vaccinations is recognised as one of the main factors for low uptake⁶.

Multiple social, cultural and political factors may influence parents to avoid or delay immunising their children. Lower vaccination uptake has been associated with apprehensions on the side effects and the safety of the vaccine, as well as specific concerns on allergies and autism^{7,8}.

There are specific vaccines which have raised fears in parents, such as the measles, mumps, and rubella (*MMR*) vaccine, which has had lower uptake, due to discredited research linked with autism in the early 2000s⁹. This has led to a knock-on effect with vaccine scepticism onto other vaccinations, causing a drop in childhood immunisation uptake. Although vaccination rates in the United Kingdom have recovered from an 80% low in 2003-4, uptake is still not at the 95% level recommended by WHO to ensure herd immunity¹⁰.

1.2 Ethnicity

There is existing research demonstrating ethnicity differences in childhood immunisation uptake rates, with uptake being lower in BAME groups¹¹. Research suggests cultural factors can affect parents' perceived importance and understanding of immunisations and the immunisation schedule. As reasons for not vaccinating can differ among groups, it is important to look in depth at specific communities to understand reasons behind vaccine hesitancy¹¹.

Research suggests that the Somali community has typically lower uptake of immunisations, compared to other ethnic communities in the UK ^{12,13}. Studies based in London have suggested a lower than average childhood immunisation uptake in

the Somali population, and that Somali children are less likely to get immunisations at the scheduled times than White-British children^{13,14}.

Research conducted on Somali parents in other countries, found they were more likely to believe that the *MMR* vaccine causes autism and more likely to decline the *MMR* vaccine than non-Somali parents¹⁵. There is no published data on immunisation uptake of the Somali population in the London Borough of Hammersmith and Fulham, UK.

Therefore, this report will include a focus group study conducted on Somali parent groups in the borough to gather qualitative research on vaccine hesitancy. This will be alongside quantitative analysis on the % uptake of immunisation within this community.

1.3 Aims

This report aims to understand differences in ethnicity uptake of childhood immunisations in the London Borough of Hammersmith and Fulham, to help improve the immunisation service and address health inequalities.

Reducing differences in immunisation uptake among children is a priority identified by the National Institute for Clinical Excellence (NICE). They have identified certain groups of children who are at risk for not being fully immunised, including those from some minority ethnic groups, such as the Afro-Caribbean community and those from non-English speaking families¹⁶.

It is important to consider the current situation when discussing access to healthcare, as the pandemic may have shifted individuals' access and perception of access to primary care. Immunisation programmes are one of areas of routine healthcare that has been disrupted during COVID-19 pandemic¹⁷.

Although the national guidance states childhood immunisations should continue during COVID-19, data shows uptake of immunisation have fallen by around a fifth across the country¹⁷. This is a key issue to address as this may further add to existing health inequalities.

1.4 Facts, Figures and Trends

The World Health Organisation (WHO) recommends at least 95% of children are vaccinated against diseases preventable by immunisation (specifically, diphtheria, tetanus, pertussis, polio, Hib, measles, mumps and rubella)¹⁸.

The most recent data for the UK shows that overall vaccination coverage is at 91.7% in 2019/2020. This is 3.3% lower than the WHO target. There is a fair amount of variation in uptake rates depending on the vaccine. As seen in Table 1, uptake

ranges from lowest at 86.4% (DTap/IPV booster) to the highest at 95.6% (DTaP/IPV/Hib Primary).

Table 1. Immunisation uptake % by each vaccination for each age group, by region

Coverage at	Vaccination	UK	England	London	H&F
1 year (%)	DTap/IPV/Hib/HepB	93.0	92.6	88.6	86.6
1 year (%)	PCV	93.6	93.2	89.1	87.7
1 year (%)	Rota	90.5	90.1	85.9	83.9
1 year (%)	MenB	92.9	92.5	87.7	87.6
2 years (%)	DTap/IPV/Hib	94.2	93.8	90.1	87.6
2 years (%)	MMR1	91.1	90.6	83.6	80.8
2 years (%)	Hib/MenC booster	91.0	90.5	83.5	80.7
2 years (%)	PCV booster	90.9	90.4	82.9	78.0
2 years (%)	MenB Booster	89.4	88.7	80.6	74.9
5 years (%)	DTaP/IPV/Hib Primary	95.6	95.2	91.8	90.4
5 years (%)	DTaP/IPV booster	86.4	85.4	74.4	69.0
5 years (%)	MMR 1st dose	94.8	94.5	89.8	87.9
5 years (%)	MMR 2 nd dose	87.5	86.8	76.9	69.6
5 years (%)	Hib/MenC booster	92.9	92.5	87.4	84.0

Table 2. Purpose of each vaccination listed in Table 1

Vaccination	Disease it protects against
DTap/IPV/Hib/HepB	Diphtheria, tetanus, pertussis/ Polio/ Haemophilus influenzae b/ hepatitis B
PCV/PCV booster	Pneumonia and Meningitis
Rota/Rota booster	Rotavirus
MenB	Meningococcal group B
DTap/IPV/Hib/	Diphtheria, tetanus, pertussis/ Polio/ Haemophilus influenzae b
MMR1 1 st and 2 nd dose	Measles, mumps and rubella
Hib/MenC booster	Haemophilus influenzae type b and Meningococcal group C

In London overall immunisation uptake is lower than the national average, at 85.2%. This number is even lower in LBHF, at 82.4%. The current uptake figures are lower than the WHO target, by 9.8% and 12.9% respectively. Uptake for every individual vaccination is lower in LBHF when compared to that of London and the UK.

Figure 1 shows immunisation coverage at each of the 3 key age groups by region, highlighting the overall differences in uptake. For LBHF at 1, 2 and 5 years, immunisation uptake is 86.4%, 80.4% and 80.2% respectively. There is more than a 10% difference in coverage at 2 and 5 years, compared to the national average.

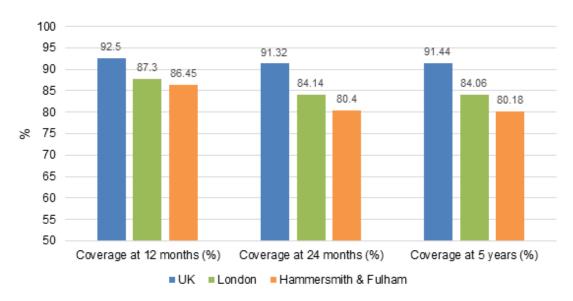


Figure 1. Bar graph % of immunisation uptake of each age group, by region, 2019/2020

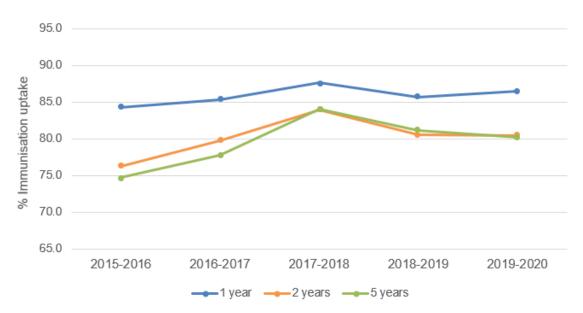


Figure 2. 5-year trend in % immunisation uptake by each age category, in LBHF

Figure 2 shows the 5-year trend in immunisation uptake, which demonstrates a steady increase until 2017/2018. However, since 2017/2018, there is a decrease in uptake, across all 3 age categories.

This recent decline is a concerning trend that should be addressed. Especially as LBHF is already performing poorly in terms of uptake within the region (Figure 3). When comparing uptake of childhood immunisation across the wider London region, LBHF ranks 28th out of 32 boroughs. No London borough is currently at the 95% immunisation target.

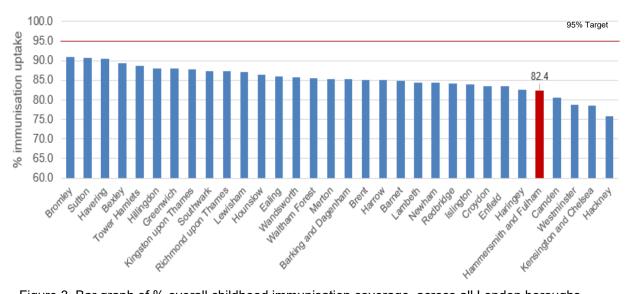


Figure 3. Bar graph of % overall childhood immunisation coverage, across all London boroughs 2019/2020

2. Population profile

The estimate of the total population in the borough for 2020, is 190,725. For the population of children under the age of 5, the figure is projected at 13,380.

The gender and age distribution of the population is shown in Figure 4. LBHF has a relatively young population, with the 0-5 age group, being the largest groups for those under 20. The population in London is the fastest growing in the country, with projections of growth in the young population¹⁹. This suggests a growing challenge in childhood immunisation uptake.

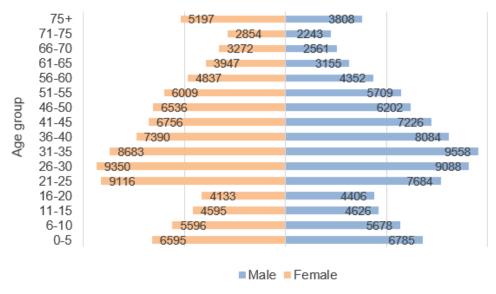


Figure 4. Bar graph of age and gender distribution of LBHF population (Source: ONS)

Percentage of non-English speaking households

As one of the risks for low vaccination uptake identified by NICE, are children from non-English speaking families, table 2 provides a brief breakdown of this statistic for LBHF. For the borough, the % of households that do not speak English is 14.2%.

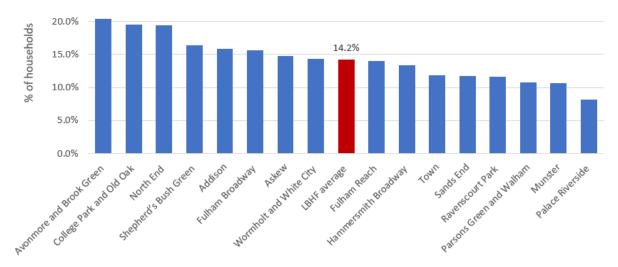


Figure 5. Bar graph % of non-English speaking household by ward in LBHF

Ethnicity Breakdown

LBHF is a diverse borough, ethnicity data suggests 36% of the adult population belong to an ethnic minority. With 45% of the under 5-years population belonging to a non-White ethnic group.

Table 3. Ethnicity breakdown of children under 5 in LBHF

Ethnicity	Number	%
White British	4,418	33%
White Irish	146	1%
Other White	2,594	20%
White & Black Caribbean	419	3%
White & Black African	319	2%
White & Asian	463	3%
Other Mixed	722	5%
Indian	141	1%
Pakistani	111	1%
Bangladeshi	85	1%
Chinese	75	1%
Other Asian	539	4%
Black African	1,067	8%
Black Caribbean	313	2%
Other Black	704	5%
Arab	692	5%
Other Ethnic Group	494	4%

Based on language estimates from the population, it can be understood that there are a large portion of those under the African Ethnic group are East African, from Somali, then followed by Ethiopian backgrounds. LBHF has a very high proportion of its residents from the ethnic Somali community. It is estimated that there are over 4,000 Somali residents living in the borough.

3. Immunisation uptake by ethnicity

Immunisation uptake data is collected from Child Health Information Services (CHIS), which record clinical data supporting health promotion activities for children, including immunisation. A total of 6688 records of childhood immunisations were received. This data includes all routine vaccinations by GP surgeries in LBFH in 2019/2020. Following COVER methodology³, immunisation status is grouped based on whether children had received the following:

• 12 months

- 3 doses of DTaP/IPV/Hib
- 2 doses of PCV
- 2 doses of rotavirus
- 2 doses of MenB

24 months

- Third dose DTaP/IPV/Hib
- o MMR1
- PCV booster
- Hib/MenC booster
- o MenB booster

5 years

- Third dose of DTaP/IPV/Hib
- DTaP/IPV booster
- MMR1
- o MMR2
- o Hib/MenC booster

3.1 Age 12 Months

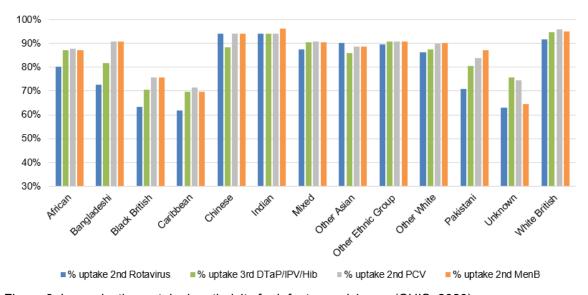


Figure 6. Immunisation uptake by ethnicity for infants aged 1 year (CHIS, 2020)

Figure 6 demonstrates the % uptake of successful immunisation of all necessary vaccines for infants by 12 months, for each ethnic group.

Key findings

- African, Bangladeshi, Black British, Caribbean, Pakistani groups have generally lower uptake compared to other ethnic communities, in this age category.
- Black British and Caribbean groups have particularly low uptake, with less than 75% uptake across all vaccinations for 12 months.
- Uptake of both doses of *Rotavirus* is lower in most groups, compared to other immunisations (African, Bangladeshi, Black British, Caribbean, Mixed, Other White, Pakistani and White British)
- White British, Indian and Chinese groups have higher uptake rates, consistent across all vaccinations in this age group.

3.2 Age 2 Years

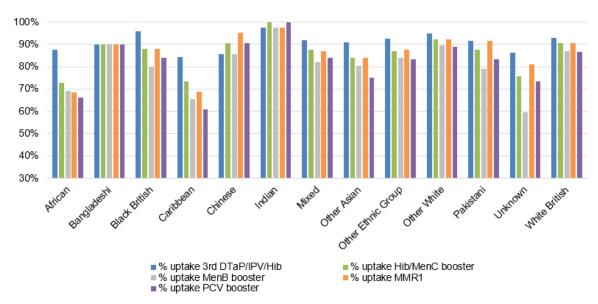


Figure 7. Immunisation uptake by ethnicity for infants aged 2 years (CHIS, 2020)

Figure 7 demonstrates the % uptake of immunisation of necessary vaccines for infants by 2 years of age, for each ethnic group.

Key findings

- In African and Caribbean communities, uptake for immunisation is low (apart from uptake of 3rd *DTap/IPV/Hib*)
- MMR uptake in African and Caribbean communities is below 70%
- MenB Booster vaccine has lower uptake in almost every ethnic group
- PCV Booster vaccine also has lower uptake in most ethnic groups

3.3 Age 5 Years

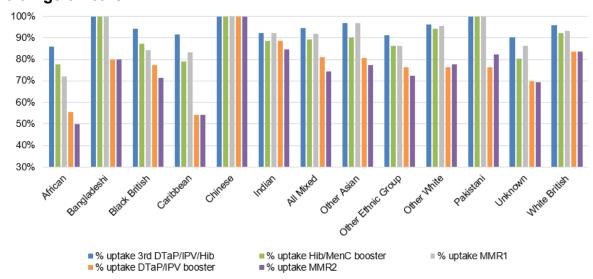


Figure 8. Immunisation uptake by ethnicity for infants aged 5 years (CHIS, 2020)

Figure 8 demonstrates the % uptake of successful immunisation of necessary vaccines for infants by 5 years, for each ethnic group. Many of these vaccinations (1st and 2nd dose MMR, 3rd DTaP/IPV/Hib) are on the vaccination schedule for infants at the age of 3 years. However, capturing this data for children at the age of 5, allows for 'catch up' of missed and delayed immunisation.

Key findings

- MMR1 uptake by 5 years of age is lowest in the African Ethnic group, at 72%
- MMR2 uptake is significantly lower than MMR1 uptake, across all ethnicities (exception is the Chinese ethnic group)
- In this age group, uptake of *DTaP/IPV booster* and *MMR2* are the lowest across all ethnicities (except the Chinese ethnic group)
- In African and Caribbean groups, uptake of DTaP/IPV booster and MMR2 is below 55%

3.4 Overall Uptake

Lowest Uptake

Figure 9 shows overall coverage for each of the 3 age groups, by ethnic group. Across all age categories, African and Caribbean communities are in the lowest 3 for overall immunisation uptake.

- Uptake at 12 months was 68%, 71% and 85% for Caribbean, Black British and African communities, respectively.
- Uptake at 24 months was 71%, 87% and 73% for Caribbean, Black British and African communities, respectively.
- Uptake at 5 years was 73%, 83% and 68% for Caribbean, Black British and African communities, respectively.

Highest Uptake

At 1 and 2 years, the Indian group has the highest level of uptake at 95% and 99%.

At 5 years, 100% uptake is achieved in the Chinese group. Across all age groups, the White British and Chinese groups have consistently achieved above immunisation 90% uptake.

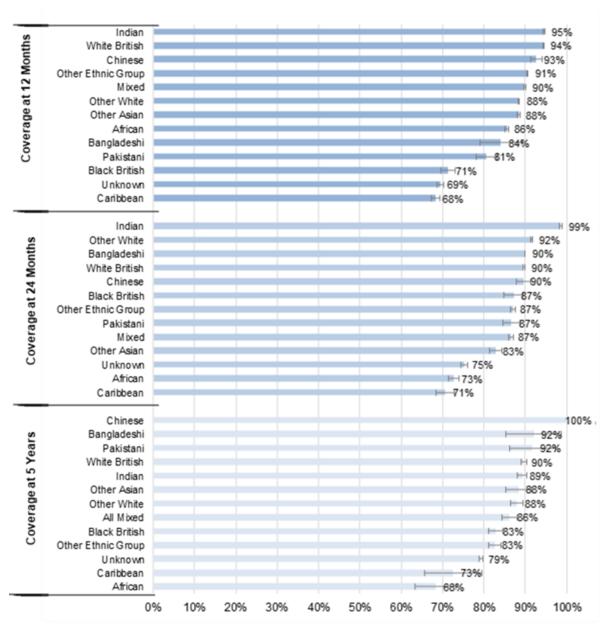


Figure 9. Overall immunisation coverage by ethnicity, with confidence intervals (CHIS, 2020)

Varying Uptake

Whilst Pakistani and Bangladeshi groups, had poor uptake at 1 year, % uptake is much higher when examining immunisation coverage at age 5. At both 1 and 2 years, this group was achieving less than 90% uptake, however at 5 years, this increased to an average of 92% uptake.

3.4 Discussion

According to data, White British children in LBHF have consistently achieved above 90% immunisation uptake (94%, 90% and 90% at 5 years, 2 years and 1 year respectively). This is 7.6% higher than the average LBHF uptake. The contrast in

immunisation uptake between ethnicities suggests a real need to target specific ethnic groups.

However, this is not the case for all ethnic minority groups. Children who are ethnicity Chinese and Indian in LBHF have high levels of uptake. This is partially consistent with previous research on uptake within ethnic minority groups, which found highest uptake among children from South Asian backgrounds (Indian, Bangladeshi and Pakistani)²⁰. This suggests that not all ethnic minorities groups need to be targeted, and just the groups identified to having lower coverage.

3.5 Immunisation uptake in Somali population

Ethnicity was generally not recorded to a high degree of precision; therefore, no data was found on the Somali population specifically. Where ethnicity was recorded, it must be presumed to fall within the African or Black British groups.

Overall immunisation uptake was lower for the African and Black British groups compared with the White British group in all cohorts (see Fig. 6-9). Full immunisations uptake breakdown is shown in Appendix 2.

In the African ethnic group, immunisation uptake is lower by:

- 17% compared to the average for LBHF at 5 years
- 12% lower at 2 years
- 2% higher at 1 year.

In the Black British ethnic group, immunisation uptake is lower by:

- 2% compared to the average for LBHF at 5 years
 - 2% higher at 2 years
 - 13% lower at 1 year.

4. Somali Parent Focus Group

A focus group was conducted on Somali parent groups as this ethnic group was identified to have low immunisation uptake rates in existing research. The aim of the focus group was to ascertain views on childhood immunisations and openly discuss any concerns.

4.1 Participants

Participants were recruited from three Somali parents' groups from LBHF, containing around 7, 12, and 20 participants in each. The focus groups took place in September 2020 online on Zoom. Each focus group lasted around 45 minutes and was conducted in Somali. The following questions were used to structure the focus groups:

- 1. What is your opinion on childhood immunisations?
- 2. What experiences have you had or heard about regarding child vaccinations?
- 3. What can be done to make you or others more likely to immunise?
- 4. How do you feel about that?
- 5. Would you want it? Why/why not?

All participants gave verbal consent to take part after receiving information on the aims and content of the project. The focus group findings were organised into 3 main themes as presented below.

4.2 Support for childhood immunisations

All participants in the focus groups were aware of the importance of childhood immunisations and reported they had immunised their children. The participants fell into two distinct camps. Those who were relatively well informed and supportive of immunisations, and those who still felt a relative degree of mistrust towards *MMR*.

Those in the latter group had still immunised their children despite their concerns. This was due to the prevailing view that immunisations were beneficial for their children's overall wellbeing. Even with some parents who linked the *MMR* vaccine to developmental delays, there was also a belief that this was 'God's plan' and so had ultimately not put them off vaccinating their children.

4.3 Concerns about childhood immunisations

Participants who were concerned about childhood immunisations were especially concerned with *MMR* vaccines. This was mainly due to associating *MMR* with developmental delays and wider learning disabilities, rather than autism specifically.

Participants reported that unclear information from healthcare professionals regarding the immunisation process and the possibility of negative impacts of

immunisations heightened fears. *MMR* was seen as the least clear vaccine in this respect across all 3 focus groups. Participants reported that lack of clarity over the vaccine had led them to rely on information from peers regarding whether to immunise their children with *MMR*. This had led some to delay getting this vaccine for their children.

4.4 Participant input to improve the current immunisation service

To tackle the concerns raised about immunisations, the participants from all groups requested direct engagement sessions from healthcare professionals to dispel misinformation. It was agreed that coordination of written information sent to them about immunisations from schools and healthcare organisations with translations into Somali would reduce confusion.

However, an in-person question and answer session with someone they trust (ideally a healthcare professional from the Somali community) with relevant expertise was seen as the most important way to achieve greater clarity of understanding about immunisations. Participants reported that they felt clinicians did not have enough time to discuss immunisations with them in enough depth to dispel rumours and so dedicated sessions with opportunities to ask questions would help address this.

4.5 Key themes

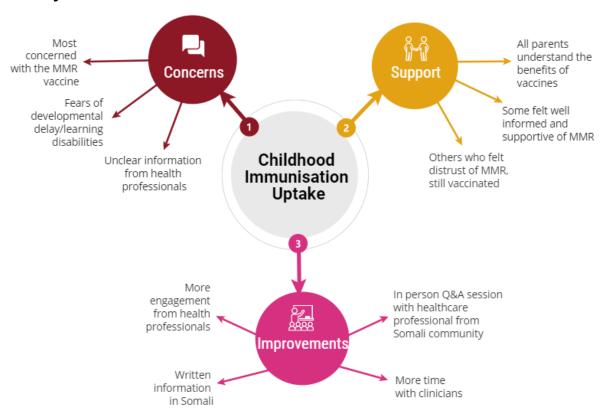


Figure 10. Key themes from focus group with Somali parent groups

5. Wider Determinants of Health

5.1 Geographic distribution

There is a geographic variation in childhood immunisation uptake across the borough. The ward with the highest overall uptake is Ravenscourt Park, which had on average 90% uptake, closely followed by Avonmore and Brook Green at 86%.

The ward with the lowest uptake is North End, with an uptake of 82.3%, followed by both Shepard's Bush Green and Sands Ends at 82.7%.

Table 4. Childhood immunisation uptake by ward (CHIS, 2020)

Wards	Overall % uptake
Ravenscourt Park	90.0%
Avonmore and Brook Green	86.0%
Hammersmith Broadway	85.7%
Askew	85.0%
Palace Riverside	85.0%
Fulham Reach	84.7%
Town	84.7%
Addison	84.3%
Munster	84.3%
Parsons Green and Walham	83.7%
Fulham Broadway	83.3%
Wormholt and White City	83.3%
College Park and Old Oak	83.0%
Sands Ends	82.7%
Shepherds Bush Green	82.7%
North End	82.3%

Figure 11 visualises the geographic variation in childhood immunisation in LBHF, as immunisation uptake is mapped at a lower layer super output area (LSOA) level.

The trend shows a decline in % uptake as we move from coverage at 1 year to 5 years. There is no clear pattern to % uptake. There are some areas with consistently high uptake, such as North Ravenscourt Park.

There are also small pockets with consistently low uptake, spread across the borough, such as parts of Shepherds Bush Green and Fulham Broadway. In most areas, coverage does vary between % uptake at 1 year and uptake at 5 years.

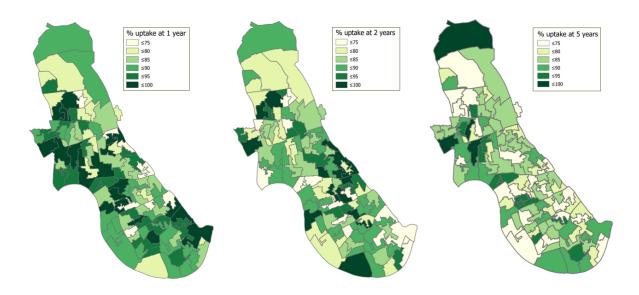


Figure 11. Childhood immunisation coverage at each age group, by LSOA (CHIS, 2020)

5.2 Deprivation

Deprivation can influence health outcomes, affecting health behaviours and access to healthcare. It is a commonly measured through the index of multiple deprivation (IMD), which considers a range of variables such as income, education, health and housing deprivation. It is important to consider how deprivation can affect uptake of childhood immunisation, in order to tackle health inequalities.

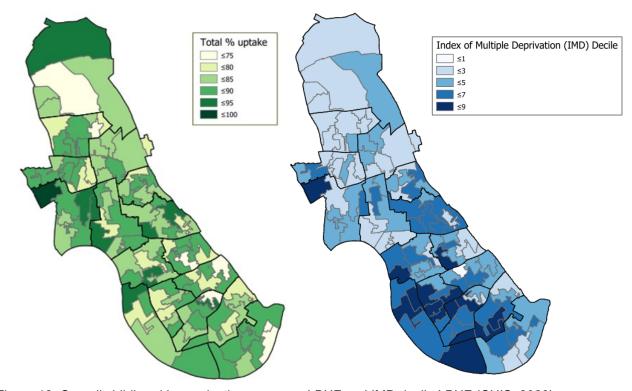


Figure 12. Overall childhood immunisation coverage LBHF and IMD decile LBHF (CHIS, 2020)

Figure 12 shows the overall childhood immunisation coverage for the borough, next to a map showing the IMD of the borough. IMD is shown here in deciles, with 1 being the most deprived (lightest blue) to 9 being the least (darkest blue). It is a useful method to classify the relative deprivation (measure of poverty) of small areas. The least deprived areas of the borough are in the south, as well as west and parts of central.

Overall uptake for the borough seems uniform, with most areas between 85-90%. Nevertheless, there are many pockets with less than 75% uptake and very few areas with 100% uptake. When comparing this to the IMD, there are some overlaps.

Parts of College Park and Old Oak and Wormholt and White City have a low decile and there are several parts of these wards with less than 80% immunisation uptake. Other similar patterns include areas such as north of Ravenscourt park, which is on the highest decile and has the highest immunisation uptake.

However, this is not the case in all areas that are in the 9th decile. There are several areas in the South of the borough that do not have high levels of immunisation uptake.

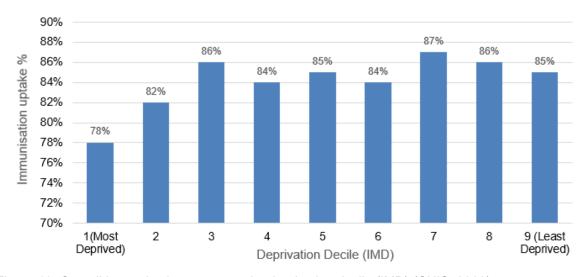


Figure 13. Overall immunisation coverage, by deprivation decile (IMD) (CHIS, 2020)

Figure 13 shows the immunisation uptake % against deprivation decile, which suggests there is a relationship between deprivation and childhood immunisation. The lowest coverage of immunisation is seen in those that live 1st decile (the most deprived areas), at 78% uptake.

The highest coverage is seen in those that live in the 7th decile, at 87%. There is a steady increase in immunisation coverage as we move from decile 1 to 3. After the 3rd decile, uptake seems to be relatively stable around the LBHF average. This highlights that deprivation influences childhood immunisation uptake, especially in the most deprived communities.

5.1 Regression Analysis

A regression analysis was carried out using the CHIS data. The R Square statistic suggests 76% of the variability in childhood immunisation uptake in LBHF, can be explained by ethnicity differences. After adjusting the regression model for deprivation (IMD), 56% of the variation in coverage can be explained by ethnicity differences.

Table 5 shows the prediction for childhood immunisation coverage by ethnicity, after adjusting for deprivation, from highest to lowest uptake.

Uptake is lowest in the Caribbean ethnic group, with the probability of immunisation at 69.2% (p<0.01). The second lowest is for the African group, with uptake at 74.3% (p<0.01), with both results having statistically significance.

Table 5. Probability of Childhood Immunisation by Ethnicity, sorted from highest to lowest

Ethnicity	Probability of Childhood Immunisation
Indian	92.6%
Chinese	92.3%
White British	89.6%
Bangladeshi	87.6%
Other White	87.6%
Mixed	86.1%
Other Asian	85.1%
Other Ethnic Group	84.9%
Pakistani	84.9%
Black British	79.2%
African	74.3%
Caribbean	69.2%

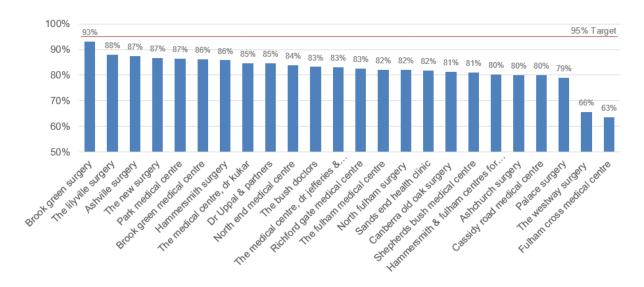
6. Recommendations and Conclusions

LBHF recognises there is a need to target both overall improvement of immunisation uptake and specifically to improve the low levels of uptake amongst certain groups and places.

Concerns over vaccine safety have allowed misconceptions about immunisation to spread among parents, despite any evidence to back them up. The large amount of unverified information available online about immunisation can make it difficult to distinguish the facts from the myths.

Therefore, it is important to address parental concerns regarding vaccines. This may be a useful approach in addressing certain ethnic communities, with the assistance of community and/or religious leaders, alongside healthcare professionals. As suggested as an improvement for increasing coverage by the Somali parent focus group.

It may be useful to consider the differences in uptake between GP Practices, to examine any key differences and areas for improvement, however that data is not available for 2019/20. Figure 14 demonstrates the overall immunisation coverage for GP Practices in LBHF for 2018/19. From this data the GPs with the lowest uptake are Fulham Cross Medical Centre (located in the south of the borough) and Westway Surgery (located in the north). The GP practice with the highest uptake for childhood immunisation is Brook Green Surgery, achieving 93% coverage.



Apart from children from some ethnic minority groups and those from non-English speaking families, NICE have also identified other groups at-risk for low immunisation coverage¹⁶, that may also require targeted interventions:

- Looked after children
- Those with physical or learning disabilities
- Children of teenage or lone parents
- Those not registered with a GP
- Children who are hospitalised or have a chronic illness
- Vulnerable children, such as those whose families are travellers, asylum seekers or are homeless.

6.1 National and Local Strategies

The NHS Long-term Plan from 2019, states improving childhood immunisations is a priority. The programme will also work closely with other key programmes such as the Healthy Child Programme. The plan also states the introduction of a digital version of the 'red book', which will help parents record routine health information about their child, including immunisation records and growth.

Local strategies for increased immunisation coverage:

- Increased communication with parents on vaccination benefits. Nationally, it is reported that parental confidence in the childhood immunisation programme is at an 'all time high'²¹. Parents trust immunisation information they get on their healthcare professionals more so than any other channel. Therefore, it is important that communication comes from experts and reliable sources.
- Reasons for the decline in coverage can be related to how people access and use local services. It is important to work closely with GPs, as most individuals access childhood vaccination through primary care. Further improvement is necessary to influence uptake GP practices with low rates of coverage. This may include:
 - Ensuring parents are sent timely invites and reminders in the form of letters or texts
 - Offering additional or more flexible appointments, to remove any barriers of terms of access (due to employment and childcare schedules)
 - Checks that children are up to date with vaccinations during routine GP appointments
 - A call back system with the practice nurse, if parents wish to discuss any routine queries
 - Feedback of immunisation uptake rates to the practice.

- Working closely with various providers and stakeholders, such as community
 and religious leaders of communities identified with low uptake, to arrange
 information sessions for parents. This will include the Afro-Caribbean
 community in the borough. This may also include media work targeted within
 this community.
- To develop a vaccination campaign, focused on partnerships with local groups. With the aim to increase trust in healthcare and uptake of routine immunisations, considering language barriers. To recognise what has led to lower levels of uptake and recognise misconceptions on vaccines and enlist the support of healthcare workers to dispel these.

A combination of these measures is necessary to improve immunisation coverage in the borough. Research suggests that a mixture of the reminder/call system alongside outreach programmes designed to fit local populations, shows the best evidence for reducing immunisation disparities in urban, ethnically diverse settings²².

6.2 Conclusion

Hammersmith & Fulham is not achieving national targets for childhood immunisations. The borough is currently achieving 82.4% coverage, 12.6% away from the 95% target to achieve herd immunity. This is paired with recent trends in a fall of immunisation coverage over the past 2 years. Suggesting a vital need to increase immunisation within the 0-5 age group.

This JSNA investigated differences in immunisation uptake by ethnicity. CHIS data from the borough demonstrates lower % uptake of childhood immunisation in African and Caribbean ethnic groups. There are certain vaccinations such as MMR, which still suffer low rates of uptake, across most ethnic groups. It is also important to recognise that deprivation also impacts uptake of childhood immunisation, which has many overlaps with ethnicity and socioeconomic factors.

Childhood immunisations are a necessity to public heath, so there is an essential need to develop and maintain an immunisation promotion project. It is important that this is designed with at-risk groups of low immunisations in mind. Vaccination programmes should be designed to support a narrowing of health inequalities, by way of ensuring the entire population is targeted and by removing any barriers to access of immunisations.

References

- (1) Andre FE, Booy R, Bock HL, Clemens J, Datta SK, John TJ, Lee BW, Lolekha S, Peltola H, Ruff TA, Santosham M. Vaccination greatly reduces disease, disability, death and inequity worldwide. Bulletin of the World health organization. 2008;86:140-6.
- (2) NHS. Why vaccination is safe and important. [Online] 2020
- (3) NHS Digital. Childhood vaccination coverage statistics. 2020 [Online]
- (4) Luyten J, Bruyneel L, van Hoek AJ. Assessing vaccine hesitancy in the UK population using a generalized vaccine hesitancy survey instrument. Vaccine. 2019 Apr 24;37(18):2494-501.
- (5) MacDonald NE. Vaccine hesitancy: Definition, scope and determinants. Vaccine 2015;33(34):4161-4164.
- (6) McIntosh ED, Janda J, Ehrich JH, Pettoello-Mantovani M, Somekh E. Vaccine hesitancy and refusal. The Journal of Pediatrics. 2016 Aug 1; 175:248-249.
- (7) Brown KF, Long SJ, Ramsay M, Hudson MJ, Green J, Vincent CA, Kroll JS, Fraser G, Sevdalis N. UK parents' decision-making about measles—mumps—rubella (MMR) vaccine 10 years after the MMR-autism controversy: A qualitative analysis. Vaccine. 2012 Feb 27;30(10):1855-1864.
- (8) Harmsen IA, Mollema L, Ruiter RA, Paulussen TG, de Melker HE, Kok G. Why parents refuse childhood vaccination: a qualitative study using online focus groups. BMC public health. 2013 Dec;13(1):1-8.
- (9) DeStafano F, Shimabukuro T. The MMR Vaccine and Autism. Annual Review of Virology 2019 Sep 29;6(1):585-600.
- (10) Godlee F, Smith J, Marcovitch H. Wakefield's article linking MMR vaccine and autism was fraudulent. British Medical Journal. 2011 Jan 8; (342):64-66.
- (11) Forster AS, Rockliffe L, Chorley AJ, Marlow LA, Bedford H, Smith SG, Waller J. Ethnicity-specific factors influencing childhood immunisation decisions among Black and Asian Minority Ethnic groups in the UK: a systematic review of qualitative research. J Epidemiology Community Health. 2017 Jun 1;71(6):544-9.
- (12) Wagner KS, van Wijgerden, Johan C J, Andrews N, Goulden K, White JM. Childhood vaccination coverage by ethnicity within London between 2006/2007 and 2010/2011. Archives of disease in childhood 2014 Apr;99(4):348-353.
- (13) Tiley KS, White JM, Andrews N, Ramsay M, Edelstein M. Inequalities in childhood vaccination timing and completion in London. Vaccine 2018 10 29,;36(45):6726-6735
- (14) Cockman P, Dawson L, Mathur R, Hull S. Improving MMR vaccination rates: herd immunity is a realistic goal. BMJ 2011 Oct 4,;343(oct04 2):d5703.

- (15) Wolff ER, Madlon-Kay DJ. Childhood vaccine beliefs reported by Somali and non-Somali parents. J Am Board Fam Med 2014 Jul-Aug;27(4):458-464.
- (16) NICE. <u>Immunisations: reducing differences in uptake in under 19s</u>. 2009. [Online]
- (17) BMA. Action to improve immunisation coverage rates across the UK. 2020 [Online]
- (18) WHO. The guide to tailoring immunization programmes. Increasing coverage of infant and child vaccination in the WHO European Region. 2013 [Online]
- (19) ONS. Subnational population projections for England: 2016-based. 2018. [Online]
- (20) Mixer RE, Jamrozik K, Newsom D. Ethnicity as a correlate of the uptake of the first dose of mumps, measles and rubella vaccine. Journal of Epidemiology & Community Health. 2007 Sep 1;61(9):797-801.
- (21) Public Health Matters. <u>Increasing vaccine uptake strategies for addressing barriers in primary care</u>. <u>Public Health England</u>. 2019. [Online]
- (22) Crocker-Buque T, Edelstein M, Mounier-Jack S. Interventions to reduce inequalities in vaccine uptake in children and adolescents aged under 19 years: a systematic review. J Epidemiol Community Health. 2017 Jan 1;71(1):87-97.

Appendix

Appendix 1: Childhood Immunisation Schedule

Age	Disease For	Vaccination
8 weeks	Diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, hepatitis B	DTap/IPV/Hib/HepB
8 weeks	Meningococcal group B	MenB
8 weeks	Rotavirus	Rotavirus
12 weeks	Diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, hepatitis B	DTap/IPV/Hib/HepB
12 weeks	Rotavirus	Rotavirus
12 weeks	Pneumonia and Meningitis	PCV vaccine
16 weeks	Diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, hepatitis B	DTap/IPV/Hib/HepB
16 weeks	Meningococcal group B	MenB
1 year	Haemophilus influenzae type b and Meningococcal group C	Hib/MenC
1 year	Pneumonia and Meningitis	PCV booster vaccine
1 year	Measles, mumps and rubella	MMR
1 year	Meningococcal group B	MenB booster vaccine
2 years	Seasonal Influenza	Flu vaccine (Not included in this report)
3 years	Diphtheria, tetanus, pertussis and polio	DTaP/IPV
3 years	Measles, mumps and rubella	MMR