The London Borough of Hammersmith and Fulham

Annual Report of the Director of Public Health

One Year On: The Impact of COVID-19 in Hammersmith and Fulham March 2020 – March 2021

Part 1 – COVID-19 Impact and Response

August 2021

CONTENTS

ABBREVIATIONS

BAME	Black, Asian and Minority Ethnic
BI	Business Intelligence
CAN	Community Aid Network
DPH	Director of Public Health
GP	General Practitioner
ICU	Intensive Care Units
IMD	Index of Multiple Deprivation
IVR	Interactive Voice Response
JCVI	Joint Committee on Vaccinations and Immunisations
LBHF	London Borough of Hammersmith and Fulham
LFD	Lateral Flow Device
LSOA	Lower Layer Super Output Area
NHS	National Health Service
NHSTT	NHS Test and Trace
PHE	Public Health England
PHEIC	Public Health Emergency of International Concern
PPE	Personal Protective Equipment
VOC	Variant of Concern
WHO	World Health Organisation

Summary of Hammersmith & Fulham Council's Response to COVID-19

On 31 December 2019, the Wuhan Municipal Health Commission in Hubei Province, China published a statement concerning cases of 'viral pneumonia' in Wuhan. The World Health Organisation (WHO) Country Office in China noted the statement and the requested further information. On 9 January 2020, the WHO reported that Chinese authorities had determined the outbreak had been caused by a novel coronavirus. On 30 January, the WHO Director-General declared the novel coronavirus outbreak (caused by the SARS-CoV-2 virus) a public health emergency of international concern (PHEIC) (Figure 1). On 11 February 2020, the WHO announced the novel coronavirus would be named COVID-19[1].

On 7 March 2020, the first case of COVID-19 was identified in the London Borough of Hammersmith and Fulham (LBHF). On 18 March 2021, LBHF entered an emergency footing, the first council in England to do so. The UK entered a nationwide lockdown on 23 March 2020. Following the identification of the first case, LBHF Council acted proactively to assist residents by establishing the Community Aid Network (CAN) and appointing a Director of COVID-19 response.

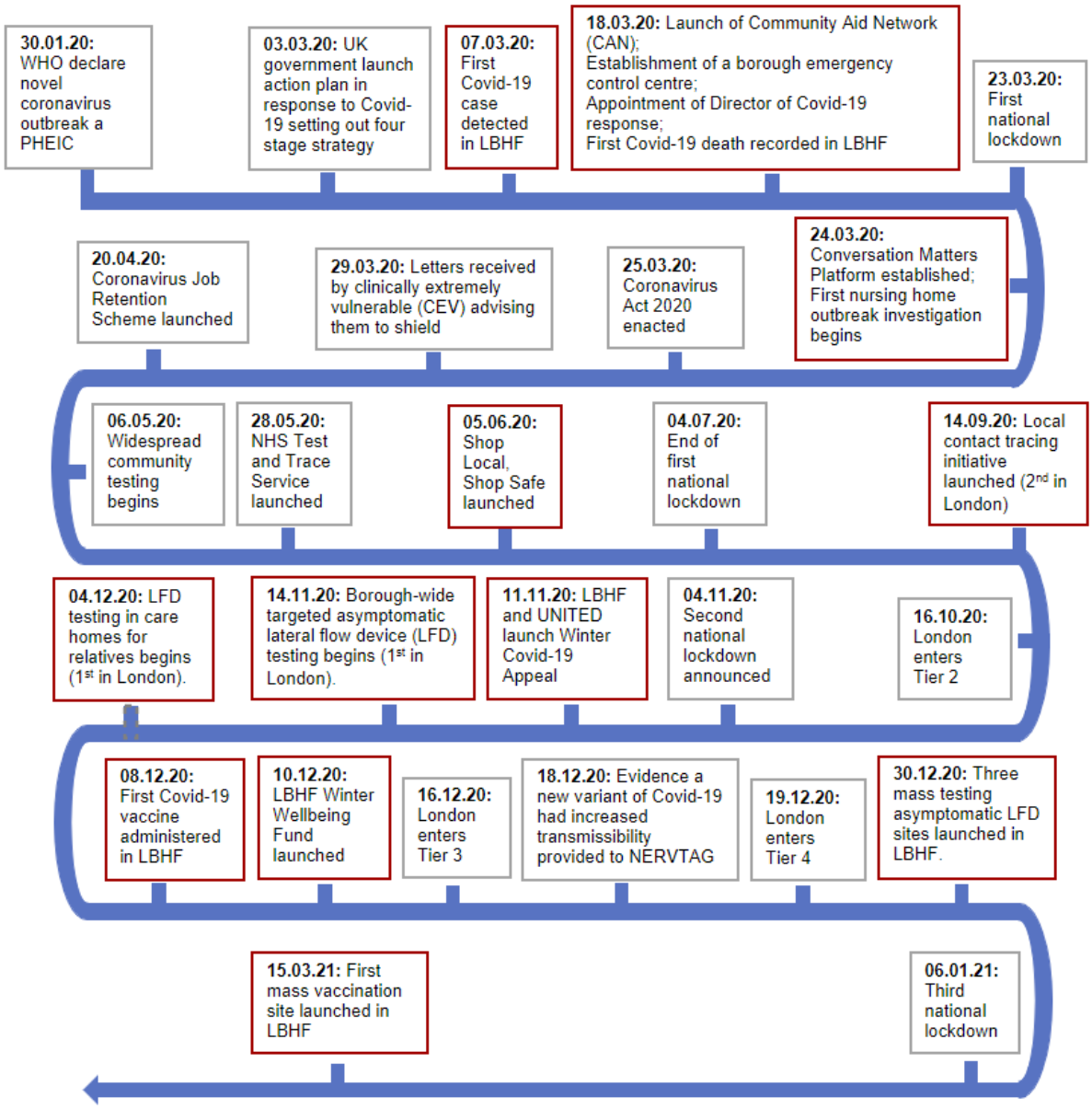
As of 31 March 2021, 12,855 total COVID-19 cases had been recorded in LBHF. The 7-day rate of COVID-19 cases per 100,000 peaked on 10 January 2021 at 820.4. More deprived areas in LBHF recorded higher numbers of COVID-19 cases between March 2020 and March 2021 compared with more affluent areas. In addition, case rates varied by ethnic group with individuals identifying as 'Other' ethnicity and Asian and Asian British recording the highest case rate per 100,000 during the 12-month period.

LBHF's pioneering and innovative approach to testing led to the early introduction of care home testing in April 2020 (first nationally at same time as Public Health England's research study 'Vivaldi') and the borough being the first in London to introduce lateral flow device (LFD) testing in November 2020. LBHF also introduced local contract tracing very early on, in September 2020.

Deaths due to COVID-19 rose to a high of 74.0 per 100,000 per month in April 2020, and increased demand during certain periods led to the establishment of emergency mortuaries in LBHF. The roll-out of the National Health Service (NHS) vaccination programme may have contributed to the decrease in deaths in March 2021, however challenges regarding improving uptake in more deprived areas and in some ethnic groups remain. As of 31 March 2021, 37.2 percent of the LBHF population had received the first dose of the COVID-19 vaccine.

[1] World Health Organisation (2021) Timeline: WHO's COVID-19 Response. [Online] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline. Accessed 10 August 2021.

Figure 1. Timeline of international, national and local response to COVID-19 (January 2020 – March 2021).



1.1. COVID-19 Infections

COVID-19 Infections in LBHF

12,855 COVID-19 cases

First recorded COVID-19 case:	Total COVID-19 outbreaks:
4 March 2020	**427**

Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021.

The first case of COVID-19 was identified in LBHF on 4 March 2020. As of 1 April 2021, a total of 12,855 COVID-19 cases had been identified in LBHF[2].

LBHF experienced three surges of COVID-19 cases between 1 March 2020 and 31 March 2021. The first surge occurred in April 2020 when the number of positive COVID-19 tests in LBHF reached 50 (Figure 2). However, it is likely cases were substantially higher during this period due to low rates of community testing resulting in unidentified cases.

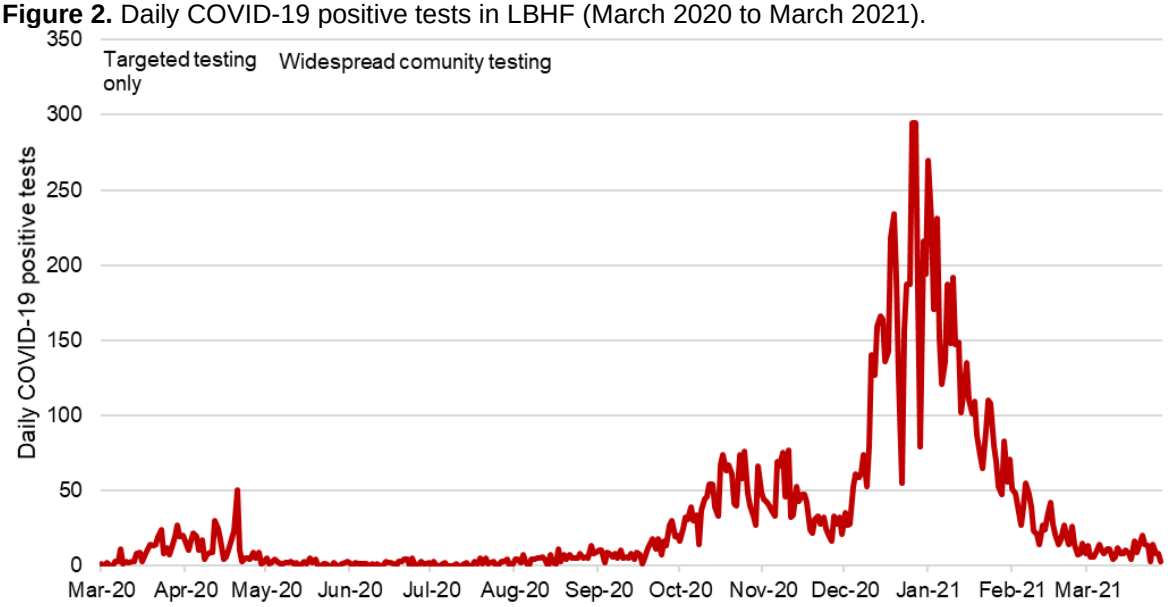
The next surge in cases occurred in October when the steady increase in cases in September 2020 accelerated, before stabilising during November following the introduction of national lockdown restrictions.

The second surge in cases occurred in December 2020 and January 2021 following the largest month-on-month increase in COVID-19 cases between November 2020 and December 2020. The 7-day case rate peaked on 10 January 2021 at 820.4 per 100,000 (Figure 3). The presence of the COVID-19 variant of concern (VOC) first identified in Kent (VOC B.1.1.7, or Alpha) is likely responsible for the sharp increase in cases during this period. The decrease in COVID-19 cases between January and February 2021 demonstrates the impact of the lockdown in decreasing transmission.

In LBHF individuals aged between 20 and 39 years had the highest number of COVID-19 cases (5968 – 47 percent of all cases in LBHF) and cases per 100,000 population (8741.5) between March 2020 and March 2021 (Table 1). Individuals aged 80 years and older had the second highest rate of COVID-19 cases per 100,000 (7717.1) of all age groups despite the relatively low absolute number of cases when compared to other age groups. The overrepresentation of individuals aged 80 years and older is in part due to outbreaks in care homes (Section 2.1.4). Females accounted for 52 percent of COVID-19 cases, Males accounted for 42 percent and gender was unknown for 3 percent during the 12-month period.

[2] HM Government (2021) Cases in Hammersmith and Fulham. [Online]. Available from: https://coronavirus.data.gov.uk/details/cases?areaType=ltla&areaName=Hammersmith%20and%20Fulham. Accessed 10 August 2021.

Figure 2. Daily COVID-19 positive tests in LBHF (March 2020 to March 2021).



Data source: HM Government (2021). Cases in Hammersmith and Fulham. Data updated as of 9:00 on 01 April 2021.

Figure 3. 7-day COVID-19 cases per 100,000 population in LBHF (June 2020 to March 2021).

Data source: Pubic health England (2021). London daily COVID-19 surveillance tables. Data updated as of 9:00 on 01 April 2021.

Table 1. COVID-19 cases by age group in LBHF (01 March 2020 to 31 March 2021)

	0-19	20-39	40-59	60-79	80+
COVID-19 cases	1608	5968	3426	1161	407
COVID-19 cases per 100,000 population	3997.0	8741.5	6998.8	5179.3	7717.1

Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021.

College Park and Old Oak had the highest number of COVID-19 cases relative to the population between 01 March 2020 and 31 March 2021 with a cumulative total of 9694.6 cases per 100,000 population. Wards adjacent to College Park and Old Oak had high rates of cases per 100,000 population and contain deprived areas (Figure 4). Palace Riverside had the lowest rate of cases per 100,000 population (5650.9).

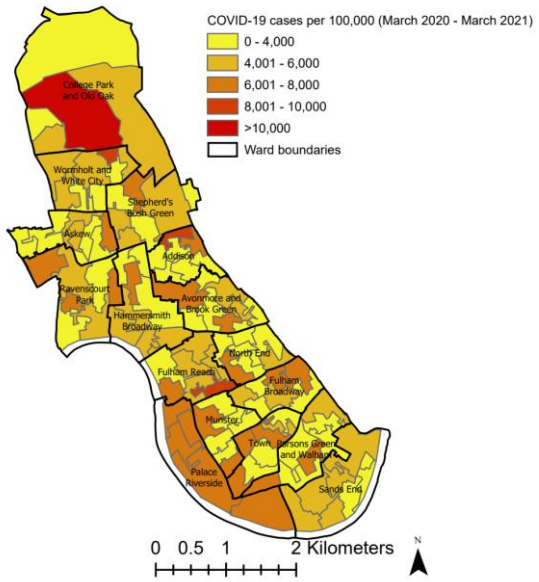
Other South West wards in LBHF (Munster and Town) which tend to be more affluent than those in the north, also had relatively low cases (Table 2).

Table 2. COVID-19 cases by ward in LBHF (March 2020 and March 2021)

Ward	April 2020	January 2021	March 2020 - March 2021
Addison	168.9	2212.9	6478.8
Askew	130.6	2220.2	6653.8
Avonmore and Brook Green	441.4	1898.9	6396.3
College Park and Old Oak	367.8	3309.8	9694.6
Fulham Broadway	342.8	2135.9	7462.4
Fulham Reach	317.0	2483.5	7195.1
Hammersmith Broadway	361.3	2260.5	8058.8
Munster	102.1	1679.2	6206.5
North End	194.2	2012.2	6345.4
Palace Riverside	145.2	1267.5	5650.9
Parsons Green and Walham	123.3	1964.8	5797.4
Ravenscourt Park	510.8	2062.2	6498.9
Sands End	47.9	2525.8	7180.5
Shepherd's Bush Green	172.5	2373.3	7497.7
Town	125.8	1833.0	6155.1
Wormholt and White City	231.4	2650.2	7629.7

Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021

Figure 4. Cumulative COVID-19 cases per 100,000 population in LBHF LSOAs (01 March 2020 to 31 March 2021)



Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021.

1.1.1. COVID-19 Infections and Deprivation

Between 01 March 2020 and 31 March 2021, cumulative COVID-19 cases per 100,000 in the poorest neighbourhoods were almost twice that in the richest neighbourhoods in LBHF.

The 2019 Index of Multiple Deprivation (IMD) provides a relative measure of deprivation for small areas across England. A deprivation score is assigned to each lower layer super output area (LSOA) based on a range of indicators including employment, education and housing[3]. The rank of each LSOA's deprivation score assigns each LSOA a decile, with decile one indicating highest level of deprivation. LBHF has 113 LSOAs with an average population of 1,638 individuals in each[4]. In LBHF 18 percent of LSOAs are in the most deprived 20 percent of LSOAs in England, however only one LSOA is in the most deprived 10 percent of LSOAs in England.

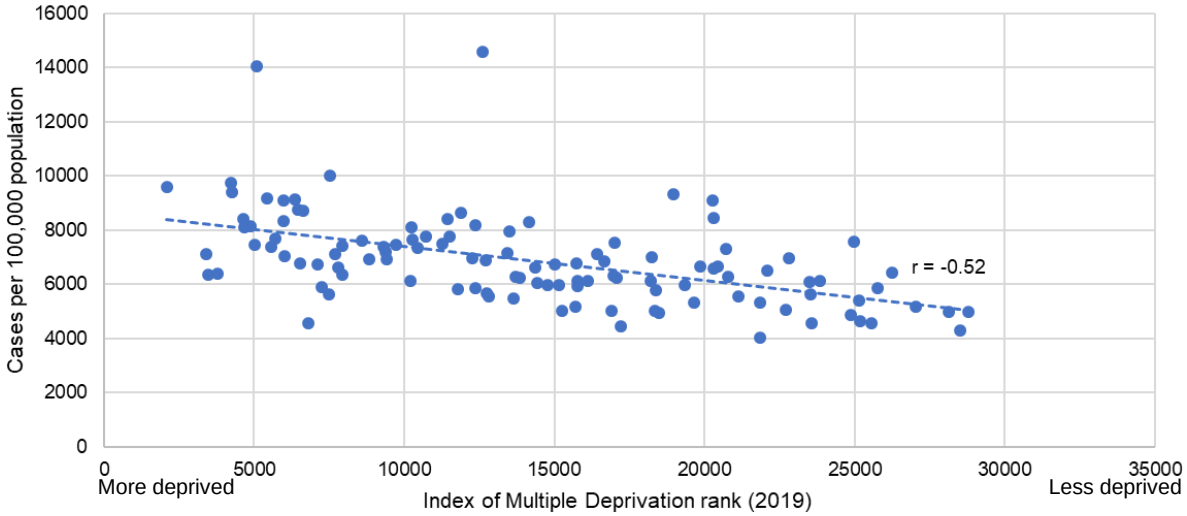
Analysis by Public Health England (PHE) found age-standardised diagnosis rates for COVID-19 in the most deprived 20 percent of LSOAs were 1.9 times higher than the rate in the least deprived 20 percent of LSOAs for men, and 1.7 times higher for women[5].

In LBHF between March 2020 and March 2021, the average cumulative rate of COVID-19 cases per 100,000 in LBHF LSOAs in decile 1 (most deprived) was 9590.2. Almost double the average cumulative rate of COVID-19 cases per 100,000 in LBHF LSOAs in decile 9 (4822.9) (second least deprived decile).

Plotting LSOAs deprivation rank against rates of COVID-19 cases per 100,000 population between March 2020 and March 2021 reveals a moderate negative relationship between the variables (Figure 5). The Pearson correlation coefficient (r) indicates less deprived LSOAs (lower IMD rank) have a lower rate of cases per 100,000 population (Figure 5). It is plausible that the higher rates of diagnosis in more deprived areas may be due to a density of residents in occupations more exposed to COVID-19 or due to geographic proximity to infections[5].

[3] Ministry of Housing, Communities, and Local Government (2021). Index of Multiple Deprivation 2019.
[4] Office for National Statistics (2020). Mid-year Population Estimates 2019.
[5] Public Health England (2020) Disparities in the risk and outcomes of COVID-19.

Figure 5. Correlation between COVID-19 cases per 100,000 population and IMD decile by LSOA (March 2020 – March 2021).



Data source: Public Heath England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 15 March 2021; Ministry of Housing, Communities and Local Government, English Indices of Deprivation 2019.
* r is a statistical measure of correlation. An r near zero indicates no correlation, an r closer to 1 or -1 suggests correlation.

1.1.2. COVID-19 Infections and Overcrowding

Analysis indicates there is no correlation between overcrowding and COVID-19 cases per 100,000 population at the neighbourhood level in LBHF.

The New Policy Institute has identified overcrowded households in London were at higher risk of intra-household transmission between March 2020 and September 2020[6]. Data from the 2011 census is the only source currently available for this data, therefore conclusions are limited. However, it is likely the higher prevalence of overcrowded households in more deprived neighbourhoods contributed to higher COVID-19 infections in these areas.

Plotting the proportion of households overcrowded in each LSOA by COVID-19 cases per 100,000 population does not reveal a relationship between these characteristics. However, the presence of a relationship across London indicates that the lack of correlation in LBHF may be due to the data not accurately representing current conditions (Appendix 1).

1.1.3. COVID-19 Infections and Ethnicity

Excluding individuals identifying as an 'Other' ethnic group, individuals identifying as Asian and Asian British had the highest rate of cases per 100,000 between March 2020 and March 2021 in LBHF.

[6] New Policy Institute (2020). People and places in London most vulnerable to COVID-19 and its social and economic consequences.

England-wide analysis of COVID-19 data by PHE revealed individuals identifying as Black ethnicity had the highest age-standardised diagnosis rates of COVID-19 per 100,000 population (486 in females; 649 in males) and individuals identifying as White ethnicity had the lowest (220 in females; 224 in males)[5].

The differential impact of COVID-19 on ethnic groups in LBHF is limited by the lack of recorded data on ethnicity for confirmed cases – 25.6 percent of COVID-19 cases in LBHF did not have ethnicity information. Calculating the rate of COVID-19 cases per 100,000 population enables COVID-19 cases by ethnicity to be investigated, however the data for the number of individuals identifying as each ethnicity is from the 2011 Census therefore may not accurately represent the current trend.

Excluding individuals identifying as an 'Other' ethnic group, Individuals identifying as Asian and Asian British had the highest rate of cases per 100,000 between March 2020 and March 2021 with 5623.6 cases per 100,000 population. The rate was marginally above individuals identifying as Black, African, Caribbean or Black British - 4950.2 – and substantially above individuals identifying as White (Table 5). Plotting the relationship between COVID-19 cases per 100,000 and the proportion of the population identifying as Black, Asian or Minority Ethnic (BAME) also revealed a correlation between the two characteristics (r=0.4) (Appendix 2).

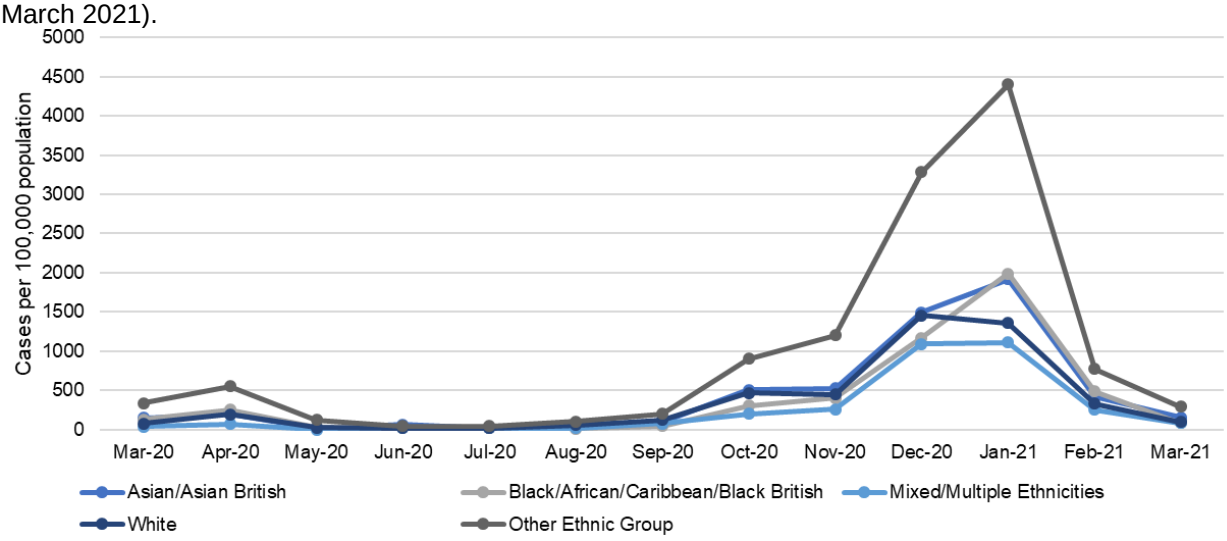
Table 5. COVID-19 cases by ethnicity in LBHF (March 2020 and March 2021)

	No information	Black/African/ Caribbean/Black British	Asian/ Asian British	Mixed/multiple ethnic groups	Other ethnic group	White
Population 2019	-	24,706	16,502	12,811	11,391	11,9733
COVID-19 cases	3296	1223	928	414	1396	5593
COVID-19 cases per 100,000 population	-	4950.2	5623.6	3231.6	12255.3	4671.2
Proportion of general population (percent)	-	13	9	7	6	65
Proportion of COVID-19 cases (percent)	25.6	9.5	7.2	3.2	10.9	43.5

Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021; Office for National Statistics (2013). Census 2011, Ethnic Group.

Individuals identifying as Other ethnic group have a higher proportion of COVID-19 cases (10.9 percent) compared to the proportion of the general LBHF population this group comprises (6 percent). In both April 2020 and January 2021, individuals identifying as Other ethnic group had the highest number of cases per 100,000 population (Figure 6). Excluding Other ethnic group, during the surge in COVID-19 cases between December 2020 and January 2021, individuals identifying as Asian or Asian British, and Black, African, Caribbean, or Black British had the highest rate of COVID-19 cases per 100,000 population (Figure 6).

Figure 6. COVID-19 cases per 100,000 population by ethnic group in LBHF (01 March 2020 to 31 March 2021).



Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021; Office for National Statistics (2013). Census 2011, Ethnic Group

1.1.4. Outbreaks, Clusters and Exposures

Between 01 March 2020 and 06 March 2021, PHE notified LBHF of 172 outbreaks within the borough with workplaces being the most common place for an outbreak to occur.

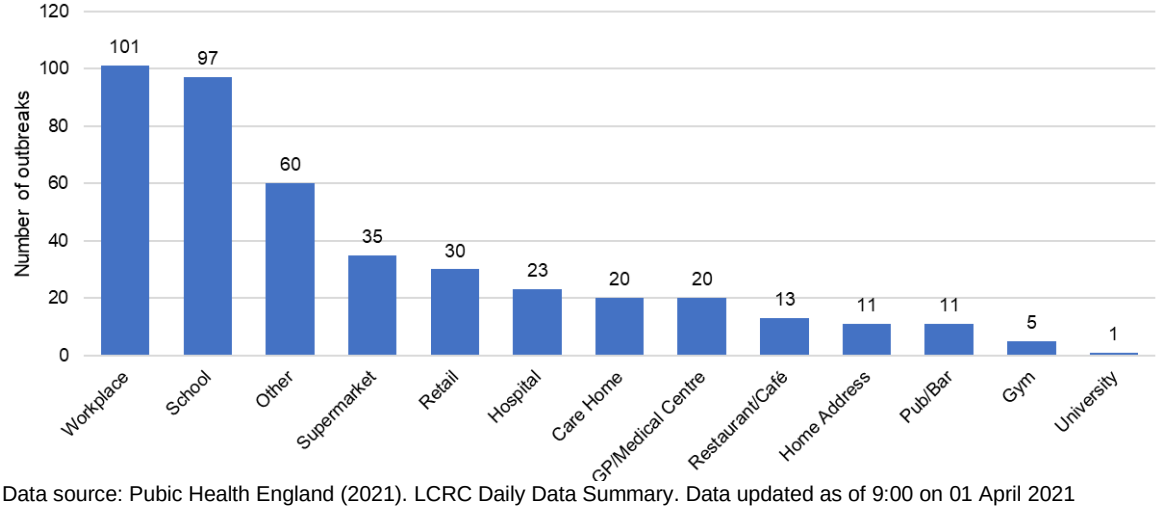
PHE[7] defines a cluster as two or more test-confirmed cases of COVID-19 among individuals associated with a specific non-residential setting with illness onset dates within a 14-day period. PHE[7] defines an outbreak as two or more test-confirmed cases of COVID-19 among individuals associated with a specific non-residential setting with illness onset within 14 days, and one of:

- Identified direct exposure between at least 2 of the test-confirmed cases in that setting.
- When there is no sustained local community transmission - absence of an alternative source of infection outside the setting for the initially identified cases.

Between 01 March 2020 and 06 March 2021, PHE notified LBHF of 2 clusters, 253 exposures, and 172 outbreaks within the borough[8]. Workplaces were the most common place for an outbreak to occur (101 identified), closely followed by schools (97) (Figure 7). PHE recorded 20 outbreaks in care homes between March 2020 and 2021, and 140 cases linked to care homes. Incidence of outbreaks and exposures were evenly distributed across LBHF (Figure 8).

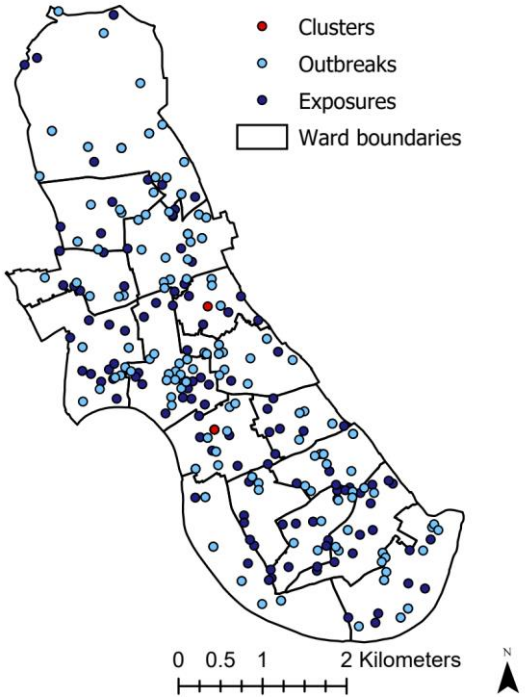
[7] Public Health England (2021). COVID-19: epidemiological definitions of outbreaks and clusters in particular settings.
[8] Public Health England (2021). LCRC Daily Data Summary.

Figure 7. COVID-19 outbreaks by location type in LBHF (01 March 2020 – 31 March 2021).



Data source: Pubic Health England (2021). LCRC Daily Data Summary. Data updated as of 9:00 on 01 April 2021

Figure 8. COVID-19 clusters, outbreaks and exposures in LBHF (01 March 2020 – 31 March 2021).



Data source: Public Health England (2021). LCRC Daily Data Summary. Data updated as of 9:00 on 15 March 2021.

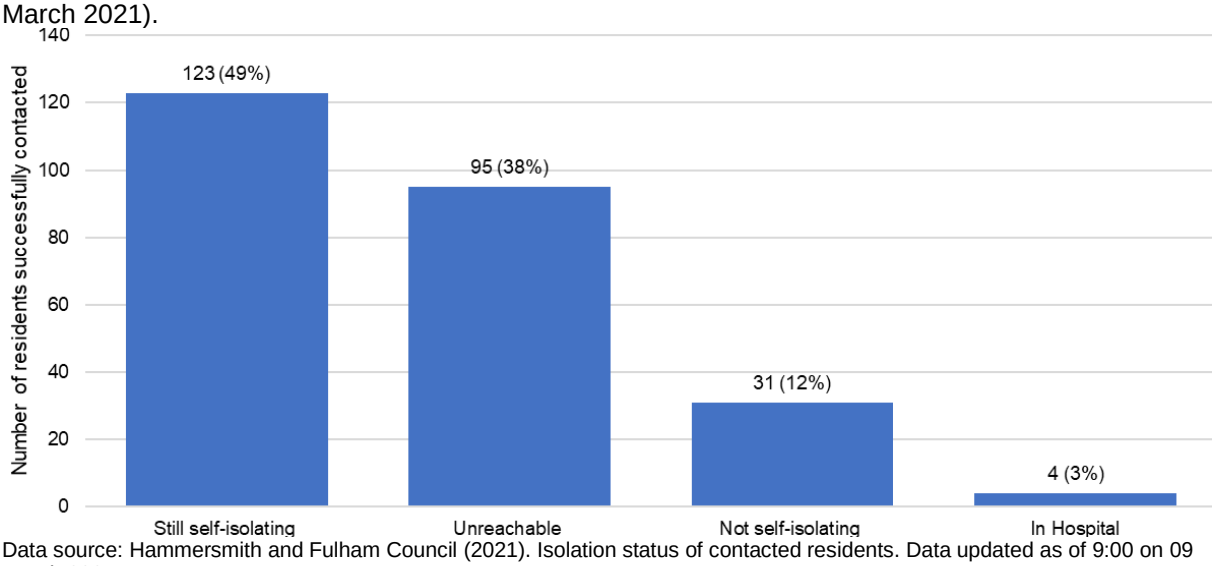
1.1.5. Self-isolation Checks

Between March 2020 and April 2021, 78 percent of LBHF residents successfully contacted within 10-days of a positive test stated they were still self-isolating.

Between March 2020 and 01 April 2021, LBHF Council contacted 253 residents via phone call within 10-days of the resident testing positive. Residents were selected at random.

Of the 253 residents contacted, 38 percent (95 individuals) were unreachable. Of the 158 successfully contacted, 78 percent stated they were still self-isolating, 20 percent stated they were no longer self-isolating, and 3 percent stated they were in hospital (Figure 9).

Figure 9. Reported self-isolation status by residents contacted by LBHF Council (March 2020 – March 2021).



Data source: Hammersmith and Fulham Council (2021). Isolation status of contacted residents. Data updated as of 9:00 on 09 March 2021

1.1.6. Intelligence-led Approach

LBHF adopted an intelligence-led approach to COVID-19, ensuring all decision-making was rooted in the data available.

Due to the nature of the pandemic and the challenges it posed it was paramount that the Council's response was driven by data and where appropriate through the use of technology.

Since March 2020, the Business Intelligence (BI) Service has developed and continuously deployed a series of reports to inform decision makers. This included live dashboards developed within Power BI and weekly reports. Due to the volume and range of data sources concerning COVID-19, it was important for the BI Service to deploy the data warehouse to help manage these flows including automation. To ensure intelligence was a part of decision-making, different types of reports have been developed to meet the needs of various audiences. Intelligence has been an integral part of daily and weekly pandemic response meetings. Deploying automated dashboards has helped increase self-service BI within the organisation and free up capacity for more value-added analysis. The ability to match data provided by the NHS to other Council datasets has been key to improve our ability to contact residents but also further developing a more holistic understanding of the needs of our residents.

Throughout the pandemic the BI Service has implemented technical solutions to support the Council's response. This has included developing a series of new CRM systems to support the CAN and Shield call centre and the Volunteer Hub; using SMS technology to enable more effective communication with key cohorts; using Interactive Voice Response (IVR) technology to contact residents and understand needs; using technology to automate processes so that the needs of our residents are quickly actioned; and enabling evidence-based decision making through the deployment of dashboards, geographical analysis software and data warehousing capability.

1.2. COVID-19 Testing

COVID-19 Testing

172,106 COVID-19 tests

Positivity:	Negative tests:
7.5 percent	**159,212 tests**

Data source: Public Health England (2021) COVID-19 Situational Awareness Explorer: Daily tests and confirmed cases. Data updated as of 9:00 on 01 April 2021.

The first COVID-19 test was carried out in LBHF on 07 January 2020. As of 31 March 2021, a total of 172,106 COVID-19 tests have been carried out in LBHF (Figure 10). The total positivity, or positive test rate, defined as the proportion of individuals tested who test positive[9], was 7.5 percent (Appendix 3)

There are two main testing routes in the UK[10]:

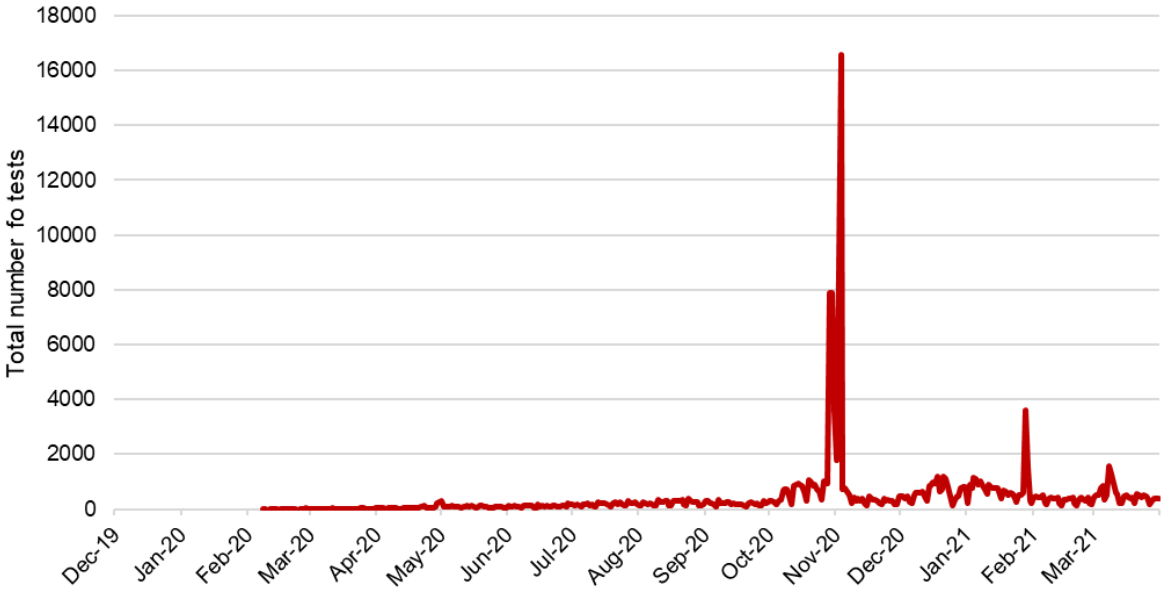
(i) Pillar 1: Swab testing by NHS hospitals and PHE labs for individuals with clinical need, and health and care workers.
(ii) Pillar 2: Swab testing for the wider community.

Initially in the first months of the pandemic, the UK exclusively used the Pillar 1 testing route. However, in May 2020 Pillar 2 testing rolled out tests to the wide community including in LBHF. The limited testing capacity prior to May 2020 resulted in an underestimate of COVID-19 cases in LBHF (Section 2.1).

During the first surge in COVID-19 cases, LBHF focussed testing efforts on at-risk cohorts, including in nursing homes (Section 2.1.4).

[9] Centres for Disease Control and Prevention (2020) Calculating percent positivity.
[10] Department of Health and Social Care (2020) COVID-19 testing data: methodological note.

Figure 10. Testing by carried out in LBHF (01 January 2020 – 31 March 2021).



Data source: Public Health England (2021) COVID-19 Situational Awareness Explorer: Daily tests and confirmed cases. Data updated as of 9:00 on 01 April 2021.

COVID-19 testing is primarily via Polymerase Chain Reaction (PCR) tests, or via LFD tests. The first LFD tests were carried out in November 2020, prior to November only PCR tests were used. LBHF was the first London borough to deploy LFD testing on 14 November 2021. Both PCR and LFD tests are essential for controlling COVID-19 and supressing transmission. PCR tests are primarily used for symptomatic individuals due to higher sensitivity (the proportion of the individuals with COVID-19 testing positive) of the PCR test when compared to the LFD test[11]. The main test sites in LBHF are supplemented by mobile test sites and symptomatic test sites.

1.2.1. Nursing Home Testing

Outbreak investigations in nursing homes in April 2021 highlighted the importance of regular testing of residents and staff to control outbreaks of COVID-19 in nursing homes prior to the adoption of this approach at a national level.

The first confirmed case of COVID-19 in a resident of any LBHF nursing home was identified on 25 March 2020. All four nursing homes in the borough have now experienced outbreaks of the SARS-CoV-2 virus and were pre-emptively closed to visitors and admissions at the times their outbreaks were declared.

In the event of outbreaks in care homes, a multidisciplinary outbreak control team was convened for each facility. These were chaired by the Director of Public Health (DPH) for LBHF from late March 2020.

[11] Department of Health and Social Care (2021) Understanding lateral flow antigen testing for people without symptoms.

Outbreak testing consisted of comprehensive testing of all residents - both symptomatic and asymptomatic - was performed in mid-April 2020, with re-testing of the negative residents a week later. A sample of staff were also tested in three of the care homes. Running parallel to testing was a point-prevalence survey for both typical and atypical symptoms in the residents. Enhanced support was provided for the care homes, with on-site infection prevention and control training from Imperial matrons.

The results of this investigation facilitated the immediate isolation of 50 asymptomatically infected residents, and informed appropriate infection prevention and control measures in general throughout the homes, including a visible improvement in the use of personal protective equipment (PPE). A further pilot of whole-scale staff testing began on 13 May 2020. Vitally, a strong interdisciplinary team has been created which can react quickly to changing circumstances during this pandemic and generate bespoke local guidance documents. The proactive approach adopted by LBHF Council to ensure an enhanced level of protection around social care ahead of national guidance has been praised by Duncan Selbie, the founding Chief Executive of PHE[12].

Following the outbreak investigation, nursing home testing transitioned to PCR tests for staff every week and PCR tests for residents every four weeks in May 2020. To ensure compliance with testing, LBHF Council paid staff £200 a week if they were required to isolate. The payments for staff isolation were later drawn from the Adult Social Care Infection Control Fund[1] following the introduction of the Fund in May 2020. Transitional beds for care home residents testing positive after discharge from hospital were introduced to reduce the risk of outbreaks due to residents returning to nursing homes.

In November 2020 LFD testing started for staff twice a week to supplement weekly PCR testing. In December 2020 LFD testing for visitors was briefly introduced, however the surge in cases during this time led to all nursing homes closing. From 08 March 2021, the government allowed care home residents to receive one nominated visitor provided the visitor wore PPE and had a negative LFD test.

Between 06 March 2020 and 08 March 2021, 6,256 COVID-19 swabs were taken in LBHF nursing homes. Staff accounted for 64 percent of the swabs with residents comprising the remainder of swabs. Residents had a higher positive test rate (3.8 percent) compared to staff (0.8 percent). In addition to nursing homes, 1326 swabs were taken at mental health and learning disability supported living homes.

1.2.2. Mass Testing

The roll out of mass testing using LFD tests has been deployed by LBHF Council as a tool to test asymptomatic individuals and maintain low infection rates.

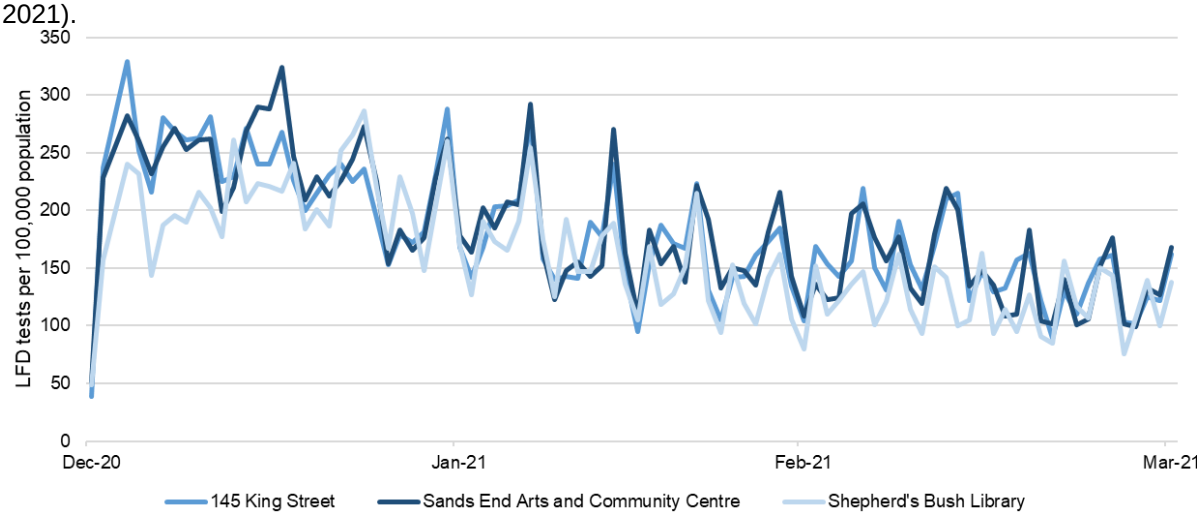
[12] Public Health England (2021) Duncan Selbie's Friday Message - 31 July 2020 [Online] Available from: https://publichealthmatters.blog.gov.uk/2020/07/31/duncan-selbies-friday-message-31-july-2020/ Accessed 24 August 2021.

The introduction of mass testing aimed to identify individuals with asymptomatic infections to enable isolation and contact tracing of cases, leading to suppression of community transmission.

LBHF began borough-wide mass targeted COVID-19 testing for asymptomatic individuals using LFD testing on 11 November 2020 – the first local authority in London to do so. On 30 December 2020, LBHF introduced three mass testing sites using LFD testing across the borough. LBHF Council worked in collaboration with external suppliers to manage the mass testing sites. Between 15 January 2021 and 25 March 2021, LBHF has consistently had one of the highest numbers of LFD kit registrations per 100,000 in London.

As of 31 March 2021, PHE has recorded 107,250 LFD tests in LBHF. Between 30 December 2020 and 31 March 2021, 58,512 COVID-19 LFD tests were carried out at LBHF Council mass testing sites. Of these tests, the majority (81 percent) were carried out at test sites located at 145 King Street, Sands End Arts and Community Centre, and Shepherd's Bush Library. Testing at the three main mass testing sites has gradually decreased between January and March 2021 (Figure 11). However, the daily number of tests at the three main mass testing sites remained relatively high as of 31 March 2021 with the lowest recorded number of tests being 76 at the Shepherd's Bush Library site on 27 March 2021.

Figure 11. LFD tests at the three main mass testing sites in LBHF (31 December 2020 – 31 March 2021).



Data source: Hammersmith and Fulham Council (2021). Mass Testing Data. Data updated as of 01 April 2021.

Between 31 December 2020 and 28 February 2021, individuals attending the asymptomatic LFD test sites were invited to take part in a survey to monitor efficiency of the service. In total, 1,069 responses were collected. Respondents learnt of the test cited primarily via the council website, followed by word of mouth and leafletting door to door. Relatively few respondents heard of the test sites via posters, Instagram, Facebook or Twitter. The majority of survey respondents stated the LBHF Council testing site team, and the results service were exceptional (Table 6). In addition, the majority of respondents stated they would recommend testing to family members and neighbours.

Table 6. Respondent answers to survey questions on mass test sites (31 December 2020 – 28 February 2021).

Survey question & Survey response	**Exceptional**	**Very good**	**Good**	**Fair**	**Poor**	**Very poor**
How easy was the COVID-19 test booking tool?	37.4	48.6	10.7	3.0	0.2	0.2
How useful was the information on the website about the test?	27.7	52.0	17.0	2.1	0.7	0.5
How helpful was the LBHF Council team at the testing site?	65.3	27.0	5.8	1.1	0.6	0.2
How efficient was the results service sent to you?	70.9	23.6	2.2	0.9	0.5	2.0
How likely is it that you will recommend other family members and neighbours to take the test?	69.8	23.7	3.6	1.1	0.7	1.0

Data source: Hammersmith and Fulham Council (2021). Mass Testing Survey. Data updated as of 01 March 2021

1.3. Contact Tracing

COVID-19 Contact Tracing

2,209 residents referred by PHE

Cases completed:	Cases completed by NHSTT
100 percent	**86 percent**

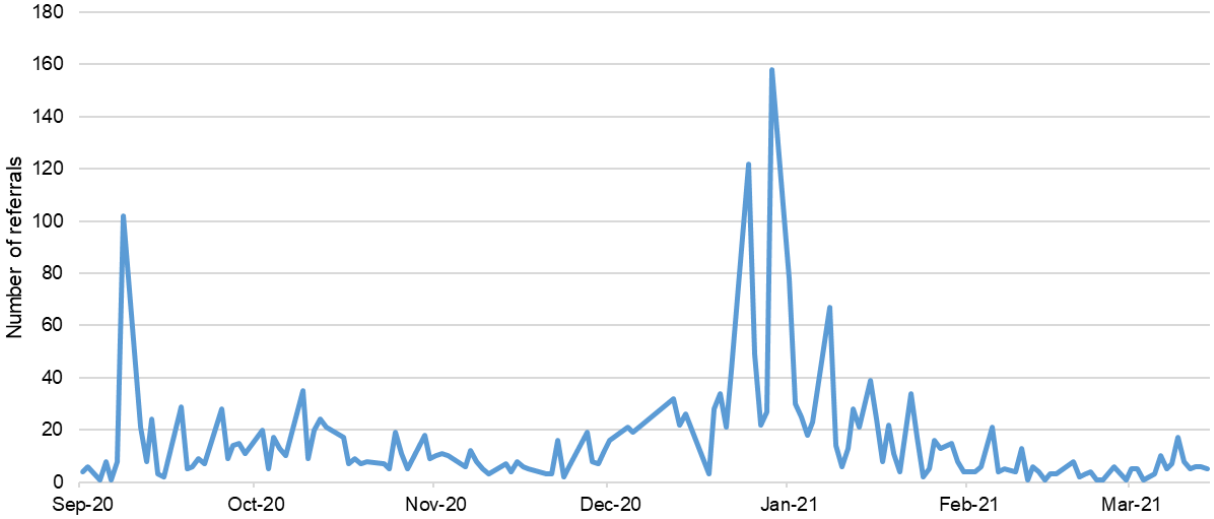
Data source: Public Health England, COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 07 April 2021.

NHS Test and Trace (NHSTT) – launched on 28 May 2020 – aimed to prevent the spread of COVID-19 by identifying contacts of individuals with positive tests and asking those contacts to isolate[13]. NHSTT experienced difficulties reaching contacts and between 28 May 2020 and 09 September 2020, NHSTT reached 98 percent of close contacts for complex cases (linked to outbreaks or high-risk settings) and 59 percent of close contacts for non-complex cases (all other cases) [13].

LBHF Council received funding to establish a local contact tracing team in August 2020 to reach contacts for hard-to-reach non-complex cases referred by NHSTT. The daily number of contact tracing cases in LBHF peaked in January 2021 (Figure 14). LBHF established a call centre and recruited employees to contact individuals referred by NHSTT. LBHF trained employees for one week on use of the local and national contact tracing systems. Employees received additional training when necessary. The number of daily local contact tracing cases referred by NHSTT to LBHF peaked in January 2021 (Figure 12). The local contact tracing team established a process to contact cases based on the data available (Figure 13; Table 8).

[13] The Health Foundation (2021) NHS Test and Trace: The journey so far.

Figure 12. Daily local contact tracing cases in LBHF referred by NHSTT (18 September 2020 to 31 March 2021)



Data source: Hammersmith and Fulham Council (2021). Local Contact Tracing Dashboard. Data updated as of 9:00 on 31 March 2021.

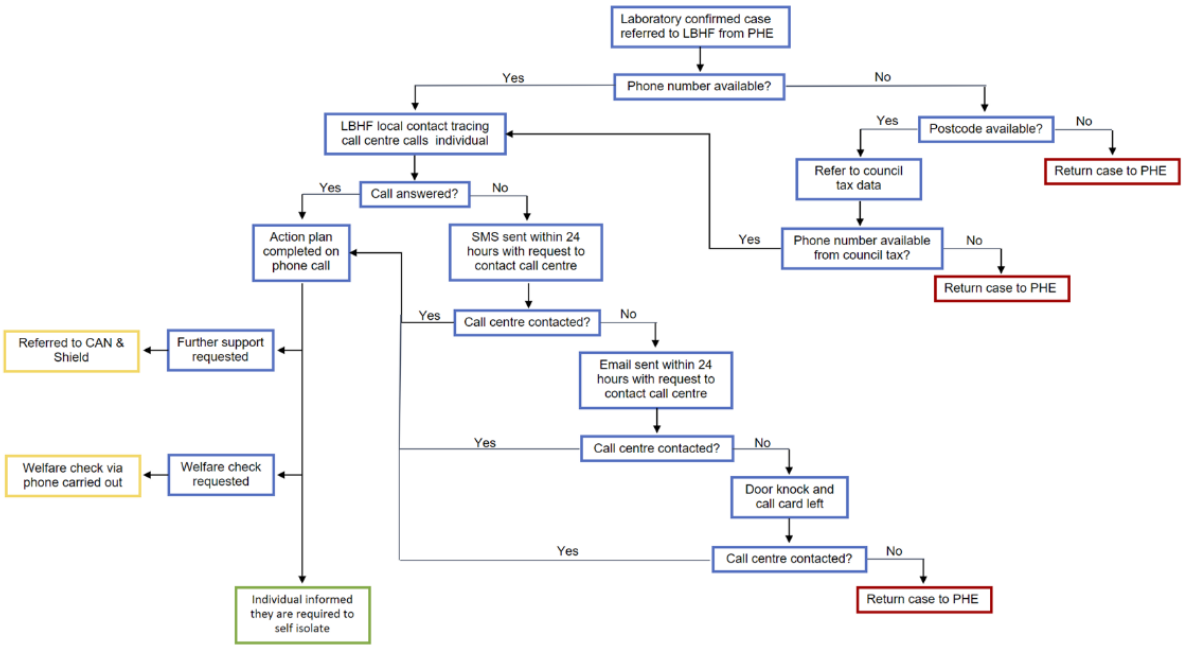


Figure 13. Process flow of local contact tracing in LBHF

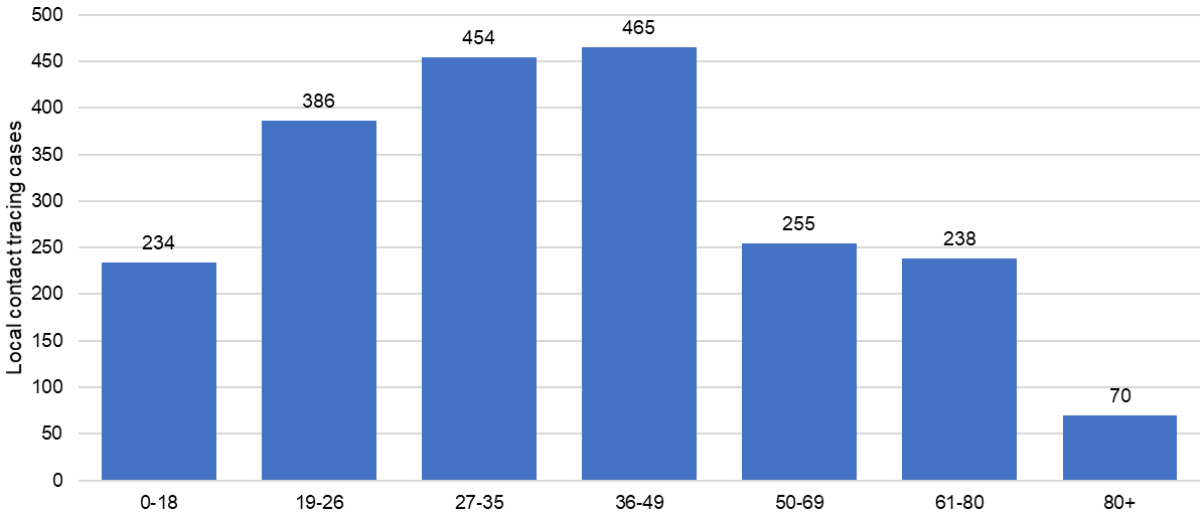
Table 8. Summary metrics of LBHF local contact tracing initiative

Local contact tracing cases:	
Referrals	2,209
Called within 24 hours of creation	1261
Missed calls followed up with SMS after 24 hours	323
SMS followed up with email after 24 hours	288

Data source: Hammersmith and Fulham Council (2021). Local Contact Tracing Dashboard. Data updated as of 9:00 on 07 April 2021.

Local contact tracing has proved an effective method of contacting LBHF residents and will be essential as the UK continues to ease lockdown restrictions after March 2021. The majority of local contact tracing cases were individuals aged between 27 and 50 years, whereas individual aged 70 years and above comprised the smallest number of cases (Figure 14).

Figure 14. Number of local contact tracing cases by age group (18 September 2020 – 07 April 2021)



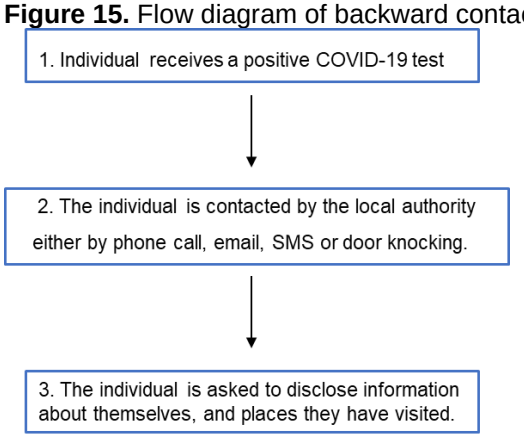
Data source: Hammersmith and Fulham Council (2021). Local Contact Tracing Dashboard. Data updated as of 9:00 on 07 March 2021.

1.3.1. Backward Contact Tracing

LBHF Council introduced a backward contact tracing system in September 2020 to aid the identification of networks of COVID-19 transmission.

Backward (or reverse) contact tracing attempts to identify where someone who has tested positive for COVID-19 may have contracted the virus. This differs from previous contact tracing efforts which have focussed on attempting to identify people that the person who has tested positive for COVID-19 may have infected. Backward contact tracing is a useful tool to uncover networks of COVID-19 transmission (Figure 15).

Figure 15. Flow diagram of backward contact tracing process.



Between 18 September 2020 and 19 April 2021, 1,922 LBHF residents that tested positive for COVID-19 and referred by NHSTT had been successfully contacted by the local contact tracing team. Individuals were asked to disclose information about themselves and the places they visited.

Only 6 percent of individuals contacted gave information concerning their occupation. Of these individuals 28 percent reported working in the workplace, and 21 percent reported working from home. Over half of the individuals that responded to questions regarding holidays and hospitality venues reported they had travelled out of the UK or attended a hospitality venue. Although it is difficult to draw conclusions with low response rates to many of the questions, holidays and hospitality appear to be the most common places of transmission.

1.4. COVID-19 Hospitalisations

COVID-19 Hospitalisation

4,629 COVID-19 patients

admitted to Imperial College Healthcare NHS Trust

Data source: UK Government (2021). Hospital admissions: Imperial College Healthcare NHS Trust Data updated as of 9:00 on 31 March 2021.

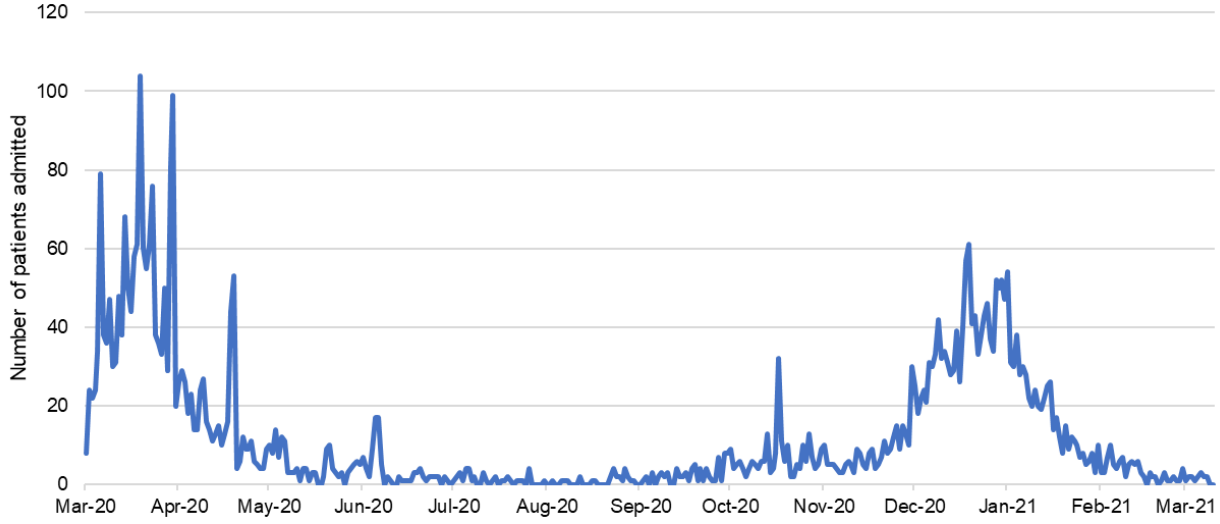
In the short term, COVID-19 increased the demand for acute care, particularly in Intensive Care Units (ICU). The wider impacts on hospital service use are discussed in Chapter 3 – Wider Impact of Covid on Health and Healthcare Services.

The number of LBHF residents hospitalised due to COVID-19 is not available. However, between March 2020 and March 2021, 4,629 COVID-19 patients were admitted to Imperial College Healthcare NHS Trust – the first being recorded on 19 March 2020. It is likely many of the admitted patients were LBHF residents as the Trust manages the primary hospitals in LBHF, in addition to residents living in the surrounding boroughs.

Daily admissions surged in April 2020 and between December 2020 and January 2021 (Figure 16), reflecting the surge in cases during these periods. Despite the

highest number of COVID-19 cases in LBHF being recorded in January 2021, the highest number of hospital admissions occurred in April 2020. The finding highlights how constrained testing capacity during the first national lockdown resulted in an underestimate of COVID-19 cases.

Figure 16: COVID-19 patients admitted to Imperial College Healthcare NHS Trust (01 March 2020 – 28 March 2021).



Data source: UK Government (2021). Hospital admissions: Imperial College Healthcare NHS Trust Data updated as of 9:00 on 31 March 2021.

1.5. COVID-19 Vaccinations

COVID-19 Vaccinations

60,617 first dose vaccinations
9,050 second dose vaccination

Population received first vaccination:	Decline rate:
32.7 percent	**2.5 percent**

Data source: NHS 2021, Whole Systems Integrated Care Dashboards for North West London Collaboration of Clinical Commissioning Groups. Data updated as of 9:00 on 01 April 2021.

On 08 December 2020, the first individual in LBHF received the COVID-19 vaccination. As of 31 March 2021, 60,017 individuals had received the first dose of the vaccination and 9,050 individuals had received in LBHF.

The joint committee for vaccinations and immunisations (JCVI) identified nine priority groups in the UK population for COVID-19 vaccination based on the prevention of mortality and the maintenance of the health and social care systems[14] (Appendix 5).

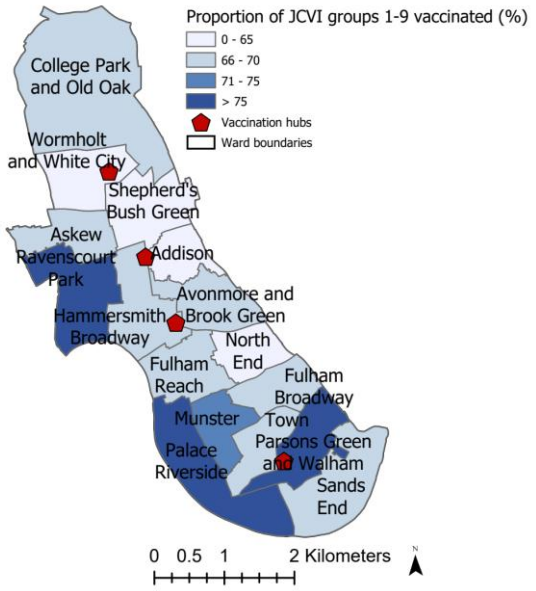
[14] JCVI (2020). Priority groups for COVID-19 vaccination.

LBHF aims to offer a COVID-19 vaccination to all residents aged 18 and over by October 2021. In the seven-day period between 25 and 31 March 2020, 668 individuals in LBHF were vaccinated each day on average.

The four vaccination sites are evenly distributed across LBHF (Figure 17). Vaccination uptake for individuals in the priority groups identified by JCVI varies between wards, with wards located on the eastern border of LBHF experiencing lower uptake rates.

The decline rate – the proportion of individuals offered the vaccination declining it – remains relatively low at 2.5 percent as of 31 March 2021 (Appendix 3). Between 08 December 2020 and 31 March 2021, individuals aged 80 years and above had the highest decline rate at 7.5 percent (Table 9) in LBHF. Individuals identifying as Caribbean in LBHF had the highest decline rate (10.5 percent), whereas individuals identifying as British and Irish had the lowest decline rate (1.7 and 2.1 percent respectively) (Table 10). The decline rate in LBHF also varied by deprivation with individuals living in areas with the higher levels of deprivation with the higher decline rates between December 2020 and March 2021 (Figure 18).

Figure 17. Vaccination uptake in the nine priority groups identified by JCVI, by ward (08 December 2020 – 31 March 2021).



Data source: NHS 2021, Whole Systems Integrated Care Dashboards for North West London Collaboration of Clinical Commissioning Groups. Data updated as of 9:00 on 01 April 2021.

Table 9. Number of eligible individuals receiving first and second vaccine, and decline rate by priority group (08 December 2020 – 31 March 2021).

Cohort	Eligible	1st Vaccine	2nd Vaccine	Uptake rate (percent)	Decline rate (percent)
Care Home	505	411	277	81	5
Clinically Extremely Vulnerable	4,884	3,628	604	74	6
At Risk (16-64)	11,461	6,410	466	56	3
QCOVID	3,544	2,292	139	65	3
Aged 80+	4,937	3,990	1,677	81	8
Aged 75-79	3,823	3,070	770	80	6
Aged 70-74	5,459	4,338	832	80	5
Aged 65-69	5,595	4,084	274	73	4
Aged 60-64	5,843	3,904	223	67	2
Aged 55-59	8,692	5,758	315	66	1
Aged 50-54	11,340	7,023	354	62	1
Aged 18-49	130,966	16,160	3,222	12	0
Aged 16-17	3,687	24	10	1	11

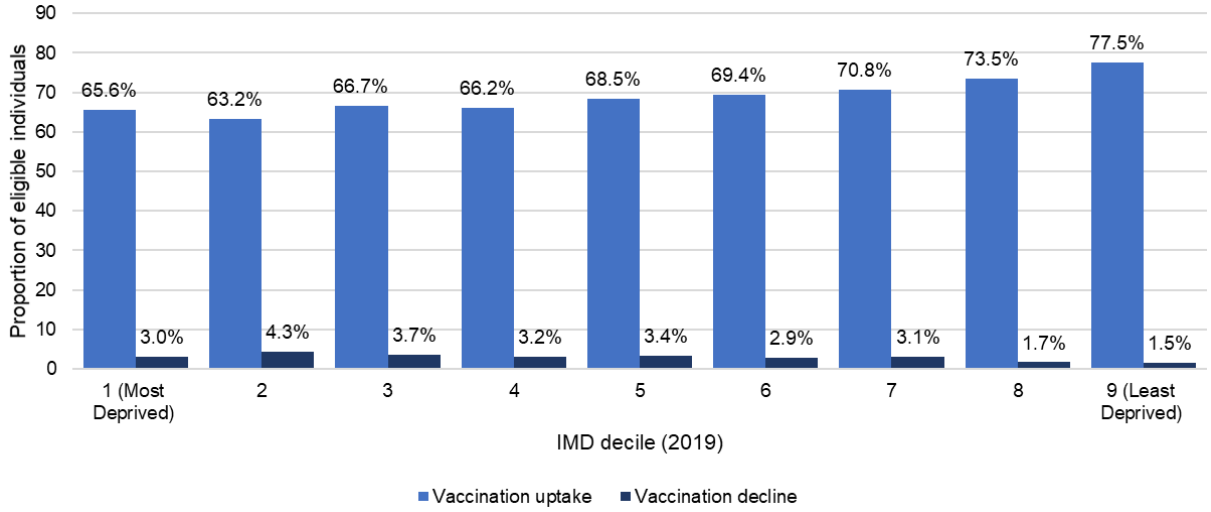
Data source: NHS 2021, Whole Systems Integrated Care Dashboards for North West London Collaboration of Clinical Commissioning Groups. Data updated as of 9:00 on 01 April 2021.

Table 10. Proportion of individuals declining the COVID-19 vaccination that have been offered the vaccination (decline rate), by ethnic group (08 December 2020 – 31 March 2021).

Ethnic Group	Total Vaccinated	Refusal	Sum	Decline rate (percent)
British	19000	338	19338	2
Irish	1649	36	1685	2
Any other White Background	8557	309	8866	4
Bangladeshi	217	6	223	3
Chinese	398	12	410	3
Indian	819	19	838	2
Pakistani	361	19	380	5
Any other Asian background	1945	62	2007	3
African	2124	119	2243	5
Caribbean	1614	189	1803	11
Any other Black background	804	60	864	7
Mixed	1321	79	1400	6
Any other ethnic group	2925	102	3027	3

Data source: NHS 2021, Whole Systems Integrated Care Dashboards for North West London Collaboration of Clinical Commissioning Groups. Data updated as of 9:00 on 01 April 2021.

Figure 18. Proportion of individuals declining the COVID-19 vaccination that have been offered the vaccination (refusal rate), by LSOA deprivation decile in 2019 (08 December 2020 – 31 March 2021).



Data source: NHS 2021, Whole Systems Integrated Care Dashboards for North West London Collaboration of Clinical Commissioning Groups. Data updated as of 9:00 on 01 April 2021.

Variations in vaccination uptake in LBHF reflect national trends which indicate uptake is lower in minority ethnic communities and poorer communities[15]. The reasons for the trend are complex, however likely are related to perceptions of risk; low confidence in the vaccine; distrust; access barriers; inconvenience; socio-demographic context and lack of endorsement; lack of vaccine offer or lack of communication from trusted providers and community leaders[16].

In LBHF several strategies have been introduced to increase vaccine confidence including extensive bespoke community events with faith and community groups, working with the faith forum to help reinforce public health messaging, as well as the production of a range of information videos dispelling myths surrounding the vaccine.

1.6. COVID-19 Mortality

COVID-19 Mortality

301 COVID-19 resident deaths

Case fatality rate: **2.3 percent**

Resident deaths in hospital: **64.8 percent**

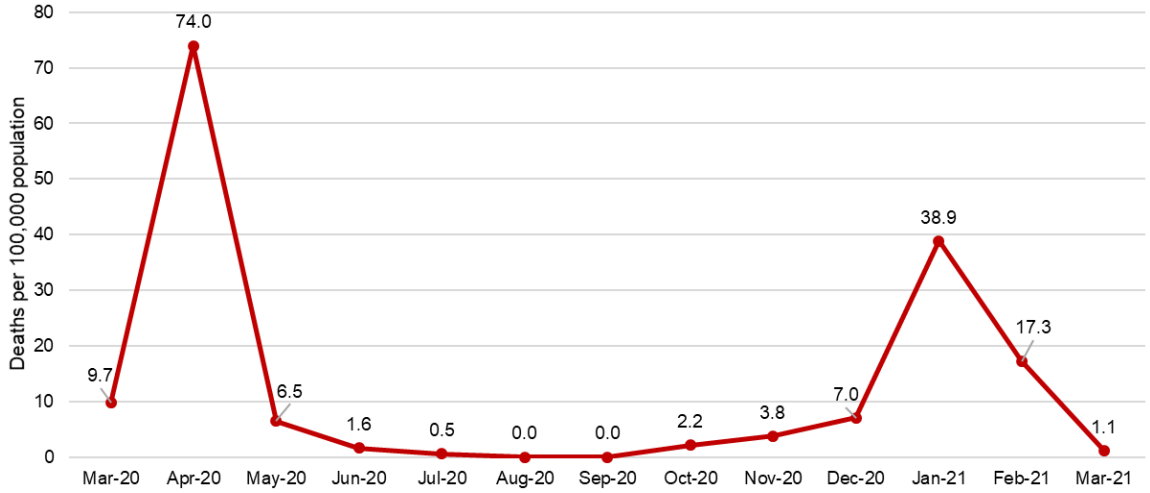
Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021.

[15] Dickerson, J., Lockyer, B., Moss, R.H., Endacott, C., Kelly, B., Bridges, S., Crossley, K.L., Bryant, M., Sheldon, T.A., Wright, J. and Pickett, K.E., 2021. COVID-19 vaccine hesitancy in an ethnically diverse community: descriptive findings from the Born in Bradford study. *Wellcome Open Research*, *6*(23), p.23.

[16] Local Government Association. 2021. Driving uptake for COVID-19 vaccination.

On 18 March 2020, the first LBHF resident died of COVID-19 in LBHF. As of 31 March 2020, 301 LBHF residents have died due to COVID-19. COVID-19 deaths per 100,000 population peaked in April 2020 with 74 deaths per 100,00 recorded (Figure 19).

Figure 19. LBHF resident COVID-19 resident deaths per 100,000 (01 March 2020 to 31 March 2021).



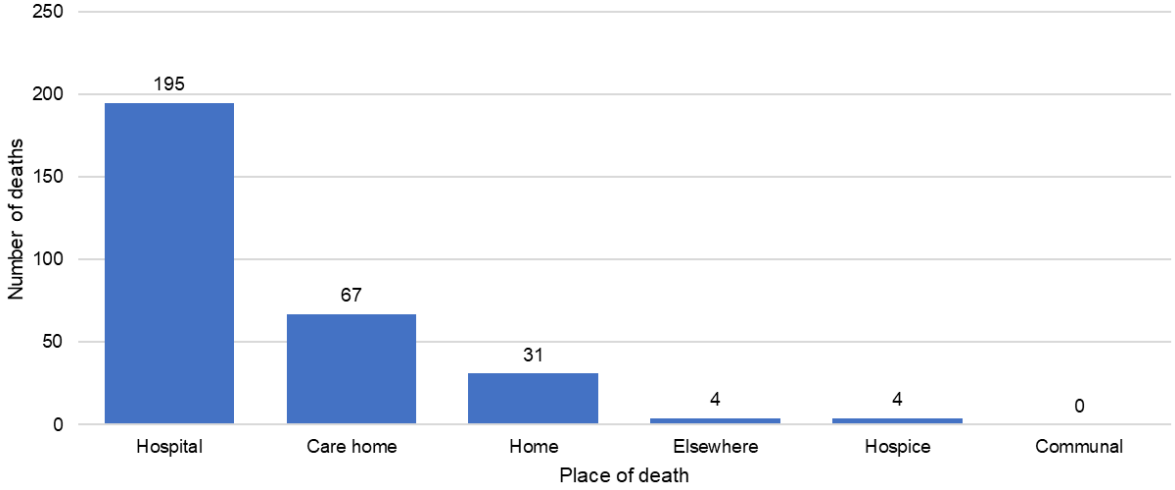
Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 01 April 2021.

The majority of LBHF residents who died due to COVID-19 died in hospital (65 percent), followed by care homes (23 percent) (Figure 20). LBHF ranked 1st out of 33 London boroughs for COVID-19 only deaths as a percentage of care home beds in the borough in 2020.

Detail regarding the characteristics of residents who have died due to COVID-19 are available between 18 March 2020 and 06 January 2021. Men accounted for 64 percent of COVID-19 deaths, and individuals aged 60 years and older accounted for 88 percent of all deaths in LBHF residents within the borough during this time period.

Trends in COVID-19 deaths in LBHF are consistent with national trends in COVID-19 mortality – older individuals are more likely to die due to COVID-19, as are males[5]. Individuals identifying as minority ethnic were also found to have higher COVID-19 related mortality across England[5], however ethnicity data is not available in the local authority level.

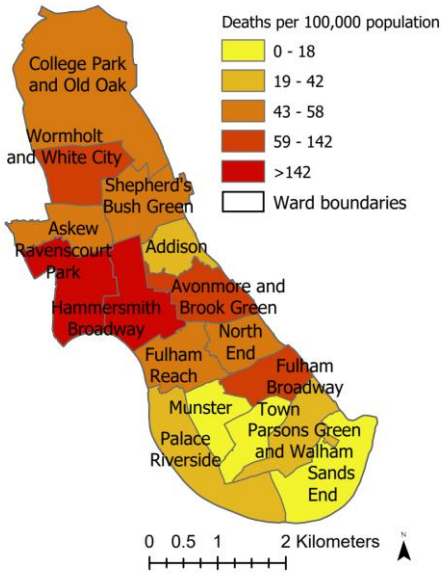
Figure 20. Place of LBHF resident COVID-19 deaths per 100,000 (01 March 2020 to 31 March 2021).



Data source: Public Health England (2021) London Daily COVID-19 Surveillance Tables. Data updated as of 9:00 on 01 April 2021.

Ravenscourt Park (which has one nursing home), Hammersmith Broadway (which has two nursing homes) and Avonmore and Brook Green had the highest rates of deaths per population in LBHF with 201.6, 202.6 and 142.2 deaths per 100,000 respectively between 18 March 2020 and 06 January 2021 (Figure 21). These wards include neighbourhoods that are classified as 20 percent of the most deprived neighbourhoods in England, and also have higher proportion of the population which contributed to a higher case fatality rate in comparison to other wards[17].

Figure 21: Deaths per 100,000 population due to Covid-19, by ward (18 March 2020 – 06 January 2021).



Data source: Hammersmith and Fulham Council. Registrar Data; Office for National Statistics (2020) Mid-year population estimates 2019.

[17] Office for National Statistics (2020) Mid-year population estimates 2019.

1.6.1. Registrar Services

Registrar services in LBHF continued to operate efficiently throughout COVID-19 and adapted processes to minimise delays arising from changing demand on registrar services.

Registrar services are required in order to register a birth, death, marriage or civil partnership. During the first surge in COVID-19 cases in the UK, LBHF responded rapidly to fast-moving government guidance concerning registrar services. The early, proactive and efficient work of LBHF registrar services ensured delays arising due to COVID-19 were minimised and communications concerning services were consistent with government guidance. For example, all guidance available on the LBHF website and available via the automated phone service was updated regularly to keep in line with government guidance. A dedicated COVID-19 mailbox for LBHF registrar services was established to respond to COVID-19 specific enquiries from residents, NHS trusts and the Coroner's Office. Electoral registration staff were seconded to Registrar Services to ensure the team were able to meet increased demand arising due to COVID-19 deaths. Most LBHF employees in registrar services continued to work in the office throughout COVID-19, adhering to social distancing and public health guidelines. This ensured certificates that had to be issued in-person could be completed without delay.

The Coronavirus Act 2020 enabled deaths to be registered by telephone appointment, rather than in person. General Practitioners (GPs), care homes and hospitals were able to send the medical cause of death certificate electronically reducing need for unnecessary travel.

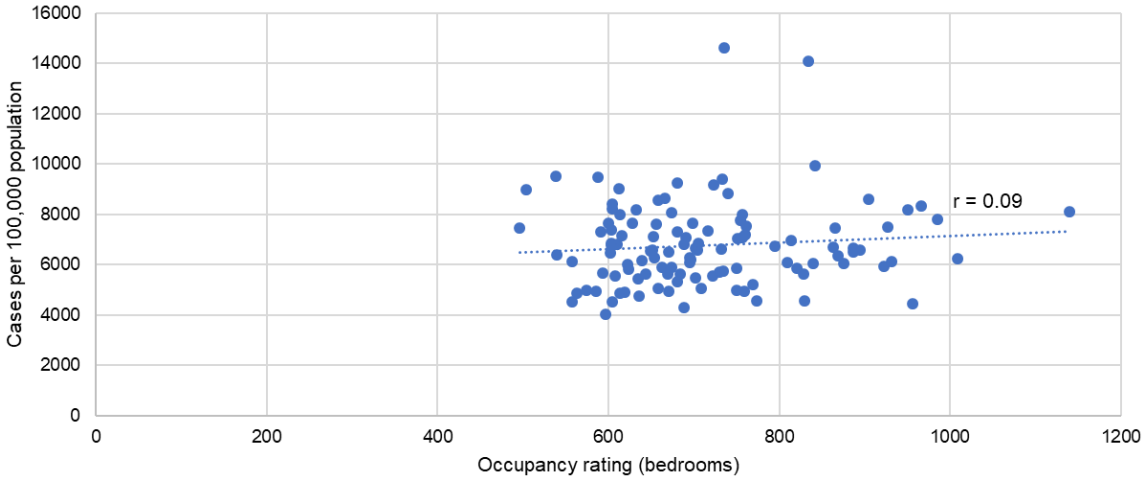
Birth registrations were paused initially in March 2020, however from February 2021 in-person birth registrations were allowed. Birth registrations enable children to be registered with the GP and for parents to receive child benefit. While births were unable to be registered, LBHF organised locally with GPs to enable the red book issued by midwives at birth to be used for GP registration. The process was fed to national panel and the same process was used to allow parents to register for child benefit.

Marriage and civil partnership ceremonies were cancelled throughout much of the COVID-19 pandemic. Ceremonies are due to resume on 29 March 2021 with priority given to individuals whose ceremonies were cancelled between December 2020 and February 2021. The early, proactive and efficient work of LBHF registrar services ensured delays arising due to COVID-19 were minimised and communications concerning services were consistent with government guidance.

APPENDICES

Appendix 1

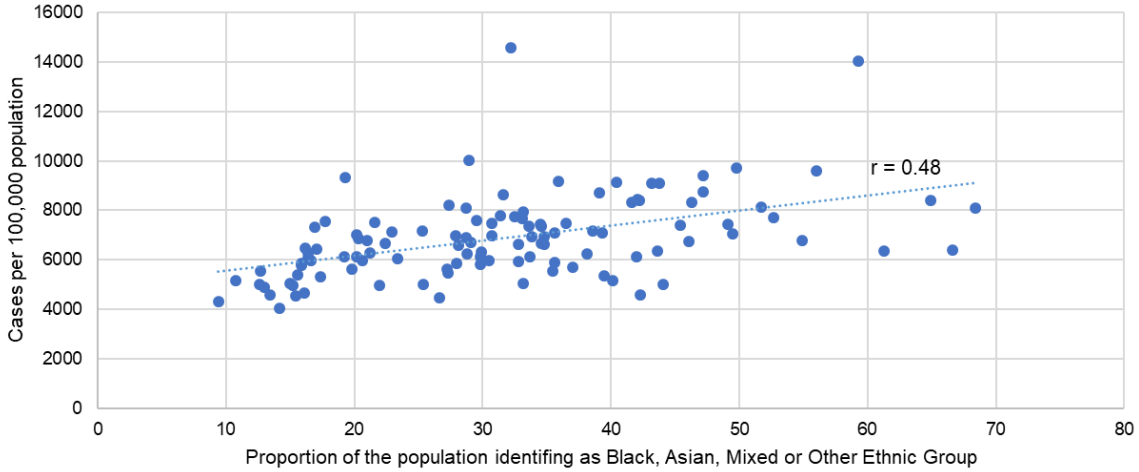
Figure A.1. Correlation between COVID-19 cases per 100,000 population and occupancy rating by LSOA (01 March 2020 to 31 March 2021).



Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 15 March 2021; Office for National Statistics, 2013. Census 2011, Occupancy rating.
* r is a statistical measure of correlation. An r near zero indicates no correlation, an r closer to 1 or -1 suggests correlation

Appendix 2

Figure A.2. Correlation between COVID-19 cases per 100,000 population and proportion of the population identifying as Black, Asian, Mixed, or Other Ethnic Group by LSOA (March 2020 – March 2021).



Data source: Public Health England (2021). COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 15 March 2021; Office for National Statistics (2013). Census 2011, Ethnic Group.
* r is a statistical measure of correlation. An r near zero indicates no correlation, an r closer to 1 or -1 suggests correlation

Appendix 3

Equation A.3.1. Positivity formula

$$Positivity = \frac{Positive\ tests}{Positive\ tests + Negative\ tests\ (excluding\ void)}\ x\ 100$$

Equation A.3.2. Refusal rate formula

$$Refusal\ Rate = \frac{Number\ declined\ vaccination}{(Number\ declined\ vaccination + Number\ received\ first\ vaccine)}\ x\ 100$$

Appendix 4

Table A.4. COVID-19 positive test rate by age group in LBHF (01 January 2020 and 31 March 2021).

	0-19	20-39	40-59	60-79	80+
January 2020	0	0	0	0	0
February 2020	0	0	0	0	0
March 2020	1.6	13.2	19.5	**22.6**	**21.3**
April 2020	4.8	7.5	8.3	14.7	**25.5**
May 2020	1.1	1.0	1.1	1.5	0.9
June 2020	0.9	0.6	0.7	1.0	1.0
July 2020	0.4	0.4	0.2	0.4	0.5
August 2020	1.2	1.0	0.8	0.1	0.3
September 2020	2.0	1.9	0.8	0.6	0.1
October 2020	6.1	7.3	4.2	2.0	2.1
November 2020	9.7	6.1	4.8	2.8	1.7
December 2020	13.0	10.1	10.2	8.3	4.9
January 2021	11.9	8.1	7.3	6.9	6.9
February 2021	5.3	2.0	2.0	1.9	2.0
March 2021	0.3	0.4	0.4	0.4	0.2

Data source: Public Health England, COVID-19 Situational Awareness Explorer. Data updated as of 9:00 on 01 April 2021.

Key:

- 0.0 - 4.9
- 5.0 - 9.9
- 10.0 - 14.9
- 15.0 - 19.9
- ≥ 20

Appendix 5

Table A.5. JCVI COVID-19 vaccination priority groups.

Priority Groups	Vaccination Period
1. Care home residents	09/12/20 – 14/02/21
2. Aged 80 + years	
3. Aged 75 – 79 years	
4. Aged 70 – 74 years and clinically vulnerable	
5. Aged 65 – 69 years	15/02/21 – 04/10/21
6. Aged 18 years – 64 years with underlying health conditions	
7. Aged 60 – 64 years	
8. Aged 55 – 59 years	
9. Aged 50 – 54 years	
Non – priority: Aged 18* – 49 years	

Data source: Joint Committee on Vaccination and Immunisation (JCVI) (2021) Advice on Priority Groups for COVID-19 Vaccination, 30 December 2020.