

# Birmingham Covid-19 Inequalities Overview

09/03/2020



# Inequalities & Covid-19

Many inequalities that existed prior to the pandemic have been exacerbated over the last year.

The inequalities due to Covid-19 are primarily reflected in differences in infection rates and death rates between different communities, and more recently in vaccine uptake.

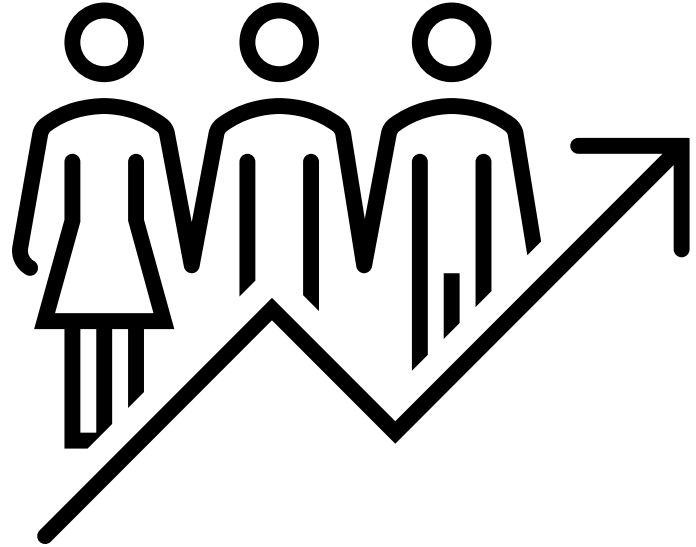
Understanding of these inequalities has been limited by data recording and reporting and so many of these inequalities are still relatively poorly understood.

There are also inequalities created through the impact of the Covid-risk reduction restrictions impacting on different communities in different ways and there is limited data available on this at a local level.

There may well be longer term inequalities being created through the impact of restrictions on healthcare access and services such as screening and immunisation and these inequalities are anticipated but poorly understood.

# Dimensions of inequalities

- Identity, language and culture
- Place
- Profession
- Poverty



We face significant challenges in measuring and quantifying inequalities because of the limitations in data collection and this primarily reflects quantitative data rather than qualitative perceptions of inequalities.

# CASE RATE INEQUALITIES

# Inequalities in Covid-19 Case Rates: Identity

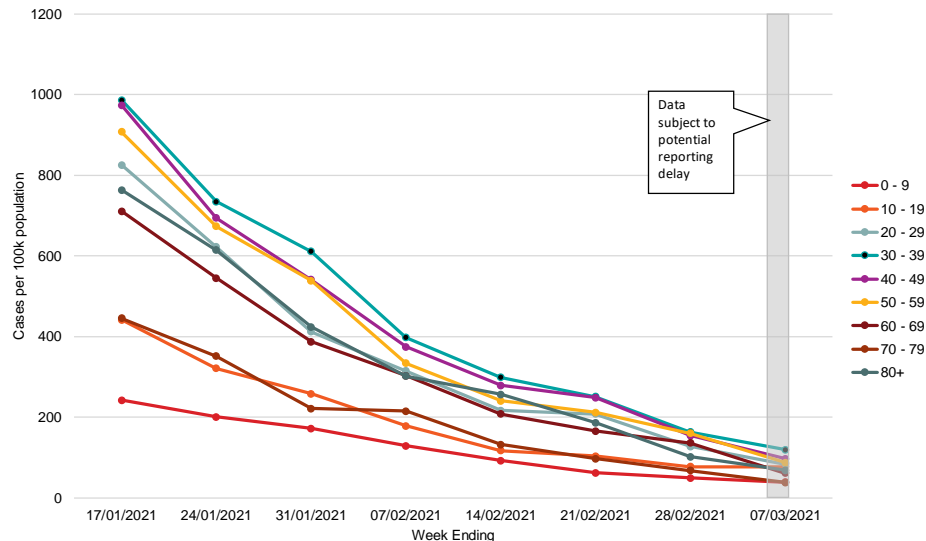
- Age – consistently higher case rates in working age adults (30-44yrs) and some spikes in specific age groups e.g. students, care home residents.
- Ethnicity – consistently higher case rates in south Asian ethnic groups especially Pakistani, Bangladeshi and Indian.
- Gender – case rates over the whole pandemic are about 10% higher in women than in men (8,986 cases/100K compared to 8,057 cases/100K)

Information on other protected characteristics - religion, disability and sexual orientation and gender identity are not captured routinely and so analysis is not possible for these communities of identity although there are likely to be inequalities in these groups.

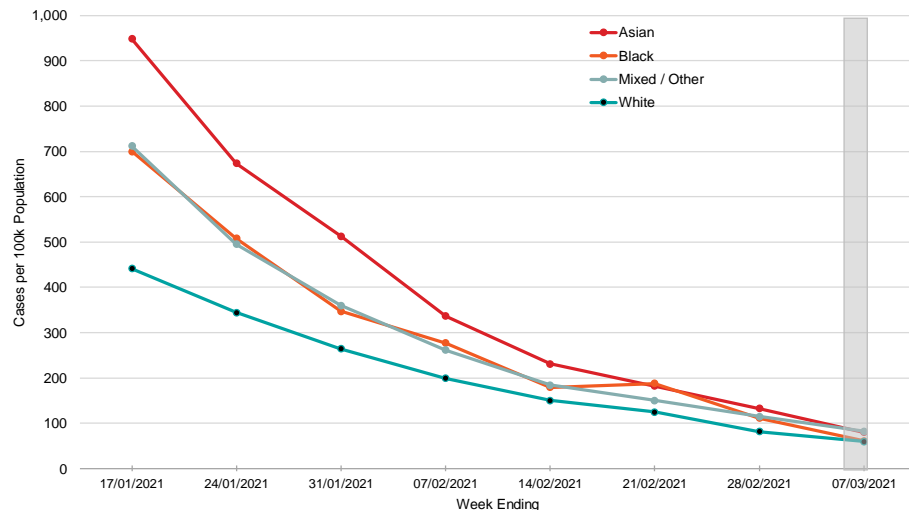
Other aspects of identity such as caring or housing status, are not routinely collected in case data and there is limited understanding of inequalities locally for these groups.

# Inequalities in Covid-19 Case Rates: Identity

COVID-19 Birmingham Cases Rate per 100,000 Population by Week & Age Group  
Week Ending 17th January to Week Ending 7th March (incomplete week)



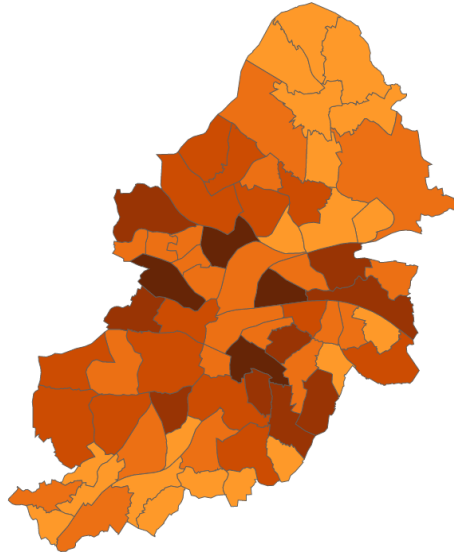
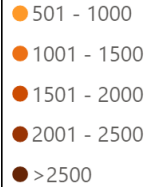
COVID-19 Birmingham Cases Rate per 100,000 Population by Week & Ethnic Group  
Week Ending 17th January to Week Ending 07th March (incomplete week)



# Inequalities in Covid-19 Case Rates: Place

All positive cases confirmed by ward since 1st March 2020 (Pillar 1 & 2 Tests)

## Cases by Ward



Data from  
01/03/2020 –  
06/03/2021

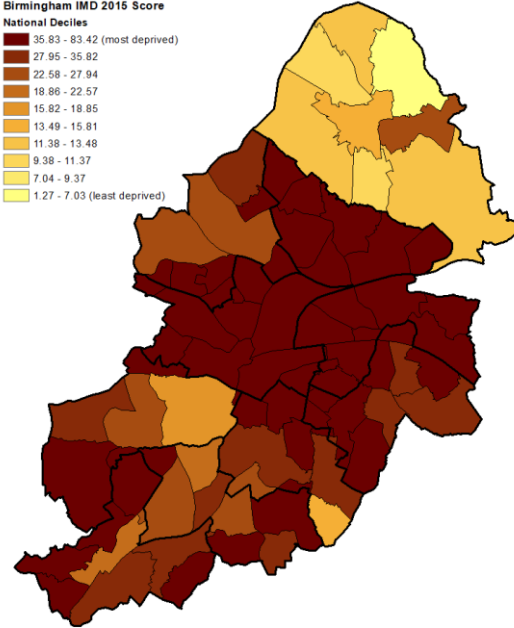
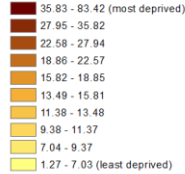
## Index of Multiple Deprivation (IMD) 2015 by Ward

### Legend

Legend:  
Birmingham Constituencies  
Birmingham Wards

### Birmingham IMD 2015 Score

#### National Deciles



Source: IMD data from the Ministry of Housing, Communities & Local Government (MHCLG) (2015).  
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## Geography

- Wards provide the most useful level of analysis of case rates by geography as although they can be skewed by specific setting clusters this is less than at lower levels of place.
- Ward rates overall have been highest in the most deprived and ethnically diverse wards.

# Inequalities in Covid-19 Case Rates: Profession

- Healthcare professionals
- Social care professionals
- Other professional groups

Data on case rates by professional group is not routinely reported yet there have been significant concerns raised around occupational exposure.

- The largest employment sector in Birmingham is Health and Social Work, 2.3% greater than the National figure. Employment in retail in Birmingham is 1% less than nationally.
- Other large employment groups in Birmingham are education and manufacturing.
- These occupations can not be carried out from home and may have contributed to inequalities by profession

## Employee jobs (2019)

	Birmingham (Employee Jobs)	Birmingham (%)	West Midlands (%)	Great Britain (%)
Total Employee Jobs	515,000	-	-	-
Full-Time	354,000	68.7	66.6	67.8
Part-Time	160,000	31.1	33.4	32.2

## Employee Jobs By Industry

B : Mining And Quarrying	25	0.0	0.1	0.2
C : Manufacturing	39,000	7.6	11.7	8.0
D : Electricity, Gas, Steam And Air Conditioning Supply	800	0.2	0.4	0.4
E : Water Supply; Sewerage, Waste Management And Remediation Activities	3,000	0.6	0.8	0.7
F : Construction	18,000	3.5	4.5	4.9
G : Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	72,000	14.0	16.1	15.0
H : Transportation And Storage	24,000	4.7	6.0	4.9
I : Accommodation And Food Service Activities	37,000	7.2	7.4	7.7
J : Information And Communication	14,000	2.7	2.6	4.3
K : Financial And Insurance Activities	24,000	4.7	2.4	3.5
L : Real Estate Activities	10,000	1.9	1.7	1.7
M : Professional, Scientific And Technical Activities	45,000	8.7	6.4	8.8
N : Administrative And Support Service Activities	49,000	9.5	9.5	8.9
O : Public Administration And Defence; Compulsory Social Security	26,000	5.0	3.7	4.4
P : Education	53,000	10.3	8.9	8.7
Q : Human Health And Social Work Activities	81,000	15.7	13.4	13.1
R : Arts, Entertainment And Recreation	10,000	1.9	2.3	2.5
S : Other Service Activities	11,000	2.1	2.0	2.0

Source: ONS Business Register and Employment Survey : open access

- Data unavailable

Notes: % is a proportion of total employee jobs excluding farm-based agriculture  
Employee jobs excludes self-employed, government-supported trainees and HM Forces  
Data excludes farm-based agriculture

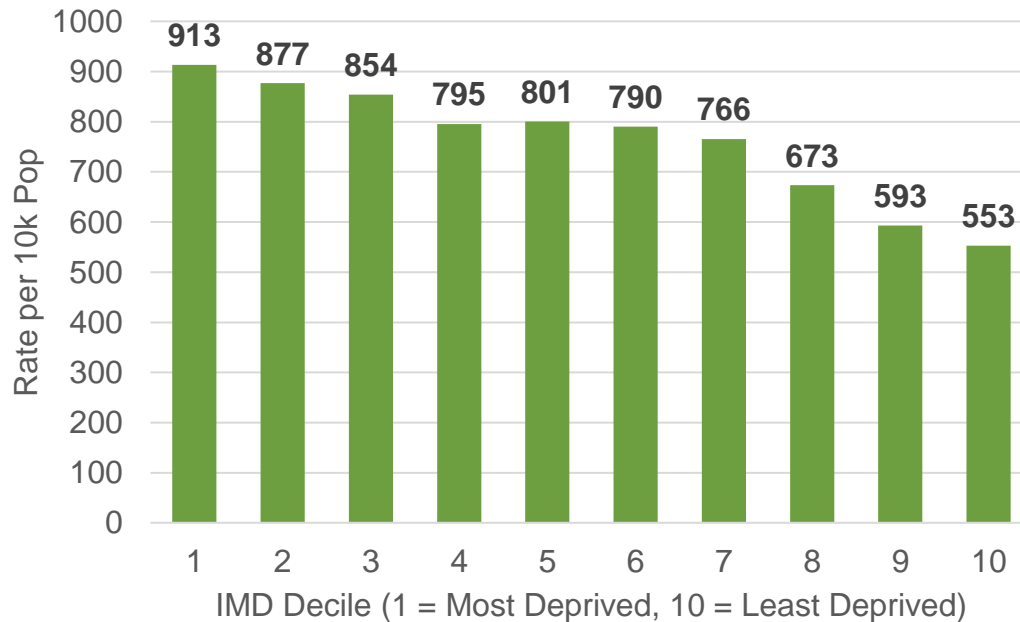


# Inequalities in Covid-19 Case Rates: Poverty

Data on case rates by poverty is primarily extrapolated from the postcode of residence and the Index of Multiple Deprivation.

- Birmingham's Covid-19 rate for all cases from 1<sup>st</sup> March 2020 to 8<sup>th</sup> March 2021 is 39% higher per 10,000 of the population in the most deprived decile compared to the least deprived decile.
- In Birmingham LSOAs in the most deprived decile, the percentage of Covid-19 cases is greater than the proportion of the population. This indicates that there is an over representation of Covid-19 cases in that population.
- When comparing the Covid-19 rate per 10,000 of the population by IMD Score, the general trend shows the higher the IMD score, the higher the case rate.

Rate of COVID-19 Cases per Population by IMD National Decile  
1st March 2020 to 8th March 2021



# Reflections and Learning

- The results of the PHE data review suggest that people from Black and Asian ethnic groups may be more exposed to COVID-19, and therefore are more likely to be diagnosed.
- This could be the result of factors associated with ethnicity such as occupation, population density, use of public transport, household composition and housing conditions. Stakeholders highlighted the high proportion of ethnic minorities combined compared to the white groups that were key workers and in occupations that placed them at risk by increasing the likelihood of social contact and increasing the risk of being exposed to those infected with COVID-19.
- Key actions recommended by stakeholders included the importance of valuing and respecting the work of key workers; provision of adequate protective equipment; stronger arrangements for workplace wellbeing and risk assessments; targeted education, awareness and support for key workers; occupational risk assessments; and tackling workplace bullying, racism and discrimination to create environments that allow workers to express and address concerns about risk.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/892376/COVID\\_stakeholder\\_engagement\\_synthesis\\_beyond\\_the\\_data.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892376/COVID_stakeholder_engagement_synthesis_beyond_the_data.pdf)

# DEATH RATE INEQUALITIES

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# Inequalities in Covid-19 Death Rates: Identity

- Age – consistently higher death rates in older adults
- Ethnicity – consistently higher death rates in ethnic minorities
- Gender – higher male death rate than female
- Disease groups – higher death rates in populations with underlying health conditions, including high blood pressure, diabetes and kidney disease

Information on other protected characteristics at a local level - religion, disability and sexual orientation and gender identity are not captured routinely and so analysis is not possible for these communities of identity although there are likely to be inequalities in these groups.

Other aspects of identity such as caring or housing status, are not routinely collected in death data and there is limited understanding of inequalities locally for these groups.

# Inequalities in Covid-19 Death Rates: Ethnicity

Data on death rates by ethnicity:

- Death rates in hospitals were highest among people from Black and Asian ethnic groups[2]
- People of Bangladeshi ethnicity had twice the risk of dying compared to people of white British ethnicity<sup>1</sup>
- There was a 10–50% greater risk of death from Covid-19 among people of Chinese, Indian, Pakistani, other Asian, Caribbean, and other ethnicities when compared to white British people<sup>1</sup>

[1] Public Health England. Disparities in the risk and outcomes of COVID-19. [Online].[cited 2021 Feb 24]. Available from:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/892085/disparities\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892085/disparities_review.pdf).

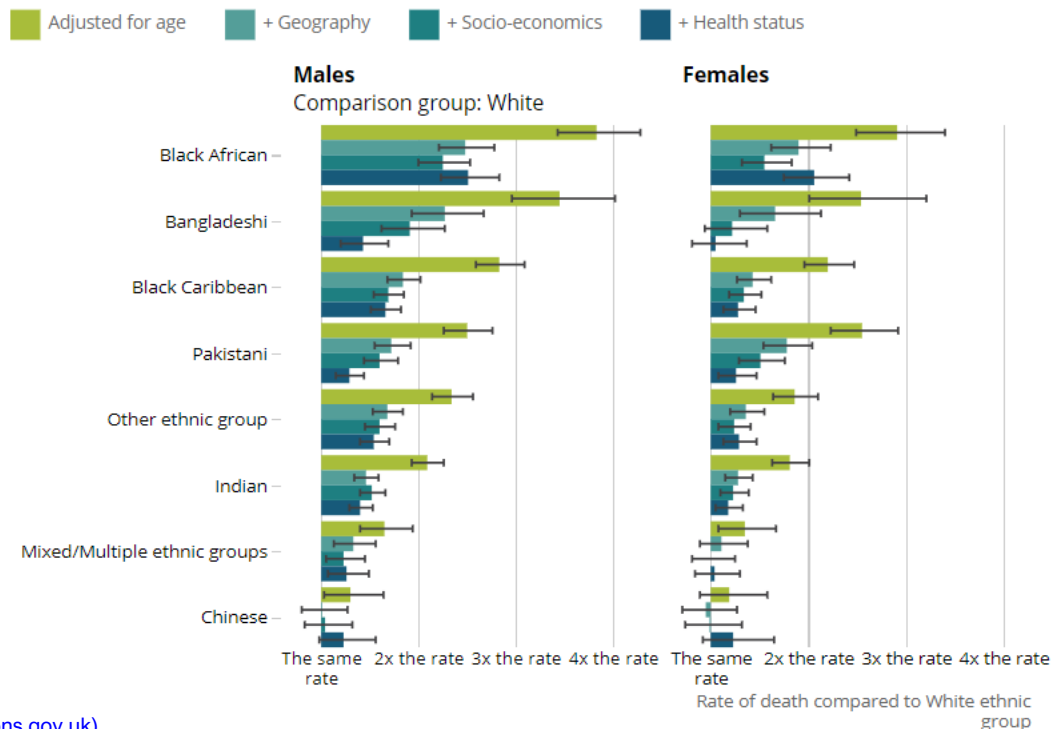
[2] The Institute for Fiscal Studies (1 May 2020) - Are some ethnic groups more vulnerable to COVID-19 than others? [Online].[cited 2021 Feb 24]. Available from:

<https://www.ifs.org.uk/inequality/chapter/are-some-ethnic-groups-more-vulnerable-to-covid-19-than-others/>.

# Inequalities in Covid-19 Death Rates: Identity

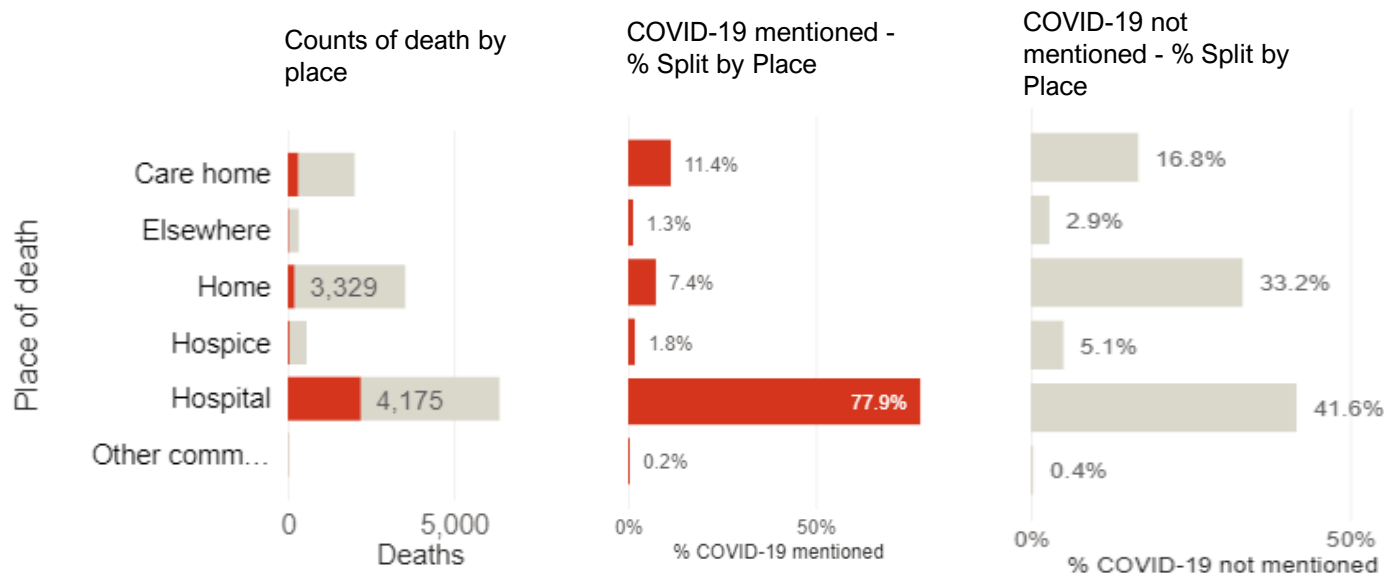
- Most minority ethnicities have higher Covid-19 mortality rates
- After accounting for where people live and social and economic factors (including people's jobs, education and housing conditions), the gap lessens but is still significant.

Rate of death involving coronavirus (COVID-19) by ethnic group and sex relative to the white population, England, 2 March to 28 July 2020



[Coronavirus \(COVID-19\) latest insights - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/coronavirus/latest-insights)

# Inequalities in Covid-19 Death Rates: Place

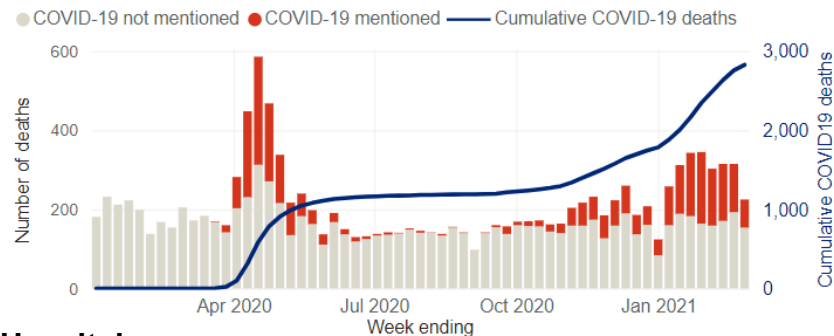


80% of Covid-19 related deaths have taken place in hospital, 7% at home and 11% at care homes

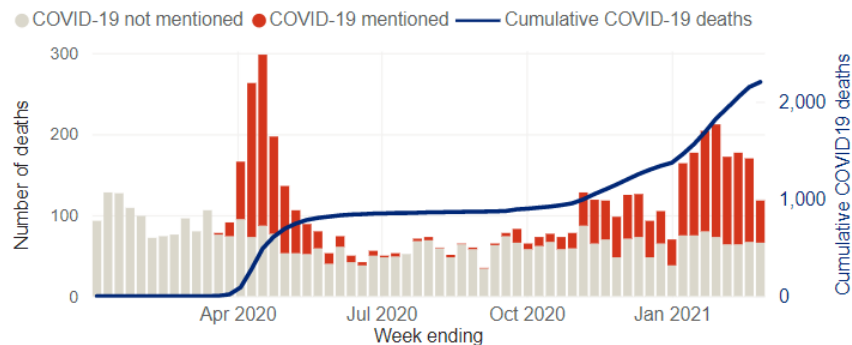
# Inequalities in Covid-19 Death Rates: Place

Deaths by registration date W/e 03/01/20 to 26/02/21

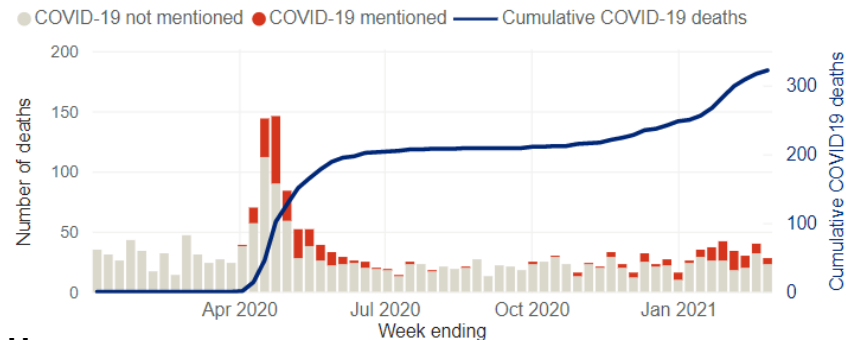
## Birmingham



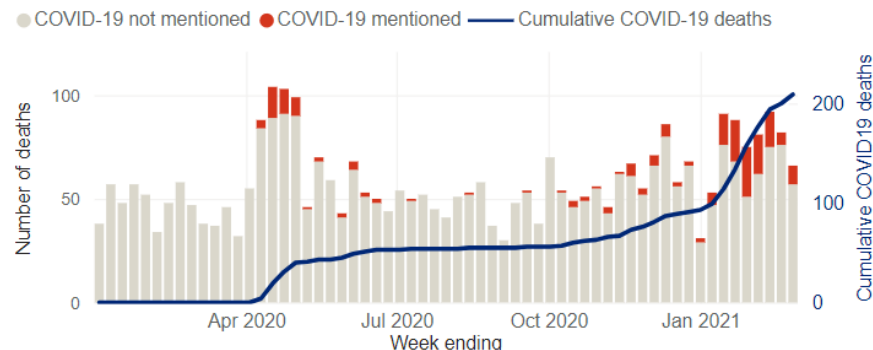
## Hospital



## Care Home



## Home



PHE Covid-19 Situational Awareness Explorer

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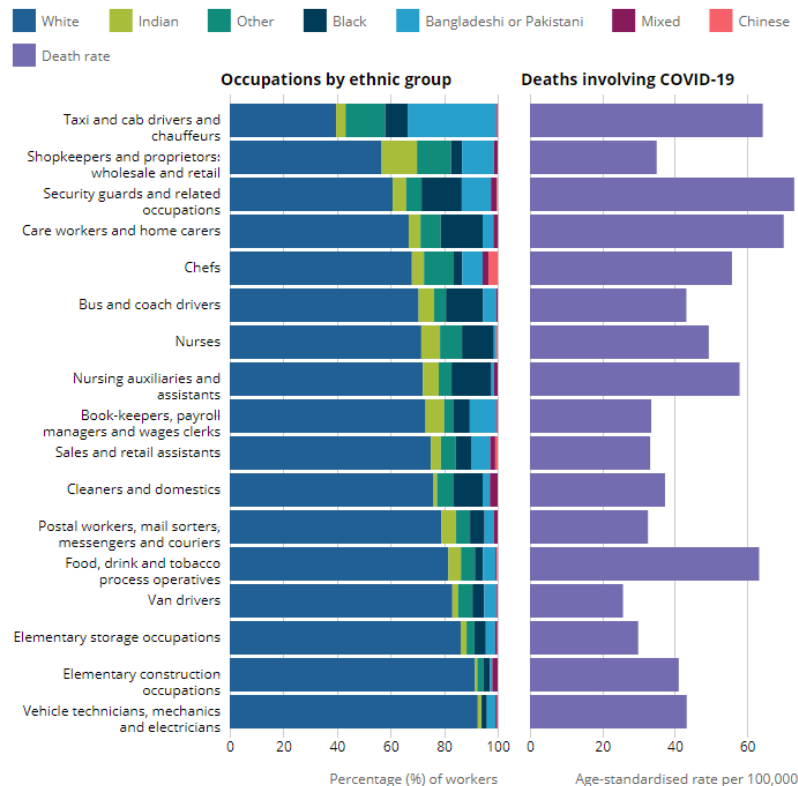
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# Inequalities in Covid-19 Death Rates: Profession

- Data on case rates by professional group is not routinely reported yet there have been significant concerns raised around occupational exposure.
- Some ethnic groups are more likely to work in jobs with higher Covid-19 death rates

Proportion of ethnic group within occupations and COVID-19 death rate, England and Wales, deaths involving COVID-19 registered between 9 March and 25 May 2020



[Coronavirus \(COVID-19\) latest insights - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk/coronavirus/articles/latestinsights)

# VACCINATION INEQUALITIES

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# Inequalities in Covid-19 Vaccination Rates: Identity

## Demographics of uptake: Ethnicity (extract 09/03)

Across the priority groups uptake of vaccine is lower in African, Caribbean and Black communities and then Pakistani and Bangladeshi communities, but there is a significant difference in the size of different ethnic groups in different priority groups e.g. the total eligible population of >80yrs from a Pakistani ethnic group is 3,552 compared to 401 from African ethnic groups.

Ethnic Group	% uptake of 1st Dose of Covid Vaccination data extracted 09/03								COVID At Risk
	Over 80yrs olds	75-79yrs	70-74yrs	65-69yrs	60-64yrs	55-59yrs	50-54yrs	CEV	
Not recorded	70.0%	79.3%	77.2%	68.5%	51.3%	25.4%	40.6%	55.8%	60.8%
African	62.5%	61.5%	69.1%	67.8%	43.4%	47.7%	37.5%	48.6%	61.3%
Any other Asian background	78.5%	77.1%	69.7%	76.7%	47.9%	44.2%	37.3%	64.4%	35.0%
Any other Black background	70.0%	61.5%	61.1%	59.7%	50.6%	28.4%	23.0%	56.1%	32.0%
Any other ethnic group	72.0%	75.4%	79.6%	65.2%	64.5%	31.7%	26.6%	90.4%	36.9%
Any other mixed background	81.1%	75.0%	72.8%	69.9%	54.9%	37.9%	22.3%	76.3%	48.3%
Any other White background	91.2%	88.5%	88.0%	85.8%	74.2%	51.0%	28.7%	80.7%	36.1%
Arab	77.8%	56.3%	62.5%	59.4%	27.5%	21.0%	10.5%	33.9%	24.2%
Bangladeshi or British Bangladeshi	74.2%	81.1%	81.0%	74.2%	77.1%	43.8%	35.0%	50.3%	47.0%
British, Mixed British	95.0%	95.5%	94.9%	91.6%	80.2%	51.6%	39.3%	89.5%	65.8%
Caribbean	70.7%	93.4%	90.5%	54.9%	42.3%	28.9%	24.3%	74.8%	34.1%
Chinese	82.6%	74.8%	73.0%	60.8%	49.2%	32.9%	29.8%	61.4%	38.1%
Indian or British Indian	88.5%	90.4%	87.1%	66.9%	54.1%	35.7%	16.8%	72.5%	46.2%
Irish	92.7%	72.6%	66.2%	87.9%	64.2%	32.9%	28.3%	66.6%	47.4%
Pakistani or British Pakistani	73.3%	75.2%	73.7%	76.5%	61.3%	36.0%	26.7%	56.5%	45.6%
Traveller	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	4.5%	14.3%	0.0%
White and Asian	71.9%	70.8%	57.8%	54.1%	51.4%	32.7%	32.5%	60.4%	37.3%
White and Black African	71.4%	80.6%	80.3%	76.2%	65.1%	50.4%	42.4%	57.9%	48.0%
White and Black Caribbean	69.9%	71.5%	63.6%	54.7%	56.5%	31.8%	27.6%	55.8%	33.5%

# Inequalities in Covid-19 Vaccination Rates: Identity

## Demographics of vaccination uptake: Gender (extract 09/03)

Uptake of vaccine is similar in both genders

Gender	% uptake of 1st Dose of Covid Vaccination								
	data extracted 09/03								
	Over 80yr olds	75-79yrs	70-74yrs	65-69yrs	60-64yrs	55-59yrs	50-54yrs	CEV	COVID At Risk
Female	89.61%	91.35%	90.08%	84.26%	71.96%	48.49%	38.85%	73.46%	55.98%
Male	89.34%	91.07%	89.68%	82.81%	67.36%	38.10%	26.65%	77.79%	53.31%

# Inequalities in Covid-19 Vaccination Rates: Poverty

## Demographics of vaccination uptake: Deprivation (extract 09/03)

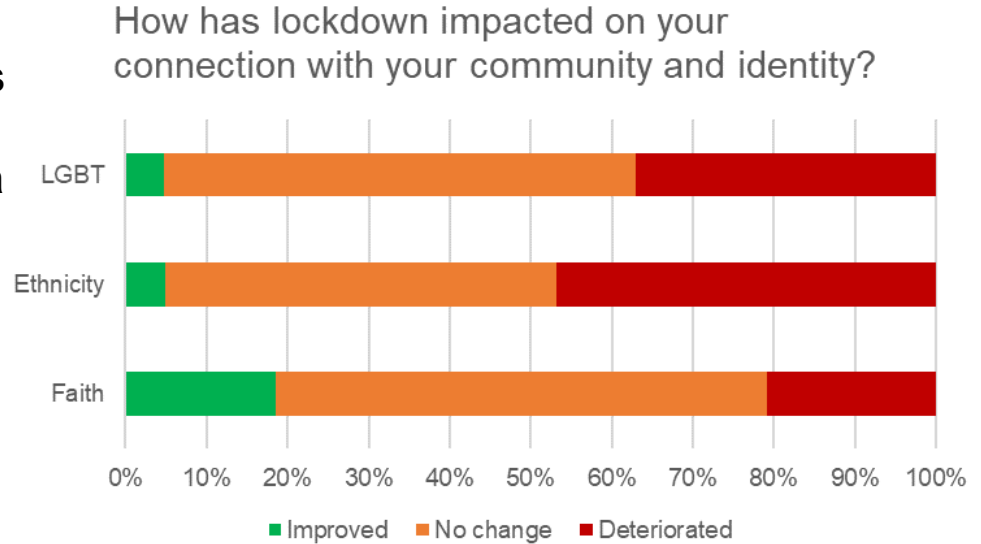
Uptake of vaccine by deprivation shows lower uptake in more deprived communities than in more affluent communities.

Deprivation based on postcode of residence	% uptake of 1st Dose of Covid Vaccination data extracted 09/03								
	Over 80yr olds	75- 79yrs	70- 74yrs	65- 69yrs	60- 64yrs	55- 59yrs	50- 54yrs	CEV	COVID At Risk
Deprived (DQ1)	84.1%	87.2%	85.3%	76.8%	62.4%	38.8%	29.9%	69.8%	48.2%
Moderately Deprived (DQ2)	90.9%	91.8%	90.5%	85.1%	70.7%	44.6%	34.6%	80.8%	57.9%
Average (DQ3)	92.9%	94.0%	93.4%	89.7%	76.2%	47.2%	35.3%	86.0%	63.2%
Moderately Affluent (DQ4)	94.2%	94.6%	94.5%	91.3%	78.8%	50.7%	37.2%	89.7%	69.4%
Affluent (DQ5)	95.7%	95.9%	95.3%	93.4%	84.1%	49.6%	33.7%	93.5%	74.8%

# HEALTH BEHAVIOURS INEQUALITIES DURING COVID – BIRMINGHAM COVID-19 IMPACT SURVEY

# Inequalities in Health Behaviours: Identity

In general communities of identity felt their relationship with these communities has deteriorated during lockdown, with the exception of faith where there were a similar proportion who felt it had improved to those who felt it had deteriorated. Ethnic minority communities were the most negative about how their relationship with their community had changed.

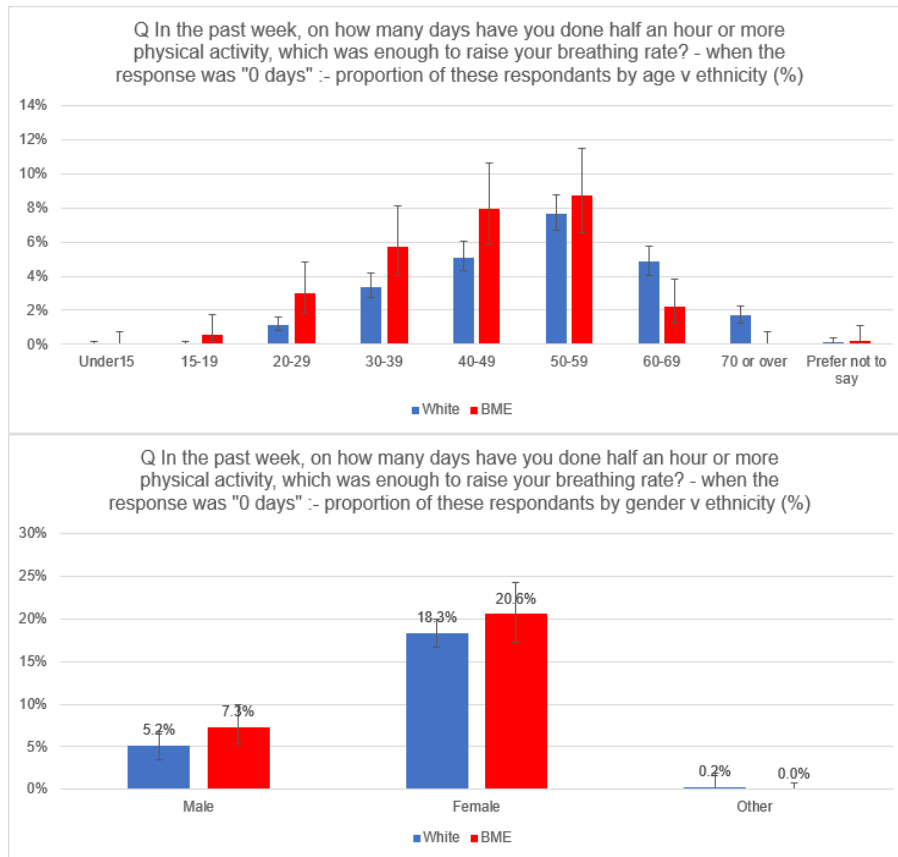


Given the size of the sample it was not possible to analyse by place, profession or poverty. The following slides display health behaviours by age, gender and ethnic minority .

# Inactivity

Physical inactivity was highest in the 50-59yr age group, but there appears to be significantly higher levels of inactivity in non-white ethnic minorities aged 20-29yrs, 30-39yr and 40-49yr.

Women were more inactive than men but there did not appear to be significant differences between white and all other ethnic groups combined.

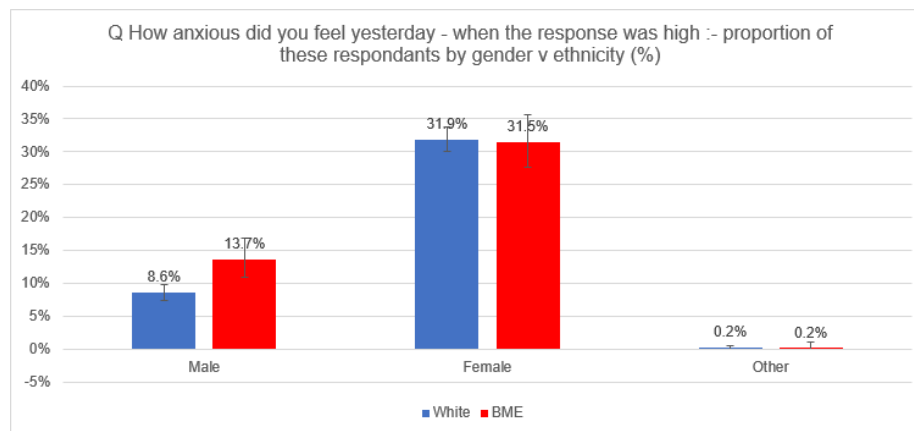
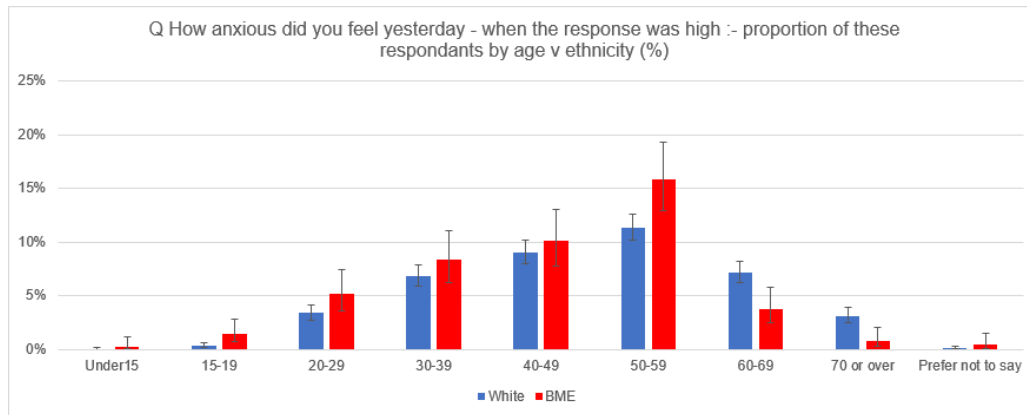




# Anxiety

Rates of self-reported anxiety is highest in the 50-59yr age group but this difference was even more significant in ethnic minority (excluding White minority) communities.

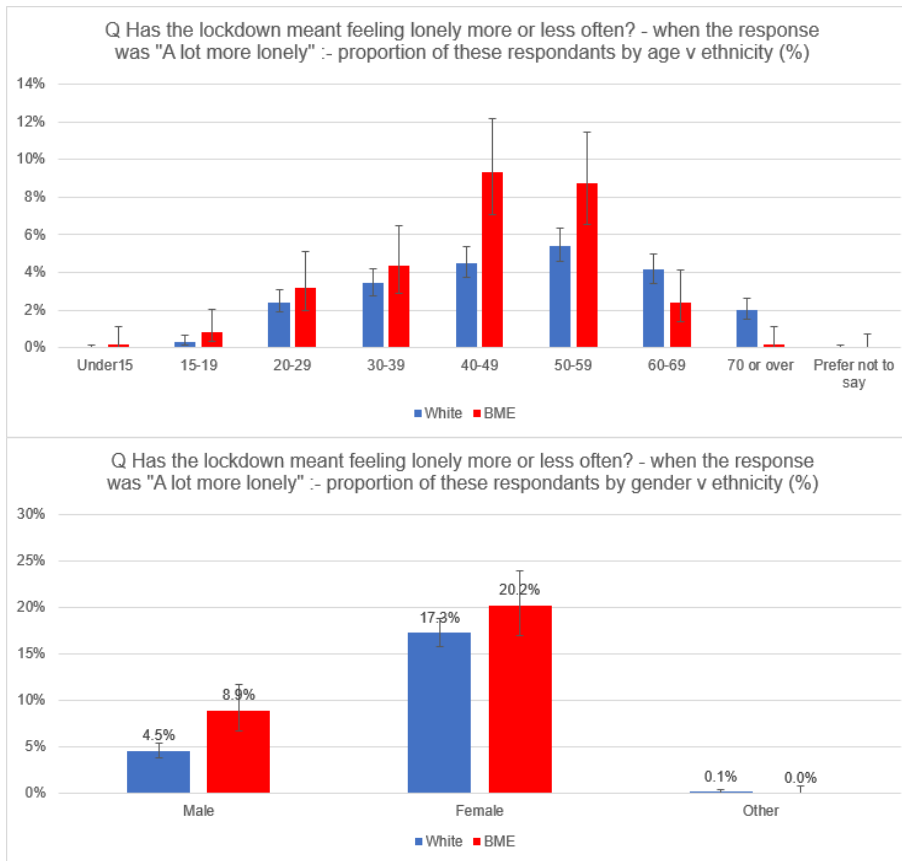
Women were more likely to report higher levels of anxiety than men, but non-white ethnic men had higher rates of reported anxiety than white men but this was still lower than their female counterparts.



# Loneliness

Self reported higher levels of feeling a lot more lonely is higher in 40-59yr age group and this is more pronounced in non-white ethnic groups.

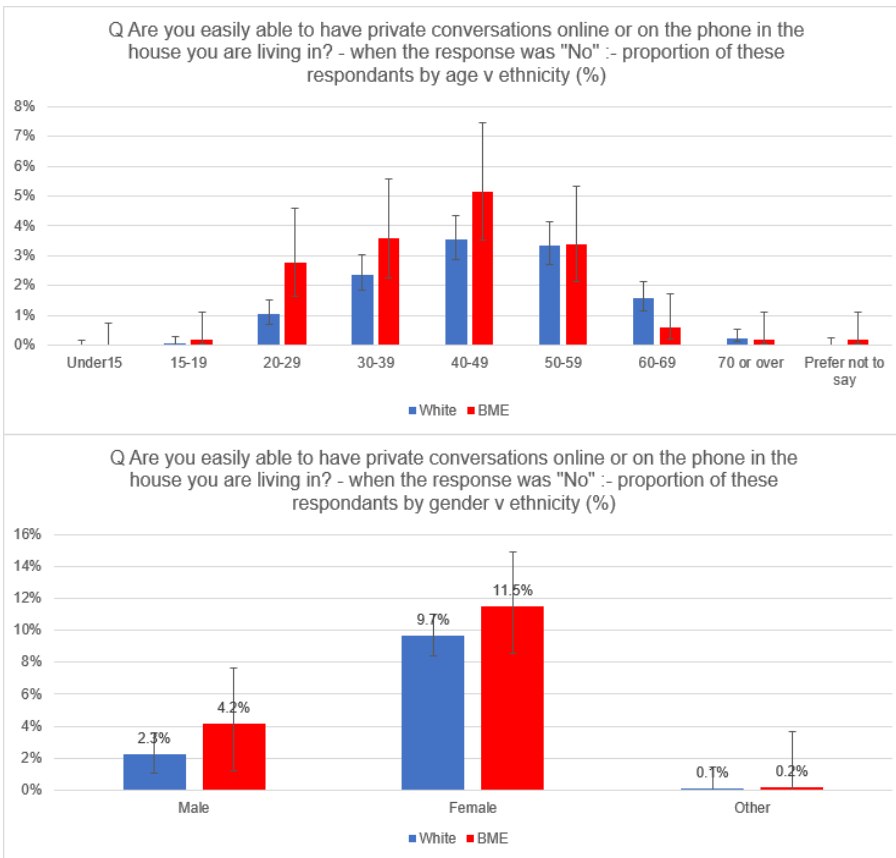
Women were more likely to report feeling a lot more lonely than men and non-white ethnic groups were higher in both genders than for white counterparts but this may not be significant difference for women.



# Private Conversations

Ability to have a private conversation at home was lower among working age adults but the confidence intervals suggests that the most significant difference between ethnic groups is in the 20-29 age group.

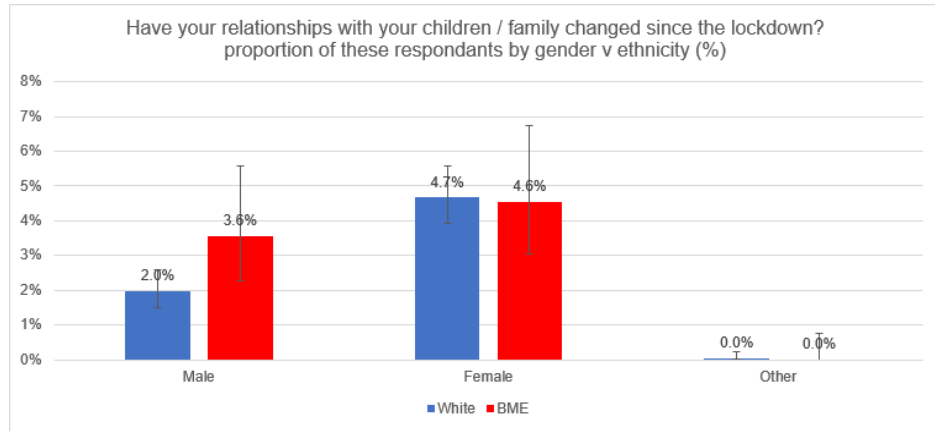
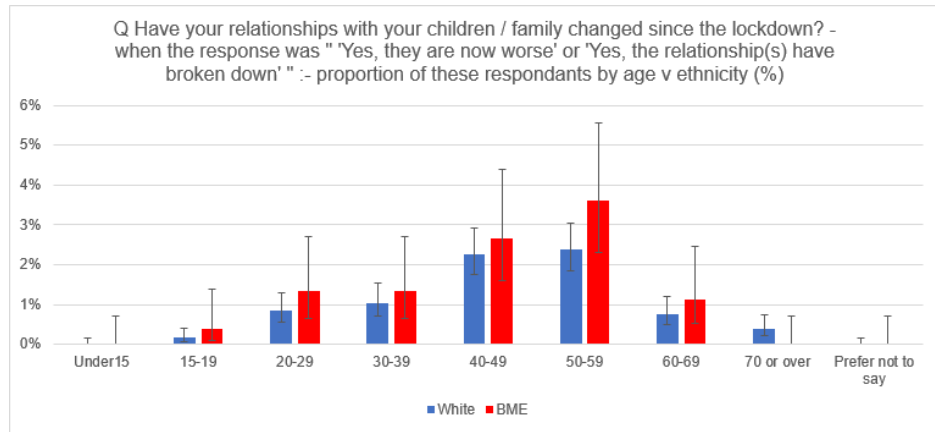
Women were less likely to be report having privacy at home but there did not appear to be significant differences between ethnic groups.



# Family relationships

Family relationships appear to have deteriorated more in 40-49yrs and 50-59yr age groups in white groups but this difference is not as clear in non-white ethnic groups because of overlapping confidence intervals.

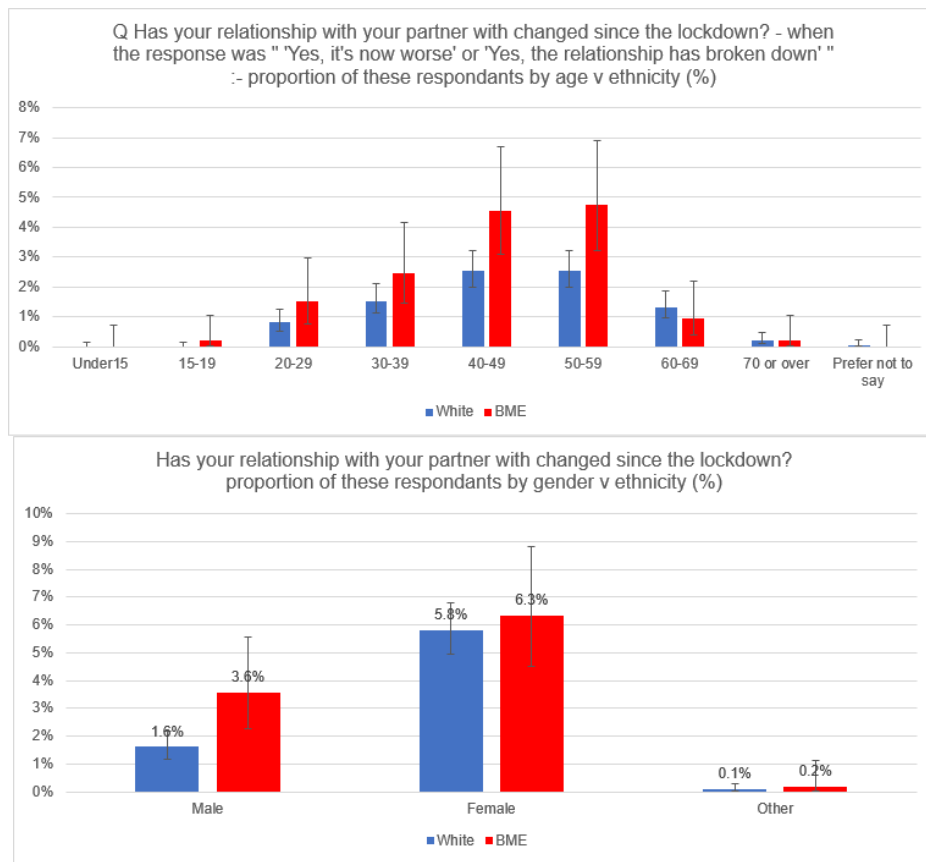
Women were more likely to report family deterioration than men but there did not appear to be significant differences between ethnic groups.



# Personal relationships

Personal relationship appeared to deteriorate more with increasing age up to 59yrs, and this was significantly higher in non-white ethnic groups aged 40-49yr and 50-59yrs.

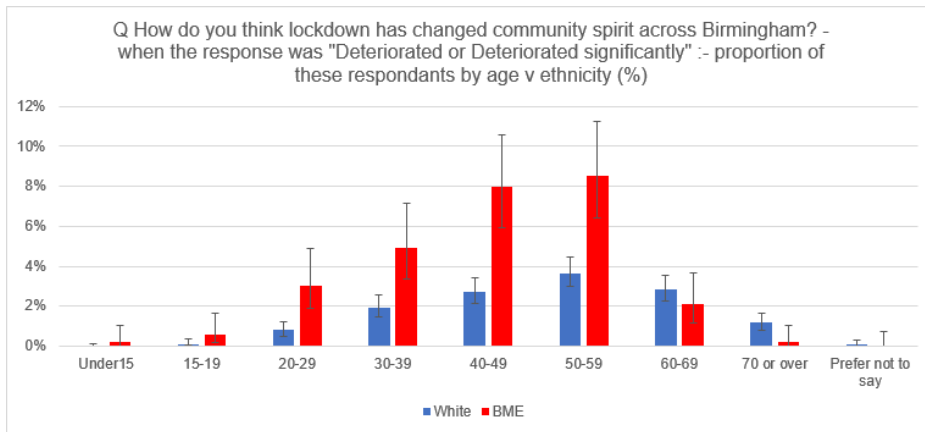
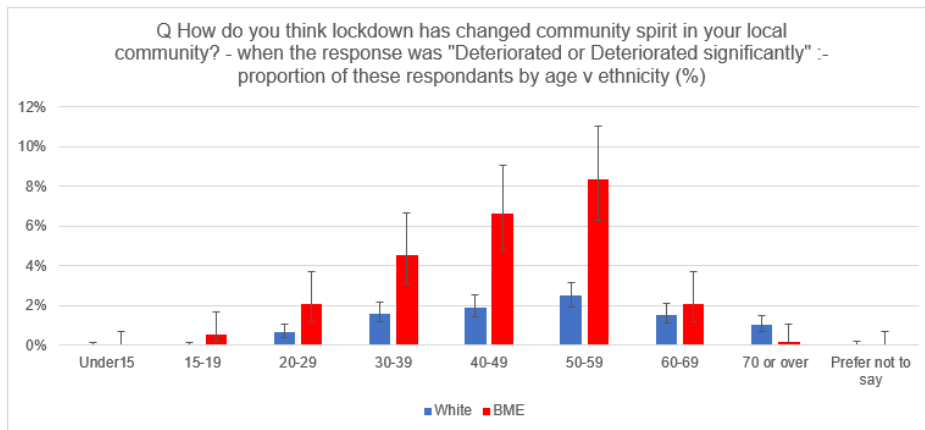
Women were more likely to report relationship deterioration than men but there did not appear to be significant differences between white and non-white ethnic groups for women, but was significantly higher for men among non-white ethnic groups.



# Perceptions of community spirit

In general non-white ethnic communities were more likely to report that they felt that community spirit in their local community has deteriorated and this was higher in the working age groups.

A similar pattern was seen for perceptions of community spirit in local communities and across the city as the whole.

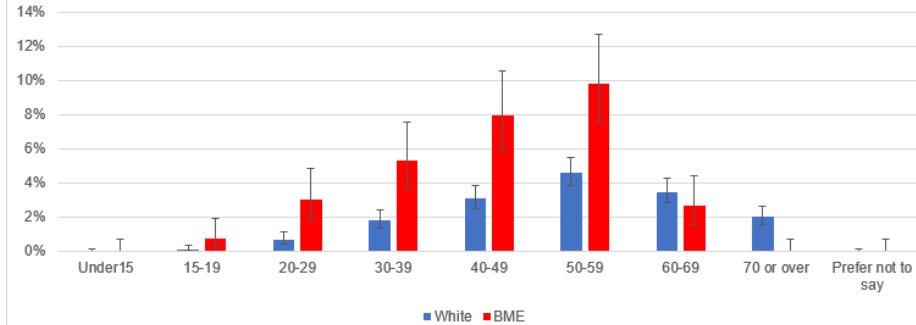


# Relationships with local communities

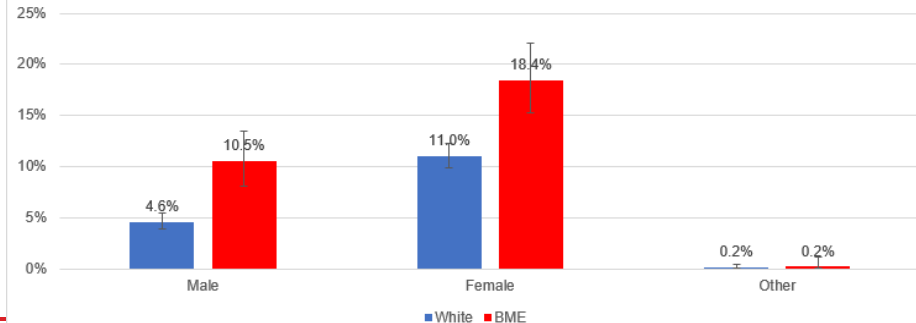
In general non-white ethnic communities were more likely to report that their relationship with their local geographical community has deteriorated and this increased across the working age groups.

Women were more likely to report relationship with local community has deteriorated than men and this was true in both white and non-white ethnic groups, and more significant for non-white ethnic groups in both genders.

Q How has lockdown changed your links with your local geographic community? e.g. your neighbours and local community - when the response was "Deteriorated or Deteriorated significantly" :- proportion of these respondents by age v ethnicity (%)



How has lockdown changed your links with your local geographic community? e.g. your neighbours and local community? proportion of these respondents by gender v ethnicity (%)



# To further understanding of Inequalities and Covid-19

To further understand Covid-19 inequalities and to build intelligence where current gaps in information exist, the Public Health Division are:

- Undertaking ethnographic research that will be reported in the Annual Director of Public Health Report
- Re running the Covid-19 Health and Wellbeing Impact Survey
- Adding to current understanding via Community Tenders



