Public Health England

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OFFICIAL SENSITIVE

Beyond the data: Understanding the impact of COVID-19 on Black Asian and Minority Ethnic (BAME) communities

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Public Health England
Wellington House

133-155 Waterloo Road
London SE1 8UG
Tel: [I&S]
www.gov.uk/phe
Twitter: @PHE_uk

Facebook: www.facebook.com/PublicHealthEngland

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339

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Contents

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Executive summary

There is clear evidence that COVID-19 does not affect all population groups equally. Many analyses have shown that older age, ethnicity, male sex and geographical area, for example, are associated with the risk of getting the infection, experiencing more severe symptoms and higher rates of death. This work has been commissioned by the Chief Medical Officer for England to understand the extent that ethnicity impacts upon risk and outcomes.

The PHE review of disparities in the risk and outcomes of COVID-19 shows that there is an association between belonging to some ethnic groups and the likelihood of testing positive and dying with COVID-19. Genomics were not included in the scope of the review.

This review found that the highest age standardised diagnosis rates of COVID-19 per 100,000 population were in people of Black ethnic groups (486 in females and 649 in males) and the lowest were in people of White ethnic groups (220 in females and 224 in males).

An analysis of survival among confirmed COVID-19 cases showed that, after accounting for the effect of sex, age, deprivation and region, people of Bangladeshi ethnicity had around twice the risk of death when compared to people of White British ethnicity. People of Chinese, Indian, Pakistani, Other Asian, Caribbean and Other Black ethnicity had between 10 and 50% higher risk of death when compared to White British.

The higher observed death rates from COVID-19 in Black and Asian ethnic groups when compared to White ethnic groups is the opposite of what is seen in previous years, when the all cause mortality rates are lower in Asian and Black ethnic groups.

Comparing to previous years, all cause mortality was almost 4 times higher than expected among Black males for this period, almost 3 times higher in Asian males and almost 2 times higher in White males. Among females, deaths were almost 3 times higher in this period in Black, Mixed and Other females, and 2.4 times higher in Asian females compared with 1.6 times in White females.

These analyses did not account for the effect of occupation, comorbidities or obesity. These are important factors because they are associated with the risk of acquiring COVID-19, the risk of dying, or both. Other evidence has shown that when comorbidities are included, the difference in risk of death between ethnic groups among hospitalised patients is greatly reduced.

This report builds upon the PHE epidemiological review by summarising a rapid evidence review and external stakeholder engagement.

Review of the wider literature

A rapid review of the published literature was undertaken to identify if inequalities exist in how BAME populations are affected by COVID-19 infection when compared to the White British population.

The review also sought to understand the social and structural determinants of health that may impact disparities in COVID-19 incidence, treatment, morbidity, and mortality in BAME communities.

There is some evidence which supports the hypothesis that BAME individuals are more likely to test positive for COVID-19 than those identifying as White British but more needs to be done For other minority ethnic groups, there is insufficient evidence to draw conclusions.

The evidence describing risk of severe COVID-19 is mixed. More, high quality research is needed before any conclusions can be reached. The emerging evidence suggests excess mortality due to COVID-19 in BAME populations. Individuals of Black African or Black Caribbean and Asian ethnic groups may have highest increased risk.

The evidence review and stakeholder feedback indicate that risks associated with COVID-19 transmission, morbidity, and mortality can be exacerbated by the housing challenges faced by some members of BAME community. The most recent research from the UK suggests that both ethnicity and income inequality are independently associated with COVID-19 mortality. Individuals from BAME groups are more likely to work in occupations with a higher risk of COVID-19 exposure. They are more likely to use public transportation to travel to their essential work. Historic racism and poorer experiences of healthcare or at work may mean that individuals in BAME groups are less likely to seek care when needed or as NHS staff are less likely to speak up when they have concerns about Personal Protective Equipment or risk.

Stakeholder engagement

We also carried out engagement with a broad range of stakeholders. In total 17 sessions were hosted involving over 4,000 people with a broad range of interests in BAME issues. These sessions provided further insights into the factors that may be influencing the relationship and impact of COVID-19 on BAME communities and strategies for addressing inequalities. PHEs role was to capture the feedback received and were not responsible for confirming the evidence base behind the points raised.

Stakeholders expressed deep dismay, anger, loss and fear in their communities about the emerging data and realities of BAME communities being harder hit by the COVID-19 pandemic than others, exacerbating existing inequalities. Many had lost colleagues or family members to the disease, and nearly all are experiencing the impact of the

disease on their communities with the significant social, physical and mental health impacts and complications.

Stakeholders acknowledged that while actions are already being undertaken, the results of the PHE review and other studies should be used to strengthen and accelerate efforts moving forward. Clear, visible and tangible actions, provided at scale were called for now with a commitment to address the underlying factors. A summary of available resources available to support local action is provided in this report.

The main themes emerging from the stakeholder sessions were:

Longstanding inequalities exacerbated by COVID-19

It is clear from discussions with stakeholders that COVID-19 in their view did not create health inequalities, but rather the pandemic exposed and exacerbated longstanding inequalities affecting BAME communities in the UK. A wide variety of explanations for these have been examined, ranging from upstream social and economic factors to downstream biological factors (this review did not look at genetic factors) . BAME groups tend to have poorer socioeconomic circumstances which lead to poorer health outcomes. Data from the ONS and the PHE analysis confirmed the strong association between economic disadvantage and COVID-19 diagnoses incidence and severe disease. Economic disadvantage is also strongly associated with the prevalence of smoking, obesity, diabetes, hypertension and their cardio-metabolic complications, which all increase the risk of disease severity.

Stakeholders felt that the disproportionate impact of COVID-19 on BAME communities presented an opportunity to create fast but sustainable change and mitigate further impact. Change needs to be large scale and transformative. Action is needed to change the structural and societal environments such as the homes, neighbourhoods, work places - not solely focusing on individuals. There is a legal duty and moral responsibility to reduce inequalities.

Increased risk of exposure to and acquisition of COVID-19

The results of the PHE data review suggest that people of Black, Asian and other minority 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, which the currently available data did not allow us to explore in this analysis.

Stakeholders highlighted the high proportion of BAME communities 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.

Increased risk of complications and death from COVID-19

Once infected, many of the pre-existing health conditions that increase the risk of having severe infection (such as having underlying conditions like diabetes and obesity) are more common in BAME groups and many of these conditions are socio-economically patterned. For many BAME communities, especially in poor areas, there is a higher incidence of chronic diseases and multiple long-term conditions (MLTCs), with these conditions occurring at younger ages.

Stakeholders called for further efforts to strengthen health promotion programmes and improve early diagnosis and clinical management of chronic diseases as a strategy to improve overall health, increase resilience and reduce the risk of adverse COVID-19 associated health outcomes. The role of severe mental illness as a risk factor for COVID-19 disease severity and death was mentioned repeatedly and identified as an area that was at risk of being overlooked in the current response. Key strategies recommended by stakeholders included strengthening targeted programmes for chronic disease prevention; culturally competent and targeted health promotion to prevent chronic diseases and MLTCs; targeting the health check programme to improve identification and management of MLTCs in BAME communities; targeted messaging on smoking, obesity and improving management of common conditions including hypertension and diabetes. Culturally competent strategies to support better symptom recognition (e.g. hypoxia), early diagnosis and earlier presentation to clinical services for COVID-19 was also seen as critical to reducing complications from COVID-19.

Racism, discrimination, stigma, fear and trust

Stakeholders pointed to racism and discrimination experienced by communities and more specifically by BAME key workers as a root cause affecting health, and exposure risk and disease progression risk. Racial discrimination affects people's life chances and the stress associated with being discriminated against based on race/ethnicity affects mental and physical health through physiological pathways. Issues of stigma with COVID-19 were identified as negatively impacting health seeking behaviours. Fear of diagnosis and death from COVID-19 was identified as negatively impacting how BAME communities took up opportunities to get tested and their likelihood of presenting early for treatment and care. For many BAME communities,

8

lack of trust of NHS services and health care treatment resulted in their reluctance to seek care on a timely basis, and late presentation with disease.

Despite these challenges, stakeholders reinforced the importance and need for communities to work with government and anchor institutions to create solutions. Faith communities played a vital role in engaging with communities and were a trusted source of information, leadership and engagement with many BAME communities. They needed to be better engaged in future efforts to build community resilience and prepare communities for the immediate and long-term challenges of COVID-19. National and local government officials (including public health teams) have a unique opportunity to provide advocacy for vulnerable groups. Work to tackle racism and discrimination within the health and care system must continue at pace with a clear commitment for increasing diverse leadership at all levels in health and care system, reflecting the communities being served.

Strategies to create healthy and supportive workplaces (within and outside the health service) that have zero tolerance for discrimination and empower BAME staff to raise concerns about occupational risk and safety are essential. So too is work with local communities to rebuild trust and reduce fear of using health services in the aftermath of COVID19. Stakeholders acknowledged that there are lots of examples of work already underway at local, regional and national levels, however COVID-19 presents an opportunity to step-up commitments and accelerate the pace of change. There is a wariness and concern that the opportunity for lasting change will be missed alongside a willingness share good practice and co-produce the change required.

Moving forward

Stakeholders made numerous recommendations for further research to understand the impact of COVID-19 on BAME communities, the extent to which this is due to increased rates of infection and why, after being infected, such patients appear to have poorer outcomes. Given the limitations of the PHE review, work was especially called for on the socio-economic, occupational, cultural and structural factors (racism, discrimination, stigma) influencing COVID-19 outcomes in BAME communities within and outside the health sector. There was a consistent ask for all research on this issue to be done in partnership with communities, ideally embedding community participatory research principles and integrating mental and physical health. Questions remain on the role of factors such as diet, housing, vitamin D deficiency although current guidance recommends taking daily supplementation. Learning from the experiences in other countries was thought to be essential in helping to understand why BAME communities in England were disproportionately affected. There is also a need for further research on the economic impacts of COVID-19 on BAME communities, which will likely be very long term and severe, with lasting health and wellbeing impacts. There was a clear ask for improved data collection on ethnicity, occupation and faith in all routine clinical data and death certification.

9

The report sets out a number of stakeholder requests for action across the following domains; *Research and data* to deepen our understanding of the wider socio-economic determinants, improve data recording of faith and ethnicity and greater use of community participatory research. *Policy*, ensuring long term sustainable change, establish cross government infrastructure to drive change, address occupational risk and act to mitigate the impact of race crime. *Communications*; work with community leaders to enhance the depth of reach into BAME communities ensuring guidance and media is culturally appropriate and available in different languages use different approaches to mitigate fears and encourage improved uptake of vital prevention services. *Anchor institutions;* scale up prevention services in a targeted and timely way, develop strategies to rebuild trust with health and care services, co-produce solutions with BAME community and faith leaders, provide safeguards to mitigate risks for all front-line workers.

In conclusion, this report provides additional information and insights on the relationship between COVID-19 and BAME communities in England from a rapid review of the published literature and stakeholder engagement exercise. Although our understanding is evolving rapidly, it is difficult at this stage to provide a full explanation of the observed differences. Ethnic inequalities in health and wellbeing in the UK existed before COVID-19 and the pandemic has made these disparities more apparent and undoubtedly exacerbated them.

The unequal impact of COVID-19 on BAME communities may be explained by a number of factors ranging from social and economic inequalities, racism, discrimination and stigma, occupational risk, inequalities in the prevalence of conditions that increase the severity of disease including obesity, diabetes, hypertension and asthma. Unpacking the relative contributions made by different factors is challenging as they do not all act independently. The engagement sessions highlighted the BAME community's deep concern and anxiety that if lessons are not learnt from this initial phase of the epidemic, future waves of the disease could again have severe and disproportionate impacts. All were united in the commitment that urgent, collaborative and decisive action is required to avoid a repeat of this in the future.

Recommendations

Throughout the stakeholder engagement exercise, it was both clearly and consistently expressed that without explicit consideration of ethnicity, racism and structural disadvantage in our responses to COVID-19 and tackling health inequalities there is a risk of partial understanding of the processes producing poor health outcomes and ineffective intervention. No work was done to review the evidence base behind stakeholders comments.

The following recommendations arise from a range of requests for action from stakeholders and point to the areas where commitment, focus, and delivery at scale could make a significant difference in improving the lives and experiences of BAME communities. This is crucially important as we emerge from the first phase of the COVID-19 pandemic and look toward rebuilding communities, restarting services and local economies, and creating resilient, engaged and cohesive communities capable of withstanding and thriving despite the upcoming challenges.

1. Mandate comprehensive and quality **ethnicity data collection and recording** as part of routine NHS and social care data collection systems, including the mandatory collection of ethnicity data at death certification, and ensure that data are readily available to local health and care partners to inform actions to mitigate the impact of COVID-19 on BAME communities.

2. Support **community participatory research**, in which researchers and community stakeholders engage as equal partners in all steps of the research process, to understand the social, cultural, structural, economic, religious, and commercial determinants of COVID-19 in BAME communities, and to develop readily implementable and scalable programmes to reduce risk and improve health outcomes.

3. Improve **access, experiences and outcomes of NHS, local government and Integrated Care Systems commissioned services** by BAME communities including: regular equity audits; use of Health Impact Assessments; integration of equality into quality systems; good representation of black and minority ethnic communities among staff at all levels; sustained workforce development and employment practices; trust-building dialogue with service users.

4. Accelerate the development of **culturally competent occupational risk assessment tools** that can be employed in a variety of occupational settings and used to reduce the risk of employee's exposure to and acquisition of COVID-19, especially for key workers working with a large cross section of the general public or in contact with those infected with COVID-19.

5. Fund, develop and implement **culturally competent COVID-19 education and prevention campaigns,** working in partnership with local BAME and faith communities to reinforce individual and household risk reduction strategies; rebuild trust with and uptake of routine clinical services; reinforce messages on early identification, testing and diagnosis; and prepare communities to take full advantage of interventions including contact tracing, antibody testing and ultimately vaccine availability.

6. Accelerate efforts to **target culturally competent health promotion and disease prevention programmes** for non-communicable diseases promoting healthy weight,

physical activity, smoking cessation, mental wellbeing and effective management of chronic conditions including diabetes, hypertension and asthma.

7. Ensure that **COVID-19 recovery strategies** actively **reduce inequalities caused by the wider determinants of health** to create long term sustainable change. Fully funded, sustained and meaningful approaches to tackling ethnic inequalities must be prioritised.

Acknowledgements

Impact of COVID-19 in Black, Asian, and Minority Ethnic (BAME) Populations: A rapid literature review

Main messages:

- There is some evidence which supports the hypothesis that individuals identifying as Black African or Black Caribbean are more likely to test positive for COVID-19 than those identifying as white British. For other minority ethnic groups, there is insufficient evidence to draw conclusions

- the evidence describing risk of severe COVID-19 is very mixed. More, high quality research is needed before any conclusions can be reached

- the emerging evidence suggests excess mortality due to COVID-19 is higher in BAME populations. Individuals of Black African or Black Caribbean ethnicity may be of highest increased risk

- the risks associated with COVID-19 transmission, morbidity, and mortality can be exacerbated by the housing challenges faced by some members of BAME community

- the most recent research from the UK suggests that both ethnicity and income inequality are independently associated with COVID-19 mortality

- individuals from BAME groups are more likely to work in occupations with a higher risk of COVID-19 exposure. They are more likely to use public transportation to travel to their essential work

- historic negative experiences of healthcare or at work may mean that individuals in BAME groups are less likely to seek care when needed or as NHS staff less likely to speak up when they have concerns about PPE or testing

Background

Health disparities are differences in health across the population, some of which may be unfair and avoidable. There is emerging evidence from the United Kingdom and other countries that some population groups have an increased risk of adverse outcomes from COVID-19 including some ethnic groups, males, those with certain pre-existing

conditions such as obesity, those in deprived communities, older people, some occupations, people living in care homes, and other vulnerable groups. This may exacerbate existing health inequalities in the population.

To support the review, PHE has undertaken a rapid literature review on disparities in the risk and outcomes of COVID-19 using available data sources.

Alongside this the National Institute for Health Research (NIHR) and UK Research and Innovation (UKRI) launched a rolling call for rapid research proposals that address emerging priorities and have potential to deliver public health impacts within 12 months.

There is emerging evidence of an association between those in a BAME and increased risk of severe COVID-19 disease and mortality. Evidence is also emerging of an association between cardiovascular disease, diabetes, and severe obesity and increased risks of severe COVID-19 disease. These long term conditions are also found with increased prevalence amongst many UK BAME populations (2, 3). London and Birmingham, 'hot spots' for the COVID-19 epidemic in England, also have some of the highest BAME populations; London is home to 60% of black residents of England and Wales and 50% of the Bangladeshi population (4).

These underlying individual and population level associations confound the risk of COVID-19 disease severity and mortality. The existing literature was examined to determine if excess risk remained for individuals from BAME groups from COVID-19 after adjusting for social and structural determinants of health.

The purpose of this review was to identify if inequalities exist in how BAME populations are affected by COVID-19 infection when compared to the white British population. The review also seeks to understand the social and structural determinants of health that may impact disparities in COVID-19 incidence, treatment, morbidity, and mortality in BAME communities.

Methods (set out in detail in appendix 1)

Review questions

1. Are individuals in BAME groups more likely to be tested for and/or subsequently diagnosed with COVID-19 infection?

2. Are individuals in BAME groups more likely to develop severe clinical presentations of COVID-19 infection?

3. Is infection with COVID-19 more likely to lead to mortality within BAME groups?

4. What are the social and structural determinants of health that may impact disparities in COVID-19 incidence, treatment, morbidity, and mortality in BAME communities?

Notes:

Ethnicity can be defined as shared culture and traditions that are distinctive, maintained between generations, and lead to a sense of identity and groupness. Minority ethnic groups are populations that differ in ethnicity from the dominant or majority ethnicity in a country. In the 2011 census, 7.9 million people identified themselves as being in a BAME equivalent to 14% of the UK population (1).

A scoping search was completed on 14/05/2020 to identify any existing reviews (systematic or rapid) related to the defined research questions. A number of COVID-19 review repositories and prospective review registers were searched and a summary paper was produced. Four completed, potentially relevant rapid reviews were identified, that broadly examined the impact of COVID-19 in BAME groups (4-7). One additional review was identified in the primary literature search described below (8).

Of the reviews identified, McQuillan et al (6) answered the key questions defined in the research protocol. An updated literature search, using the search terminology detailed in McQuillan et al, was undertaken specifically focused on papers published (or available as pre-print) between 25th April and 19th May 2020. See appendix 1 for details of the full methodology used. A full protocol is available on request. In summary, this was screening published evidence, extracting data, critically appraising studies and synthesising key points for inclusion. The narrative synthesis includes evidence from the primary literature as well as the four rapid reviews identified in the scoping search.

Evidence

The search returned 527 records; an additional 21 papers were sent to the team by public health colleagues, primarily potentially relevant papers awaiting publication. After removal of duplicates, 544 records were screened by title and abstract and 120 full texts. A PRISMA diagram is provided in appendix 2.

Thirty-one papers were identified for inclusion. Twenty studies looked at UK data with eight pulling from the large, Biobank Cohort study (9-16). Whilst this cohort study has the benefit of including a large number of UK residents, over 500,000 participants, and has collected a significant amount of data about each individual to allow for adjustment of numerous confounders, the voluntary nature of enrolment in the cohort leads to a concern around selection bias and worries about the generalisability of the findings. Additionally, most of the information collected about socio-economic status and underlying health conditions were collected at the time of enrolment (between 2006-2010); these may have changed significantly in the following decade.

Four UK studies describe the COVID-19 epidemic at individual NHS trusts: two papers report findings from trusts in the West Midlands and two from trusts in London (17-20). These papers are valuable in describing the outbreaks in 'hotspots' affecting members of the BAME community but may not be generalisable to other populations across England.

Eleven studies describe data from the United States (21-30). Due to the differing ethnic profile of the United States, the historical differences in the impacts of racism and slavery, and the radically different healthcare systems between the US and the UK, it is difficult to generalise the effects of social and structural impacts on health. The data, however, were included given the scarcity of data examining the impact of COVID-19 in BAME communities, nationally and internationally. Country of data origin will always be highlighted.

All the studies included in the review were observational and have a number of limitations such as lack of randomisation and heterogeneity of participants. Several included ecological studies which present additional limitations, including the inability to control for individual level confounding. In addition, all studies were conducted during a global pandemic, which could have resulted in possible incompleteness of data. Inconsistency of testing across settings and countries is another limitation.

Summary of rapid reviews

The rapid review of the literature conducted by McQuillan *et al* examined 54 papers and found the overall quality of the data to be very low (6). They found no data on testing rates in BAME populations. There was little data on severity of Covid-19 in black, Asian, and minority ethnic groups in UK beyond demonstrating that BAME populations have higher rates of cardiovascular and diabetes, both of which lead to an increased risk of complications and mortality from Covid-19. Two very low-quality US studies found that BAME individuals were more likely to make up the ICU population after the pandemic started (not all results were statistically significant) and that hospitalised patients were more likely to be from a BAME population than the underlying population would suggest. Evidence on mortality came from very low-quality papers. When looking at actual vs. expected hospital deaths, for all ethnic groups other than white British and white Irish, the number of deaths exceeded what would be expected for that age group. The mixed and Indian ethnic groups were more than twice as likely to die; Pakistani, Bangladeshi and black Caribbean nearly three times as likely to die, black African more than four times as likely and other ethnic group nearly eight times as likely to die from Covid-19 related complications. The review identified housing, occupational risk (health and social care and other "essential work"), and the low socioeconomic status as social

and structural risks that could potentially impact BAME communities and lead to an increased risk of Covid-19 transmission, morbidity, and mortality.

Raznaq *et al* conducted a review for the Centre for Evidence based Medicine. The rapid review examined 46 papers and found that CVD had the highest prevalence among diseases that put patients at highest risk for complications with Covid-19. They also found that the most deprived were nearly twice as likely to be admitted to ICU than the least deprived (this follows the pattern for other viral pneumonias) and proportionally more black patients required advanced respiratory support in ICU than during other viral pneumonias. The review also found higher excess deaths due to Covid-19 in BAME populations: 1.5 times higher in Indian populations, 2.8 times higher in Pakistani populations, 3 times higher in Bangladeshi populations, 4.3 times higher in black African populations, 2.5 times higher in black Caribbean populations, and 7.3 times higher in black other populations.

This review will build on the limited evidence from the McQuillen *et al* rapid synthesis.

Evidence on testing and test positivity for COVID-19 in BAME populations

Several studies reported that individuals in BAME groups, particularly those identifying as Black African and Black Caribbean, were more likely to test positive for COVID-19 (10, 12, 15, 27, 29, 31); however, only one study presented data on the proportion of participants, by ethnicity, that were tested for COVID-19 regardless of result (12). Both black and Asian participants of this Biobank study had a higher proportion of COVID-19 tests than expected when compared to white British participants (All tests: white 88.6%, Asian, 3.73%, black 4.8%; All participants: white 94.1%, Asian 2.4%, black 1.8%). Statistical significance was not reported.

Following the move into the second pandemic phase, 'Delay,' COVID-19 testing in England was prioritised for individuals admitted to hospital with respiratory symptoms, health and social care workers, and other key workers (32). The ethnicity of those tested has not been reported but the literature is clear that BAME groups are over-represented across a number of key-worker populations, which may have led to increased testing in these groups. The health and social care workforce is particularly well represented by BAME groups: Indians account for 14% of doctors and Black Africans make up 7% of the nursing workforce (4).

The likelihood of a positive test in certain BAME groups appears to be raised even after adjusting for confounding. These results, however, all come from studies with high risk of bias and should be interpreted with caution. Two Biobank studies report statistically

significant increased relative risk of a positive COVID-19 test result for black participants when compared to white participants: aRR 2.66 (95% CI 2.03, 3.88) (15); aRR 2.07 (95% CI 1.16, 3.71) (10). Prats-Uribe et al also reported an increased relative risk of COVID-19 positivity for individuals in the 'other ethnic groups' category (aRR 1.67; 95% CI 1.04, 2.68) and those identifying as Asian (aRR 2.09; 95% CI 1.53, 2.84) (15).

The national Royal College General Practitioners surveillance programme found that those of a black ethnicity had 4.75 times the odds of a positive COVID-19 test than those of a white ethnicity (31). It should be noted, however, that the sample of BAME individuals in the RCGP database is small and ethnicity is missing for 27% of entries.

Internationally, two large cohort studies in the US and one US ecological study support the findings that individuals of a black ethnicity are at increased odds of a positive COVID-19 test (27-29).

Key findings:

- the current evidence around the likelihood of individuals in BAME populations being tested for COVID-19 at a higher or lower rate than those identifying as white British is very limited and conclusions cannot be drawn from the literature

- low-level evidence from the studies included in the literature review supports the hypothesis that individuals identifying as Black African or Black Caribbean are more likely to test positive for COVID-19 than those identifying as white British. For other minority ethnic groups, there is insufficient evidence to draw conclusions

Evidence on severe clinical presentations of COVID-19 in BAME populations

The picture is very mixed when examining the evidence around severe clinical presentations of COVID-19 across ethnic groups. In one UK Biobank study, researchers found that participants from black ethnic groups had three times the odds of hospitalisation and participants from Asian ethnic groups had twice the odds of hospitalisation when compared to participants from white ethnic groups (14) to note participants in the study were volunteers which may impact on results. In another UK Biobank study, however, the same groups were found to have similar odds of hospitalisation (12). One additional UK Biobank study, looked at risk of "severe COVID-19 " and found that participants from black ethnic groups had over a three-fold increased risk and participants from Asian ethnic groups had a two-fold increased risk compared to participants from white ethnic groups (p<0.001) (11).

Studies focussing on NHS Foundation trusts had similarly mixed results: one Birmingham trust found those of South Asian descent more likely to have higher disease severity on admission to hospital and more likely to need ICU support

(p<0.001) (19). Three other NHS Foundation trusts found no significant differences between any BAME groups when compared to the white British population on ICU admission (17, 18, 20). These studies had small sample sizes and high risk of bias but little additional UK data are available.

Other evidence reviews highlight the ICNARC ICU audit, which compared confirmed COVID-19 ICU patients with viral pneumonia patients from 2017-2019 (5, 7). The ICNARC ICU audit notes that 34% of critically ill COVID-19 patients were from a BAME background compared to 12% of admitted to ICU for viral pneumonia in previous years.

Co-morbid conditions

Certain co-morbidities have been linked in the literature to higher risks of severe clinical outcomes and/or mortality due to COVID-19. The key risk factors for poor outcomes is pre-existing cardiovascular disease (CVD); others include diabetes and hypertension (4, 8). A meta-analysis performed by Janowski et al found that multiple co-morbidities appear to confer cumulative risk (8). Rates of CVD and diabetes are particularly high in some BAME communities. Death rates from CVD are 50% higher than average among individuals of South Asian descent (2). Individuals of South Asian descent are four times more likely to have type 2 diabetes; individuals with a Black African or Black Caribbean ethnicity are three times more likely to develop type 2 diabetes than those of white British ethnicity (3, 33, 34).

Key finding:

The evidence describing risk of severe COVID-19 amongst BAME populations is unclear; more, high quality research is needed before any conclusions can be reached

Evidence on excess mortality due to COVID19 in BAME populations

The evidence emerging from the United Kingdom suggest excess mortality due to COVID-19 in BAME populations. Studies conducted at single hospital trusts found significantly greater odds of mortality for individuals of South Asian ethnicity (17, 19) sample size for these were over 2000. A national ICU retrospective audit found that BAME patients were more likely to die after being admitted to ICU with confirmed COVID-19 than those of white ethnicity (p=0.0001) (6).

Two groups used hospital mortality data to generate standardised mortality ratios (SMRs) by ethnicity (35, 36). Williamson et al used anonymised primary care data to further refine the SMR. They found that individuals recorded as black ethnicity or Asian ethnicity were at higher risk of COVID-19 related mortality, even after controlling for age, co-morbidity, and deprivation (black ethnicity: aHR 1.71, 95% CI 1.44, 2.02; Asian

ethnicity aHR 1.62, 95% CI 1.43, 1.82; mixed ethnicity aHR 1.64, 95% CI 1.19, 2.26) (36).

The Institute for Fiscal Studies found in their analysis of the available hospital deaths data that there is a "higher per-capita mortality for all BAME groups than can be explained by age and geography alone" (4). Black Africans have 3.7 times the number of deaths than those of the white British ethnicity, Pakistanis have 2.9 times the deaths, and Black Caribbean's have 1.8 times the deaths. White Irish have fewer deaths due to COVID-19 than the white British do.

The Office for National Statistics has examined data and reported that those of Black African or Black Caribbean ethnicity are 1.9 times more likely to die due to COVID-19; males of Bangladeshi and Pakistani ethnicity are 1.8 times more likely to die, and females of Bangladeshi and Pakistani ethnicity are 1.6 times more likely to die. All excess deaths are compared to those of a white British ethnicity (37). Those of a Chinese or mixed ethnicity have a similar risk of death to white British. Mortality data has primarily relied on hospital reported deaths; not including care home deaths could artificially inflate BAME deaths as more white British older adults reside in nursing and residential homes (4). The analysis presented by the ONS, however, includes deaths outside of hospital and adjusts for potential confounding through linkage to the 2011 census data.

Only one study reports mortality in healthcare workers in the UK by ethnicity (38). This study used data gathered from social media, news reports, and other publicly available "In memoriam" websites to gather outcome data, meaning it is of high risk of bias. They found a higher proportion of BAME fatalities than expected considering the proportion of the NHS workforce that is BAME. Of the deaths in healthcare workers reported, 63% were in BAME groups: 36% were of Asian ethnicity (compared to 10% of NHS workforce) and 27% were of black ethnicity (compared to 6% of the NHS workforce). Further analysis is urgently needed to understand the morbidity and mortality of health and social care workers due to COVID-19, with a particular focus on BAME groups.

The international literature is mixed. The data from the United States is primarily from ecological studies, which have a high risk of bias due to residual confounding. These studies show that the risk of death is higher for African-Americans (black ethnicity) when compared to the white population (5, 25, 26, 30). There is, however, substantial variation across and within states and some cohort studies found no significant difference between risk of mortality for those of a black ethnicity and those of a non-black ethnicity (24, 28).

Key finding:

The available evidence suggests excess mortality due to COVID-19 in BAME populations in England. Individuals of Black African or Black Caribbean ethnicity may be of highest increased risk.

Evidence around the social and structural determinants of health in relation to COVID-19 and BAME communities

The social and structural determinants of health are defined as the wider influences to an individual's health; these can be visualised as the outer layer of Dahlgren and Whitehead's policy rainbow (39). The social and economic circumstances described can affect health throughout the life course and those that are most deprived have the highest risk of serious illness and premature death (39, 40). Disparities in health behaviours increase over time: those that are richer have even better health and those that are poorer lag further behind. It is important to find public health interventions that do not widen these health inequalities (41). More research is required to fully understand of the correlation between COVID-19 risks and outcomes, ethnicity and wider determinants of health.

There is substantial evidence on health inequalities that is relevant to COVID-19 Inequalities in health status and disease risk are associated with minority ethnic status; those in minority ethnic groups have poorer health outcomes that the majority population (42). Differences in cultural factors may play a role in disease risk, but it is more likely that the decreases in life expectancy and health outcomes are due to social, economic, and structural determinants of health (43).

Housing

The risks associated with COVID-19 transmission, morbidity, and mortality can be exacerbated by the housing challenges faced by some members of BAME community.

Whilst there is no direct evidence which directly correlates housing to COVID-19 outcomes there are studies which can be considered.

Overcrowding can lead to increased COVID-19 transmission as individuals within the household are unable to effectively self-isolate (20) This is a much larger problem in BAME households than in white British households, even after controlling for region (4). In London, 30% of Bangladeshi households, 16% of Black African households, and 18% of Pakistani households have more residents than rooms compared with only 2% of white British households (4). Soltan et al found that overcrowding was associated with increased rates of mortality in their hospital based cohort (20).

BAME households are more likely to be intergenerational: grandparents living alongside grandchildren. Whilst this can have significant community and social benefits, there is a

concern that socially active young people may be more likely to spread the virus associated with COVID-19 disease to the oldest population most at risk. Bangladeshi, Indian, and Chinese households are particularly likely to have people over the age of 65 living with children under the age of 16; 30% of BAME live with a child under the age of 16 compared with only 11% of the white British population (7).

Black, Asian, and other minority ethnic populations are also much less likely to be owner-occupiers of their current residence compared to the white British majority. This can lead to housing insecurity (7).

Financial Vulnerabilities

Socioeconomic status has been linked to incidence and severity of viral pneumonia in recent years (5). This social gradient continues to be seen with COVID-19 disease: individuals in the most deprived quintiles are nearly twice as likely to be admitted to ICU as the least deprived. The most recent research from the UK suggests that both ethnicity and income inequality are independently associated with COVID-19 mortality (44).

The economic impact of the COVID-19 'shut-down' may be felt differently across different ethnic groups in England. Platt *et al* found that Pakistani and Bangladeshi households were most likely to have men working in a 'shut-down' sector (restaurant work, taxi driving) as well as having a partner not currently in the labour market; this could lead to high levels of financial insecurity in this group (4). They also identified that the proportion of Black African and Black Caribbean households with dependent children and lone parents is high when compared to other groups; this may lead to difficulty arranging childcare in order to become economically active. Local and national policy initiatives will need to be sensitive to BAME communities to ensure existing health and economic inequalities are not widened due to the extraordinary measures taken during the pandemic.

Occupational Risk

Individuals from BAME groups are more likely to work in occupations with a higher risk of COVID-19 exposure, this includes the health and social care workforce, as well as cleaners, public transport workers, and retail workers (6). The health and care workforce in England are significantly over-represented by people from BAME groups: 40% of doctors, 20% of nurses, and 17% of social care workforce are from of BAME ethnicity. In London, nearly 50% of the NHS and CCG staff come from a BAME group (44.9%) (5). Often, BAME workers are in lower paid roles within the NHS, which mean that these roles cannot be done remotely (5, 6); this leads to greater exposure with other members of the community.

23

It has also been noted by several research groups that individuals in BAME groups are more likely to use public transportation to travel to their essential work, leading to additional routes of exposure (5, 6, 22).

Experiences

Individuals that identify as being part of a BAME group may feel marginalised, have experienced racism, or have had previous experiences with a culturally insensitive health service that could create barriers to engagement. Research has shown that individuals from BAME backgrounds often have poorer access to healthcare services as well as poor past experiences of care and treatment (45). This may mean they are less likely to seek care when needed or as NHS staff less likely to speak up when they have concerns about PPE or testing (5).

Key findings – drawn from direct and indirect evidence:

- the risks associated with COVID-19 transmission, morbidity, and mortality can be exacerbated by the housing challenges faced by some members of BAME community. Overcrowding can lead to increased COVID-19 transmission as individuals in the household are unable to effectively self-isolate. BAME households are more likely to be intergenerational, leading to risk of transmission between young children and older adults
- the most recent research from the UK suggests that both ethnicity and income inequality are independently associated with COVID-19 mortality
- individuals from BAME groups are more likely to work in occupations with a higher risk of COVID-19 exposure. They are more likely to use public transportation to travel to their essential work
- historic racism and poorer experiences of healthcare or at work may mean that BAME individuals are less likely to seek care when needed or as NHS staff less likely to speak up when they have concerns about PPE or testing

Limitations

The rapid review of primary studies is limited to evidence drawn from COVID-19. This evidence base has been generated during extremely difficult global pandemic circumstances that may have affected the completeness of the data sources. Furthermore, none of the data presented, including the previously conducted reviews, were of high quality. It is important to continue to monitor this rapidly expanding evidence base and update the literature review regularly.

Conclusions

The emerging evidence base suggests that individuals in black, Asian, and minority ethnic groups are at increased risk of mortality due to COVID-19. Those of Black African and Black Caribbean descent appear to be at greatest increased risk.

Health inequalities known to affect the BAME communities in England may be increasing the risk of transmission (overcrowded housing, reliance on transport, living in populations centres) and the risk of mortality (high underlying risk of co-morbidities: CVD, diabetes, obesity). Furthermore, the measures to control the spread of the COVID-19 across the country may have led to further economic or housing instability. Local and national policy initiatives will need to be sensitive to BAME communities to ensure existing health and economic inequalities are not widened due to the extraordinary measures taken during the pandemic.

Looking beyond the data: Stakeholder engagement

Main messages:

- in total 17 sessions were hosted involving over 4,000 people with a broad range of interests in BAME issues. These sessions provided further insights into the factors that may be influencing the relationship and impact of COVID-19 on BAME communities and strategies for addressing inequalities.
- stakeholders expressed deep dismay, anger, loss and fear in their communities about the emerging data and realities of BAME communities being harder hit by the COVID-19 pandemic than others, exacerbating existing inequalities
- COVID-19 in their view did not create health inequalities, but rather the pandemic exposed and exacerbated longstanding inequalities affecting BAME communities in the UK
- stakeholders acknowledged that while actions are already being undertaken, the results of the PHE review and other studies should be used to strengthen and accelerate efforts moving forward. Clear, visible and tangible actions, provided at scale were called for now with a commitment to address the underlying factors
- stakeholders highlighted the high proportion of BAME communities 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
- stakeholders called for further efforts to strengthen health promotion programmes and improve early diagnosis and clinical management of chronic diseases as a strategy to improve overall health, increase resilience and reduce the risk of adverse COVID-19 associated health outcomes
- stakeholders pointed to racism and discrimination experienced by communities and more specifically by BAME key workers as a root cause affecting health, and exposure risk and disease progression risk
- faith communities played a vital role in engaging with communities and were a trusted source of information, leadership and engagement with many BAME communities and needed to be better engaged in future efforts to build community resilience and prepare communities for the immediate and long-term challenges of COVID-19
- strategies to create healthy and supportive workplaces (within and outside the health service) that have zero tolerance for discrimination and empower BAME staff to raise concerns about occupational risk and safety are essential. So too is work with local communities to rebuild trust and reduce the fear of using health services in the aftermath of COVID19.

Introduction

The stakeholder engagement/ listening sessions had three objectives: (1) To provide clarity on the terms of reference for PHE's research review of COVID-19 and BAME communities; (2) To engage a broad cross-section of external partners on current concerns, activities, and priorities for work regarding the impact of COVID-19 on BAME communities' (3) To identify opportunities for individual and collective action, recognising that interventions to address these disparities must be multi-level, sustained, participatory and ideally place-based.

In this component of the work, data was gathered from a series of 17 stakeholder engagement events involving representatives from a wide and diverse range of constituencies. The events took place over a four week period (between 30 April 2020 and 27 May 2020) with participants from national, regional and local bodies including the Royal Colleges; the devolved nations; cross-government departments; local government leaders, chief executives of local government, directors of public health, faith groups, migrant health leaders, community and voluntary sector leaders and representatives, researchers and academics, pharmacist organisations, business leaders, political leaders and health and wellbeing board chairs. Many the events were co-chaired by senior leaders in the field. In total more than 4,000 individuals were involved in a stakeholder engagement events.

All engagement events took place online either by Skype, Zoom or Microsoft Teams. Key issues raised by participants were recorded and summarised for each session. PHE also received written feedback from other stakeholders, from which key themes were extracted and considered in the content of this report. All acquired data were analysed using an iterative approach which incorporated deductive and inductive methods in identifying themes. Due to data protection we are not able to include a list of all the individuals who participated in the discussions. The stakeholder engagement events provided rich qualitative and contextual insight into a range of issues on COVID-19 and BAME communities.

Stakeholders expressed deep dismay, anger, loss and fear in their communities about the emerging data and realities of BAME communities being harder hit by the COVID-19 pandemic than others, exacerbating existing inequalities. Many had lost colleagues or family members to the disease, and nearly all are experiencing the impact of the disease on their communities with the significant social, physical and mental health impacts and complications. The engagement sessions highlighted the deep concern and anxiety that if lessons are not learnt from this initial phase of the epidemic, future waves of the disease could again have severe and disproportionate impacts. All were united in the commitment that urgent clear action was taken to avoid a repeat of this in the future.

In general, the feedback from communities centred around four major areas: The impact of longstanding social and economic inequalities on BAME communities vulnerability to COVID-19; factors increasing the risk of exposure to and acquisition of COVID-19; factors increasing the risk of severe disease and death from COVID-19; the impact of racism, discrimination, stigma, fear and trust; and solutions for moving forward. These are described in more detail in the following section.

The information set out below represents feedback received from external stakeholders and are not the views of PHE.

Impact of longstanding social and economic inequalities

Stakeholders clearly articulated an understanding that COVID-19 did not create health inequalities, but rather the pandemic exposed and exacerbated longstanding inequalities affecting BAME communities in the UK. A wide variety of explanations for these were discussed by participants, ranging from upstream social and economic factors to downstream biological factors (the PHE review did not look at genetic factors). BAME groups tend to have poorer socioeconomic circumstances which lead to poorer health outcomes. Participants highlighted data that they had seen from the ONS which confirmed the strong association between economic disadvantage and COVID-19 incidence and severe disease. Economic disadvantage is also strongly associated with risk factors for disease severity including smoking, obesity, asthma, diabetes, hypertension and cardio-metabolic complications.

Stakeholders felt that the severe and disproportionate impact of COVID-19 on BAME communities presented an opportunity to create fast but sustainable change and mitigate further impact. Change needs to be large scale and transformative. They noted that action is needed at multiple levels - everyone has an important role to play. They also felt that action is needed to change the structural and societal environments such as the homes, neighbourhoods, workplaces - not focusing on individuals. They also highlighted a legal duty and moral responsibility to reduce inequalities.

The need for taking a systems level approach

Stakeholders felt more could have been done to anticipate the unequal effect of COVID-19 on BAME communities and that many lessons from previous incidents were not drawn upon to prevent the excess mortality rates in BAME communities. Had this been done, this could have helped to prevent some of the disproportionate impact on BAME communities and loved ones.

There was recognition that socio-economic factors are often linked together and can combine to reinforce disadvantage in communities and across generations. This multiple disadvantage is often concentrated in specific geographical areas, particularly

28

in inner city areas across the whole country. These in turn could increase risk of exposure to COVID-19 as well as risk of severe disease.

Participants felt that any conversation about a health issue must start from the wider societal challenges that we face; economic challenges, structural racism, quality of housing, amongst others. Many recognise that there are long-standing structural issues that need to be addressed at a systems level but hope that COVID-19 represents a tipping point for change.

> "We have deprivation that is not new. This is an ongoing issue within communities. From our organisational point of view, we are looking at what's the action that the system has taken to address some of these challenges and which ones of them have been effective in trying to lift people out of these situations. Because I think there's an opportunity to not get complacent and to think about how we can reshape a new normal. And I just wonder how we can capture some of that learning going forward."

Further, there is also a wider anxiety that the organisations that support BAME and other communities may not exist due to the economic impact of the COVID-19.

> "The prediction is that 40% of SME community and voluntary sector will cease to exist in three months from now. Including those run by ethnic minorities supporting individuals with overlapping intersectionality e.g. BAME woman, single parent, mental illness, not employed -these small organisations will cease to exist...my concern is that trust is diminished yet again for these communities but how do we sustain and strengthen a sector that doesn't exist?"

Local government

Stakeholders recognised the critical role that local government played in ensuring services were available for the most vulnerable in society. However, there was deep concern for many that decades of cuts in local authority funding had diminished the ability of local authorities to truly address many of the wider social and structural issues that may have placed BAME communities at risk including poverty, social exclusion, and improving living and housing conditions for some of the most marginalised in our society including the homeless, migrants, gypsies and travellers. Similarly, stakeholders felt that the reductions in public health funding and capacity within local government reduced the ability to deliver targeted prevention programmes at scale in many local areas, critical in reducing COVID-19 risk and severity.

> "More needs to be done to recognise that adverse health impacts of this pandemic extend beyond the illness itself. It should include the health impacts

> from lockdown measures and increased economic vulnerability that
> disproportionately affect ethnic minority groups too"

Despite these challenges, local government played a significant role in the first phase of the pandemic by engaging local communities, developing culturally appropriate outreach and programmes, working with local faith institutions and leaders, supporting and shielding vulnerable persons, and providing food, financial and social support to those who had been severely affected and isolated.

> "Our partnership have come together to support communities in ways
> that have never been done before – we are committed to building
> on this and ensuring we use this pandemic as a transformation
> opportunity – some good can come from this!"

There was a lot of innovation in how local government responded to the crisis that respondents felt should be taken forward. It was felt critical that resources were provided for local government to meet the growing and pervasive needs that will emerge post-COVID

Income and poverty

Stakeholders expressed concerned about the role of economic deprivation and the risk of acquiring COVID-19 and having more severe disease. Their knowledge of the emerging data indicated that those who were more economically disadvantaged were more likely to be in occupations that involved greater exposure to risk or were less able to take up protective measures including isolation at home. Many of the BAME community make up a large percentage of frontline and key worker roles. COVID-19 is hitting deprived communities hardest.

Income inequality and poverty was also identified as a major concern for communities to be able to withstand the economic challenges resulting from the COVID-19 pandemic. A number of stakeholders felt that more needed to be done to protect the economic stability of these communities.

> "A lot of people think this is just a BAME people's issue, but it's not – it's
> everybody's business"

Housing, social and living conditions

Stakeholders repeatedly raised a number of social factors related to housing, accommodation, and living conditions that may have increased the risk of exposure to COVID-19. Poor housing conditions had a significant detrimental impact on health, with poor housing increasing the risk of cardiovascular disease, respiratory disease, depression and anxiety, as well as lack of sleep, restricted physical activity. All of these were mentioned as risk factors for worse outcomes with COVID-19 once infected.

Participants raised concerns that BAME communities were more likely to live in more densely populated urban areas where the virus has spread fastest, and are more likely to be key workers, especially in London. Some minority ethnic groups are more likely to live in over-crowded accommodation increasing risk of transmission within households.

> "Multiple generations living in one household mean elderly and vulnerable individuals may struggle, or be unable, to physically distance themselves in a safe manner. However, older people might have more support for essential activities".

Legal and moral duty to act to prevent long term harm

Stakeholders feel that there is legal and moral duty to act, and that more must be done to comply and protect those most at risk. Stakeholders raised concerns that the long-term impacts of COVID-19 would likely significantly affect BAME communities particularly those living in areas of high deprivation.

> "We already had people who had existing problems, but we know that because of the post-COVID economic issues that there are going to be disproportionate effects on those people who are from lower socio-economic backgrounds and there is a predominance of people from black and Asian and minority ethnic groups in those lower socio-economic status backgrounds. So, this is like a triple whammy, adding the traumatic effects of COVID itself and then the economic effects."

Voluntary and community sector organisations (VCS)

Stakeholders uniformly felt that voluntary sector organisations play such an essential role in engaging and supporting local BAME communities and ultimately help build community resilience to COVID-19 and other threats. Even before COVID-19, reductions in funding to this sector had resulted in a gradual and significant loss in the number, range and diversity of VCS organisations working in many localities. Stakeholders believed that this prevented or limited the extensive community mobilisation, preparedness and resilience building that could have helped limit the impact of COVID-19 on local communities and supported efforts by local and national government.

> "Volunteers are the backbone of our community – providing medicine, care and support to the most vulnerable – it's heart breaking to see so many forced to close or unable to support more because of a lack of resources"

As we move beyond the peak of the first phase, VCS organisations and the role they play in supporting communities was seen as critical for the months ahead when we will need to work with communities to observe COVID-19 prevention strategies including

testing, contact tracing and ultimately preparation for a vaccine. Their role in communicating culturally sensitive and language appropriate messaging, as trusted allies, and as a bridge to statutory services was felt as essential for BAME communities.

Vulnerable groups and populations

Stakeholders consistently identified vulnerable groups, including the homeless, migrants, gypsies and traveller communities as being at increased risk throughout the COVID-19 outbreak and even more so in its aftermath. There was concerns about the ability of national and local government messages and programmes on COVID-19, for example regarding prevention, testing and contact tracing, to reach the most vulnerable and excluded within our society, especially when those groups may be wary or fearful of engaging with statutory services.

> "The announcement that people who cannot work from home should return to work has disproportionately affected BAME workers who are more likely to work in these roles, such as construction, process plants and cleaning.- People were also advised that they should avoid public transport and commute by car, bicycle or walk wherever possible to minimise social contact. However, BAME people are significantly more likely to be reliant on public transport than White people. More must be done to recognise, safeguard and protect our vital front-line workers- we must take greater care of those who take care of us and our loved ones"

Stakeholders recognised the good work that had been done locally to address some of these issues, for example providing temporary accommodation for the homeless, and that the lessons learnt should be built upon. Stakeholders felt that it would be unacceptable to return to the status quo pre-COVID-19 and that every effort should be taken to avoid to the systematic disadvantage, social and economic exclusion and discrimination that these communities experienced. Key to this will be ensuring that all national, regional and local recovery plans commit to building upon, the positive gains made in engaging and providing comprehensive services for these groups.

> "As the UK faces an historic economic recession as a consequence of COVID-19, ongoing financial and other additional support needs to be targeted at those who are living in poverty or insecure employment. Adequate financial support will also help ensure that people who should be shielding or isolating for their own and others' health are not forced to work by economic necessity"

Faith community

Stakeholders emphasised the central role that faith plays in BAME communities. COVID -19 had significantly affected not only communities' ability to recognise their religious practices but also to grieve for loved ones.

> "We cannot separate faith from people's lived experiences – faith is part of the solution"

Faith leaders have shown great leadership throughout the pandemic response – engaging and educating local communities, providing support services, helping the most vulnerable, tackling myths and misinformation, supporting families and communities through trauma and bereavement, and helping to support some of the most vulnerable in our midst.

> "Communication of risk to communities is crucial and faith groups can be a key pillar to support dissemination of information "

It was felt by some that their unique contributions were not valued enough in the initial response to the pandemic and that moving forward opportunities to strengthen and support the role of faith communities in local responses should be reinforced they are also provide a way to support messages about infection control in faith settings.

> "the system does not engage with faith, and we know faith is a key part of BAME communities"

This is especially important as we move into the recovery phase of COVID-19 and will be imperative to help build community resilience. Stakeholders felt very strongly that faith leaders can have a key role to play in rebuilding trust with health, care and other statutory services. They can also help with engaging hard to reach communities, and working with government to ensure that guidance and messaging is culturally appropriate.

> "we've seen so many faith-based organisations at the forefront of community efforts providing mental health and spiritual support, practical support by organising delivery of food medicine, essential supplies to elderly, vulnerable and isolated households- they provide a vital component of many BAME communities"

Increased risk of exposure to and acquisition of COVID-19

Stakeholders highlighted the high proportion of BAME communities that were key workers and occupations that placed them at risk by increasing the likelihood of social contact and being exposed to those infected with COVID-19.

Key actions recommended by stakeholders included the importance of valuing, supporting and protecting key workers; provision of adequate personal protective equipment (PPE); 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.

Protection of BAME staff working in frontline roles in health and social care

Concerns were raised by stakeholders about the increased risk of exposure to COVID-19 among BAME staff in NHS and social care settings, and the high mortality rate they have reported to observe. Outside the health and care sector, many people from ethnic/racial minorities hold essential jobs in retail, public transport and other sectors putting them on the front line and at risk of exposure to COVID-19. Stakeholders felt that too little has been done to protect these staff, some were unaware of the work that the NHS has been doing and others felt this was too little too late. Some reported that they had personally experienced or received reports from colleagues about racism, bullying and harassment at work. This meant that they were reluctant to speak up about issues (such as PPE shortages), which placed them at higher risk.

Others believe that BAME front line workers were sometimes given substandard quality or inadequate PPE given the nature of their roles and the risk of exposure. Numerous examples were given of staff not able to access appropriate PPE to protect themselves adequately in line with national guidance and being afraid to speak up about this.

> "requests for risk assessments or additional PPE by BAME workers are more likely to be refused, or whether those requests are less likely to be made because of fear of adverse treatment"

Differential treatment in the workplace

Many feel this is a long-standing issue which existed prior to COVID-19. BAME staff are concerned about raising issues because of past experiences and fear of consequences for speaking up. Others raised issues about fairness in the workplace. Staff want support and an environment for staff to express their concerns and have these met effectively.

> "reports we have received since the outbreak of the pandemic suggest that there have been a significant number of instances of direct and indirect discrimination based on ethnicity. A high number of BAME members have felt concerned about raising issues because of either previous instances of poor treatment, or a fear that they will face adverse consequences if they speak up."

Support for key workers with high levels of social contact

There are even greater concerns about other frontline staff outside of health and care settings such as transport workers, security staff and carers. Some stakeholders felt that there was initial confusion on risk and the levels of PPE required for those working outside of health and care settings which may have led to BAME key workers being

poorly protected. Stakeholders recognised that occupational risk is out of scope of the PHE review but wanted action to be taken by NHS and government to clarify the risk for those working in roles with high exposures to members of the public and, where appropriate, effective workplace risks assessments being made. This was seen as important to ensure that those who did some of the most important and essential roles were adequately protected.

"We must take care of those who take care of us"

Valuing and protecting key staff

Stakeholders repeatedly returned to a theme of how we as a society value those who occupy key worker roles, largely filled by BAME individuals in many parts of the country. Many of these roles cannot be done at home forcing people to place themselves in positions of higher risk. More should be done to recognise, value and protect key workers (outside of the NHS). Steps should be taken to ensure that women are equally represented in all engagement and communications.

"Media should do a lot more in balancing the appreciation of such bravery, commitments, and sacrifices, made by our Community key workers to appreciate what they have achieved for us today"

People who are still working and leaving the household during this period have an increased risk of exposure to COVID-19. Those in informal employment are also less likely to have access to adequate, or any, PPE.

Migrant workers are more likely to be employed in key worker roles, making up approximately 1 in 5 of the health and social care workforce and more than 40 per cent of workers in food manufacturing.

Risk assessments

The issue of occupational risk assessments came up repeatedly in engagement sessions involving professionals as well as community representatives. It was felt that evidence-based tools that could help employees to understand risk and to identify employees who may be at increased risk of acquiring or transmitting infection would be helpful. Many participants called for an evidence informed standardised risk assessment tools. However, it was also recognised that support and guidance must accompany the use of these tools to ensure that workers do not feel discriminated against and ensure that they feel safe to identify risks and issues without fear of losing their job.

Other factors increasing exposure risk

Stakeholders highlighted other factors that may be contributing to the increased risk of exposure including the important role of culture, including places of worship, multigenerational

35

households, and variation in social interactions. Some BAME groups have been segregated in overcrowded urban housing centres and workplaces, the conditions of which can make physical distancing and self-isolation difficult, leading to increasing risks for the spread of COVID-19. Stakeholders were also concerned that BAME groups exposed in crowded places and becoming seriously ill might be infected from multiple sources and a comparatively large infectious dose of COVID-19, further driving onward transmission and influencing the severity of their disease. These complicated social determinants of health might explain the increased risk of infection, but not necessarily worse outcomes and all these factors need deeper examination before we can draw valid conclusions.

Increased risk of complications and death from COVID-19

Stakeholders felt that once infected, many of the pre-existing health conditions that increase the risk of having severe infection (such as having underlying conditions like diabetes and obesity) are more common in BAME groups and many of these conditions are both socio-economically patterned. For many BAME communities, especially in economically deprived areas there is a higher risk of having high incidence of chronic diseases and multiple long-term conditions (MLTC), with these conditions occurring at younger ages.

Stakeholders highlighted concerns about the high burden of MLTC among BAME communities and called for efforts to improve early diagnosis, better clinical management and improve health outcomes. The role of severe mental illness as a risk factor for COVID-19 disease severity and death was mentioned repeatedly and identified as an area that was at risk of being overlooked in the current response. Key strategies recommended by stakeholders included strengthening targeted programmes for chronic disease prevention; culturally competent and targeted health promotion to prevent chronic diseases and MLTCs; targeting the health check programme to improve identification and management of MLTCs in BAME communities; targeted messaging on smoking, obesity and improving management of common conditions including CVD and diabetes. Culturally competent strategies to support better symptom recognition (e.g. hypoxia), early diagnosis and earlier presentation to clinical services for COVID-19 was also seen as critical to reducing complications from COVID-19.

Timely access to services

Stakeholders reflected on the challenges of differential access, experiences and outcomes of such services for BAME groups across a range of settings which pre-dated COVID-19. Equitable and timely access to services extends beyond simple service uptake and includes access to appropriate information, services that are timely, appropriate and sensitive to needs.

Some BAME communities feel that they receive different treatment when compared with white patients - this has further exacerbated fear within BAME communities and reluctance to seek medical care.

> "Why are black people who go into hospital with other medical conditions being put on COVID-19 wards when they do not have corona virus, particularly when they have known underlying conditions, e.g. diabetes, which clearly makes them at higher risk?"

Fear of contracting COVID-19 and misunderstanding about availability of vital services results in late and more acute presentations. This needs to be addressed to ensure that further risk is mitigated.

> "our communities are more likely to have health conditions which make them more vulnerable to COVID-19, such as diabetes and CVD. Many didn't even know their GP was open, whilst others were afraid to go in case they caught COVID -19 "

Improved management of multiple long-term conditions (MTLC)

BAME communities are disproportionally affected by MLTC and associated life style risk factors. Uptake of prevention services in these communities needs to improve. Services need to target their resources and ensure that they offer culturally appropriate care. Stakeholders mentioned that there is poor engagement of BAME communities with health services for chronic diseases, especially for cardiovascular disease – a condition that is known to increase disease severity with COVID-19. Requests were made to review shielding criteria to take account of these issues.

Stakeholders were also concerned about ethnic differences in engagement with health promotion initiatives and uptake of preventive interventions, which may have exacerbated the risk of severe disease due to smoking, obesity, cardiovascular disease, asthma and diabetes. Moreover, the heterogeneity of BAME groups, whether African, Caribbean, South Asian (Indian, Pakistani, or Bangladeshi in the UK), Chinese, or other ethnicities, have diverse risk factor profiles, which might be important for COVID-19 outcomes.

As part of protecting BAME communities from future harm, it was felt that a more concerted effort was needed to manage chronic diseases and their risk factors through targeted prevention and early diagnosis and disease management programmes.

> "For too long we have known that ethnic minorities are at higher risk of CVD, diabetes and obesity and that prevention services are not accessed in time by high risk groups – more must be done."

Mental illness and COVID-19 severity

Stakeholders highlighted their knowledge of emerging evidence of increased acquisition risk and poorer health outcomes for people with mental illness. This was especially compounded for BAME communities for whom problematic access to primary mental healthcare and mental health promotion have been well described. There were concerns that the importance of mental ill health as a risk factor for COVID-19 was not adequately acknowledged and therefore poorly managed, with many missed opportunities for early intervention and support.

Many feel that lockdown restrictions will significantly impact those with mild, moderate and severe mental illness (SMI) and those who are caring for them. Social distancing measures place restrictions on access to social support networks which are a fundamental part of BAME communities' infrastructure and culture.

> "Ethnic minority groups also face particular risks of social isolation and loneliness, linked to higher levels of deprivation and potential exclusion from structures and processes that promote social connectedness and a sense of belonging."

Community engagement and mobilisation

Issues were raised that COVID -19 communications and their method of cascade were not always appropriate for all BAME groups. Community participatory engagement with BAME groups could be used to produce communication materials which have a bigger impact and raise awareness of risk factors and improve the uptake of prevention services. These should also be translated into different languages and recognising the central role that faith plays in many BAME communities.

Several participants felt that official guidance and messages about COVID-19 were conflicting and difficult to interpret. This was further complicated by false theories circulating across social media, "fake news" and a misunderstanding about the effectiveness of using home remedies to treat COVID-19.

People receive and process national messages differently, and not all have the means to apply these messages in the same way. Some BAME communities, can only be reached through non-traditional methods. Digital communication is efficient and easy to use but does not reach all vulnerable groups. Certain groups such as the elderly, those with mental health issues, and certain cultural or faith-based communities including Orthodox Jews may be excluded.

> "People who struggle to access, understand, appraise and apply health information, or who face barriers in navigating the complexity of the NHS, may not be able to adhere to public health messages or advice."

"Messages must be delivered with clarity, with locally created messages
likely to have greater uptake /impact "

Racism, discrimination, stigma, fear and trust

Stakeholders pointed to racism and discrimination experienced by communities and more specifically by BAME key workers as a root cause affecting health, and exposure risk and disease progression risk. In addition, the stress associated with being discriminated against based on race/ethnicity affects mental and physical health through physiological pathways. Issues of stigma with COVID-19 were identified as negatively impacting health seeking behaviours.

Fear of diagnosis and death from COVID-19 was identified as negatively impacting how BAME communities took up opportunities to test for COVID-19 and their likelihood of presenting early for treatment and care. The effects of hostile environments against immigrants, particularly failed asylum seekers and undocumented immigrants, might affect settled BAME populations adversely through heightened prejudice and societal tensions.

For many BAME communities, lack of trust of NHS services and treatment resulted in their reluctance to seek care on a timely basis, again resulting in late presentation with disease. Others were also fearful of being deported if they presented to hospital.

"people in the asylum system and those with no recourse to
public funds, who can often face additional barriers to
accessing healthcare".

Despite these challenges, stakeholders reinforced the importance and need for communities to work with government and anchor institutions to create solutions. Faith leaders are a trusted source of information for many BAME communities and needed to be better engaged in future efforts to build community resilience and prepare communities for the immediate and long-term challenges of COVID-19. National and local government officials (including public health teams) have a unique opportunity to provide advocacy for vulnerable groups. Work to tackle racism and discrimination within the health service must continue at pace with a clear commitment for increasing diverse leadership at all levels in health and care system, reflecting the communities being served.

Strategies to create healthy and supportive workplaces (within and outside the health service) that have zero tolerance for discrimination and empower BAME staff to raise concerns about occupational risk and safety are essential. So too is work with local communities to rebuild trust and reduce fear of using health services in the aftermath of COVID19. Stakeholders acknowledged that there are lots of examples of work already underway at local, regional and national levels, however COVID-19 presents an

opportunity to step-up commitments and accelerate the pace of change. There is a wariness and concern that the opportunity for lasting change will be missed alongside a willingness share good practice and co-produce the change required.

Cultural competence

The theme of cultural competence, defined as the ability of providers and organisations to effectively deliver services that meet the social, faith, cultural, and linguistic needs of service users, was raised repeatedly by stakeholders. This was especially important as interventions to reduce the disproportionate impact of COVID-19 and BAME communities would require a set of attitudes, perspectives, behaviours, and policies – both individually and organisationally – that would promote and value positive and effective interactions with diverse cultures.

> "This has contributed towards a lack of trust the health system and
> apathy among ethnic minorities towards health information,
> and consequential decisions among communities who didn't trust the
> system and were apathetic about health messages"

The sustained, at scale action on the wider social and economic determinants of health required to effectively address and mitigate the societal (health, social, economic) impact of COVID-19 may inadvertently exacerbate ethnic health inequalities unless it adequately considers the ethnic patterning in residential, income, educational and occupational circumstances and empowers BAME communities to be part of creating solutions. The central role of racism must be acknowledged, understood and addressed and there is an urgent need to build the evidence base around effective action and while taking effective action at every level in our society.

BAME staff working in health and care settings

Stakeholders felt strongly that more must be done to protect and support BAME staff working in health and care services (including pharmacies and domiciliary care). They play a vital role in our society, more should be done to recognise this and celebrate this. There are deep concerns raised about the support that BAME front line workers have received, this fundamental break in trust between employers and organisations should be a priority to address as we move into recovery phase of COVID-19.

It was recognised that a lot has been done since the start of the pandemic to improve access to PPE and mitigate risk, but concerns were expressed that these safeguards were not applied equally across ethnic groups. Staff should be made to feel comfortable and safe to voice concerns without fear of job loss or discrimination. There are good examples of occupational risk assessments providing an opportunity to ensure a standardised approach at scale to all health and care settings.

> "We are pleased that steps have been taken in NHS services to ensure
> risk assessments are carried out on a precautionary basis and that being

of a non-white ethnicity has been included as a risk factor in the risk
assessment frameworks and guidance. However, there is significant
variation in how these are carried out"

Stigma and fear of COVID-19

Stakeholders felt that COVID-19 has exacerbated historic issues with discrimination,
stigma, fear and trust by BAME communities with anchor institutions. There is a
widespread stigma and fear associated with contracting COVID-19 for the individual
involved, their family, and their community. Chinese communities reported experiencing
racism and being subjected to violent crimes because of COVID -19.

More recently, as reports of increased risk of COVID-19 among BAME communities
have become more widely reported, some BAME communities have increased
experienced stigma and discrimination as they are viewed as being more likely to be
infected with the disease. There are fears that this will also have negative effects on job
and housing opportunities. Stakeholders therefore encouraged caution and care with
how these issues were discussed and framed in media discussions.

> "Currently we have a Chinese mother with children. She's suffered domestic
> violence and moved out of the home, but because of the racist comments due
> to COVID-19, people shouting at her, she's so scared so she moved back to
> her husband. This happens a lot, we suffer a lot of racist comments in the
> Chinese community due to COVID19"

> "Black men are labelled as being four times more likely to have COVID-19
> infection – what will mean for them in seeking employment, for example?"

Factors such as low health literacy, loss of trust and fear of discrimination have resulted
in BAME groups not seeking health advice in a timely fashion. It has also reduced
uptake of COVID-19 testing and fear of reporting COVID-19 symptoms. This has
serious implications resulting in more acute symptoms and severity of condition.

Trust and fairness

Issues related to trust and fairness were raised repeatedly by stakeholders in the
engagement sessions. For some BAME communities, longstanding challenges in the
provision of high quality, culturally competent and compassionate health and care
service provision meant that there was little trust or faith in healthcare providers and
services. In addition, as so many communities had lost family or community members
following often challenging interactions with the health service (NHS 111, emergency
and clinical care) during the COVID-19 outbreak, this relationship was further strained.
Lack of trust and a perception of the unfairness were seen as an additional burden

faced by BAME communities, which negatively impacted people's willingness to engage with services. Stakeholders felt that work to rebuild trust with BAME communities in the aftermath of COVID-19 must be a key part of restoring local clinical and care services.

> "Fear and anxiety have increased not only with NHS staff but also in communities, with people nervous to use primary and secondary services. In my opinion this must be a priority of this review- this must not be a one size fits all solution- investing in this long-standing issue will need time and effort"

The role of the media

The media's critical role in supporting public messaging effective in reaching diverse populations was mentioned by numerous stakeholders. There was some concern that relevant public health messaging, on prevention, early diagnosis, and treatment of COVID-19 among BAME groups might be less effective, leading to later presentation.

Stakeholders stressed that portraying BAME communities in the media is important, but this must be done fairly and appropriately. While welcoming the increased visibility of the BAME issues with COVID-19 there was concern that the disease would be seen as one primarily affecting BAME individuals leading to increased stigma and discrimination.

It was felt important to portray the range of risks faced by BAME communities as well as the assets within these communities. The media had an important role to play in highlighting the positive roles being played by many BAME individuals who lost their lives or were negatively impacted by COVID-19. Associated with this was the importance of the media portraying positive stories of the roles and importance of key workers within our society, ensuring the images and stories of NHS, care and other frontline workers truly reflected the diversity of people in these roles.

> "When people speak about our community they speak of low skilled, deprived communities. But many of us have professional jobs and are valuable members of society".

Moving forward

Stakeholders made numerous recommendations for research needed to understand the impact of COVID-19 on BAME communities, the extent to which this is due to increased rates of infection and why, after being infected, such patients appear to have poorer outcomes. Given the limitations of the PHE review, work was especially called for on the socio-economic, occupational, cultural and structural factors (racism, discrimination, stigma) influencing COVID-19 outcomes in BAME communities within and outside the health sector. There was a consistent ask for all research on this issue to be done in partnership with communities, ideally embedding community participatory research principles and integrating mental and physical health.

Questions remain on the role of factors such as diet, housing, vitamin D deficiency although current guidance recommends taking daily supplementation. Learning from the experiences in other countries was thought to be essential in helping to understand why BAME communities in England were disproportionately affected. There is also a need for further research on the economic impacts of COVID-19 on BAME communities, which will likely be very long term and severe, with lasting health and wellbeing impacts. There was a clear ask for improved data collection on ethnicity, occupation and faith in all routine clinical data and death certification.

Cross-government approaches are critical

Stakeholders recognised the vital role that policy and government can play in reducing inequalities during the COVID -19 pandemic and beyond. Truly addressing the long standing societal inequalities can only be achieved through united joined up leadership. Responsibility for policy on issues which widen inequalities such as housing, employment, health, social care, race crime is shared across government.

> "We need to come together to understand & address the impacts across the whole piece not just direct and indirect health impacts – such as education, employment, welfare, access/uptake of business support- focusing on changing the situations and environments that people live in not focusing on individuals "

Examples such as the joint work and health unit provide models which could be adopted further. Any future strategies and communications must be designed in partnership with BAME communities – there are many examples of community participatory working to learn from. To ensure success this work will require dedicated resources.

Discussions across government departments and across the devolved nations were welcomed with recognition that cross government infrastructure will be vital as we move into the recovery phase of COVID-19. Stakeholders felt that there is a need for pace and scale in tackling the disparities that exist in COVID -19, there are many ways in which further risks and impact can be mitigated. Prevention at scale which is tailored and targeted at the most vulnerable is required, that must be properly resourced.

Focus should be on immediate and long-term policy and legislation changes to ensure that risks can be mitigated, and lessons learnt for future situations. The passion and commitment to make bold and sustainable change is shared by all stakeholders. Government have an opportunity (and a legal duty) to tackle long standing inequalities which existed prior to COVID-19 but this requires leadership and collaboration by all.

> "This is a once in a lifetime chance we must come together to act – we are committed and want to work together"

Capturing the passion and commitment for change

The stakeholder engagement and listening sessions have provided an invaluable perspective to this review. Despite acknowledgement of wider structural and systems level issues which need to be addressed, there is an overarching sense of enthusiasm to work together from all sectors and across all spatial levels. Individuals and groups are keen to be involved in future work lead by PHE and other organisations, and there is much appetite for collaborative preparation for a second wave of COVID-19, should one occur.

'What is important for all of us is that we don't let the data limitations and other issues get in the way of our ambition of what we need to do, in terms of joining up and thinking about what the impact of COVID-19 means for our communities."

Act now: Share promising practices

While stakeholders were keen to have a thorough investigation of the impact of COVID-19 on BAME communities which would take time to conduct, it was universally felt that action to engage, empower and protect communities could not and should not wait. The imperative to act now, at scale and in culturally appropriate ways was reinforced. It was felt that doing so could offer a significant opportunity to rebuild trust with BAME communities. There are many examples of good practice that can be celebrated and shared.

"We must act now – COVID-19 did not create inequalities, these have been with us for a long time we don't need more data or research to act. We must prevent any more harm being done."

Improve ethnicity and faith data collection and recording

The accuracy, completeness and granularity of ethnicity recording continues to affect the quality and depth of research that can be carried out. This also impacts upon the ability to understand and respond to need. Some local areas have devised innovative methods to improve this such as contacting relatives of deceased COVID-19 residents to get ethnicity data retrospectively. This is resource intensive and a more systematic resolution is needed. Many participants also called for faith to be recorded in addition to ethnicity data, there are large differences within communities of the same ethnicity that are dictated by faith.

"It makes me sad that 20+ years later in my career we are still talking about data being collected, which is the basics of science. Surely that has to be fixed forever going forward."

"Recording of ethnicity and occupation on death certificates has been an issue for too long – a change in legislation is urgently needed."

44

The current classification of ethnic groups is problematic for some BAME groups who feel that the grouping of ethnicities does not reflect the heterogeneity within each ethnic group. Smaller ethnic minority groups such as the Gypsy, Roma and Travellers, new migrants and asylum seekers communities are missed by current ethnicity recording.

Many of the most at-risk individuals are unable to access NHS services due to various reasons such as immigration status and therefore may be a hidden unmet need. Recording of lower level data can however also have unintended consequences which need to be considered.

> "We want to flag that communities don't always like or want granular data published about them. We are afraid of the public gaze and the hate that can arise from that."

Need for further research

Stakeholders recognise the complexity of why inequalities exist and that COVID-19 is a new challenge which has never been experienced at such scale before. Understanding the causes and risk factors which are driving the disparities in COVID-19 outcomes for BAME communities is vital to mitigating further risks and impacts.

There is substantial interest and support from academics and research bodies to help fill the gaps that exist. Many highlighted the need to better understand the complex relationships between MLTC and COVID-19 risk factors. The NIHR and UKRI calls are welcomed but concerns were raised that this will be too slow. Stakeholders are keen to adopt more agile and rapid ways of learning. Examples of researchers tapping into big data to provide real time intelligence are promising and offers insights into behaviours and opportunities to reach communities.

> "Lack of data is an impediment to the system's ability to respond practically- delivering better, frequent and agile access to data would be a significant improvement- However, at this stage, people were not being allowed to access all the data needed, and a failure to tackle this would be a mistake".

Many expressed concerns about the longstanding gaps in ethnicity and occupation recording in health and care data.

> "In the absence of some of the more textured data it would be difficult to drill down into a very local, community level, understanding and, therefore, would limit the ability to decide how best to target and allocate resources"

We have seen examples of innovative approaches to data collection, but this is not efficient or sustainable. Steps must be taken to ensure that government and services can work in an evidence informed way as we move into the recovery phase of the pandemic. Stakeholders

were clear that long standing gaps in the recording of ethnicity must be addressed with legislation.

> "it's important that we reframe how we work with communities. We shouldn't wait for the data reports before taking action, but should be thinking now about what to do differently"

There are many areas for further research that were called for and it is recognised that this is a complex issue with multiple factors interacting. Many calls were made to develop a programme of community participatory research, involving BAME researchers and community representation - to inform the evidence, to help translate results and evidence into action.

> "Clear commitments should be given to expanding research on this topic beyond the bio-medical to include the social, cultural, economic and structural determinants of health and the intersectionality of different domains of inequalities. "

Using community assets – the role of culture and faith

More needs to be done to support and recognise culture and faith as an asset during the recovery phase of the pandemic. Faith provides an important foundation for communities' resilience through recovery and bereavement. The importance of faith in BAME communities should be reflected better in COVID-19 guidance. Faith leaders can play an important role in increasing the adoption of guidance.

> "I have buried over 300 people as a leader in the Muslim community. I want faith data to be collected for COVID-19 deaths, so that our community can work to prevent this"

> "Community members turn to faith as a core component of their resilience and purpose, but it is often omitted in response to illness and thus individuals are unable to express themselves wholly"

> "face-mask guidance suggests men should shave their beards. For Muslim and Sikh communities, this can carry a tremendous compromise to their spiritual practice"

Learning from others

Stakeholders were keen to understand whether the patterns of disadvantage and disproportionality observed with COVID-19 and BAME communities in England were seen in the devolved nations and other western industrialised countries. While ethnic disparities in the U.S. COVID-19 epidemic were among the most frequently mentioned, stakeholders highlighted the situation in other European countries as potential exemplars and encouraged a more

46

systematic enquiry to understand what lessons could be learnt where similarities and differences existed.

"Previous studies have shown that natural disasters widen
inequalities for people with chronic diseases or those who are more vulnerable –
what can we learn from other countries.
We need to do more faster to help prevent further harm"

For a number of stakeholders, signals of the potentially less severe impact of COVID-19 in many countries in the Caribbean, Africa and Indian sub-continent raised questions as to why BAME communities in England were so severely affected. They suggested that issues such as structural racism and discrimination, widening societal and economic inequalities, and failure to adequately protect key workers, many of whom are BAME, while not unique to the U.K. may have contributed disproportionately to patterns observed here. There was recognition however that differences in population structures, patterns of social mixing, household structures, phasing and timing of epidemic responses all played a role in explaining these differences between geographic areas and more detailed research would be required. The recurring theme of vitamin D deficiency and diet was also postulated as a factor in explaining geographic differences, leading to calls for more definitive research to be undertaken a matter of urgency.

Limitations

The stakeholder engagement sessions provided an opportunity to engage a wider range of individuals working in various sectors, at national, regional and local levels, across multiple disciplines, and representing diverse demographic, social, cultural and economic characteristics. The data and insights from the sessions were further complemented by written submissions received by numerous stakeholders. We have attempted to summarise the major themes arising from these activities, whilst highlighting areas which were unique or distinctive to some constituencies. The data highlight opportunities for further, more detailed research to understand the nature, range and contexts of many of the issues identified. It will be important to understand how these factors vary between different racial/ethnic minority groups given the significant differences in their demographic and socio-economic characteristics and life experiences in England.

Stakeholders requests for action

The following section provides a summary of the requests for action from stakeholders and do not represent the views of PHE. These are not set out in order of priority. They have the potential to build on existing work and commitments and are not exhaustive. These requests for action inform five key priority recommendations to can help guide immediate and impactful action included at the end of this section.

Data and research:

- clear commitments should be given to expanding research on this topic beyond the bio-medical to include the social, cultural, economic and structural determinants of health and the intersectionality of different domains of inequalities
- develop a programme of community participatory research, involving BAME researchers and community representation - to inform the evidence, to help translate results and translate evidence into action
- Improve the recording of ethnicity, faith and occupation for all mortality and morbidity data
- strengthen ethnicity and faith group data collection across all the COVID-19 response- including all testing pillars, morbidity and mortality data (including front line workers from all workplaces) and future data collections such as antibody testing and vaccinations
- build the evidence base to inform practice and policy ensuring this is rapid and uses real time information and optimises upon big data opportunities

Policy:

- co-produce with communities ways to strengthen their resilience in the next phase of this pandemic, and for future pandemics, by using asset-based approaches
- scale up action across government to tackle structural root causes of inequalities such as housing and employment
- put in place cross government infrastructure to facilitate collective action across policy departments. This may require new structures or identifying a lead department to coordinate activity
- commission a rapid review / horizon scan to identify if, and how, policy and guidance should change as lock down measures are relaxed (e.g. shielding, PPE, testing, guidance to employers and employees) in response to the emerging evidence of disproportionate impact of COVID-19 on BAME communities
- change legislation to mandate a duty to act upon the results of health impact assessments
- use the convening powers & leadership of Metro Mayors and devolution to create change
- work with violence reduction units, the police and community and faith leaders to a) mitigate escalation of race crime and b) reduce the risk of further discrimination in the community and workplace if COVID becomes mis-represented as a BAME disease
- develop an approach to reduce risk in occupational settings where workers feel disproportionality affected. Ensure that these staff groups feel valued for their vital contribution to society

Anchor institutions:

48

- scale up prevention support for risk factors such as CVD and diabetes and enhance data driven prevention to target those at highest risk. Ensure that this is appropriately tailored to different BAME communities
- work with Behavioural insights team to review messaging to ensure reach into most at risk community groups is effective
- rebuild trust between services and BAME communities
- work with communities and faith leaders to address concerns about unequal treatment and institutional racism
- accelerate efforts to improve workplace race equality and promote, value and support diverse leadership across systems and institutions
- provide an evidence-based work place risk assessment for use across all work places settings. This should include clear guidance about their implementation to avoid any unforeseen perceived discrimination or widening of inequalities

Communications:

- ensure that all communication and marketing include culturally specific imagery and content, using voices of communities with lived experiences to shape future public messaging
- work with community and faith leaders to develop a communication plan to mitigating the fears and stigma in communities arising from media headlines around BAME and COVID -19
- public bodies to continue to develop and strengthen their advocacy roles
- highlight and disseminate models of best and promising practice
- continue with proactive community engagement throughout the next phase of the pandemic

Recommendations

1. Mandate comprehensive and quality **ethnicity data collection and recording** as part of routine NHS and social care data collection systems, including the mandatory collection of ethnicity data at death certification, and ensure that data are readily available to local health and care partners to inform actions to mitigate the impact of COVID-19 on BAME communities.

2. Support **community participatory research**, in which researchers and community stakeholders engage as equal partners in all steps of the research process, to understand the social, cultural, structural, economic, religious, and commercial determinants of COVID-19 in BAME communities, and to develop readily implementable and scalable programmes to reduce risk and improve health outcomes.

3. Improve **access, experiences and outcomes of NHS, local government and Integrated Care Systems commissioned services** by BAME communities including: regular equity audits; use of Health Impact Assessments; integration of equality into quality systems; good representation of black and minority ethnic communities among staff; sustained workforce development and employment practices; trust-building dialogue with service users

4. Accelerate the development of **culturally competent occupational risk assessment tools** that can be employed in a variety of occupational settings and used to reduce the risk of employee's exposure to and acquisition of COVID-19, especially for key workers working with a large cross section of the general public or in contact with those infected with COVID-19.

5. Fund, develop and implement **culturally competent COVID-19 education and prevention campaigns,** working in partnership with local BAME and faith communities to reinforce individual and household risk reduction strategies; rebuild trust with and uptake of routine clinical services; reinforce messages on early identification, testing and diagnosis; and prepare communities to take full advantage of interventions including contact tracing, antibody testing and ultimately vaccine availability

6. Accelerate efforts to **target culturally competent health promotion and disease prevention programmes** for non-communicable diseases promoting healthy weight, physical activity, smoking cessation, mental wellbeing and effective management of chronic conditions including diabetes, CVD and asthma

7. Ensure that **COVID-19 recovery strategies** actively **reduce inequalities caused by the wider determinants of health** to create long term sustainable change.

Resources

This section contains additional resources on health inequalities, including key data sources, tools and evidence collections. The resources include guidance which empowers organisations to systematically address health inequalities and equity at a local level, including guidance for local authorities, public health teams, CCG's and NHS providers. The resources focus on population level inequalities in health but includes specialist literature and sources for the experience of specific groups who are socially

excluded, including minority ethnic groups. A wider set of literature can be found in The King's Fund Information and Knowledge Services health inequalities reading list.

A detailed description of place-based approaches to reducing health inequalities is included after the resources tables.

COVID-19 specific resources

The following table summarises resources available to support local action to reduce health inequalities as a direct result of COVID-19

COVID-19 specific resources		
Resource	**Description**	**Link**
Place-based approach to reducing health inequalities and COVID-19	Resources supporting place-based approaches to planning and responding to the pandemic.	COVID-19 place-based approach to reducing health inequalities overview COVID-19 Summary of Guidance and support for vulnerable groups COVID-19 Suggestions for mitigating the impact on health inequalities at a local level COVID-19 Health Equity Assessment Tool (HEAT) for local areas COVID-19 Data tools to support local areas COVID-19 Estimated population at risk by LA

General resources: Tools and guides

The following table summarises resources available to support local action to reduce health inequalities which have not been specifically produced for COVID -19 but support local action to reduce inequalities.

General resources - tools and guides		
Resource	Description	Link
PHE place-based approaches on health inequalities	PHE has recently released its 'place-based approaches to health inequalities' tool. This draws together of a lot of the lessons of areas who have looked to reduce inequalities, including experience from the former National Inequalities Support Team. With checklists, examples and advice on approaches to take across the NHS, local authorities and wider partners.	https://www.gov.uk/government/publications/health-inequalities-place-based-approaches-to-reduce-inequalities
Right Care – Equality and Health Inequalities Packs	This highlights health inequalities across some healthcare areas within Clinical Commissioning Groups and provides case studies to support improvement planning.	https://www.england.nhs.uk/rightcare/products/ccg-data-packs/equality-and-health-inequality-nhs-rightcare-packs/
PHE and NHS Right Care Atlases of Variation	These highlight unwarranted variation of activity and outcomes across the heath system.	https://fingertips.phe.org.uk/profile/atlas-of-variation

https://www.england.nhs.uk/rightcare/products/atlas/ |
| PHE LKIS Health Inequalities Packs | These show inequalities in high burden diseases and the correlation with income deprivation. | Available through your PHE Local Knowledge and Intelligence Service: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/supporting-information/contact-us |
| Reducing Health Inequalities Through New Models of Care: A Resource for New Care Models | The Institute for Health Equity has developed a resource for NHS 'new care models' to support them in tackling health inequalities. The report assesses the potential and opportunities for new care models to | http://www.instituteofhealthequity.org/resources-reports/reducing-health-inequalities-through-new-models-of-care-a-resource-for-new-care-models |

General resources - tools and guides		
Resource	**Description**	**Link**
	drive a health system that focusses on population health, reduces health inequalities and takes action on the wider determinants of health.	
Local wellbeing, local growth: adopting Health in All Policies	Resource to help local government improve local wellbeing and growth through its multiple functions, service areas and partnership working.	https://www.gov.uk/government/publications/local-wellbeing-local-growth-adopting-health-in-all-policies
National Conversation on Health Inequalities: Reducing health inequalities	A toolkit and guidance for starting local conversations.	https://www.gov.uk/government/collections/national-conversation-on-health-inequalities
Local action on health inequalities evidence papers	This research shows the evidence supporting action to reduce health inequalities.	https://www.gov.uk/government/publications/local-action-on-health-inequalities-evidence-papers
Strategic Health Asset Planning and Evaluation (SHAPE) Place Atlas	Maps location of healthcare services against population health metrics, includes travel time and impact analysis.	Access by registration. https://shapeatlas.net/place/

Health and Environmental Impact Assessment	Provides a guide to health and environmental impact assessments for local teams.	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/629207/Health_and_environmental_impact_assessment.pdf
Health Equity Collection	The Health Equity Collections page contains over 30 resources that have been produced over the last few years. Some key documents included in the Collections page are: 1. Guidance for system wide approaches to reduce health inequalities 2. Children and young people 3. Community engagement and asset based approaches 4. Data and intelligence reports on health inequalities 5. Economics and health equity 6. Healthy places 7. Inclusion health 8. Prevention and early treatment 9. Public sector equality duty 10. Work, health and inclusive growth	https://publichealthmatters.blog.gov.uk/2018/01/16/a-guide-to-our-new-health-equity-collections-page/

General Resources: Specific groups – tools and guides

The following table summarises resources available to support local action to reduce health inequalities in specific population groups.

Specific groups – tools and guides		
Resource	**Description**	**Link**
Health inequalities: reducing ethnic inequalities	Guidance to support local and national action on ethnic inequalities in health.	https://www.gov.uk/government/publications/health-inequalities-reducing-ethnic-inequalities
Health inequalities in ageing in rural and coastal areas	An evidence summary of health inequalities among older people in coastal and rural areas.	https://www.gov.uk/government/publications/health-inequalities-in-ageing-in-rural-and-coastal-areas
Migrant Health Guide	A resource for primary care practitioners on NHS entitlements, disease topic areas and country-specific information.	https://www.gov.uk/topic/health-protection/migrant-health-guide
The Migrant Health Guide's NHS Entitlements page	Also includes translated advice and guidance for the public on COVID-19.	https://www.gov.uk/guidance/nhs-entitlements-migrant-health-guide
Mental Health: Migrant Health Guide	Provides advice and guidance on the health needs of migrant patients for healthcare practitioners.	https://www.gov.uk/guidance/mental-health-migrant-health-guide
Mental Health Data	Shows mental health data by protected characteristics.	https://fingertips.phe.org.uk/profile-group/mental-health

Health Inequalities tools for Scotland	Whilst some of these are not relevant to England, some of them are. In particular, these tools assess the impacts of different policy options on the wider determinants of health and what impact they are likely to have.	https://www.scotpho.org.uk/comparative-health/health-inequalities-tools/introduction/

General resources: Data sources and trends

The following table sets out the wide range of data sources which help to inform action and understand need

General resources - data sources and trends		
Resource	Description	Link
The Office for National Statistics Health Inequalities Dataset	The ONS holds a wide range of datasets on health inequalities, including on life expectancy, avoidable mortality and healthy life expectancy at a wide range of geographic areas.	https://www.ons.gov.uk/peoplepopulationand community/healthandsocialcare/healthinequal ities/datalist
PHE Health Inequalities dashboard	This displays trends in health inequalities in England. Inequalities are considered across a range of dimensions, including deprivation, ethnic group, sexual orientation and employment status.	https://fingertips.phe.org.uk/profile/inequality-tools
PHE Wider Determinants of Health	Describes wider determinants of health.	https://fingertips.phe.org.uk/profile/wider-determinants
PHE Public Health Outcomes Framework	Range of public health indicators and population health outcomes.	https://fingertips.phe.org.uk/profile/public-health-outcomes-framework

PHE Segment Tool	This present causes of death and age groups driving life expectancy gap at a local area level.	https://fingertips.phe.org.uk/profile/inequality-tools
Institute for Health Metrics and Evaluation Global Burden of Disease Compare Tool	Compares diseases, injuries, and risk factors to show most important contributors to health loss.	https://vizhub.healthdata.org/gbd-compare/

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Appendices

Appendix 1: Methods

Literature search

This report employed a rapid review approach to address the following research questions:

Q1: Are BAME more likely to be tested for and/or subsequently diagnosed with COVID-19 infection?

Q2: Are BAME groups more likely to develop severe clinical presentations of COVID-19 infection?

Q3: Is infection with COVID-19 more likely to lead to mortality within BAME groups?

Q4: What are the social and structural determinants of health that may impact disparities in COVID-19 incidence, treatment, morbidity, and mortality in BAME communities?

Notes:

Ethnicity can be defined as shared culture and traditions that are distinctive, maintained between generations, and lead to a sense of identity and groupness. Minority ethnic groups are populations that differ in ethnicity from the dominant or majority ethnicity in a country.

A preliminary scoping search identified 4 relevant reviews (4-7); one of these reviews (6) answered the key questions defined in our research protocol.

It was, therefore, agreed that an updated literature search, using the search terms defined in McQuillan et al (6) would be undertaken to provide the most up to date evidence.

Protocol

A protocol was produced by the project team before the literature search began, specifying the research question and the inclusion and exclusion criteria. The protocol is available on request. Due to there being limited available evidence, we included observational studies without control group.

Sources searched:

- medline, medRxiv preprints

- we also searched a number of existing COVID-19 review repositories plus additional resources such as PROSPERO, TRIP database, PubMed Clinical Queries, LitCovid, NICE Evidence, an Endnote library containing COVID-19 citations, and Google

Search strategy

The original search from McQuillan et al included all papers published between 11 November 2019 and 26 April 2020. Searches were conducted for papers published between 25 April 2020 and 19 May 2020 to fully update the available literature.

Search terms covered key aspects of the research questions, including terms related to the specific population. The search strategy for Ovid Medline is presented below.

Search strategy Medline:

("Ethnic Groups"[Mesh] OR race OR racial OR ethnic* OR migrant* OR refugee* OR displaced OR minorit* OR BAME OR BME) AND (("Betacoronavirus"[Mesh] OR "Coronavirus Infections"[MH] OR "spike protein, SARS-CoV-2"[Supplementary Concept] OR "COVID-19"[NM] OR "Coronavirus"[MH] OR "Severe Acute Respiratory Syndrome Coronavirus 2"[NM] OR 2019nCoV[ALL] OR Betacoronavirus*[ALL] OR Corona Virus*[ALL] OR Coronavirus*[ALL] OR Coronovirus*[ALL] OR CoV[ALL] OR CoV2[ALL] OR COVID[ALL] OR COVID19[ALL] OR COVID-19[ALL] OR HCoV-19[ALL] OR nCoV[ALL] OR "SARS CoV 2"[ALL] OR SARS2[ALL] OR SARSCoV[ALL] OR SARS-CoV[ALL] OR SARS-CoV-2[ALL] OR Severe Acute Respiratory Syndrome CoV*[ALL]) AND ((2020/04/25[EDAT] : 3000[EDAT] OR 2020/04/25[CRDT] : 3000[CRDT] OR 2020/04/25[PDAT] : 3000[PDAT])))

Inclusion and exclusion criteria

Table 1. Inclusion and exclusion criteria

	Included	Excluded
Population	All Black, Asian, and minority ethnic populations of all ages	Indigenous populations of the Americas and Australasia
Issue	Inequalities in how BAME groups are affected by COVID-19 infection	
Comparison	White British or other White majority populations	
Outcomes	- COVID-19 incidence - Morbidity and Mortality associated with COVID-19 infection	
Measurement type	Laboratory confirmed cases	Non-PCR confirmed COVID-19 cases
Language	English	

	Included	Excluded
Date of publication	17 November 2019 to present	
Study design	Reviews and experimental or observational studies	Editorials, comments
Publication type	Published and pre-print	
Setting	OECD countries	We may focus on literature from UK/Europe in the first instance due to the significant differences in BAME populations between the UK and the US, UK and Australasia

Screening

Title and abstract screening was done independently by 2 reviewers. In case of disagreement, the study was included for full-text consideration. Full text screening was completed by a one reviewer. Figure 1 illustrates this process.

Data extraction and quality assessment

Data extraction was done by 1 reviewer.

Due to the rapid nature of the work, a validated risk of bias tool was not used to assess study quality. However, major sources of bias were noted when reviewing the papers.

Summary of Analysis of literature

Quality Assessment Criterea (based on ROBINS-1 - www.bmj.com/content/355/bmj.i4919)

1. Is there potential for confounding of the effect of intervention in this study?
2. Is there a potential risk of bias due to selection bias?
3. Is there a potential risk of bias in the methods used to ascertain exposures and outcomes?
4. Were the data that produced the results analyses in accordance with a pre-specified outcome(s), or where they selected among multiple measurements?

Table 1: Quality Assessment of Included Papers

Paper	Confounding	Selection Bias	Bias in the Methods	Pre-specified Protocol

Aldridge et al	Yes	Yes	Yes	Yes
Brill et al	Yes	Yes	Yes	Unknown
CDC Covid-19 Response Team	Unknown	Yes	Yes	Unknown
Chow et al	Unknown	Yes	Unknown	Yes
Cook et al	Unknown	Yes	Yes	Unknown
Cutler et al	Yes	Yes	Yes	Yes
de Lusignan et al	Yes	Yes	Yes	Yes
DiMaggio et al	Unknown	Yes	Yes	Yes
Fletcher et al	Yes	Yes	No	Yes
Gold et al	Unknown	Yes	Yes	Unknown
Gross et al	Unknown	Yes	Yes	Yes
Hastie et al	Yes	Yes	No	Yes
Ho et al	Yes	Yes	No	Yes
Khan et al	Yes	Yes	No	Yes
Khawaja et al	Unknown	Yes	Yes	Yes
Kolin et al	Yes	Yes	No	Yes
Millett et al	Yes	Yes	Yes	No
Niedzwiedz et al	Yes	Yes	No	Yes
Patel et al	Yes	Yes	No	Yes
Perez-Guzman et al	Yes	Yes	No	Yes
Platt et al	Yes	Yes	No	Unknown
Prats-Uribe et al	Yes	Yes	No	Yes
Raisi-Estabragh et al	Yes	Yes	No	Yes

Rentsch et al	Yes	No	No	Yes
Rose et al	Yes	Yes	Yes	Yes
Sapey et al	Unknown	Yes	No	Yes
Soltan et al	Yes	Yes	No	Unknown
Vahidy et al	Yes	Yes	Yes	Yes
Wadhera et al	Yes	Yes	No	Yes
White et al	No	Yes	Yes	Yes
Williamson et al	Yes	Yes	Yes	Yes

Table 2: AMSTAR Scores for Systematic Reviews and Rapid Reviews

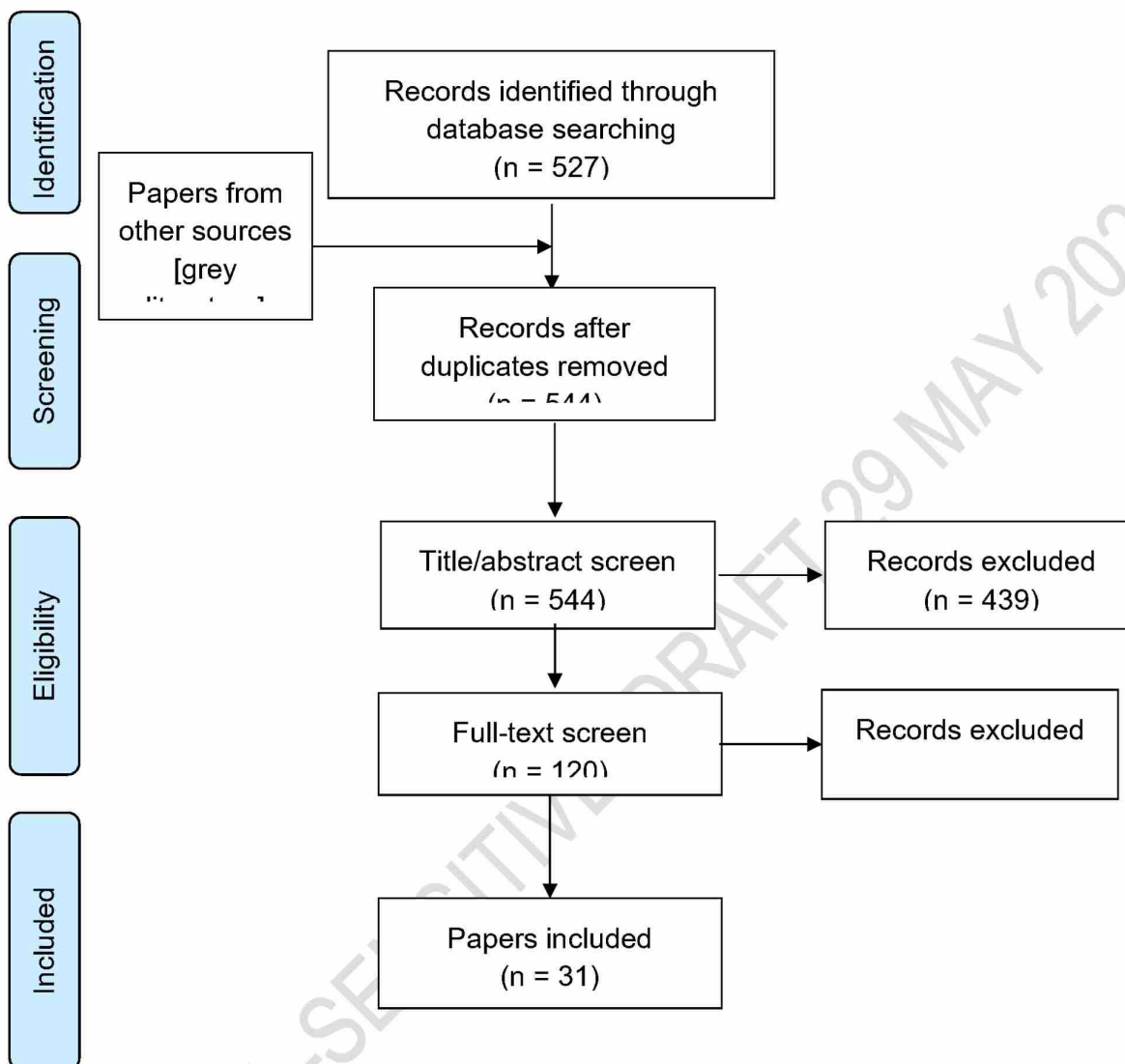| Paper	
Jankowski et al	2
McQuillan et al	4
NHS Confederation	0
Razaq et al	1

Appendix 2: PRISMA diagram

Figure 1. PRISMA diagram

Glossary

Acronyms

BAME - Black, Asian and Minority Ethnic (people)

CCG – Clinical Commissioning Group

CVD – Cardio-Vascular Disease

COVID-19 – Coronavirus Disease 2019

MLTC – Multiple Long-Term Conditions

NHS – National Health Service

ONS – Office for National Statistics

PPE – Personal Protective Equipment

Terminology

Acquisition – to contract (coronavirus)

Confounder – a variable other than the one being studied, which could be the cause of the results seen in a study.

Health promotion – the process of enabling people to improve their health and increase control over it. Health promotion programmes are often targeted at specific groups of people; for example, smokers.

Hypothesis – an idea that is put forward as an explanation for a particular situation but has not yet been proven. A hypothesis can be tested through carrying out research.

Incidence instances a number of new cases. An incidence rate divides this number by the denominator which needs to be accurate, possibly expressing it as a percentage or number of cases over person-years-of-observation depending on the study design.

Inequality – an inequality is an unfair and avoidable difference between people or groups of people. Inequalities exist in health, income, and other areas.

Intersectionality – the interconnectedness and overlap of social organisations such as race, gender and class, which can cause disadvantage and discrimination to the individual involved.

Morbidity – illness or degradation of health that results especially from long-term conditions and older age.

Mortality – death.

Risk assessment/occupational risk assessment – a process used to identify hazards that may negatively impact an individual. An occupational risk assessment assesses hazards in the workplace which may harm an employee.

Stakeholders – a person, group or organisation that has an interest or concern in a given topic.

Terms of reference – a specific description of what the purpose of a project/meeting is for people working together towards a shared goal.