Evidence mounts on the disproportionate effect of COVID-19 on ethnic minorities

As the cases of coronavirus disease 2019 (COVID-19) continue to increase across the world, evidence is continuing to emerge that the pandemic could be disproportionately affecting people from black, Asian, and minority ethnic (BAME) communities.

In the UK, this trend first came to public attention during media reports that showed the first 11 doctors who sadly lost their lives to COVID-19, were all from BAME communities. Following this, various analyses have been published, with one showing that of 106 COVID-19 fatalities in health workers some two thirds (63%) were in BAME people (up to April 22, 2020). The figure was 94% for doctors and 71% for nurses, with the average reduced with the inclusion of other health-care workers (55%).

The UK's Intensive Care National Audit and Research Centre data, up to April 30, shows that of 6574 patients with COVID-19 in intensive care, one third were from non-white ethnic groups; ethnic minorities make up only 13% of the population as a whole. However, data released by NHS England on April 19 showed that of 13 918 patients in hospitals in England who had tested positive for COVID-19 at time of death, 73·6% were white and 16·2% were of BAME ethnicity—more representative of the proportion of BAME people in the general population.

"The problem is that data on deaths and serious illness from COVID-19 among the health-care workforce and their ethnicity is not being routinely published by the government", explains Dr Chaand Nagpaul, the British Medical Association (BMA) council chair and a general practitioner (GP) in north London, UK. "However, it is a clear and consistent theme from the reports and what we know about those who have died so far, that a disproportionate number of those health-care workers who have tragically lost their lives are from BAME communities."

The UK Health Secretary Matt Hancock has announced that there will be a review into the impact of COVID-19 on BAME communities, led by NHS England and Public Health England (PHE). The UK Government subsequently confirmed that the review will also analyse the effect of gender and obesity, as well as ethnicity. "While the review speaks of looking at existing health data, the BMA believes it is also vital to collect detailed data around occupation for all health-care workers who contract the infection, given that more than 150 are reported to have died, including at least 16 doctors, of whom 94% are from BAME origin", says Nagpaul. "It is important to ascertain whether there are any occupational factors that have played a part in these health-care workers contracting the virus so that we can learn how to put in place measures to protect all health-care workers."

He adds that many factors affecting the wider ethnic minority community apply to ethnic minority doctors, such as the greater prevalence of hypertension, diabetes, and coronary heart disease, which are thought to increase the severity of COVID-19 infection. "We also know that a large proportion of BAME doctors work in staff grade, specialist, and associate specialist roles, which are crucial, patient-facing roles that are invaluable for the running of the NHS", adds Nagpaul. "Workplace factors could have a part to play too; for example, a recent BMA survey has found that BAME doctors were twice as likely as white doctors to feel pressured to see patients in high-risk settings without adequate personal protective equipment (PPE). Other BMA research revealed that BAME doctors are twice as likely not to feel confident to raise concerns about safety in the workplace compared with their white colleagues."

Nagpaul raised all these concerns in a letter to Simon Stevens, the chief executive of NHS England, and days later, on April 29, 2020, NHS England wrote to all hospital trusts across England—as well as ambulance services, mental health trusts, and organisations providing community health—asking them to risk assess their BAME workers and where necessary reassign them to duties that leave them less at risk of contracting COVID-19.

On May 1, 2020, the UK's Institute for Fiscal Studies (IFS) published its report, which found that people from ethnic minorities are more likely to live in areas badly affected by COVID-19 infection. However, despite people from ethnic minorities being younger on average than the white British population, and therefore theoretically less susceptible to infection, they were found to have higher death rates. After adjusting for age, sex, and geography, the authors of the IFS report found that the death rate for people of black African descent was 3·5 times higher than for white British people, while for those of black Caribbean and Pakistani descent, death rates were 1·7 times and 2·7 times higher, respectively.

In the USA, early data suggest that African Americans are disproportionately affected by COVID-19. In a preliminary study of data compiled from hospitals in 14 US states, African Americans represented 33% of COVID-19 hospitalisations, despite only making up 18% of the total population studied. In another analysis, among COVID-19 deaths for which race and ethnicity data were available, death rates from COVID-19 in New York City (NY, USA) among black or African American people (92·3 deaths per 100 000 population) and Hispanic or Latino people (74·3) were substantially

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For the **analysis from the Health Services Journal** see https://www.hsj.co.uk/exclusive-deaths-of-nhs-staff-from-COVID-19-analysed/7027471.article

For the **Intensive Care National Audit and Research Centre COVID-19 report** see https://www.icnarc.org/Our-Audit/Audits/Cmp/Reports

For **NHS data** see https://www.independent.co.uk/news/uk/home-news/coronavirus-bame-communities-deaths-infections-uk-statistics-a9475406.html

For the **BMA survey see** https://www.bma.org.uk/news-and-opinion/bame-doctors-hit-worse-by-lack-of-ppe

For **BMA research on NHS** see https://archive.bma.org.uk/collective-voice/policy-and-research/nhs-structure-and-delivery/future-vision-for-the-nhs/future-vision-for-the-nhs-survey

For the **IFS report** see https://www.ifs.org.uk/inequality/chapter/are-some-ethnic-groups-more-vulnerable-to-COVID-19-than-others/

For the **preliminary data from the CDC** see https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e3.htm

For the **Australian COVID-19 epidemiology report see** https://www1.health.gov.au/internet/main/publishing.nsf/Content/1D03BCB527F40C8BCA258503000302EB/$File/epidemiology_report_13_reporting_week_ending_23_59_aest_26_april_2020.pdf

For **statistics on health of Indigenous Australians** see https://www.aihw.gov.au/reports/heart-stroke-vascular-disease/cardiovascular-diabetes-chronic-kidney-indigenous/contents/table-of-contents

For more on the **H1N1 influenza epidemic in Indigenous Australians** see *NSW Public Health Bull* 2010; **21:** 26–29

higher than that of white (45·2) or Asian (34·5) people. "Studies are underway to confirm these data and understand and potentially reduce the impact of COVID-19 on the health of racial and ethnic minorities", a spokesperson from the Centers for Disease Control and Prevention (CDC) confirmed to *The Lancet Respiratory Medicine*.

Chronic conditions, such as diabetes, asthma, hypertension, kidney disease, and obesity, are all more common in African American than white populations; all of these conditions have been associated with worse outcomes in COVID-19. However, the CDC states many other factors could be involved, such as people from ethnic minorities being more likely to live in more densely populated areas and housing, to use public transport more, and to work in lower paid service jobs without sick pay, meaning they would be more likely to go to work under all circumstances, increasing the risk of exposure.

"I do not think that the pattern we are seeing in COVID-19 deaths for African Americans is solely due to pre-existing health conditions", says Thomas A LaVeist, Dean of the School of Public Health and Tropical Medicine at Tulane University, New Orleans, LA, USA. "Race disparities in those diseases are not large enough to fully explain the COVID-19 death disparity. For example, there are no racial differences in obesity among men. Also, especially in the southern US states, white people also have extremely high rates of obesity, diabetes, hypertension, and the other chronic diseases."

LaVeist says it is difficult to have definitive views on the cause of ethnic disparities in COVID-19 mortality until the overall infection rate has been established in different racial groups. "Are African Americans more likely to have been exposed to the virus? They seem to be more likely than others to work in jobs that place them at risk, such as check-out clerks and delivery drivers, and less likely to have jobs that allow them to work from home." He adds that most southern states with larger ethnic minority populations have declined to expand Medicaid, which has reduced the number of poorer residents with regular access to primary health care. "Each of these factors, many of them the result of policy decisions, play a role in producing disproportionate death rates among African Americans", he says.

In Australia, steps have been taken to protect Indigenous Australians living in remote and rural locations, mainly through the introduction of extremely strict limitations on travel in or out of these communities. "It's important to stress that the majority of Indigenous Australians live in urban or regional areas—large and small cities mainly on the coast of Australia. While a lot of focus is on remote communities, a high proportion of Indigenous Australians in urban and regional areas have the same elevated risk of serious COVID-19 illness due to multiple chronic conditions and are at risk of rapid spread due to a high prevalence of overcrowding", explains Jason Agostino, medical advisor to the National Aboriginal Community Controlled Health Organisation and Lecturer in General Practice at the Australian National University, Canberra, ACT, Australia.

At the time of writing, Australia's latest COVID-19 epidemiology report (including data up to April 26, 2020) showed there were only 52 cases of COVID-19 among Indigenous Australians, representing less than 1% of Australia's cases despite Indigenous Australians being 3·3% of the population. "So far there have not been any cases in Indigenous Australians in remote or very remote regions", explains Agostino. "Through the Aboriginal and Torres Strait Islander COVID-19 Advisory Group and other forums we are able to identify strategies to address community priorities. An early and positive step to prevent spread was the additional travel restrictions put in place for many remote communities at the request of community leaders."

However, institutional problems remain, in particular some communities have overcrowded housing and have no facilities to safely isolate and quarantine infected or suspected cases. "There has also been insufficient support to enable health-care staff to quarantine before entering remote communities. If a health service wants to enforce the 14-day quarantine for locum staff, they have to bear that cost", says Agostino. Should an outbreak occur, protocols have been developed for early transfer of cases and their close contacts out of communities and into regional centres, and the Australian Federal Government recently announced additional funding for retrieval services.

The risks of COVID-19 to Indigenous communities could not be clearer. More than 1 in 3 Indigenous Australian adults report having either cardiovascular disease, diabetes, or renal disease, and onset of these diseases often occurs 20 years earlier than the non-Indigenous population. Smoking rates are also much higher, with approximately 40% of adults smoking, more than double that seen in the non-Indigenous population. "The 2009 H1N1 influenza epidemic showed what can happen to Indigenous Australians", says Agostino. "During that outbreak, rates of admission to the intensive care unit and mortality were some 4-times higher in Indigenous Australians compared with the non-Indigenous population."

He concludes that "while Australia's Federal and State and Territory Governments have put in place some good measures, the success so far is due to Aboriginal and Torres Strait Islander people taking the lead and protecting their communities. Indigenous Australians began a network of community-controlled health organisations in the 1970s and this so-called whole of community, whole of person approach to health care is what is helping protect them in this early stage of the pandemic."

Tony Kirby