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Time for a culture change: understanding and reducing risk, morbidity and mortality from COVID-19 in those of black and minority ethnicity

Following a number of epidemics in the 21st century, including Ebola and Middle East respiratory syndrome, the SARS-COV-2 virus, causing COVID-19 disease, was declared a pandemic health emergency of international concern in January 2020.

Iqbal Singh[1]

Kailash Chand[1]

Arun Singh[2]

Kondal R Kandadi[3]

Author details can be found at the end of this article

Correspondence to:
Iqbal Singh; iqbalsingh21@aol.com

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The SARS-COV-2 virus has had a devastating impact, with over 35 000 deaths in the UK across all sectors as of 18 May (hospitals, care homes, hospices and in the community) (Department of Health and Social Care and Public Health England, 2020). In the UK there has been increasing concern regarding the disproportionate impact that COVID-19 is having on black and minority ethnic communities. The *Health Service Journal* (Cook et al, 2020) identified that out of 119 NHS staff who had died from COVID-19, 64 were from ethnic minority backgrounds. People from ethnic minorities account for 14% of the population but have accounted for 34% of COVID-19-related intensive care unit admissions as of 24 April 2020 (Intensive Care National Audit and Research Centre, 2020). Black men are 4.2 and black women 4.3 times are more likely to die from a COVID-19-related death than men and women of white ethnicity (Office for National Statistics, 2020). Men in the Bangladeshi and Pakistani ethnic group were 1.8 times more likely to have a COVID-19-related death than white males when age and other sociodemographic and health characteristics were taken into account (Office for National Statistics, 2020). This difference in the incidence and mortality of COVID-19 between ethnic groups is only partly accounted for by socioeconomic disadvantage and other circumstances; the remaining gap has not yet been explained (Docherty et al, 2020; Intensive Care National Audit and Research Centre, 2020; Office for National Statistics, 2020).

Socioeconomic factors and comorbidities

An analysis of English Housing Survey data from 2014–17 found marked ethnic contrasts in the numbers of households that were over-crowded (defined as having fewer bedrooms than needed to avoid undesirable sharing) – 30% of Bangladeshi households, 16% of Pakistani, 12% of black and 2% of white. The Labour Force Survey (Gov.UK, 2019) data from 2018 showed that people of Pakistani and Bangladeshi ethnicity were much more likely than those of other ethnic groups to live in multi-generational households. The 2011 census data (https://www.ons.gov.uk/census/2011census) found that people of Pakistani, Bangladeshi and black ethnicity were most likely to live in deprived neighbourhoods.

The high incidence of diabetes and coronary heart disease in the British Asian population (Singh et al, 2007) has been recognised for a long time. A number of other risk factors and comorbidities, including obesity, chronic obstructive pulmonary disease, chronic kidney disease, hypertension and age, may partly account for the increase in mortality from COVID-19, although this area requires more research. While the increased susceptibility of people of black and minority ethnicity to SARS-COV-2 and the possibility of more severe outcomes is investigated, immediate action must taken to mitigate this risk. There is increasing evidence from the UK and the USA of the disproportionate impact on black and minority ethnic communities and the inability to communicate, mitigate and bridge this gap.

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Risks, communication and messaging

For more than 20 years, communication on health issues with black and minority ethnic communities has not had the desired impact. A culturally sensitive method of communicating with black and minority ethnic communities is needed so that they understand, act on and have confidence in the message delivered and in the people delivering the message.

Public health messages targeted at black and minority ethnic communities need to acknowledge that such communities are diverse. Each individual group has powerful cultural and religious traditions and expectations that underpin perceptions, attitudes and opinions and act as powerful modulators of persuasion and coercion in terms of behaviours.

Public health messages, when received and understood, are only acted upon if they align with these experiences. Such messaging needs to understand how culture shapes people's immediate attitude to risk. The actions needed to mitigate risk are well known but not acted upon. Risk aversion and health in black and minority ethnic groups is poorly understood and public health messaging has not grasped this. One size does not fit all.

Very little is known about the risk appetite, behaviours and attitudes of black and minority ethnic groups towards measures such as social distancing, hand washing, contact tracing, self-isolation, vaccination and using technology to deliver the key measures used to prevent contracting and transmitting SARS-COV-2. During the COVID-19 pandemic, it is important that any risk factors identified and actions taken should allow for increased vulnerability and susceptibility to the disease and therefore help to reduce the risk which is not accounted for by these factors.

The need for urgent risk assessment

There is not yet credible data or evidence that ethnicity alone may be a risk factor for increased mortality from COVID-19, but if we wait for the evidence to be gathered, there may be some missed opportunities to shield people at risk and to protect vulnerable black and minority ethnic healthcare staff from possible tragic consequences. A risk assessment approach has been developed by the Forum of International Doctors' Associations for staff working with COVID-19 patients, incorporating existing known risk factors (Tables 1 and 2). This may mean being overcautious, or data may subsequently provide a different explanation. However, protecting a small high risk group and saving lives will make it worthwhile and also send a supportive message to staff and society that actions are being taken.

Table 1. COVID-19 risk assessment tool

Risk factor*		Score
Age	50–59 years	1
	60–69 years	2
Sex	Male	1
	Female (black or Filipino)	0.5
Comorbidity	Cardiovascular disease (on treatment for hypertension, atrial fibrillation, heart failure, previous myocardial infarction, stroke, transient ischaemic attack)	1
	Diabetes mellitus type 1 or 2	1
	Chronic pulmonary disease (including asthma, chronic obstructive pulmonary disease, interstitial lung disease)	1
	Chronic kidney disease (any stage 1–5)	1
	Sickle cell or thalassaemia trait or other haemoglobinopathies	1
	Obesity (body mass index >30 kg/m^2 or waist circumference >33 inches women, >35 inches men)	1
	Black and minority ethnic or mixed race or family susceptibility to COVID-19	1

** Please circle each risk factor applicable to yourself and then match it against the risk profile in Table 2. Prepared by the Forum of International Doctors' Associations*

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Table 2. Recommendations based on risk assessment score from Table 1

		Score		
Risk stratification		**0–3 (low risk)**	**3.5–6 (high risk)**	**7 or more (very high risk)**
Recommendation		Continue current duties with adherence to best infection control practice	Consider appropriate personal protective equipment and modification of duties	Work from home or in non-patient facing roles
Current duties	Community	Continue with caution	Modified duties or appropriate personal protective equipment	Work from home or in non-patient facing roles
	Primary care	Continue with caution	Modified duties or appropriate personal protective equipment	Work from home or in non-patient facing roles
	Secondary care: non-aerosol-generating procedures	Continue with caution and/or use enhanced personal protective equipment	Modified duties or appropriate personal protective equipment	Work from home or in non-patient facing roles
	Secondary care with aerosol-generating procedures	Enhanced personal protective equipment	Redeploy out of aerosol-generating procedure areas	Work from home or in non-patient facing roles

The authors recommend that staff self-administer the risk assessment as above and discuss the resulting risk score with their line manager to agree a plan to protect the staff member as per the recommendations in Table 2. If there is a disagreement either with the scoring or with the line manager, the matter should be resolved by the occupational health department.

The primary purpose of this assessment is to identify NHS staff who are at increased risk from COVID-19 disease and mitigate that risk as much as possible. The tool helps staff and manager to start a conversation and discussions should be individualised and take place in a supportive environment.

To keep the tool simple there is no weighting within each category at present but as evidence develops different contributing factors may have different weighting, eg obesity may incur additional points depending on the level of obesity.

Need for urgent and medium-term action

The NHS faces a huge challenge in developing a comprehensive strategy and plan to mitigate the impact of COVID-19 on black and minority ethnic staff. Research is needed to understand whether those from black and minority ethnic groups are more susceptible to the virus, and whether they react with more severe symptoms, have worse outcomes and if there are reasons for the increased virulence seen in these groups.

While we wait for a vaccine or cure, the only option in the short term is to develop a strategy to reduce risk and provide appropriate personal protective equipment or remove staff from frontline duties. A clear strategy is also needed to reduce the impact on mental health in the short and long term. The strategy needs to have an inclusive intellectual, comprehensive and holistic competence at all levels within the NHS and Department of Health and Social Care. Forty four percent of medical staff are from black and minority ethnic backgrounds, so it is vital that they are a part of strategy and involved in this issue. The NHS and Department of Health and Social Care should set up a black and minority ethnic advisory panel as the General Medical Council has done. The whole issue is complex and structural and institutional changes are needed to account for these inequalities; looking ahead, an independent inquiry may be the only option to achieve these aims.

Author details

[1]Centre of Excellence in Safety for Older People (CESOP), Accrington, UK

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Key points

- Urgent risk assessment and appropriate action is needed to ensure that all black and minority ethnic staff are not at additional risk from COVID-19.
- The NHS and Department of Health and Social Care should develop a clear strategy based on a comprehensive and inclusive intellectual and cultural competence.
- Research into communication with communities and effective culturally sensitive public health messaging is necessary to reduce risk.
- There is a need for an independent inquiry on health and socioeconomic inequalities and their disproportionate impact on black and minority ethnic communities.

[2]Department of Medicine for Older People, East Lancashire Teaching Hospitals NHS Trust, Blackburn, UK

[3]Vice Chancellors Office, University of Bolton, Bolton, UK

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