Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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What about BAME? A letter to the editor on 'The socio-economic implications of the coronavirus pandemic (COVID-19): A review'

We read the article by Nicola et al. published in the June 2020 issue of this journal with great interest [1]. In this article, the authors gave a thorough overview of the socio-economic consequences of COVID-19 on various aspects of the world economy – a highly relevant topic given the current circumstances. The authors describe the impact on the healthcare industry and the vulnerability of health care staff to infection. In this letter, we discuss more specifically the disproportionate impact on BAME (Black, Asian and Minority Ethnic) individuals, potential reasons for this, as well as making suggestions as to how this can be addressed.

Ethnicity is a complex structure involving biology, distinct behavioural patterns and cultural aspects. These facets ought to be explored when analysing the disproportionately negative health outcomes for BAME individuals. The first eleven doctors who tragically lost their lives due to COVID-19 were all from BAME backgrounds [2]. In a more recent analysis of 106 coronavirus-related deaths in healthcare workers, 66% were found to be from BAME backgrounds, whereas this figure was as high as 94% when considering doctors alone [3]. Cohort studies from the UK Biobank database show that BAME individuals, independent of socioeconomic status and comorbidities, are at a 2 to 4-fold higher risk of COVID-19 infection [4]. Socioeconomic deprivation and comorbidities are in themselves independent risk factors.

Severe cases of COVID-19 have been correlated with underlying conditions, namely hypertension, diabetes and cardiovascular disease, whilst ethnic minorities have been shown to have a higher prevalence of these conditions. In addition, those of African-Caribbean descent are more likely to suffer from more severe cases of hypertension, thus increasing the severity of the infection and putting them at greater risk of deterioration. Minorities have also been shown to have a higher risk of developing end-stage renal failure than their white counterparts. This can increase their susceptibility towards viral transmission which can further exacerbate the problem [5]. Interestingly, the BCG vaccination is associated with lower mortality rates of COVID-19 [6]. Many of the BAME individuals in the UK come from countries that do not offer a national BCG vaccination programme, which may partially account for higher mortality rates. Additionally, those of darker skin tones have less endogenous production of Vitamin D, leading to deficiency [7]. Studies have shown a correlation between Vitamin D deficiency and respiratory tract infections [8], hence increasing the risk of acute respiratory distress in COVID-19 patients.

Data illustrates that overcrowding affects BAME homes much more than white homes [9]. Cultural differences such as inter-generational cohabiting family units increase the risk of transmission to the elderly, who are at greatest risk of dying from COVID-19. We would like to make the following suggestions as to ways in which these inequalities could be addressed:

1. Educational institutions and workplaces should actively identify and encourage BAME individuals to receive the BCG vaccine and any other relevant vaccinations.
2. To reduce the health disparity, the NHS could implement a bi-annual GP/physician associate review of systems and review vaccination passport of registered BAME patients at their respective practice.
3. To increase social prescribing by primary care practitioners and signposting BAME individuals to relevant services.
4. The creation of a government-led (PHE) public health campaign to integrate the aforementioned recommendations into BAME individuals' workplace.

Socioeconomic class, as well as ethnic background, should be factored into healthcare policies. Moreover, there should be more effective measures in place to control infection in these deprived communities, ensuring a better allocation of resources to reflect the increased level of vulnerability to the virus. This should include risk-stratification tools better directed at recognising vulnerable patients at an earlier stage to prevent deterioration.

Provenance and peer review

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Youssef Chedid– Writing.
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1. Name of the registry:
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Declaration of competing interest

None to declare.

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