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Nevertheless, the aforementioned studies,<sup>4-10</sup> each with its own important nuances, all reached similar overarching conclusions from which a reasonable interpretation is that no evidence exists to support the speculation that RAAS inhibitors increase the risk of COVID-19. Nor does evidence exist to suggest that, once infected, the risk of admission to hospital due to COVID-19, progression to more severe complications, or death is increased with RAAS inhibitor use compared with treatment with other antihypertensive drugs. Findings from some studies even suggest that treatment with RAAS inhibitors might reduce risk of severe complications or death due to COVID-19,<sup>9,10</sup> but this potentially important finding needs confirmation in randomised controlled trials.

For the moment, we should applaud the remarkable achievement of investigators globally, in the face of considerable adversity, for rapidly generating scientific data that should diminish the speculation about the safety of RAAS inhibitors during this global COVID-19 pandemic and provide a degree of reassurance to patients and their doctors.

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## Sharpening the global focus on ethnicity and race in the time of COVID-19



Tackling injustices, including those that result from prejudice and racism globally, is essential in the response to the coronavirus disease 2019 (COVID-19) pandemic. Here, we focus on UK South Asian and Black and African-American populations, using internationally recognised terminology and definitions,<sup>1</sup> and consider the UK and the USA as globally relevant examples. We recognise other minorities also need consideration in the COVID-19 response, and we hope our principles apply broadly. Given their settled status either after migration or by birth in the country, ethnic/racial minority populations should experience health-care outcomes equal to those of others. Sadly, this seems untrue.<sup>2,3</sup>

Data on COVID-19 cases and deaths are plentiful, but detailed data on COVID-19 by age, sex, or ethnicity/

race are scant but should be available routinely and automatically.<sup>4</sup> In the UK, collection of data by ethnicity in hospitals is mandatory<sup>5-8</sup> and in the USA the National Institutes of Health Revitalization Act requires the publication of data by race/ethnicity and sex by federal agencies.<sup>9</sup> The UK's Intensive Care National Audit and Research Centre reported on May 1, 2020, that 2300 (34%) of 6770 critically ill COVID-19 patients were from ethnic/racial minority groups.<sup>10</sup> For comparison, the 2011 census shows that ethnic minority groups made up about 14% of the UK population. Additionally, National Health Service (NHS) health-care staff from ethnic minority groups seem to have died in disproportionate numbers from COVID-19, even when accounting for the high proportion of people from these groups who are

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employed in the NHS and work on the front line. These matters are being investigated in a UK Government-initiated inquiry by Public Health England<sup>11</sup> and have been highlighted by health-care workers, advocates, the UK's Chief Medical Officer, and politicians. Detailed scrutiny with accurate counts of numerators and denominators together with understanding explanatory factors and accompanying health-care environments will be required to interpret the findings of the inquiry.

In the USA, analyses of COVID-19 deaths from some states show that there are more deaths in African Americans than in White Americans.<sup>12</sup> For example, in Chicago, nearly 52% of deaths from COVID-19 were among African Americans, although they represent only about 30% of the city's population.<sup>13</sup> In New York state<sup>14</sup> and in some other US states,<sup>15</sup> COVID-19 has been more deadly for African American and Hispanic people than for White people. These noticeable disparities<sup>12–15</sup> have been highlighted by advocates, the US Surgeon General, and politicians.

Why are ethnic/racial minority groups, seemingly, being disproportionately affected by COVID-19?<sup>216</sup> We support socioeconomic and environmental rather than biological explanations, which have been damaging to science and populations alike historically, are unlikely, and could lead to prejudice or victim blaming.<sup>17,18</sup> We also note, however, that socioeconomic factors did not fully explain ethnic variations in hospitalisation and death for respiratory infections, including influenza, in Scotland.<sup>19</sup> Older age, male sex, and underlying chronic non-communicable problems, including cardiovascular diseases, hypertension, diabetes, obesity, and chronic

obstructive pulmonary disease (COPD), are associated with worse outcomes in COVID-19.<sup>10,13,20</sup> Routine large-scale data on the risk factors and potential underlying causes of COVID-19 complications for ethnic/racial minorities are not available globally as yet, so our explanations are tentative, but comorbidities might explain some of the differences.

However, COVID-19 has sharpened the focus on structural and societal inequalities that have long existed in the UK, the USA, and other countries. Many people from ethnic/racial minorities hold essential jobs in health and social care, retail, public transport, and other sectors, putting them on the front line and at risk of exposure to COVID-19.<sup>11,21</sup> Some people from ethnic/racial minority 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.<sup>13,16,21</sup> Ethnic/racial minorities exposed in crowded places and becoming seriously ill might be infected from multiple sources and a comparatively large infectious dose of the causative virus (SARS-CoV-2), which could be relevant in health and social care workers.<sup>11,13</sup>

Health-care disparities are also likely to have a role in the high burden of COVID-19 among ethnic/racial minorities—eg, in the USA, Black or African American minorities and Hispanic groups are less likely to have health insurance, with consequent reduced health-care access and use.<sup>13,21</sup> The relevant public health messaging, early diagnosis, and treatment of COVID-19 among ethnic/racial minorities might be less effective, leading to later presentation.<sup>13,16,21</sup> The important role of culture, including places of worship, multigenerational households, and variation in social interactions might also have a role in increased risks of COVID-19.<sup>13,16</sup> 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.

Chronic conditions, especially diabetes, are comparatively common in African and South Asian minority groups in Europe and the USA.<sup>22</sup> Stroke is more common in African populations in the UK and the USA, with moderate increased risk of coronary heart disease in South Asian groups compared with White populations.<sup>22</sup> Other comorbidities including COPD, asthma, and infections such as tuberculosis might also be contributing

to comparatively adverse outcomes in COVID-19. Moreover, the heterogeneity of ethnic/racial minority 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.<sup>19,23</sup> The high prevalence of chronic diseases in US and UK ethnic/racial minorities reflects social and economic disadvantages, and factors such as diet, cigarette smoking, alcohol use, and exposure to psychosocial stressors.<sup>16,21,22</sup> The effects of hostile environments against immigrants, particularly failed asylum seekers and undocumented immigrants, might affect settled ethnic/racial minority populations adversely through heightened prejudice and societal tensions.

Do these ethnic/racial variations apply to treatments also? There might be ethnic/racial variations in prescribing and adherence to medications;<sup>17</sup> a broad range of commonly prescribed drugs might be relevant in COVID-19 and potential beneficial, adverse, and neutral effects require reliable study. For example, very low serum concentrations of 25-hydroxyvitamin D are common in ethnic/racial minorities with darker skins in the UK and the USA.<sup>24</sup> Meta-analyses of randomised trials suggest a protective effect of vitamin D against acute respiratory infections.<sup>25</sup> Research is underway on varied pharmacological measures to treat and prevent COVID-19 infection. Pending the findings of these studies, we suggest following the rapidly evolving clinical and public health guidance on current medications, intakes of micronutrients, including vitamin D,<sup>26,27</sup> and relevant health behaviours.

Ethnic/racial disparities in the health outcomes of people with COVID-19 need to be studied alongside age, sex, gender, socioeconomic status, and comorbidities in disaggregated public health data.<sup>4,19</sup> A provisional analysis by the UK Office for National Statistics suggests that the risk of COVID-19-related death among some ethnic groups is higher than that among those of White ethnicity in the UK.<sup>28</sup> After adjustment for age, Black men are 4.2 times more likely to have a COVID-19-related death and Black women are 4.3 times more likely than White ethnicity men and women in the UK.<sup>28</sup> After taking account of age and other sociodemographic characteristics and measures of self-reported health and disability, people of Bangladeshi, Pakistani, Indian, and mixed ethnicities also had a significantly increased risk of COVID-19-related death compared with those of White ethnicity.<sup>28</sup> These results suggest that the difference between ethnic groups

in COVID-19 mortality is partly a result of socioeconomic disadvantage and other circumstances, but a remaining part of the difference has not yet been explained.

The evidence in the UK and the USA in the time of COVID-19 has sharpened the focus on inequalities neglected for a long time. Therefore, hand in hand, political action is needed to tackle xenophobia and racism, with concerted efforts to resolve long-standing societal inequalities globally. Reliable collaborative evidence must underpin clinical, public health, and societal interventions by policy makers that address these injustices and tackle the COVID-19 pandemic and its sequelae.

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## Community participation is crucial in a pandemic

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Community participation is essential in the collective response to coronavirus disease 2019 (COVID-19), from compliance with lockdown, to the steps that need to be taken as countries ease restrictions, to community support through volunteering. Communities clearly want to help: in the UK, about 1 million

people volunteered to help the pandemic response<sup>1</sup> and highly localised mutual aid groups have sprung up all over the world with citizens helping one another with simple tasks such as checking on wellbeing during lockdowns.<sup>2</sup>

Global health guidelines already emphasise the importance of community participation.<sup>3,4</sup> Incorporating insights and ideas from diverse communities is central for the coproduction of health, whereby health professionals work together with communities to plan, research, deliver, and evaluate the best possible health promotion and health-care services.<sup>5</sup>

Pandemic responses, by contrast, have largely involved governments telling communities what to do, seemingly with minimal community input. Yet communities, including vulnerable and marginalised groups, can identify solutions: they know what knowledge and rumours are circulating; they can provide insight into stigma and structural barriers; and they are well placed to work with others from their communities to devise collective responses. Such community participation matters because unpopular measures risk low compliance. With communities on side, we are far more likely—together—to come up with innovative, tailored solutions that meet the full range of needs of our diverse populations.

### Panel: Steps to community participation in the COVID-19 response

#### Invest in coproduction

- Fund dedicated staff and spaces to bring the public and policy makers together
- Create spaces where people can take part on their own terms (eg, avoid bureaucratic formalities or technical jargon)
- Move beyond simply gathering views and instead build dialogue and reflection to genuinely codesign responses
- Invest not only for this emergency but also for long-term preparedness

#### Work with community groups

- Build on their expertise and networks
- Use their capacity to mobilise their wider communities

#### Commit to diversity

- Capture a broad range of knowledge and experiences
- Avoid one-size-fits-all approaches to involvement
- Consciously include the most marginalised

#### Be responsive and transparent

- Show people that their concerns and ideas are heard and acted upon
- Collaborate to review outcomes on diverse groups and make improvements