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COVID-19: rethinking risk



The burden of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic continues to grow, both in terms of morbidity and mortality from the pandemic itself and the effects of mitigation strategies.¹ Tailoring policies on the basis of emerging evidence about conditions associated with COVID-19 severity is key to informing the actions of both policy makers and individuals. This means moving from generalised population-based mitigation strategies to focusing on those most at risk of severe outcomes from COVID-19.

In *The Lancet Global Health*, Andrew Clark and colleagues² produce a model-based estimate of populations at increased risk of severe COVID-19. The authors focus on the central role played by 11 predominantly non-communicable disease (NCD) categories in predicting risk and the need to tailor the response accordingly. Understanding the heterogeneities of risk helps to contextualise the response and focus resources and actions on those most susceptible to severe disease, who are a fraction of the total number of people considered at risk.³ A particular strength of the model underlying this analysis is that, while based on currently available data and assumptions about the pandemic, it can be modified as new evidence emerges and allows for the much needed further stratification of risk to inform a precision public health approach.

The authors raise many important points for policy makers, including that while focusing on certain conditions will help to narrow prevention efforts, having these conditions and contracting COVID-19 does not necessarily equate to severity of disease. The interplay of multiple morbidities, age, and strength of hospital systems also plays a key role in determining infection outcomes.

The authors identify several limitations of the model. First, it does not account for the potential role of co-existing morbidities and it considers age as an independent risk factor in predicting severity of outcome. Such analysis should now be possible based on medical death records. Second, it does not sufficiently consider the relative weight with regard to severity of disease of specific conditions or their interaction with age. In the USA, a third of COVID-19 deaths have occurred in people older than 85 years.⁴ Third, in particular for low-income and middle-income

countries, there are weaknesses in the underlying data, creating uncertainty around the estimates. Finally, and most importantly, the model does not consider the role of underlying risks factors or social determinants.

Social determinants including poverty and social exclusion, underemphasised in the response, are linked with both identified risk factors and outcomes.⁵ In the USA, Mexico, and elsewhere, in particular among younger people, COVID-19 has disproportionately affected poor and marginalised populations who have a higher prevalence of NCDs and their risk factors, most notably obesity.⁶ The effective result is an NCD–COVID-19 co-pandemic, underpinned by poverty and structural inequity.⁷

Although older age and underlying conditions are visible markers of increased risk, people subject to structural inequities are more likely to develop underlying conditions and receive poor quality health care for management of those conditions and of COVID-19.⁸ In addition to age-associated risk, emerging evidence shows that those with unmanaged chronic conditions, including HIV, are more vulnerable to severe outcomes.^{9,10} Treatment and management of those conditions is further limited by the COVID-19 response.³

An increased understanding of risk factors, including the effects of social determinants and their interplay, provides an opportunity to target mitigation strategies and helps to allay the popular misconception that everyone is at equal risk of severe illness. As the authors note, it is time to evolve from a one-size-fits-all approach to one that centres on those most at risk. This will need to happen at both the individual and community level. Considering the relevance of social determinants, such an approach requires urgently improving communication about COVID-19; increasing access to health services, including palliative care, for those already socially vulnerable; and providing economic support to cope with the mitigation. Enhanced primary health care will help to monitor health and social care and engage individuals and families in chronic NCD management and the COVID-19 response.

The authors describe the practice of shielding at-risk populations. Based on lessons learned from HIV and Ebola on the importance of working together

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with communities, it is time for policy makers to shift to a less patriarchal approach and engage with, rather than shield, communities so that communities have agency and voice in developing the response. A two-way dialogue with formal and informal leaders is an evidence-based approach to addressing fear, misinformation, and contextualising the response for those at risk of severe outcomes.

The SARS-CoV-2 pandemic is forcing us to face the fact that progress towards the Sustainable Development Goals is fragile, as those populations on the path towards leaving poverty are now at increased risk of falling behind. It also shows the need to strengthen the nexus between underlying conditions, their risk factors, and infectious diseases. This requires acknowledging the importance of interventions to address structural inequity, universal health coverage, and wider social protection schemes as part of the response. It is time to acknowledge that we are not all at equal risk of severe outcomes from COVID-19 and to work together with those most affected to tailor an effective response.

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