Wearing face masks in the community during the COVID-19 pandemic: altruism and solidarity

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As the coronavirus disease 2019 (COVID-19) pandemic progresses, one debate relates to the use of face masks by individuals in the community. We previously highlighted some inconsistency in WHO's initial January, 2020, guidance on this issue.[1,2] WHO had not yet recommended mass use of masks for healthy individuals in the community (mass masking) as a way to prevent infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in its interim guidance of April 6, 2020.[3] Public Health England (PHE) has made a similar recommendation.[4] By contrast, the US Centers for Disease Control and Prevention (CDC) now advises the wearing of cloth masks in public[5] and many countries, such as Canada, South Korea, and the Czech Republic, require or advise their citizens to wear masks in public places.[6-8] An evidence review[9] and analysis[10] have supported mass masking in this pandemic. There are suggestions that WHO and PHE are revisiting the question.[11,12]

People often wear masks to protect themselves, but we suggest a stronger public health rationale is source control to protect others from respiratory droplets. This approach is important because of possible asymptomatic transmissions of SARS-CoV-2.[13] Authorities such as WHO and PHE have hitherto not recommended mass masking because they suggest there is no evidence that this approach prevents infection with respiratory viruses including SARS-CoV-2.[3,4] Previous research on the use of masks in non-health-care settings had predominantly focused on the protection of the wearers and was related to influenza or influenza-like illness.[14] These studies were not designed to evaluate mass masking in whole communities. Research has also not been done during a pandemic when mass masking compliance is high enough for its effectiveness to be assessed. But absence of evidence of effectiveness from clinical trials on mass masking should not be equated with evidence of ineffectiveness. There are mechanistic reasons for covering the mouth to reduce respiratory droplet transmission and, indeed, cough etiquette is based on these considerations and not on evidence from clinical trials.[14] Evidence on non-pharmaceutical public health measures including use of masks to mitigate the risk and impact of pandemic influenza was reviewed by a workshop convened by WHO in 2019; the workshop concluded that although there was no evidence from trials of effectiveness in reducing transmission, "there is mechanistic plausibility for the potential effectiveness of this measure", and it recommended that in a severe influenza pandemic use of masks in public should be considered.[15] Dismissing a low-cost intervention such as mass masking as ineffective because there is no evidence of effectiveness in clinical trials is in our view potentially harmful.

Another concern is the shortage of mask supply in the community. Medical masks must be reserved for health-care workers. Yet to control the infection source rather than to self-protect, we believe that cloth masks, as recommended by the CDC,[5] are likely to be adequate, especially if everyone wears a mask. Cloth masks can be easily manufactured or made at home and reused after washing. Authorities also worry about correct techniques for wearing, removal, and disposal of face masks, but these techniques could be learned through public education.

Finally, there are concerns that mask wearing could engender a false sense of security in relation to other methods of infection control such as social distancing and handwashing. We are unaware of any empirical evidence that wearing masks would mean other approaches to infection control would be overlooked. It is important, however, to emphasise the importance of this point to the public even if they choose to wear masks.

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Mass masking is underpinned by basic public health principles that might not have been adequately appreciated by authorities or the public. First, controlling harms at source (masking) is at least as important as mitigation (handwashing). The population benefits of mass masking can also be conceptualised as a so-called prevention paradox—ie, interventions that bring moderate benefits to individuals but have large population benefits.[16] Seatbelt wearing is one such example. Additionally, use of masks in the community will only bring meaningful reduction of the effective reproduction number if masks are worn by most people—akin to herd immunity after vaccination. Finally, masking can be compared to safe driving: other road users and pedestrians benefit from safe driving and if all drive carefully, the risk of road traffic crashes is reduced.

Social distancing and handwashing are of prime importance in the current lockdown. We suggest mask wearing would complement these measures by controlling the harm at source. Mass masking would be of particular importance for the protection of essential workers who cannot stay at home. As people return to work, mass masking might help to reduce a likely increase in transmission. South Korea and Hong Kong have managed to limit their COVID-19 outbreaks without lockdown.[17,18] It is difficult to apportion the contribution of various measures, including extensive testing, rigorous contact tracing, and strict isolation, but use of masks in public is universally practised in these two places. We encourage consideration of mass masking during the coming phases of the COVID-19 pandemic, which are expected to occur in the absence of an effective COVID-19 vaccine.[19] Finally, this practice could also be useful for control of future influenza epidemics.

Mass masking for source control is in our view a useful and low-cost adjunct to social distancing and hand hygiene during the COVID-19 pandemic. This measure shifts the focus from self-protection to altruism, actively involves every citizen, and is a symbol of social solidarity in the global response to the pandemic.

We declare no competing interests.

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