

Covid-19: An urgent call for global ‘vaccines-plus’ action

SARS-CoV-2 has infected more than 278 million people globally, with at least 5.4 million deaths recorded by the World Health Organization as of 26 December 2021. The Omicron (B.1.1.529) variant of concern is spreading rapidly.[1]

Some countries view infection as a net harm and pursue strategies ranging from suppression to elimination.[2] They seek to sustain low infection rates through a combination of vaccination, public health and financial support measures (vaccines-plus). Other countries implemented mitigation strategies that aim to prevent health systems from being overwhelmed by building population immunity through a combination of infection and vaccination. These countries rely on a vaccines-only approach and seem willing to tolerate high levels of infection provided their healthcare systems can cope.

The high transmissibility and degree of immune escape by the Delta and Omicron variants means sustained protective population immunity is unlikely to be achieved with the current vaccines based on the original strain.[3] Compared to Delta, Omicron is much more likely to infect those who were vaccinated or exposed to previous SARS-CoV-2 variants, suggesting significant immune escape.[4]

Widespread transmission brings a degree of unpredictability to the pandemic response. High transmission risks more rapid adaptation of SARS-CoV-2, with outcomes that include increased transmissibility (seen with Alpha, Delta and Omicron), increased antibody immune escape (Beta and Omicron) or greater pathogenicity (Delta and Alpha).[5]

There are other drawbacks to a vaccines-only strategy. Countries which tolerated high transmission have seen rises in both COVID-specific and all-cause mortality, healthcare

worker shortages and repeated lockdowns to control surges in case numbers. [2,6-9] Countries which suppressed transmission early saw reduced mortality and less economic damage.[2, 7, 10, 11]

While vaccination greatly reduces risks of serious illness and death, Long COVID remains a concern.[12,13] Disruption to education as a result of staff and student sickness, and/or repeated lockdowns due to failure to control the virus, are likely to have a lasting impact on the wellbeing and prospects of the next generation.[14]

High levels of transmission also create a negative feedback loop, whereby important public health measures such as test, trace, isolate and support systems become overwhelmed, making them less effective, further fuelling transmission.[15]

For all these reasons, a vaccines-plus approach should be adopted globally. This strategy will slow the emergence of new variants and ensure they exist in a low transmission background where they can be controlled by effective public health measures, while allowing everyone (including those clinically vulnerable) to go about their lives more freely.

We welcome the World Health Organization's recent guidance on community[16] and healthcare[17] mask use, but believe more can be done to suppress transmission without adversely impacting economic or social activity. Accordingly, we call upon the World Health Organization and national governments to:

1. Unequivocally declare SARS-CoV-2 an airborne pathogen and stress the implications for preventing transmission.[18] A clear message from the World Health Organization will help to remove confusion that has been used to justify outdated policies.[19]
2. Promote the use of high-quality face masks for indoor gatherings and other high-transmission settings. The significant benefits of community masking are now well-established.[20,21] Respirators (e.g. N95, P2/FFP2 or KF94) should be preferred in all indoor settings where people mix, and for healthcare workers at all times.[21,22]

3. Advise on effective ventilation and filtration of air. It is time to go beyond opening windows and aim for a paradigm shift to ensure all public buildings are optimally designed, built, adapted and utilised to maximise clean air for occupants — strategies which have been shown to reduce SARS-CoV-2 transmission.[23 - 25]
4. Set criteria for imposing or relaxing measures to reduce COVID-19 spread based on levels of transmission in the community. Effective find, test, trace, isolate and support will continue to be essential to intercept transmission. Low rates of transmission give all available measures the best chance of being effective, creating a positive, self-reinforcing cycle of disease control. Sufficient financial and practical support for isolation should be implemented everywhere, particularly in low- and middle-income countries and deprived parts of high-income countries.[26,27]
5. Support urgent measures to achieve global vaccine equity, including vaccine sharing, suspension of vaccine patents, removal of barriers to technology transfer, and establish regional production centres to create a plentiful local supply of high-quality vaccines everywhere.[28] Global vaccine rollout should include coordinated efforts to tackle misinformation to ensure people have access to timely, accurate data on vaccine effectiveness and protection.

Vaccines-plus is affordable and achievable. It is the policy advocated by WHO Director General, Dr Tedros Adhanom Ghebreyesus in his statement of 14 December 2021: *“I need to be very clear: vaccines alone will not get any country out of this crisis. Countries can and must prevent the spread of Omicron with measures that work today. It’s not vaccines instead of masks, it’s not vaccines instead of distancing, it’s not vaccines instead of ventilation or hand hygiene. Do it all. Do it consistently. Do it well.”*

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