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EFFECTIVENESS OF PUBLIC HEALTH MEASURES AGAINST COVID-19

Effectiveness of public health measures against covid-19: ventilation has a major role

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Talic and colleagues' systematic review and meta-analysis assessed many public health measures for reducing covid-19 but did not assess the effectiveness of interventions designed to reduce the presence of virus in inspired air, such as filtration, window opening, or the installation of ventilation.¹

The climate implications of some of these measures could be challenging, but they are potentially important considerations in the design of buildings, workplaces, and homes for "antiviral sustainability." These factors are also potentially important modifiers for other measures like home isolation and social distancing or people density. In addition, ventilation may be a key determinant of the propensity for superspreading events, which seem to be a major determinant in the transmission of covid-19.

There is published evidence in this area—ventilation is an entire science in itself. It is also the subject of hospital building regulations,^{2,3} World Health Organization guidance,⁴ and government guidelines⁵ from around the world. It has a major role in ensuring the safety of staff working in covid areas.⁶

Notwithstanding the understandable fears of clinical staff working directly with patients with covid-19, a lot of hospital based transmission of covid-19 is likely to take place in poorly ventilated non-clinical areas. In schools, variations in the effectiveness of closures may have related to differences in ventilation or climate (and hence window opening), which are potentially major determinants of school transmission and the safety of school returns.

With all this in mind, it is hard to understand why ventilation, high efficiency particulate air filtration,⁷ ultraviolet disinfection,⁸ and ambient carbon dioxide monitoring were not mentioned, especially in an article that seeks to inform policy. To deliver properly calibrated and effective responses to viral threats, surely it is important to understand the relative effectiveness and interactions between all the different measures?

Competing interests: None declared.

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