

出典：“Role of ventilation in controlling SARS-CoV-2 transmission”, Published 23 October 2020, Scientific Advisory Group for Emergencies, Gov. UK.

### **Recommended Actions**

- Guidance on environmental control for COVID-19 across all sectors should be updated to provide explicit advice on the risk of far-field aerosol airborne transmission, the importance of ventilation, and recommendations on improving ventilation. This should consider the following overarching principles:
  - Ventilation should be integral to the COVID-19 risk mitigation strategy for all multi-occupant public buildings and workplaces. This should include identification of how a space is ventilated and articulation of the strategy that is adopted to ensure the ventilation is adequate.
  - Multi-occupant spaces that are used regularly and are poorly ventilated (below 5 l/s/person or above 1500ppm CO<sub>2</sub>) should be identified and prioritised for improvement.
  - Spaces where there is likely to be an enhanced aerosol generation rate (e.g. through singing, loud speech, aerobic activity) should aim to ensure ventilation is sufficient to maintain CO<sub>2</sub> concentrations below 800ppm (typically 10-15 l/s/person), and should also include additional mitigations such as face coverings for audiences and restricting the size of groups and duration of activities.
  - Ventilation should be balanced against other factors, particularly thermal comfort. It is recommended that the ventilation strategy should at least achieve the equivalent minimum ventilation rate for the space over the occupancy period as defined in current standards. In naturally ventilated buildings, strategies such as intermittent airing and partial window opening to complement background ventilation may enable this to be achieved. Ventilation rates beyond this should ensure that thermal comfort is not significantly compromised
- Further sector specific guidance is needed for building/facilities managers and professional engineers that sets out ventilation recommendations and practical advice on improving ventilation. This will need to be supported by professional engineering and facilities management bodies and an appropriate campaign for industry.
- A simple public guide on ventilation should be developed with reasons why ventilation is important, practical tips and/or FAQs. This would benefit from co-development with people who are not ventilation experts, and supported by public health campaigns in a similar way to hand washing and face coverings.
- It is recommended to identify where there may need to be financial or technical support to enable individuals and organisations to take appropriate actions to improve ventilation and deal with health and comfort related consequences such as providing adequate heating.
- Research on real-world application of air cleaning and filtration technologies and development of guidance on best practice is urgently needed in order to determine those which are safe and effective.
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- Additional analysis is recommended for chilled food processing and other low temperature environments to evaluate the importance of ventilation and environmental conditions on transmission risk
- In the longer term consideration of infectious disease transmission needs to be embedded into building ventilation regulations and associated statutory guidance in the same way that energy, comfort and air quality have been incorporated. Building regulations should identify performance standards and enhanced measures taken to ensure that compliance is achieved in use. As Part F: Ventilation is currently under review there is an opportunity to consider this further and immediately as part of the current review process. Further regulation and guidance may be required to ensure that existing buildings can meet necessary standards.