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Experts propose customized measures to reduce COVID-19 transmission

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Environmental mitigation measures involving ventilation in spaces, air filters, air ionizers, table-top dividers, and UVC lights, can supplement current safe management measures



The R&D ecosystem in Singapore has been studying various measures that can help support the safe reopening of the economy as we open up in phases. On top of current safe management measures such as wearing of a mask, maintaining safe distancing, limiting social contacts and observing good personal hygiene, these additional solutions will help support a safer resumption of activities.

Temasek Foundation, the Agency for Science, Technology and Research (A*STAR) and other research partners such as ITE College East and Temasek Life Sciences Laboratory (TLL), have done extensive scientific studies in collaboration with public agencies and gleaned insights that could be useful in further reducing the risk of COVID-19 transmission.

With the combined efforts from A*STAR's Institute of Materials Research and Engineering (IMRE) and Institute of High-Performance Computing (IHPC), tests have been conducted in various venues such as public transportation, concert theatres, offices, and eateries. The research team has actively partnered with several public agencies, private sector companies, and institutes of higher learning in studies related to droplet and aerosol transmission under different environment settings.

Mitigating Covid-19 transmission risks

Research findings from the scientific community are enabling other preventive COVID-safe measures. For example, solutions can be employed to improve air quality such as the use of air filters or air ionizers to clean the air in enclosed and poorly ventilated spaces. While safe distancing remains key to reducing risks of transmission, measures such as table-top dividers can be useful during higher-risk activities such as eating when masks are removed. It is important to note that these solutions should be used in parallel with regular sanitization of surfaces to reduce fomite transmission.

Findings such as local outbreak investigation data, international research, and lessons learned from other countries, are used to inform public health measures. Some are,

- Ventilation in spaces to reduce droplet and aerosol transmission
- Air ionizers and air filters are useful in poorly-ventilated indoor spaces
- Reducing droplets transmission using table-top dividers
- Disinfecting surfaces using UVC solutions

Scientists from across Singapore's research ecosystem continue to work towards increased modeling and empirical methods in this series of studies. **Project Safeguard** is an educational initiative by Temasek Foundation aimed at raising public awareness about such scientific findings from our local R&D ecosystem, plus potential solutions to help reduce the risk of COVID-19 transmission as the team carries on economic and social activities.