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#### **Title**

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## Causal imprinting in the pandemic: the persistence of the surface-model of Sars CoV2 transmission

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#### **Abstract**

Laboratory experiments have shown that the first causal explanation people hear "imprints" on the mind. New causal explanations become combined with the first, rather than replace it. The COVID-19 pandemic presented a real-world version of these experiments. The initial causal model communicated by scientific publications focused on how the virus spread via contact with surfaces. However, by July 2020 the science was clearly showing that aerosol transmission was more important, yet there has still been a greater focus on cleaning surfaces than ventilation since then. The current studies show how the surface model and aerosol model coexist in people's minds, are associated with risk perceptions, and drives preferences for pandemic control strategies. In addition, the studies shows that a tutorial based on a deeper explanation of aerosol transmission focused on the density of virus particles in the air helps causal model updating.