Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

The prominence of asymptomatic superspreaders in transmission mean universal face masking should be part of COVID-19 de-escalation strategies

Dear Editor,

Beldomenico recently provided a convincing argument in this journal that superspreaders play an important role in the spread of SARS-CoV-2 (Beldomenico, 2020). His argument is strengthened by recent evidence that a small proportion of individuals are 'speech super-emitters' who emit an order of magnitude more aerosol particles than their peers (Asadi et al., 2019) and epidemiological evidence of the importance of superspreaders (Lloyd-Smith et al., 2005). A study of SARS-CoV-1 transmission, for example, found that superspreaders played a greater role in its spread than in all the other respiratory viral infections evaluated (Lloyd-Smith et al., 2005). If the same was true for SARS-CoV-2, then this could explain the apparent discrepancy between studies that typically find low secondary attack rates within homes (11.2% in one study in China (Bi et al., 2020)) and high attack rates in specific clusters of transmission such as the Skagit County choir where 87% of choir attendees were infected by a single person following a single joint choir practice (Hamner et al., 2020). Likewise, one superspreading event linked to a single case in a church in South Korea, was reported to result in 3900 secondary cases (Shim et al., 2020). These considerations are of added significance in the light of increasing evidence that a large proportion of SARS-CoV-2 transmissions occur whilst the transmitters have few or no symptoms (Arons et al., 2020) and evidence that SARS-CoV-2 is transmitted via airborne as well as contact and droplet routes (Setti et al., 2020). As lockdown measures are eased it is worth considering that taken together these insights suggest that social distancing measures may not, by themselves, be sufficient to prevent large, new outbreaks of COVID-19 (Setti et al., 2020). A single superspreader in an underventilated supermarket, for example, could infect a high number of individuals. Rather it is possible that universal face masking in public plus social distancing may be required to sufficiently reduce this risk (Setti et al., 2020). Face masks have been shown to reduce the risk of transmission of a range of respiratory viruses including SARS-CoV-1 and other coronaviruses (Cheng et al., 2020; Howard et al., 2020). Widespread use of face masks in public has also been associated with a lower incidence of COVID-19 at a population level (Cheng et al., 2020). Whilst gaps in the evidence for exactly how best to use face masks remain (Cheng et al., 2020), the evidence that superspreaders, who may have few or no symptoms, are responsible for large outbreaks provides further evidence to justify recommendations promoting universal face masking in public.

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