

[The Effect of Social Distancing on the Reach of an Epidemic in Social Networks](#)

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How does social distancing affect the reach of an epidemic in social networks? We extend the Susceptible-Infected-Removed (SIR) epidemic model to social networks in which individuals are limited in the number of other people they can interact with. While increased social distancing always reduces the spread of an infectious disease, the magnitude varies greatly depending on the topology of the social network. Our results also reveal the importance of coordination at the ‘global’ level. In particular, the public health benefits from social distancing to a group (e.g., a country) may be completely undone if that group maintains connections with outside groups that are not social distancing.