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Droplets and modes of respiratory disease transmission LYDIA BOUROUIBA, Massachusetts Institute of Technology — Direct observation of violent expirations such as sneezes and coughs events reveal that such flows are multiphase turbulent buoyant clouds with suspended droplets of various sizes. The effects of ambient conditions indoors, such as moisture and temperature, coupled with the water content of such clouds are key in shaping the pathogen footprint emitted by potentially sick individuals. Such pathogen footprint can change the patterns of respiratory disease transmission. We discuss how the fluid dynamics of violent expirations can help inform how.

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