

Abstract Submitted
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Particle tracking experiments to capture droplet velocities in human exhalations.¹ PRATEEK BAHL, CHARITHA DE SILVA, C RAINA MACINTYRE, ABRAR AHMAD CHUGHTAI, CON DOOLAN, UNSW Sydney — Infection control guidelines suggest a spatial separation of 1 - 2 m as the safe distance between a health worker and an infected patient. This is based on assumptions of the risk of droplets spread from various respiratory exhalations. Most flow visualization studies to date, provide only qualitative data, and do not provide sufficient details to accurately estimate the flow velocity of respiratory droplets. Here, we present a method to visualize droplets expelled during various exhalations and a framework to understand their dynamics. This method is tested to resolve the flow velocity of droplets expelled during exhalations, towards understanding their motion and dispersion. Preliminary results are presented by applying the methodology over various respiratory exhalations. Data from this work will be useful in understanding the transmission of infections and to inform infection control guidelines.

¹Particle tracking experiments to capture droplet velocities in human exhalations

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