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Experimental assessment of different mixing air ventilation systems on ventilation performance and exposure to exhaled contaminants in hospital rooms

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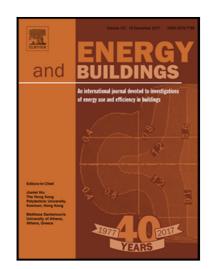
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Highlights

- Airflow patterns generated by different mixing ventilation (MV) configurations influence performance and exhaled contaminants distribution in hospital rooms using mixing ventilation strategies.
- The exposure to exhaled contaminants is a transient process in which punctual high peak values could be several times higher than the average.
- There is an influence between the ventilation configuration and air renovation rate on the mean and peak exposure to exhaled contaminants.
- The performance of MV configurations based on ceiling swirl diffusers are more reliable and less dependent on local airflow patterns.
- The comparison between the results obtained for MV and displacement (DV) ventilation strategies highlight the good performance of DV for hospital room environments.

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