



In-hospital and midterm post-discharge complications of adults hospitalised with respiratory syncytial virus infection in France, 2017–2019: an observational study

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Respiratory syncytial virus infection in hospitalised adults with influenza-like illness was associated with poor in-hospital and midterm post-discharge outcomes, which may be worse than or similar to those of patients with influenza virus infection <https://bit.ly/2VAsMhh>

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Abstract

Objectives The purpose of this study was to describe the clinical characteristics and in-hospital and post-discharge outcomes of respiratory syncytial virus (RSV) infection among adults hospitalised with influenza-like illness (ILI) and compared against patients admitted for influenza.

Methods Adults hospitalised with ILI were prospectively included from five French university hospitals over two consecutive winter seasons (2017/2018 and 2018/2019). RSV and influenza virus were detected by multiplex reverse transcription PCR on nasopharyngeal swabs. RSV-positive patients were compared to RSV-negative and influenza-positive hospitalised patients. Poisson regression models were used to estimate the adjusted prevalence ratio (aPR) associated with in-hospital and post-discharge outcomes between RSV and influenza infections. The in-hospital outcome was a composite of the occurrence of at least one complication, length of stay ≥ 7 days, intensive care unit admission, use of mechanical ventilation and in-hospital death. Post-discharge outcome included 30- and 90-day all-cause mortality and 90-day readmission rates.

Results Overall, 1428 hospitalised adults with ILI were included. RSV was detected in 8% (114 of 1428) and influenza virus in 31% (437 of 1428). Patients hospitalised with RSV were older than those with influenza (mean age 73.0 *versus* 68.8 years, $p=0.015$) with a higher frequency of chronic respiratory or cardiac disease (52% *versus* 39%, $p=0.012$, and 52% *versus* 41%, $p=0.039$, respectively) and longer

hospitalisation duration (median stay 8 *versus* 6 days, $p < 0.001$). Anti-influenza therapies were less prescribed among RSV patients than influenza patients (20% *versus* 66%, $p < 0.001$). In-hospital composite outcome was poorer in RSV patients (aPR 1.5, 95% CI 1.1–2.1) than in those hospitalised with influenza. No difference was observed for the post-discharge composite outcome (aPR 1.1, 95% CI 0.8–1.6).

Conclusion RSV infection results in serious respiratory illness, with worse in-hospital outcomes than influenza and with similar midterm post-discharge outcomes.