

# Respiratory Syncytial Virus Among Hospitalized Filipino Adults: A Study on Prevalence, Clinical Presentation, and Outcomes in a Tertiary Hospital

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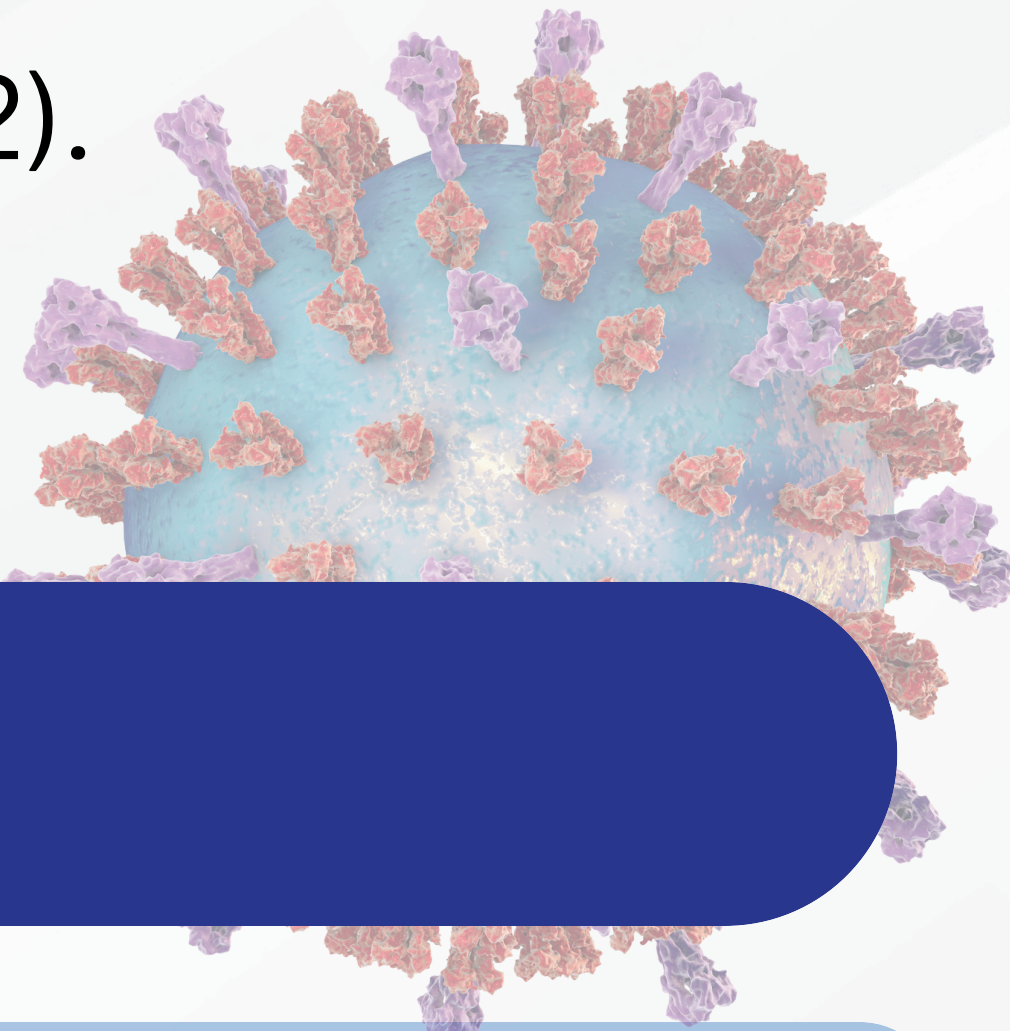
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## Background

Respiratory syncytial virus (RSV), long known as a pediatric pathogen, is increasingly recognized as an important cause of illness in adults, especially the elderly and those with comorbidities. Its impact among hospitalized Filipino adults remains poorly described. The objectives of this study are to determine the prevalence, clinical features, and outcomes of RSV infection in adults admitted with acute respiratory tract infections (ARTIs), and to compare these with non-RSV viral infections.

## Methodology

We conducted a retrospective cohort study in two tertiary centers of St. Luke’s Medical Center from April 2022 to December 2024. Adults admitted with ARTIs who underwent respiratory panel testing within five days were included. Patients with multiple viral co-detections or hospital-acquired infections were excluded. RSV cases were compared with non-RSV viral infections (excluding SARS-CoV-2).



## Results

The overall prevalence of RSV was 5.7%, with most cases clustering in the last quarter of the year. Of 570 adult patients hospitalized with confirmed viral respiratory infections, 117 (20.5%) tested positive for RSV. Patients positive for RSV were significantly older (mean age: 68.0 vs. 58.9 years) and more often female. Asthma and chronic renal failure were more prevalent in the RSV group. Clinical features including cough, colds, and crackles on auscultation were significantly more frequent in patients positive for RSV. Radiographic pneumonia was also more common on admission among RSV cases.

Among the 157 patients tested for bacterial coinfection, *Pseudomonas aeruginosa* and *Serratia marcescens* were significantly more common in patients positive for RSV, suggesting a higher risk of nosocomial bacterial superinfection. Patients positive for RSV also had a significantly longer mean hospital stay ( $9.96 \pm 2.58$  vs.  $5.48 \pm 0.51$  days) and higher in-hospital mortality (15.4% vs. 7.7%). In both groups, most deaths were attributed to hospital-acquired or ventilator-associated pneumonia. There were no significant differences in the specific causes of death between groups.

Signs and Symptoms				
Fever	415 (72.81)	85 (75.65)	330 (72.85)	1.0000
Cough	440 (77.19)	110 (94.02)	330 (72.85)	<0.0001
Colds	300 (52.63)	20 (17.09)	280 (61.81)	<0.0001
Sore throat	67 (11.75)	8 (6.84)	59 (13.02)	0.0908
Difficulty of breathing	150 (26.32)	37 (31.62)	113 (24.94)	0.1787
Crackles	304 (53.33)	95 (81.2)	209 (46.14)	<0.0001
Wheezing	62 (10.88)	12 (10.26)	50 (11.04)	0.9399
Chest Xray on Admission				
No pneumonia	247 (43.33)	36 (30.77)	211 (46.58)	0.003
With pneumonia	322 (56.49)	81 (69.23)	241 (53.2)	0.0026

Clinical profile of patients with ARTI and tested for a respiratory panel, SLMC, 2022-2024 . Patients positive for RSV were more likely to present with cough and crackles, but less likely to have colds compared to those without RSV. Adult RSV infection is associated with a greater likelihood of pneumonia on chest X-ray at the time of hospital admission.

	Total (n=570)	RSV Positive (n=117)	Non-RSV Positive (n=453)	p-value
Frequency (%)				
Discharged	517 (90.7)	101 (86.32)	416 (91.83)	0.0201
Expired	52 (9.12)	18 (15.38)	35 (7.73)	
THOC	1 (0.18)	1 (0.85)	0	

Outcomes of hospitalization of patients with ARTI and tested for a respiratory panel, SLMC 2022-2024. RSV infection in adults is associated with a longer duration of hospitalization.

## Conclusion

RSV is a substantial contributor to severe respiratory illness in hospitalized adults. It is associated with distinct clinical and epidemiologic features, and worse outcomes compared to non-RSV viral infections. These findings underscore the need for increased clinical awareness, especially among high-risk populations, and support the importance of adult RSV surveillance and prevention strategies, including vaccination.