

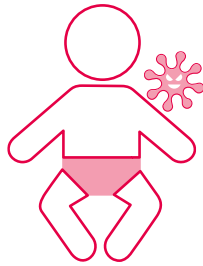


Impact of respiratory viral co-infections on RSV disease burden in young children in primary care

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CONCLUSION

Viral co-detections were not associated with a higher disease burden



35% of children with RSV had a respiratory viral co-detection

Premature birth was more common in RSV mono-infected children

Higher proportion of children with RSV viral co-detection attended daycare/school

BACKGROUND

A third of the young children with respiratory syncytial virus (**RSV**) have viral co-infections.

This study aims to assess the impact of respiratory viral co-detections on RSV disease burden in children under five years in primary care.

METHODS

Prospective cohort study

- Standardised RSV COMNET protocol¹
- During RSV seasons 2020-2023
- Italy, Spain, England

Children aged <5 years

- Fulfilling WHO acute respiratory infection case definition
- Laboratory-confirmed RSV diagnosis

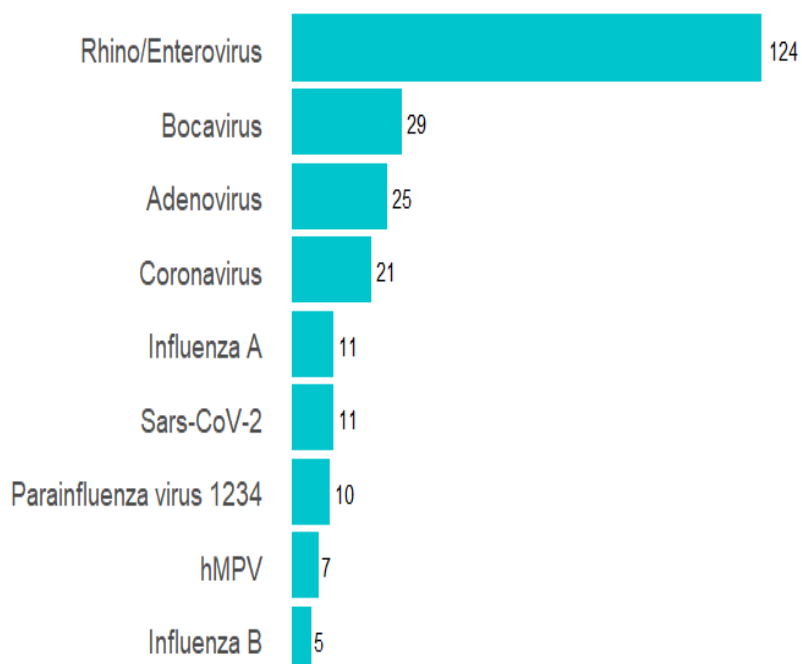
Day 1 (sampling day)

- Demographics
- Clinical symptoms
- Nasopharyngeal swab for RSV testing and other respiratory viruses
- Filled in by a primary care physician

Day 14 & Day 30

- Clinical symptoms
- Healthcare and Medication use
- Days of illness, Complications, Societal impact
- Filled in by the parents

Co-detections among 200 RSV-positive children (35%)



RESULTS

2637 children with acute respiratory infection tested using multiplex PCR

585 (22%) RSV positive

Patient characteristics	RSV mono-infection (N=378)	RSV viral co-detection (N=207)	P-value
Median age (IQR) in months	14 (6-27)	16 (8-29)	0.39
Male, n/N (%)	196/378 (52%)	101/207 (49%)	0.53
Medical history, n/N (%)			
Prematurity (<37 weeks)	35/342 (9%)	8/198 (4%)	<0.05
Any major comorbidity	9/360 (2%)	2/197 (1%)	0.39
Any minor comorbidity	29/340 (8%)	15/184 (8%)	1.00
Household characteristics, n/N (%)			
Attendance daycare/school	270/365 (74%)	159/198 (80%)	<0.01
Parental employment, n/N (%)			
One parent	146/330 (44%)	94/185 (51%)	0.08
Both parents	97/330 (29%)	58/185 (31%)	
No parental employment	87/330 (26%)	33/185 (18%)	

18 children had missing follow-up data

567 (97%) children analysed

Healthcare, medication use and parental absence	RSV mono-infection (N=367)	RSV viral co-detection (N=200)
Health-care utilisation, n/N % (95% CI)		
≥ 1 repeat primary care visit	227/365 (62% (57-67))	128/198 (64% (58-71))
Primary care visits, mean (95% CI)	2.3 (2.0-2.5)	2.5 (2.1-2.9)
Emergency department visits	61/364 (17% (13-21))	45/197 (23% (17-29))
Hospitalization	26/363 (7% (5-10))	16/196 (8% (5-13))
Medication, n/N % (95% CI)		
Antibiotics	91/365 (25% (21-30))	54/197 (27% (21-34))
Bronchodilators	173/365 (47% (42-53))	105/197 (53% (46-60))
Corticosteroid inhalers	52/365 (14% (11-18))	39/197 (20% (15-26))
Any over-the-counter medication	146/354 (41% (36-47))	103/190 (54% (47-61))
Parental work absence, n/N % (95% CI)		
Work absence (in half days)	98/321 (31% (26-36))	71/179 (40% (32-47))
Number of days, mean (95% CI)	2.2 (1.7-2.7)	3.2 (2.2-4.2)

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