

# Low co-infection rate in children with community-acquired pneumonia in Spain.

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On behalf of PCAPE Study Group

## 1. AIMS

To describe the etiology of CAP in hospitalized children, with a focus on the incidence of co-infections.

## 2. METHODS

A cohort of hospitalized children with CAP was analyzed. Children were prospectively recruited in 2 hospitals in Madrid, Spain, from April 2012, to March 2015.

An extensive microbiological work-up was performed, including: blood cultures, PCR for *S. pneumoniae* in blood, *S. pneumoniae* antigen in urine, serial serology for *M. pneumoniae*, *C. pneumoniae* and *L. pneumophila*, and PCR for 16 viruses, *M. pneumoniae* and *C. pneumoniae* in nasopharyngeal aspirate (NPA), culture and *S. pneumoniae* antigen in pleural fluid.

AdV, RhV, BocaV, Enterov and CoV were not considered etiological agents, since they are as frequent in asymptomatic children as in CAP.

## 3. RESULTS

Figure 1. Flowchart of the study.

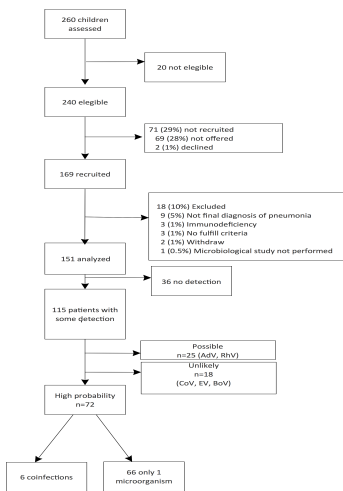


Figure 2. Radiological pattern of infections

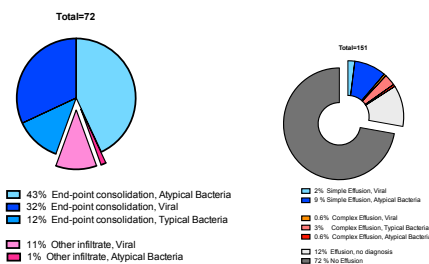


Figure 3. Frequency of microorganisms detected, alone or in combination. A total of 75 (50%) patients had 1 microorganism detected. A total of 47 (31%) patients had co-detection of >1 microorganism.

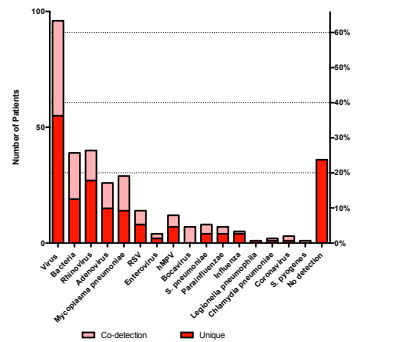


Figure 4. Frequency of high probable etiological agents of pneumonia. Patients with high probable etiology identified: 72/151 (47%) Mono-infections: 66 (91%) patients. Co-infections: 6 (8%) patients.

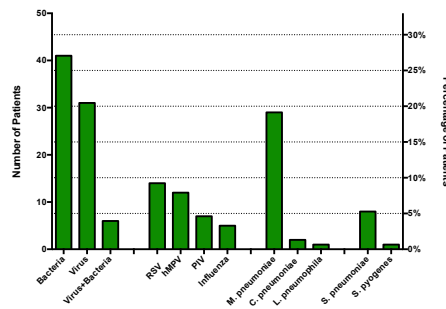
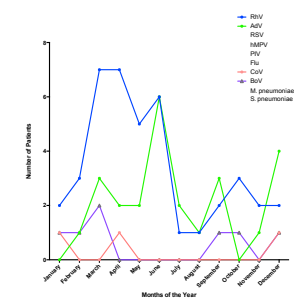
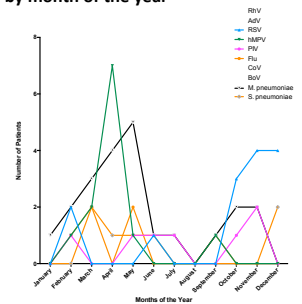


Figure 4. Frequency of agents (causal and detected) by month of the year



## CONCLUSION

Currently, *M. pneumoniae* and viruses are the major etiological agents of CAP in children. The co-infection rate and the co-detection rate were not as high as reported elsewhere.