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## 50 Years Ago in *THE JOURNAL OF PEDIATRICS*

### Epidemiology and Determining Etiologies of Respiratory Tract Infections: Both Have Changed!

Maletzky AJ, Cooney MK, Luce R, Kenny GE, Grayston T. Epidemiology of viral and mycoplasmal agents associated with childhood lower respiratory illness in a civilian population. *J Pediatr* 1971;78:407-14.

This study, performed in the offices of 12 pediatricians in the greater Seattle area, attempted to identify infectious etiologies of mild, nonhospitalized cases of lower respiratory tract illnesses in children <6 years of age. Over a 12-month period, 574 eligible illnesses were recorded among almost 11 000 children under the care of these pediatricians (annual incidence of 52.5 per 1000 children <6 years of age).

There are several noteworthy aspects of this study and its findings. This was a yeoman effort at capturing etiologies of illnesses, including collection and transport of throat swabs to the laboratory where they were inoculated into  $\geq 3$  cell lines, and virus growth was detected using multiple steps/methods. Culture for *Mycoplasma pneumoniae* was performed. Acute and convalescent blood samples were drawn when possible for different serologic assays for a panoply of pathogens. Almost 50% of illnesses had 1 of 4 viruses (respiratory syncytial virus, influenza, parainfluenza, and adenovirus) or *Mycoplasma* identified. *Mycoplasma* was associated with approximately 7% of illnesses. In all cases, rales were found on examination, and one-half of cases occurred in the >5-year-old (oldest) age group. Serology added little to *Mycoplasma* diagnosis (by culture) but substantially added to viral diagnoses. All pathogens except adenovirus were clustered in the fall and winter. Recognition of respiratory syncytial virus as a cause of mild illness, especially in those >1 year of age was new. Adenovirus detection rates and timing were similar in study patients to a group of well children being investigated by the authors, suggesting that adenoviruses when isolated may not be pathogenic.

The main findings of this study have been replicated, and the conclusions validated. Rapid molecular detection of many more pathogens is now available. However, we still struggle with assigning detected agents with causality for symptomatology. A few "side dishes" in the report are noteworthy 50 years later. All 12 participating pediatricians were included using the pronoun "he." Only 10% of 5-year old children were attending Kindergarten and only 9% attended earlier preschool. Without thinking much about it prospectively, the epidemiology of viral respiratory tract illnesses was soon to change profoundly when women routinely entered the workforce and very young children entered out-of-home collective environments.

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