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# Preface

## Respiratory Viral and Atypical Pneumonias



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Respiratory viral infections continue to be a major global health problem affecting all ages. Respiratory viruses are the most commonly detected causes of community-acquired pneumonia with the incidence highest among very young children and the elderly. Molecular-based nucleic acid detection has become the standard diagnostic method for respiratory viral pathogens, having replaced older serologic and antigen-detection methods. The respiratory tract virome is becoming better defined based on culture-independent molecular assays. These methods have identified common viral pathogens as well as less common viruses with an unknown role in lung pathogenicity. This issue of *Clinics of Chest Medicine* brings together current up-to-date reviews of respiratory viral and atypical pneumonias written by experts in the field. These reviews explore multiple aspects of respiratory infection from epidemiology through specific seasonal and pandemic viruses and atypical bacteria, clinical presentation, their role in acute and chronic lung diseases, as well as treatment and prevention. The importance of respiratory syncytial virus (RSV) is highlighted as an important respiratory pathogen at both ends of the age spectrum with a general lack of awareness of RSV in adult providers. Respiratory viral infections contribute to the pathogenesis

of acute lung process, such as acute respiratory distress syndrome, and chronic lung diseases, such as asthma and chronic obstructive pulmonary disease. Viruses can have particularly life-threatening adverse clinical consequences in immunocompromised patients. Nonviral atypical pneumonias, particularly *Legionella*, *Mycoplasma*, and *Chlamydia*, which have significant overlap with viral pneumonia syndromes and are difficult to diagnose given the nonspecific nature of their presentations, are reviewed. Emerging respiratory viral pathogens that cause problems in epidemic proportions, such as pandemic influenza and coronaviruses, are discussed. Viral infections can contribute to complicated bacterial pneumonias. Current available antiviral therapies for some respiratory viral infections are described. Development of more antiviral therapies is clearly needed as well as identification of groups of patients who would have greatest benefit. Vaccination is a most effective way of preventing infection, but is only available for a limited number of respiratory pathogens with vaccine efforts for more viruses under development. The goal of this issue on respiratory viral and atypical pneumonia is to provide our current understanding of the topic and to highlight gaps of knowledge and basis for future research.

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