

# Respiratory Pathogen Molecular Panel Testing

Last Literature Review: May 2019    Last Update: December 2023

Viral respiratory tract infections are the most common diseases affecting humans worldwide. Respiratory viruses can be associated with both self-limiting upper respiratory tract infections (eg, the common cold) and more severe lower respiratory tract infections (LRTIs) (eg, bronchitis, bronchiolitis, pneumonitis, pneumonia). LRTIs are a major cause of hospitalization, morbidity, and mortality in infants and the elderly and are associated with significant disease burden.

## Disease Overview

### Incidence

- Viral infections cause approximately 80% of respiratory tract disease; mixed infections account for approximately 20% infection in adults, 60% in children
- Symptomatic disease varies by viral type and patient age
  - Highest rates occur in young and elderly populations with widely varying outcomes
- Seasonal influenza causes a large proportion of viral respiratory disease
  - Median incidence of approximately 8% in U.S. 2010 to 2016

### Symptoms

Symptoms general occur within 1-3 days of exposure and last 7-14 days.

Location	Symptoms
Upper respiratory infections	Nasal congestion Sneezing Cough Sore throat Fever Chills Fatigue Decreased appetite <sup>a</sup> Lethargy <sup>a</sup>
Lower respiratory infections <sup>b</sup>	Worsening cough Shortness of breath Focal pain Dizziness <sup>c</sup> Confusion <sup>c</sup>

<sup>a</sup>Especially in children

<sup>b</sup>Overlap with upper infection

<sup>c</sup>Older adults

## Featured ARUP Testing

### [Respiratory Virus Mini Panel by PCR 0060764](#)

**Method:** Qualitative Reverse Transcription Polymerase Chain Reaction

Preferred test to confirm respiratory syncytial virus (RSV), influenza A, or influenza B in general inpatients and RSV in adults.

### [Respiratory Viral Panel by PCR 3001479](#)

**Method:** Qualitative Polymerase Chain Reaction

- Preferred test for evaluating severely immunocompromised (eg, BMT) or critically ill (ICU) patients with respiratory symptoms.
- Test detects influenza A, influenza B, RSV, human metapneumovirus, human rhinovirus, and adenovirus.
- Detects and differentiates parainfluenza 1, 2, 3, and 4.

# Test Interpretation

## Limitations

### Negative result

- Does not rule out the presence of polymerase chain reaction (PCR) inhibitors in patient specimen
- Does not detect assay-specific nucleic acid in concentrations below level of detection by assay

## Related Information

[Respiratory Syncytial Virus - RSV](#)  
[Respiratory Viruses](#)

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