



**Footnote 1**  
Typical signs/symptoms include cough, rhinorrhea, increased work of breathing, abnormal lung exam. Patients that are intubated or have a tracheostomy may not have the typical signs and symptoms of a respiratory tract infection.

**Footnote 2**  
High risk conditions: immunocompromised, or chronic underlying disorders such as cardiovascular, genetic, hematologic, metabolic, neuro-developmental, neuromuscular, neurological, pulmonary, or renal conditions.

**Footnote 3**  
NP swab for "Influenza A+B+RSV PCR Panel." This assay has greater sensitivity and specificity than the rapid antigen tests for influenza, but is significantly less expensive than the RPP. Same turn-around-time as RPP. Cannot reuse swab from rapid antigen assay. If suspect influenza, can either:

- Empirically treat with oseltamivir; OR
- Obtain Influenza/RSV PCR from nasal swab

**Note 1:** In most patients with a negative RSV/influenza PCR, oseltamivir is not indicated. For those children with influenza-like symptoms who are critically ill or immunocompromised, the decision to start oseltamivir should be made on a case-by-case basis.

**Note 2:** If the Influenza/RSV PCR panel does not yield the information needed, the same NP swab sample in the lab can be used for the complete RPP if needed.

## Respiratory Pathogen Panel by NP Swab Ordering Guideline

### SSM Health Cardinal Glennon Children's Hospital

#### What does the Respiratory Pathogen Panel (RPP) test for?

Adenovirus

Coronavirus HKU1, NL63, 229E, OC43

Human Metapneumovirus

Human Rhinovirus/ Enterovirus

Influenza A (H1 , H1-2009, H3) and B

Parainfluenza 1-4

Respiratory Syncytial Virus

*Bordetella pertussis*

*Chlamydomphila pneumoniae*

*Mycoplasma pneumoniae*

#### How much does it cost?

The RPP is one of the most expensive diagnostic tests that is currently performed by the SSM Network Microbiology Laboratory. It accrues an annual cost to SSM of 1.3 million dollars.

#### How does it impact management?

The majority of pathogens that are tested for in the panel are treated symptomatically. In many cases, the result of the panel does not change treatment options. Patients who require ICU care or have co-morbidities may benefit from this test in some circumstances (e.g. decreased antibiotic usage, decreased diagnostic testing, cohorting). In other cases, a positive test result will prompt a specific therapy (e.g. antibiotic therapy for *Mycoplasma pneumoniae* or *Bordetella pertussis*).

#### Who will not benefit from the RPP?

- Patient scenarios where identifying the pathogen would not change the treatment
- Patients whose care would be served equally well by a more cost effective diagnostic test (e.g. rapid RSV test)
- Patients who are being discharged home

#### Are there other preliminary tests that can replace the RPP?

- Rapid RSV and influenza antigen testing is a relatively low cost testing method with a quick turn-around time. Patients with a positive rapid test rarely need an RPP.