

**LABORATORY ALLIANCE** of Central New York, LLC

New PCR Combo Test for Influenza and RSV

**Commencing: April 2, 2015 at Rapid Response Labs (Hospitals)
April 20, 2015 for Outreach Clients**

The Microbiology Department of Laboratory Alliance is pleased to announce the availability of a new PCR test that will detect the presence of influenza A and B viruses as well as RSV in nasopharyngeal specimens. This test will be offered at our Operations Center as well as each of our hospital's Rapid Response Laboratories. It will allow for the generation of highly reliable test results within 90 minutes or less of specimen receipt. Given the urgency of needing these test results for appropriate patient care and management, the combination Flu/RSV assay will be offered at our Operations Center and each of our hospital's Rapid Response Laboratories 24 hours per day, seven days per week. This new combination Flu/RSV test is replacing our former influenza and RSV assays that were only available as separate orderable tests.

Background

Human respiratory infections may be caused by a wide variety of microbial pathogens including bacteria, fungi, viruses, and even some parasitic worms. Among the viruses, influenza virus and respiratory syncytial virus (RSV) are two common causes of pulmonary infection, causing disease in all patient age groups especially during the winter months. Early diagnosis of these infections is often necessary to insure the prompt administration of antiviral therapy and/or to institute appropriate infection control measures in hospitalized or nursing home patients to minimize the risk of disease transmission.

Influenza, or the flu, is a contagious viral infection of the respiratory tract. Transmission of influenza is primarily airborne (i.e., coughing or sneezing); the peak of transmission usually occurs in the winter months. Symptoms commonly include fever, chills, headache, muscle aches, malaise, cough, and sinus congestion. Gastrointestinal symptoms (i.e., nausea, vomiting, or diarrhea) may also occur, primarily in children, but are less common in adults. Symptoms generally appear within two days of exposure to an infected person. Pneumonia may develop as a complication of influenza infection, causing increased morbidity and mortality in pediatric, elderly, and immunocompromised populations.

Influenza viruses are classified into types A, B, and C, of which the former two cause most human infections. Influenza A is the most common type of influenza infection in humans, and is generally responsible for seasonal flu epidemics and occasionally for pandemics. Influenza A viruses can also infect animals such as birds, pigs, and horses. Infections with influenza B virus are generally restricted to humans and are less frequent causes of epidemics.

Respiratory syncytial virus (RSV), a member of the Paramyxoviridae family consisting of two subgroups (subgroups A and B), is also the cause of a contagious disease that afflicts primarily infants and the elderly who are immunocompromised, e.g., patients with chronic lung or heart disease or undergoing treatment for conditions that reduce the strength of their immune system. The virus can live for hours on countertops and toys and causes both upper respiratory infections, such as tracheobronchitis, and lower respiratory infections manifesting as bronchiolitis and pneumonia. By the age of two, most children have already been infected with RSV, but because only weak immunity develops following infection, both children and adults can become reinfected. Symptoms usually appear four to six days after exposure to infection. The disease is typically self-limiting, lasting about one to two weeks in infants. In adults, the infection lasts about five days and presents with symptoms consistent with a cold, such as rhinorrhea, fatigue, headache, and fever. The RSV season overlaps with influenza season somewhat as infections begin to rise during the fall and continues through early spring. RSV infections, however, also occur at other times of the year, although rarely.

During the viral respiratory season, it is often difficult to determine whether a pulmonary infection is caused by influenza or RSV since they may present with similar clinical symptoms.

Test:	FLU A B/RSV PCR
Test Code:	FLXRSV
Method:	Multiplex Real-time PCR
Specimen Requirement:	Nasopharyngeal swab specimens collected on Dacron or flocked swabs in Universal Transport Medium (UTM) or M4. Nasopharyngeal aspirate or wash.
Unacceptable Specimens:	Any swab other than Dacron or flocked swabs and any transport medium other than UTM.
Storage and Transport:	Specimens should be transported at 2–8 °C. Specimens placed in transport medium following collection can be stored for up to 24 hours at 2–30 °C or up to seven days at 2–8 °C prior to testing with the Xpert Flu/RSV XC Assay.
Schedule of Testing:	Daily, 24 hours per day
CPT4 Code:	87631
Billing Code:	3010446

References:

1. Petric, M. et al. 2006. J. Infect. Dis. 194:S98-110.
2. Centers for Disease Control and Prevention. Seasonal influenza. <http://www.cdc.gov>. Accessed on March 14, 2013.
3. <http://www.mayoclinic.com/health/respiratory-syncytial-virus.DS00414/DSECTION=prevention>. Accessed on March 14, 2013.