
Effective Date:  December 3, 2014

The CDC predicts that seasonal influenza A H3, influenza A H1N1 2009 and seasonal influenza B will be the predominant influenza viruses circulating this viral respiratory season.  These viruses are predicted to remain susceptible to oseltamivir (Tamiflu) and zanamivir (Relenza).  Therefore, molecular sub-typing for influenza A will not be needed at this time.  For additional information:  http://www.cdc.gov/flu

IMPORTANT  Intranasal influenza vaccine (i.e. FluMist):  recipients (esp. children) of the intranasal vaccine can shed vaccine-related viruses up to 14 days after vaccination; these will be detected by our testing methods and are indistinguishable from wild-type influenza viruses.

Billing Note: Insurance will NOT reimburse both the Rapid Influenza & RSV by PCR and Respiratory Virus Panel by PCR tests if performed on the same day of service.

TESTS AVAILABLE AT BEAUMONT LABORATORY:

Rapid Influenza & RSV by PCR.  (Outreach order code: FLRSV)
- **Specimen** Nasopharyngeal (NP) only
- **Performed** Mon – Sun, results available within 90 minutes
- **Detects** Influenza A, influenza B, RSV.
- **Notes**
  1)  This test has exceptional sensitivity (>97%) - false negative rate of about 3%.
  2)  This test detects all sub-types of influenza A but does not provide sub-typing.
- **When to order** This should be the first-line test ordered for patients with influenza-like illness, due to superior diagnostic sensitivity and rapid turn-around time.

Respiratory Virus Panel (RVP) by PCR.  (Outreach order code: IRVPG)
- **Specimen** Nasopharyngeal (NP), sputum, bronchial wash/brush, bronchoalveolar lavage.
- **Performed** Mon – Sat, results available in 24 – 48 hr.
- **Detects** Influenza A with sub-typing (H1, H3, H1N1 2009), influenza B, RSV A, RSV B, human metapneumovirus, adenovirus B/E, adenovirus C, rhinovirus, parainfluenza viruses (1,2,3,4) and coronaviruses (OC43, HKU1, NL63, 229E)
  -  **This test will NOT detect SARS or MERS Coronaviruses**
  -  **In general, this test will NOT detect Enteroviruses.  If suspected, please order Enterovirus by nucleic acid amplification (see below).**
- **Note** If test results demonstrate the presence of a non-typeable strain of influenza A, the specimen will be forwarded to MDCH for further testing.
- **When to order** This should be used as a non-urgent, comprehensive test if you suspect the patient may be infected with respiratory viruses other than influenza A/B or RSV.
Enterovirus by nucleic acid amplification (Outreach Order Code: IEVNA)

- **Specimen**: Nasopharyngeal (NP) swab
- **Performed**: Mon – Sun, results available in 24 hr.
- **Detects**: Enteroviruses, but does not specifically report which type is detected.
- **When to order**: As a stand alone test for enterovirus or in combination with other tests for respiratory viruses that don’t specifically detect enterovirus.

Culture, Virus (Outreach Order Code: CXVIR)

- **Specimen**: Eye (i.e. conjunctiva), lung tissue, pleural fluid, sputum, bronchial wash/brush, bronchoalveolar lavage.
- **Performed**: Mon – Sun, results available within 48 hr.
- **Detects**: Influenza A and B, RSV, adenovirus and parainfluenza viruses 1, 2, 3. This test detects all sub-types of influenza A but cannot provide individual sub-typing results.
- **When to order**: 1) Preferred test for eye, lung tissue and pleural fluid specimens to detect multiple types of viruses.
  2) For sputum, bronchial wash/brush and bronchoalveolar lavage specimens, only CMV, HSV, and enterovirus will be cultivated; other respiratory viruses will be detected with the RVP by PCR test due to improved test sensitivity and an expanded panel of pathogens that can be detected. In this situation, you should order both Culture, Virus and RVP by PCR.
  3) NP swab specimens are no longer acceptable for Culture, Virus.

REFERENCES:

If you have questions, please contact Client Services (1-800-551-0488, option 5).

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IN-PATIENT


Testing Desired on an In-Patient?

No

No Further Action

Yes

Focused or Expanded Pathogen Detection Desired?

Focused (Routine or STAT)

Rapid Influenza & RSV by PCR (NP SWAB SPECIMEN ONLY)

Positive

No Further Action

Negative

Expanded (Routine Only)

Respiratory Virus Panel by PCR (SELECT SPECIMENS ONLY)¹

Expanded (Routine Only)

Culture, Virus (SELECT SPECIMENS ONLY)¹

Is another test needed to exclude other viral respiratory pathogens?

No

No Further Action

Yes

Focused (Routine or STAT)

Rapid Influenza & RSV by PCR (NP SWAB SPECIMEN ONLY)

Expanded (Routine Only)

Respiratory Virus Panel by PCR (SELECT SPECIMENS ONLY)¹

Culture, Virus (SELECT SPECIMENS ONLY)¹

1. SELECT SPECIMENS ONLY:
   - NP swab – only acceptable for the RVP by PCR test.
   - Eye (i.e. conjunctiva), lung tissue and pleural fluid – only acceptable for the Culture, Virus test. Will detect influenza virus, respiratory syncytial virus, adenovirus and parainfluenza virus (1,2,3).
   - Sputum, bronchial wash/brush and BAL – requires two tests (Culture, Virus and RVP by PCR). Culture, Virus will detect CMV, HSV and Enterovirus. RVP by PCR will detect all other respiratory viruses, providing improved test sensitivity and an enhanced panel of pathogens that can be detected.
1. SELECT SPECIMENS ONLY:
   - NP swab – only acceptable for the RVP by PCR test.
   - Eye (i.e. conjunctiva), lung tissue, pleural fluid – only acceptable for the Culture, Virus test. Will detect influenza virus, respiratory syncytial virus, adenovirus and parainfluenza virus (1,2,3).
   - Sputum, bronchial wash/brush, BAL – requires two tests (Culture, Virus and RVP by PCR). Culture, Virus will detect CMV, HSV and Enterovirus. RVP by PCR will detect an expansive panel of respiratory viruses with exceptional test sensitivity.

2. RVP by PCR:
   - This test will NOT be reimbursed if performed on the same NP swab specimen used for the Rapid Influenza & RSV by PCR test. Reflex testing is NOT available. If this test is clinically indicated, another NP swab specimen MUST be collected (i.e. different date of service).