

## Clinical Policy: Polymerase Chain Reaction Respiratory Viral Panel Testing

Reference Number: CP.MP.181

Last Review Date: 08/20

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### Description

Medical necessity criteria for multiplex respiratory polymerase chain reaction (PCR) testing.

*Note: For PCR testing for COVID-19, refer to CP.MP.183 2019-Novel Coronavirus Testing.*

### Policy/Criteria

- I. It is the policy of Centene Corporation® that respiratory viral panels (RVPs) testing for five pathogens or less are considered **medically necessary** when meeting one of the following:
  - A. Performed in the outpatient setting, will influence the plan of care, and any of the following:
    1. To assess for infection by other pathogens when COVID-19 is suspected and a COVID-19-specific test result will not be available soon enough to influence the plan of care;
    2. The member is immunocompromised;
    3. The test is ordered by an infectious disease specialist, or an infectious disease specialist is not available;
  - B. Performed in a healthcare setting that cares for critically ill patients, such as the emergency department or inpatient hospital, including those in observation status.
- II. It is the policy of Centene Corporation that respiratory viral panels (RVPs) testing for six pathogens or more are considered **medically necessary** in a healthcare setting that cares for critically ill patients, such as the emergency department or inpatient hospital, including those in observation status.
- III. It is the policy of Centene Corporation that RVPs are considered **not medically necessary** for all other indications.

### Background

Polymerase chain reaction (PCR) respiratory viral panels (RVP) may detect the RNA or DNA of multiple types of respiratory viruses as a single test, often through a nasal, nasopharyngeal, or oropharyngeal swab. Viral pathogens are the most common cause of respiratory tract infections. PCR testing is effective for confirming respiratory viral infections with very high sensitivity and specificity. Rhinovirus, parainfluenza virus, coronavirus, adenovirus, respiratory syncytial virus, Coxsackie virus, human metapneumovirus, and influenza virus account for most cases of viral respiratory infections.

Multiplex PCR testing can detect numerous respiratory viruses; that number varies with the type and brand of testing being performed. However, the diagnostic role and importance of these multi-pathogen panels in identifying specific viruses in the setting of a respiratory infection is quite limited because the care and management of the patient is not altered based upon the pathogen identified, if any. For example, the child with a URI, cough, and wheezing who might be positive for RSV would not be managed any differently than the child with parainfluenza virus, adenovirus, rhinovirus, human metapneumovirus, enterovirus, Coxsackie virus, or

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coronavirus.

*Infectious Disease Society of America (IDSA)*

The IDSA recommends that “clinicians should use multiplex RT-PCR assays targeting a panel of respiratory pathogens, including influenza viruses, in hospitalized immunocompromised patients.” Further, “clinicians can consider using multiplex RT-PCR assays targeting a panel of respiratory pathogens, including influenza viruses, in hospitalized patients who are not immunocompromised if it might influence care (e.g., aid in cohorting decisions, reduce testing, or decrease antibiotic use).”

**Coding Implications**

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**Table 1: CPT codes that support medical necessity in any place of service**

| CPT Codes® | Description   |
|------------|---|
| 87631      | Infectious agent detection by nucleic acid (DNA or RNA); respiratory virus (e.g., adenovirus, influenza virus, coronavirus, metapneumovirus, parainfluenza virus, respiratory syncytial virus, rhinovirus), includes multiplex reverse transcription, when performed, and multiplex amplified probe technique, multiple types or subtypes, 3-5 targets. |

**Table 2: CPT codes that support medical necessity when billed with place of service codes in table 3**

| CPT Codes® | Description  |
|------------|--|
| 0098U      | Respiratory pathogen, multiplex reverse transcription and multiplex amplified probe technique, multiple types or subtypes, 14 targets (adenovirus, coronavirus, human metapneumovirus, influenza A, influenza A subtype H1, influenza A subtype H3, influenza A subtype H1-2009, influenza B, parainfluenza virus, human rhinovirus/enterovirus, respiratory syncytial virus, Bordetella pertussis, Chlamydomphila pneumoniae, Mycoplasma pneumoniae)  |
| 0099U      | Respiratory pathogen, multiplex reverse transcription and multiplex amplified probe technique, multiple types or subtypes, 20 targets (adenovirus, coronavirus 229E, coronavirus HKU1, coronavirus, coronavirus OC43, human metapneumovirus, influenza A, influenza A subtype, influenza A subtype H3, influenza A subtype H1-2009, influenza, parainfluenza virus, parainfluenza virus 2, parainfluenza virus 3, parainfluenza virus 4, human rhinovirus/enterovirus, respiratory syncytial virus, Bordetella pertussis, Chlamydomphila pneumonia, Mycoplasma pneumoniae) |

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| CPT Codes® | Description   |
|------------|---|
| 0100U      | Respiratory pathogen, multiplex reverse transcription and multiplex amplified probe technique, multiple types or subtypes, 21 targets (adenovirus, coronavirus 229E, coronavirus HKU1, coronavirus NL63, coronavirus OC43, human metapneumovirus, human rhinovirus/enterovirus, influenza A, including subtypes H1, H1-2009, and H3, influenza B, parainfluenza virus 1, parainfluenza virus 2, parainfluenza virus 3, parainfluenza virus 4, respiratory syncytial virus, Bordetella parapertussis [IS1001], Bordetella pertussis [ptxP], Chlamydia pneumoniae, Mycoplasma pneumoniae) |
| 0115U      | Respiratory infectious agent detection by nucleic acid (DNA and RNA), 18 viral types and subtypes and 2 bacterial targets, amplified probe technique, including multiplex reverse transcription for RNA targets, each analyte reported as detected or not detected  |
| 87632      | Infectious agent detection by nucleic acid (DNA or RNA); respiratory virus (eg, adenovirus, influenza virus, coronavirus, metapneumovirus, parainfluenza virus, respiratory syncytial virus, rhinovirus), includes multiplex reverse transcription, when performed, and multiplex amplified probe technique, multiple types or subtypes, 6-11 targets   |
| 87633      | Infectious agent detection by nucleic acid (DNA or RNA); respiratory virus (eg, adenovirus, influenza virus, coronavirus, metapneumovirus, parainfluenza virus, respiratory syncytial virus, rhinovirus), includes multiplex reverse transcription, when performed, and multiplex amplified probe technique, multiple types or subtypes, 12-25 targets  |

**Table 3: Place of service codes supporting medical necessity for codes in table 2**

| Place of Service Code | Place of Service Name             | Place of Service Description  |
|-----------------------|-----------------------------------|---|
| 21                    | Inpatient Hospital                | A facility other than psychiatric which primarily provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services by, or under, the supervision of physicians to patients admitted for a variety of medical conditions. |
| 22*                   | Outpatient Hospital (Observation) | A portion of a hospital which provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services to sick or injured persons who do not require hospitalization or institutionalization.                                    |
| 23                    | Emergency Room – Hospital         | A portion of a hospital where emergency diagnosis and treatment of illness or injury is provided.   |

*\*NOTE: PCR testing in an outpatient place of service is reimbursable only when performed as part of the diagnostic work-up for a patient admitted for Observation.*

| Reviews, Revisions, and Approvals  | Date  | Approval Date |
|--|-------|---------------|
| Policy developed   | 12/19 | 01/20         |
| Added a note to refer to CP.MP.183 for 2019-novel coronavirus testing.   | 03/20 |               |
| Split medical necessity statements to address panels of 5 pathogens or less and panels of 6 or more separately. Added criteria for panels of 5 or fewer pathogens in the outpatient setting: specified that the test will influence the plan of care, and added the following as indications: testing for other pathogens when COVID-19 suspected and COVID-19 testing is not available soon enough to influence the plan of care, when immunocompromised, or when ordered by an ID or when an ID is not available. Moved codes 87632 and 87633 to a table of medically necessary codes when billed with POS codes in Table 3. Added codes 0098U, 0099U, 0100U, and 0115U as medically necessary when billed with POS codes in Table 3. References reviewed and updated. | 08/20 | 08/20         |

**References**

- Hill AT, et al. and the CHEST Expert Cough Panel. Adult Outpatients with Acute Cough Due to Suspected Pneumonia or Influenza: CHEST Guideline and Expert Panel Report. CHEST 2019; Volume 155, Issue 1, Pages 155–167.
- Noridian Local Coverage Determination. L37315 MolDX: Multiplex Nucleic Acid Amplified Tests for Respiratory Viral Panels. Revision effective 10/1/2019.
- Hayes. Molecular Test Assessment: “FilmArray Respiratory Panel (BioFire Diagnostics LLC),” May 2020.
- Hayes. Molecular Test Assessment: “FilmArray Respiratory Panel 2 (BioFire Diagnostics LLC),” March 2020.
- Uyeki TM, et al. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza. Clin Inf Dis 2019; Volume 68, Issue 6, Pages e1–e47. <https://doi.org/10.1093/cid/ciy866>.
- Ralston SL, et al. Clinical practice guideline: the diagnosis, management, and prevention of bronchiolitis. American Academy of Pediatrics. Pediatrics 2014; Volume 134, Issue 5, Pages e1474- 502. doi: 10.1542/peds.2014-2742.
- Esposito S, et al. Multiplex Platforms for the Identification of Respiratory Pathogens: Are They Useful in Pediatric Clinical Practice? Front Cell Infect Microbiol. 2019 Jun 4;9:196. doi: 10.3389/fcimb.2019.00196.
- Busson L, et al. Contribution of the FilmArray Respiratory Panel in the management of adult and pediatric patients attending the emergency room during 2015–2016 influenza epidemics: An interventional study. Int J Infect Dis. 2019 Jun;83:32-39. doi: 10.1016/j.ijid.2019.03.027.
- Echavarría M, et al. Clinical impact of rapid molecular detection of respiratory pathogens in patients with acute respiratory infection. J Clin Virol. 2018 Nov;108:90-95. doi: 10.1016/j.jcv.2018.09.009.
- Ramirez JA, Musher DM, Evans SE, et al. Treatment of Community-Acquired Pneumonia in Immunocompromised Adults: A Consensus Statement Regarding Initial Strategies.

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Chest. 2020 Jun 16 doi: 10.1016/j.chest.2020.05.598.

11. Sberna G, Amendola A, Valli MB, et al. Trend of respiratory pathogens during the COVID-19 epidemic. *J Clin Virol.* 2020 Aug; 129: 104470. Published online 2020 May 26.
12. Lai C, Wang C, Hsueh P. Co-infections among patients with COVID-19: The need for combination therapy with non-anti-SARS-CoV-2 agents? *J Microbiol Immunol Infect.* 2020 Aug; 53(4): 505–512.

### **Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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**Note: For Medicaid members,** when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid

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manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members,** to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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