

Clinical Policy: Polymerase Chain Reaction Respiratory Viral Panel Testing

Reference Number: CP.MP.181

Date of Last Revision: 03/22

[Coding Implications](#)

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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.CPC.03 Preventive Health and Clinical Practice Guideline Policy

Policy/Criteria

- I. It is the policy of Centene Corporation[®] that respiratory viral panels (RVPs) testing for five pathogens or fewer are considered **medically necessary** when meeting one of the following¹⁻⁷:
 - A. Performed in the outpatient setting, will influence the plan of care, and any of the following:
 1. The member/enrollee is immunocompromised;
 2. 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, and includes patients 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, and includes patients 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.⁶ Viral pathogens are the most common cause of respiratory tract infections.⁸ Rhinovirus, parainfluenza virus, coronavirus, adenovirus, respiratory syncytial virus (RSV), Coxsackie virus, human metapneumovirus, and influenza virus account for most cases of viral respiratory infections.¹ Immunocompromised patients can develop severe lower respiratory tract infections from common respiratory viral pathogens that otherwise cause mild upper respiratory tract infections in healthy patients.⁹

PCR testing is generally effective for confirming respiratory viral infections with very high sensitivity and specificity.^{7,13} Respiratory viral infections often have nonspecific clinical presentations and, therefore, accurate and timely identification through PCR testing has the potential to optimize antiviral use when appropriate, decrease the spread of any viral infection, and to reduce the number of patients being treated with antibiotics unnecessarily.^{8,10-12,15} Multiplex PCR testing can detect a variety of respiratory viruses depending on the type and brand of testing being used.¹² However, the diagnostic role and importance of these multi-pathogen panels in

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identifying specific viruses in the setting of a respiratory infection is quite limited because the care and management of the individual patient is rarely altered based upon the pathogen identified.¹⁴

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).”^{6(p898)}

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
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	Revision 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 reviewed, updated and reformatted. CPT codes 0098U, 0099U and 0100U deleted 04/21. Changed “review date” in the header to “date of last revision” and “date” in the revision log header to “revision date.” Specialist review.	07/21	
Removed criteria specific to Covid 19 testing in I.A.	08/21	08/21
Annual review. References reviewed and updated. Updated background with no clinical significance. Specialist reviewed.	03/22	03/22

References

1. Local coverage determination. MolDX: multiplex nucleic acid amplified tests for

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- respiratory viral panels (L37315). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published May 13, 2019 (revised October 01, 2019). Accessed February 03, 2022.
2. Local coverage determination. MoIDX: multiplex nucleic acid amplified tests for respiratory viral panels (L37301). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published May 13, 2019 (revised October 01, 2019). Accessed February 07, 2022.
 3. Local coverage determination. MoIDX: multiplex nucleic acid amplified tests for respiratory viral panels (L37348). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published December 03, 2018 (revised November 30, 2020). Accessed February 08, 2022.
 4. Local coverage determination. MoIDX: multiplex nucleic acid amplified tests for respiratory viral panels (L37713). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published November 12, 2018 (revised November 11, 2019). Accessed February 08, 2022.
 5. Local coverage determination. MoIDX: multiplex nucleic acid amplified tests for respiratory viral panels (L37764). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published December 17, 2018 (revised October 10, 2020). Accessed February 08, 2022.
 6. Uyeki TM, Bernstein HH, Bradley JS, 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 Infect Dis*. 2019;68(6):895-902. doi:10.1093/cid/ciy874
 7. Esposito S, Mencacci A, Cenci E, Camilloni B, Silvestri E, Principi N. Multiplex Platforms for the Identification of Respiratory Pathogens: Are They Useful in Pediatric Clinical Practice?. *Front Cell Infect Microbiol*. 2019;9:196. Published 2019 Jun 4. doi:10.3389/fcimb.2019.00196
 8. Echavarría M, Marcone DN, Querci M, et al. Clinical impact of rapid molecular detection of respiratory pathogens in patients with acute respiratory infection. *J Clin Virol*. 2018;108:90-95. doi:10.1016/j.jcv.2018.09.009
 9. Ramirez JA, Musher DM, Evans SE, et al. Treatment of Community-Acquired Pneumonia in Immunocompromised Adults: A Consensus Statement Regarding Initial Strategies. *Chest*. 2020; 158(5):1896-1911. doi:10.1016/j.chest.2020.05.598
 10. Hill AT, Gold PM, El Solh AA, et al. Adult Outpatients with Acute Cough Due to Suspected Pneumonia or Influenza: CHEST Guideline and Expert Panel Report. *Chest*. 2019;155(1):155-167. doi:10.1016/j.chest.2018.09.016
 11. Molecular Test Assessment. FilmArray Respiratory Panel (BioFire Diagnostics LLC). Hayes. www.hayesinc.com. Published May 21, 2020 (annual review June 28, 2021). Accessed February 07, 2022.
 12. Molecular Test Assessment. FilmArray Respiratory Panel 2 (BioFire Diagnostics LLC). Hayes. www.hayesinc.com. Published March 10, 2020 (annual review February 24, 2021). Accessed February 07, 2022.
 13. Busson L, Bartiaux M, Brahim S, 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;83:32-39. doi:10.1016/j.ijid.2019.03.027

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14. Ralston SL, Lieberthal AS, Meissner HC, et al. Clinical practice guideline: the diagnosis, management, and prevention of bronchiolitis [published correction appears in *Pediatrics*. 2015 Oct;136(4):782]. *Pediatrics*. 2014;134(5):e1474-e1502. doi:10.1542/peds.2014-2742
15. Wils J, Saegeman V, Schuermans A. Impact of multiplexed respiratory viral panels on infection control measures and antimicrobial stewardship: a review of the literature. *Eur J Clin Microbiol Infect Dis*. 2022;41(2):187-202. doi:10.1007/s10096-021-04375-3

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.

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Note: For Medicaid members/enrollees, 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 manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, 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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