Revision log

INFECTIOUS DISEASE: RESPIRATORY TESTING

See Important Reminder at the end of this policy for important regulatory and legal information.

OVERVIEW

Respiratory illnesses cause significant morbidity and mortality within the United States and around the world. Seasonal influenza, respiratory syncytial virus (RSV), and SARS-CoV-2 infect many individuals each year, and while most will recover with no complications, a significant number will be hospitalized or die. Diagnostic testing for upper respiratory tract infections can be very useful for clinicians, as clinical signs and symptoms of these infections can have significant overlap between pathogens. Accurate and rapid testing techniques may aid clinicians, via identification of a specific pathogen, in selecting the best course of treatment for patients. Optimally, treatment is started within 48-72 hours of diagnosis. Testing methods range from culture and microscopy to immunoassays and advanced molecular diagnostic techniques; technology in this space is evolving rapidly and clinical guidelines can lag as a result.

This policy is intended for use in the outpatient setting.

POLICY REFERENCE TABLE

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

Criteria Sections	Example Tests (Labs)	Common CPT Codes	Common ICD Codes	Ref

Syndromic/Multiplex Respiratory Panels with 6 or More Targets	Respiratory Pathogen Panel, Quest Diagnostics	87632, 87633, 87486, 87581, 0115U, 0202U, 0223U, 0225U, 0373U	J42, J43, J44, J45, J47, J12, J15, J16, J17, J18	3
	ePlex Respiratory Pathogen Panel (GenMark Diagnostics, Inc)			
	Biofire FilmArray Respiratory Panel 2.1 (Biofire Diagnostics)			
	QIAstat-Dx Respiratory SARS-CoV-2 Panel (QIAGEN Sciences)			
	ePlex Respiratory Pathogen Panel 2 (GenMark Diagnostics, Inc)			
	Respiratory Pathogen with ABR (RPX) (Lab Genomics LLC, Thermofisher Scientific)			
	Respiratory Virus PCR Panel IV (Quest Diagnostics)	87632, 87633	J42, J43, J44, J45, J47, J12, J15, J16, J17, J18	
	Respiratory Viral Panel, PCR (Quest Diagnostics)			
SARS-CoV-2, RSV, or Influenza A/B, OR Multiplex Respiratory Viral Panels with 5 or Fewer Targets	Xpert Xpress SARS-CoV-2/Flu/RSV for SARS-CoV-2 and Flu targets only (Cepheid)	0240U, 0241U, 87501, 87502, 87503, 87426, 87428, 87631, 87635, 87636, 87637, 87811	J00, J01, J02, J04, J06	3, 6, 7
	Xpert Xpress SARS-CoV-2/Flu/RSV for all targets (Cepheid)			

	Infectious Agent Antigen Detection by Immunoassay			
	Infectious Agent Antigen Detection by Immunoassay, Qualitative or Semiquantitative			
	Infectious Agent Antigen Detection by Immunoassay, Qualitative or Semiquantitative, SARS-CoV-2 and Flu A/B			
	Influenza A and B and RSV RNA, Qualitative, Real-Time RT-PCR (Quest Diagnostics)			
	SARS-CoV-2 RNA (COVID-19), Qualitative NAAT (Quest Diagnostics)			
	SARS-CoV-2 RNA (COVID-19) and Influenza A and B, Qualitative NAAT (Quest Diagnostics)			
	Infectious Agent Antigen Detection by Nucleic Acid (DNA or RNA) SARS-CoV-2/Flu/RSV Multiplex Amplified Probe Technique			
	Infectious Agent Antigen Detection by Immunoassay with Direct Optical Observation			

Bacterial Respiratory Infection/Pneumonia Panels	Infectious Agent: Chlamydia pneumoniae Detection by Nucleic Acid (DNA or RNA), Direct Probe Technique	87485, 87486, 87487, 87541, 87798, 87580, 87581, 87582	R91, Z16	3
	Chlamydophila pneumoniae, DNA, Qualitative, Real-Time PCR (Quest Diagnostics)			
	Infectious Agent: Chlamydia pneumoniae Detection by Nucleic Acid (DNA or RNA), Quantification			
	Legionella DNA, Qualitative, Real-Time PCR (Quest Diagnostics)			
	Infectious Agent: Mycoplasma pneumoniae Detection by Nucleic Acid (DNA or RNA), Direct Probe Technique			
	Mycoplasma pneumoniae, DNA PCR (Labcorp)			
	Infectious Agent: Mycoplasma pneumonia Detection by Nucleic Acid (DNA or RNA), Quantification			
Influenza A and B Antibody Tests	Influenza Type A and Type B Antibody, Serum (Quest Diagnostics)	86710		1

Group A Streptococcus Pharyngitis Tests	Streptococcus Group A Antigen Detection by Immunoassay	87430, 87650, 87651, 87880	J02, J03, J35, R10, R11, R21, R23.3, R50, R51.9	2
	Streptococcus Group A Antigen Detection by Nucleic Acid Direct Probe Technique			
	Group A Streptococcus Detection, NAA (Labcorp)			
	Streptococcus Group A Antigen, Adult (Quest Diagnostics)			
Group A Streptococcus Pharyngitis Cultures	Streptococcus Group A Culture (Quest Diagnostics)	87081	J02, J03, J35, R10, R11, R21, R23.3, R50, R51.9	2, 4
Group A Streptococcus Antibody Tests	Antistreptolysin O (ASO) Antibodies (Labcorp)	86060		2

CRITERIA

It is the policy of health plans affiliated with Centene Corporation® that the specific tests noted below are **medically necessary** when meeting the related criteria:

RESPIRATORY PATHOGEN PANEL TESTS

Syndromic/Multiplex Respiratory Panels with 6 or More Targets

I. Syndromic Multiplex Respiratory Panels with 6 or more targets may be considered **medically necessary** when:

   A. The member presents in the outpatient setting with signs or symptoms of an acute respiratory infection, **AND**

      1. The member meets at least one of the following criteria:

         a) Immunocompromised, **OR**

         b) Has severe pneumonia, **OR**

         c) Has exacerbations of airway disease, **AND**

   B. Results of the testing will influence the member's clinical management.

II. Current evidence does not support the use of Syndromic Multiplex Respiratory Panels with 6 or more targets for all other indications.

SARS-CoV-2, RSV, or Influenza A/B, OR Multiplex Respiratory Viral Panels with 5 or Fewer Targets

I. SARS-CoV-2, RSV, or Influenza A/B, **OR** Multiplex Respiratory Viral Panels with 5 or fewer targets, may be considered **medically necessary** when:

   A. The member presents in the outpatient setting with signs or symptoms of an acute respiratory infection, **AND**

   B. Results of the testing will influence the member's clinical management.

II. Current evidence does not support the use of SARS-CoV-2, RSV, or Influenza A/B, **OR** Multiplex Respiratory Viral Panels with 5 or fewer targets, for all other indications.

Bacterial Respiratory Infection/Pneumonia Panels

I. Bacterial Respiratory Infection/Pneumonia Panels may be considered **medically necessary** when:

A. The member presents in the outpatient setting with signs or symptoms of an acute respiratory infection, **AND**

B. The member meets any of the following criteria:

1. New or worsening lung infiltrates, **OR**
2. Moderate to severe upper respiratory illness, **OR**
3. Has received empiric antibiotics before obtaining cultures, **OR**
4. Has possible multidrug-resistant bacteria or polymicrobial infection, **AND**

C. Results of the testing will influence the member's clinical management.

II. Current evidence does not support the use of Bacterial Respiratory Infection/Pneumonia Panels for all other indications.

Influenza A and B Antibody Tests

I. Current evidence does not support the use of Influenza A and B Antibody Tests for the purpose of diagnosing influenza.

Group A Streptococcus Pharyngitis Tests

I. Group A Streptococcus Pharyngitis Tests may be considered **medically necessary** when:

A. The member presents in the outpatient setting with at least one of the following:

1. Acute pharyngitis, **OR**
2. Fever, **OR**
3. Tonsillopharyngeal inflammation, **OR**
4. Patchy tonsillopharyngeal exudates, **OR**
5. Palatal petechiae, **OR**
6. Anterior cervical lymphadenitis, **OR**
7. Scarlatiniform rash, **AND**

B. The member does **NOT** have clinical and epidemiological features that strongly suggest a viral etiology (e.g., cough, rhinorrhea, hoarseness, and oral ulcers), **AND**

C. Results of the testing will influence the member's clinical management.

II. Current evidence does not support the use of Group A Streptococcus Pharyngitis Tests for all other indications.

Group A Streptococcus Pharyngitis Cultures

I. Group A Streptococcus Pharyngitis Culture may be considered **medically necessary** when:

A. The member is between the ages of 3 years and 14 years, **AND**

B. The member had a negative group A Streptococcus rapid antigen detection test (RADT), **AND**

C. The member presents in the outpatient setting with at least one of the following:

1. Acute pharyngitis, **OR**
2. Fever, **OR**
3. Tonsillopharyngeal inflammation, **OR**
4. Patchy tonsillopharyngeal exudates, **OR**
5. Palatal petechiae, **OR**
6. Anterior cervical lymphadenitis, **OR**
7. Scarlatiniform rash, **AND**

D. The member does **NOT** have clinical and epidemiological features that strongly suggest a viral etiology (e.g., cough, rhinorrhea, hoarseness, and oral ulcers), **AND**

E. Results of the testing will influence the member's clinical management.

II. Current evidence does not support the use of Group A Streptococcus Pharyngitis Culture for all other indications.

Group A Streptococcus Antibody Tests

I. Current evidence does not support the use of Group A Streptococcus Antibody Tests for the purpose of evaluating a member with acute pharyngitis for a possible group A streptococcus infection.

NOTES AND DEFINITIONS

1. **Moderate to severe upper upper respiratory illness** includes one or more clinical findings of lower respiratory illness (e.g., pneumonia, severe cough/bronchitis, shortness of breath, difficulty breathing).

2. **Severe pneumonia** is defined by the Infectious Diseases Society of America/American Thoracic Society Criteria as: the presence of one major criterion or at least three minor criteria.

   Minor criteria: respiratory rate ≥ 30 breaths/min, PaO2/FiO2 ratio ≤ 250, multilobar infiltrates, confusion/disorientation, uremia (blood urea nitrogen level ≥ 20 mg/dl), leukopenia (white blood cell count < 4,000 cells/µl), thrombocytopenia (platelet count < 100,000/µl), hypothermia (core temperature < 36°C), and hypotension requiring aggressive fluid resuscitation.

   Major criteria: septic shock with need for vasopressors and respiratory failure requiring mechanical ventilation.

3. **Airway disease** is a nonspecific clinical term for a heterogeneous group of conditions including chronic obstructive pulmonary disease (COPD), emphysema, cystic fibrosis, asthma, and bronchiectasis.

4. **Signs and symptoms of acute respiratory infection** include upper or lower respiratory tract symptoms (cough, runny nose, sore throat, bronchitis, pneumonia, bronchiolitis), with or without fever, influenza-like illness (ILI) (fever and either cough or sore throat), and respiratory distress (difficulty in breathing; often characterized by increased respiratory rate and use of accessory muscles of breathing).

BACKGROUND AND RATIONALE

Syndromic/Multiplex Respiratory Panels with 6 or More Targets

Infectious Diseases Society of America

The IDSA published clinical and diagnostic recommendations in 2020 regarding molecular testing for acute respiratory tract infections (RTIs). These recommendations state the following:

"Multiplex viral NAAT [nucleic acid amplification tests] (potentially combined with bacterial NAAT) also make clinical sense for immunocompromised and critically ill patients with pneumonia as well as for those with exacerbations of airway disease." (p. 2748).

SARS-CoV-2, RSV, or Influenza A/B, OR Multiplex Respiratory Viral Panels with 5 or Fewer Targets

Infectious Diseases Society of America

The IDSA published clinical and diagnostic recommendations in 2020 regarding molecular testing for acute respiratory tract infections (RTIs). These recommendations state the following:

"Molecular testing for multiple respiratory viruses simultaneously may also be more cost-effective than traditional antigen- or culture-based methods from a laboratory perspective, especially given certain thresholds of disease prevalence. " (p. 2744)

Centers for Disease Control and Prevention

The CDC states the following on their website discussing RSV: "Healthcare providers should consider RSV in patients with respiratory illness, particularly during the RSV season."

The CDC states the following on their website discussing COVID-19: "Key times to get tested: if you have symptoms, test immediately."

Bacterial Respiratory Infection/Pneumonia Panels

Infectious Diseases Society of America

The IDSA published clinical and diagnostic recommendations in 2020 regarding molecular testing for acute respiratory tract infections (RTIs). These recommendations state the following:

"...bacterial NAAT may prove most useful in situations where patients have new or worsening lung infiltrates, are moderately to severely ill, have received empiric antibiotics before obtaining cultures, and/or there is concern for multidrug-resistant bacteria or a polymicrobial infection." (p. 2747)

Influenza A and B Antibody Tests

Infectious Diseases Society of America

The IDSA published clinical practice guidelines in 2018 which addressed testing criteria for seasonal influenza A and B viruses. These guidelines state that serologic testing for the diagnosis

of influenza should not be used by clinicians, because the results from a single serum specimen cannot be reliably interpreted. (p. 898)

Group A Streptococcus Pharyngitis Tests

Infectious Diseases Society of America

The IDSA published clinical practice guidelines in 2012 which addressed testing criteria for group A Streptococcal pharyngitis.

"Swabbing the throat and testing for GAS [group A Streptococcus] pharyngitis by rapid antigen detection test (RADT) and/or culture should be performed because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis except when overt viral features like rhinorrhea, cough, oral ulcers, and/or hoarseness are present." (p. e87)

"Patients with GAS pharyngitis commonly present with sore throat (generally of sudden onset), pain on swallowing, and fever. Headache, nausea, vomiting, and abdominal pain may also be present, especially in children. On examination, patients have tonsillopharyngeal erythema, with or without exudates, often with tender, enlarged anterior cervical lymph nodes (lymphadenitis). Other findings may include a beefy, red, swollen uvula; petechiae on the palate; excoriated nares (especially in infants); and a scarlatiniform rash." (p. e91)

Group A Streptococcus Pharyngitis Culture

Infectious Diseases Society of America

The IDSA published clinical practice guidelines in 2012 which addressed testing criteria for group A Streptococcal pharyngitis.

"In children and adolescents, negative RADT [rapid antigen detection test] tests should be backed up by a throat culture…Routine use of back-up throat cultures for those with a negative RADT is not necessary for adults in usual circumstances, because of the low incidence of GAS [group A Streptococcus] pharyngitis in adults and because the risk of subsequent acute rheumatic fever is generally exceptionally low in adults with acute pharyngitis." (p. e87)

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American Academy of Family Physicians

The American Academy of Family Physicians (AAFP) published guidelines for the diagnosis and treatment of streptococcal pharyngitis. This guideline defines the age range between 3 and 14 years as a suggestive criterion for the diagnosis of Streptococcal infection compared to other ages. (p. 385)

Group A Streptococcus Antibody Tests

Infectious Diseases Society of America

The IDSA published clinical practice guidelines in 2012 which addressed testing criteria for group A Streptococcal pharyngitis.

Per these guidelines, it is not recommended that individuals undergo anti-streptococcal antibody titers for the purpose of routine diagnosis of acute pharyngitis, as these results indicate a past infection and therefore do not aid in the diagnosis of the present illness. (p. e87)

"Measurement of anti-streptococcal antibody titers is often useful for diagnosis of the nonsuppurative sequelae of GAS pharyngitis, such as acute rheumatic fever and acute glomerulonephritis. However, such testing is not useful in the diagnosis of acute pharyngitis because antibody titers of the 2 most commonly used tests, antistreptolysin O (ASO) and antiDNase B, may not reach maximum levels until 3–8 weeks after acute GAS pharyngeal infection and may remain elevated for months even without active GAS infection." (p. e93-94)

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy developed. Reviewed by external specialist.	11/23	

REFERENCES

1. 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 Influenzaa. *Clin Infect Dis*. 2019;68(6):895-902. doi:10.1093/cid/ciy874

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3. Hanson KE, Azar MM, Banerjee R, et al. Molecular Testing for Acute Respiratory Tract Infections: Clinical and Diagnostic Recommendations From the IDSA's Diagnostics Committee. *Clin Infect Dis*. 2020;71(10):2744-2751. doi:10.1093/cid/ciaa508
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5. CDC. Learn more about the flu season. Centers for Disease Control and Prevention. Published September 20, 2022. https://www.cdc.gov/flu/about/season/index.html. Accessed January 4, 2024.
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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/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

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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.