



The Diagnosis and Management of Pharyngitis in Adults
MedStar Health Clinical Guidelines
Antibiotic Stewardship



“These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient’s primary care provider in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication but should be used with the clear understanding that continued research may result in new knowledge and recommendations.”

INTRODUCTION:

Pharyngitis is a common reason for ambulatory care visits, accounting for about 12 million office visits yearly, or 1-2% of all ambulatory care visits.¹ Most cases of pharyngitis are caused by viral illnesses and are self-limited, though clinicians prescribe antibiotics about 60% of the time.² Distinguishing viral from bacterial causes as well as recognizing potentially life-threatening complications or mimickers of pharyngitis can be challenging. This guideline discusses diagnosis and management of pharyngitis in adults. A separate guideline exists for children. The goal is to avoid overprescribing antibiotics while maintaining rapport with patients by meeting both patient and clinician expectations about types of treatment and symptom relief. Since the last update, the most significant development is the availability of a rapid nucleic acid amplification test (NAAT) for the diagnosis of group A streptococcal pharyngitis. NAATs are more sensitive than both rapid antigen detection tests (RADTs) and throat cultures. Please see the updated algorithm at the end of this guideline.

Viral cause of pharyngitis

Viral illnesses are the most common infectious cause of pharyngitis. The clinical presentation is usually characteristic and includes sore throat, low grade fever, nasal congestion, sneezing, fatigue, and cough. Hoarseness and oral ulcers also point to a viral cause. The condition is usually self-limited, treatment is symptomatic with throat lozenges and analgesics, and no diagnostic testing is needed or appropriate. In particular, testing for Group A Strep is not recommended. Importantly, COVID-19 infection may present with upper respiratory tract symptoms including sore throat and rhinorrhea. Loss of taste or smell is particularly suggestive of COVID-19 infection. When COVID-19 is suspected, patients should be tested with clinicians using appropriate personal protective equipment including wearing N95 masks and face shields or goggles. The patient should self-isolate, treat symptomatically, monitor for clinical worsening, and follow treatment recommendations per current CDC guidelines.

Group A Strep pharyngitis

In adults, Group A Strep (GAS) pharyngitis accounts for 5-15 % of pharyngitis cases. Symptoms that are suggestive of GAS include sudden onset of sore throat, fever, tonsillar exudates, cervical adenopathy, and absence of typical viral URI symptoms, especially cough. Sore throat occurring after known GAS exposure increases the likelihood that GAS may be the cause. The patient may occasionally present with a scarlatiniform rash, palatal petechiae or a strawberry tongue. The diagnosis of GAS pharyngitis should be established by rapid antigen detection test (RADT), nucleic acid amplification test (NAAT) and/or culture because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis. Clinical scoring criteria have been developed to help determine the likelihood of a bacterial cause. The most widely used are the Centor criteria, which include fever by history, tonsillar exudates, tender anterior cervical adenopathy, and absence of cough and the modified Centor criteria (McIsaac criteria) which subtract one point for age over 45. Because the Centor criteria have a low positive predictive value for determining the presence of group A streptococcal infection, the IDSA suggests that they can be used to identify patients who have a low probability of GAS pharyngitis and do not warrant further testing. Patients who meet fewer than 3 Centor criteria do not need to be tested.

<p><u>Initial Approval Date and Reviews:</u> Effective 2000, revised 9/2006, reviewed 4/2009, 3/2013, 3/2015, 8/2016 (peds) 9/2016 (adults), 9/2018 (adults and pediatrics separated), 9/2020, 9/2022</p>	<p><u>Most Recent Revision and Approval Date:</u> 9/2024</p>	<p><u>Next Scheduled Review Date:</u> 9/2026 Condition: Group A Streptococcus</p>
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Rapid antigen detection tests have high specificity (88-99%) and moderate sensitivity (77-92%) for detecting group A strep.³ Consequently, positive results do not need to be confirmed by culture. For **adults in usual circumstances**, negative RADT's do not need to be followed up with a throat culture because of the low incidence of GAS pharyngitis in adults and because the risk of subsequent acute rheumatic fever is exceptionally low in adults with acute pharyngitis (strong, moderate). In addition, observational studies in adults suggest that using an RADT without culture confirmation is not associated with increased complications.

The risk of acute pharyngitis due to GAS among adults is higher in the following situations and a throat culture or NAAT may be considered to confirm a negative RADT:

1. Patients are at risk for severe infection like those with a history of acute rheumatic fever or are immunocompromised.
2. Patients in close contact with individuals are at elevated risk for complications like those caring for infants or living with immunocompromising conditions.
3. Young adults living in dormitories or other settings where the prevalence of GAS pharyngitis is high.
4. Patients in whom clinical suspicion for GAS is high (Centor scores greater or equal to 3) and have had an exposure to a person with GAS infection.
5. Physicians who wish to ensure they are achieving maximal sensitivity in diagnosis may continue to use conventional throat culture or to back up negative RADT results with culture. A throat culture has the sensitivity of 90-95% and specificity of 95-99%.
6. NAATs are more sensitive than both RADTs and throat cultures. Their reported sensitivity and specificity are approximately 97% and 95%, respectively.³ Because NAATs are highly sensitive and specific, they can also be used as a follow-up test when an RADT is negative but streptococcal pharyngitis is still suspected.

Proper specimen collection (swabbing both tonsils or tonsillar pillars and posterior pharynx) is crucial. Clinicians should use appropriate PPE including wearing N95 masks and face shields or goggles.

Recommendations from the Infectious Disease Society of America 2012 guideline⁵ (strength of recommendation, quality of evidence) are:

Penicillin or amoxicillin remain the treatments of choice, and recommendations are made for the penicillin-allergic patient, which now include clindamycin, clarithromycin, and azithromycin (see Table 1). Patients with acute GAS pharyngitis should be treated with an appropriate penicillin antibiotic at an appropriate dose for 10 days unless treated with penicillin G long-acting single dose. Benefits of therapy include a 1-2 day shortening of the acute illness and a reduction in the risk of suppurative complications (peritonsillar abscess, etc.) and immunologic ones (rheumatic fever and post-streptococcal glomerulonephritis) (strong, high). Treatment of GAS pharyngitis in penicillin-allergic individuals should include a first-generation cephalosporin (for those who did not experience an anaphylactic reaction to penicillin) for 10 days, clindamycin or clarithromycin for 10 days, or azithromycin for 5 days (strong, moderate).

Adjunctive therapy may be useful in the management of GAS pharyngitis. If warranted, use of an analgesic/antipyretic agent such as acetaminophen or an NSAID for treatment of moderate to severe symptoms or control of high fever associated with GAS pharyngitis should be considered as an adjunct to an appropriate antibiotic (strong, high). Adjunctive therapy with a corticosteroid is not recommended (weak, moderate).

Recurrent episodes of pharyngitis associated with laboratory evidence of GAS pharyngitis may be due to chronic pharyngeal GAS carrier who is experiencing repeated viral infections rather than repeated streptococcal pharyngitis at close intervals (strong, moderate). GAS carriers do not ordinarily justify efforts to identify them, nor do they require antimicrobial therapy because GAS carriers are unlikely to spread GAS pharyngitis to their close contacts and are at little or no risk for developing suppurative or nonsuppurative complications (strong, moderate).

Follow-up post-treatment throat cultures or RADT are not recommended routinely but may be considered in special circumstances (strong, high). Diagnostic testing or empiric treatment of asymptomatic household contacts of patients with acute streptococcal pharyngitis is not routinely recommended (strong, moderate). Tonsillectomy solely to reduce the frequency of GAS pharyngitis is not recommended (strong, high).

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Table 1: Antibiotic Regimens Recommended for Group A Streptococcal Pharyngitis

Drug Route	Dose or Dosage	Duration or Quantity	Recommendation Strength, Quality
For individuals without penicillin allergy			
Penicillin V, oral	Adolescents and Adults: 250 mg 4 times daily or 500 mg twice daily	10 days	Strong, high
Amoxicillin, oral	500 mg twice daily	10 days	Strong, high
Benzathine penicillin G IM	1.2 million units	1 dose	Strong, high
For individuals with penicillin allergy			
Cephalexin, oral *	500 mg every 12 hours	10 days	Strong, high
Cefadroxil, oral*	1g once daily	10 days	Strong, high
Clindamycin, oral	300 mg every 8 hours	10 days	Strong, moderate
Azithromycin, oral**	500mg on day 1 then 250mg daily on days 2-5	5 days	Strong, moderate
Clarithromycin, oral**	250 mg every 12 hours	10 days	Strong, moderate

*Avoid in individuals with immediate type hypersensitivity to penicillin.

**Resistance of GAS varies geographically and temporally. Macrolide rate 5-20%. Clindamycin rate 1-3%.

Group C and Group G Streptococcal pharyngitis

Group C and Group G strep cause 5-10% of pharyngitis in adults. The clinical presentation can be indistinguishable from Group A strep pharyngitis. These pathogens can occur in epidemics (military and educational institutions or foodborne outbreaks) or sporadically (their significance outside of epidemics is uncertain). Diagnosis is made by throat culture (RADT tests are negative since the organisms lack the Group A antigen which is the target of RADTs). Treatment is the same as for group A strep (penicillin is the drug of choice) though treatment duration is 5 instead of 10 days (since there is no association with rheumatic fever and the longer treatment course in GAS is for rheumatic fever prevention).

Infectious mononucleosis

Pharyngitis in infectious mononucleosis is associated with fever, significant and sometimes prolonged fatigue, and posterior cervical adenopathy. Splenic enlargement may also occur. It is commonly seen in adolescents and young adults. Typical findings on CBC include lymphocytosis (more than 50% of WBC or absolute lymphocyte count > 4500/microl) with more than 10% atypical lymphocytes. The presence of heterophile antibodies (as in the Monospot test) in the proper clinical context is diagnostic, though the false negative rate in the first week of illness can be as high as 25%. Treatment is supportive. Because of the risk of splenic rupture, patients should be advised to refrain from contact sport for 3-4 weeks. In addition, recognizing signs and symptoms of impending upper airway obstruction from tonsillar enlargement (muffled voice, drooling, stridor, respiratory distress or sitting in a “tripod” position) is important since hospitalization, administration of corticosteroids, and airway management are necessary.

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Sexually Transmitted Infections presenting as pharyngitis

- Pharyngeal gonorrhea—an uncommon cause of pharyngitis, usually acquired by oral sexual contact and presenting with sore throat, fever and adenopathy. It should be considered in the appropriate clinical context (receptive oral intercourse) and confirmed by nucleic acid antigen test of the pharynx. The 2020 CDC update recommends ceftriaxone 500mg IM x 1 and doxycycline 100 mg 2x per day for 7 days. For persons weighing ≥ 150 kg (300 lbs.), a single 1 g IM dose of ceftriaxone should be administered. If chlamydial infection has not been excluded, doxycycline 100 mg orally twice a day for 7 days is recommended. When ceftriaxone cannot be used for treating urogenital or rectal gonorrhea because of cephalosporin allergy, a single 240 mg IM dose of gentamicin plus a single 2 g oral dose of azithromycin is an option. Gastrointestinal symptoms, primarily vomiting within 1 hour of dosing, have been reported among 3%–4% of treated persons. If administration of IM ceftriaxone is not available, a single 800 mg oral dose of cefixime is an alternative regimen. However, cefixime does not provide as high, or as sustained, bactericidal blood levels as ceftriaxone does and demonstrates limited treatment efficacy for pharyngeal gonorrhea. The CDC no longer recommends cefixime at any dose as first line treatment of gonococcal infections. If cefixime is used as an alternative agent, the patient should return in 1 week for a test of cure.
- For persons with pharyngeal gonorrhea, a test-of-cure is recommended, using culture or nucleic acid amplification tests 7–14 days after initial treatment, regardless of the treatment regimen. Because reinfection within 12 months ranges from 7% to 12% among persons previously treated for gonorrhea, persons who have been treated for gonorrhea should be retested 3 months after treatment regardless of whether they believe their sex partners were treated. If retesting at 3 months is not possible, clinicians should retest within 12 months after initial treatment.
- Acute HIV infection—should be considered in patients with potential HIV exposure (particularly those with a recent STI) who present with pharyngitis, fever, adenopathy, malaise, diarrhea, headache, mucocutaneous ulcers and/or rash. Pharyngitis in this condition is usually manifested by pharyngeal erythema but no exudates. Diagnostic testing should include a sensitive immunoassay (antigen/antibody immunoassay) plus HIV viral load testing.
- Syphilis- *Treponema pallidum*, the cause of syphilis, is a rare cause of pharyngitis. However, rates are rising particularly among men having sex with men (MSM) and persons with HIV. Pharyngitis is a common presenting symptom, affecting up to 50% of patients with secondary syphilis.

Deep Tissue Infections and Epiglottitis

These conditions require urgent management. Features that distinguish them from more common causes of pharyngitis include the severity of the complaints, unilaterality, toxic appearance, and neck pain.

Syndrome	Clinical Features
Peritonsillar abscess	Severe unilateral sore throat, fever, ear pain, muffled voice, drooling, neck pain and swelling. Exam with severely swollen or fluctuant tonsil with deviation of uvula or bulging of the soft palate. Trismus is common.
Submandibular abscess (Ludwig's angina)	Fever, rigor, mouth pain, drooling, dysphagia, and stiff neck. The floor of the oropharynx may be elevated. Induration and crepitus may be present in the submandibular area. Trismus is not common.
Parapharyngeal space infection	Fever, rigor, swelling below the angle of the mandible, medial bulging of the pharyngeal wall and trismus.
Lemierre syndrome (suppurative jugular thrombophlebitis)	Persistent fever and sore throat, despite antibiotics. Pulmonary emboli.
Epiglottitis	Sore throat with minimal findings on exam, fever, muffled voice, drooling, hoarseness and stridor or respiratory distress.

Adapted from UpToDate accessed Sept 21, 2020

LEMIERRE'S SYNDROME:

Lemierre syndrome is septic thrombophlebitis of the internal jugular vein. It is a rare disease that occurs in otherwise healthy young adults. It typically begins with an oropharyngeal infection and frequently involves septic emboli. Usually

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caused by oropharyngeal flora; the most common pathogens are the anaerobe *Fusobacterium necrophorum* and oral streptococci. Clinical findings include fever, rigors, exudative tonsillitis, dysphagia, trismus, unilateral neck pain, and tenderness. Complications are due to the hematogenous spread of infection. Pulmonary complications including dyspnea, pleurisy, and/or hemoptysis. Lung findings present as necrotic cavitory lesions due to septic emboli. Diagnostic evaluation includes obtaining cultures and imaging of the neck and chest. Empiric antibiotics should target *F. necrophorum* and oral streptococci using combination therapy.

SYMPTOMATIC TREATMENT OF ACUTE PHARYNGITIS IN ADULTS:

Most adult patients with acute pharyngitis have a viral illness and are seeking pain relief, which is important for patient comfort and improves their ability to maintain hydration. Approaches include systemic oral analgesics, topical therapies, and environmental measures. Over the counter oral analgesics include non-steroidal anti-inflammatory drugs, acetaminophen, and aspirin. Topical treatments include lozenges, sprays, beverages, or foods (ice, tea, honey, soup). Environmental measures include humidifiers and avoiding irritants like cigarette smoke. Steroid treatment is not recommended due to potential for harm versus only slight improvement in pain. However, steroids may be appropriate for the occasional patient with severe throat pain and/or difficulty swallowing.

AVOIDING ANTIBIOTIC OVERPRESCRIBING:

Prescribing antibiotics when they are not indicated puts the patient at risk for side effects and increases community risk of bacterial resistance. Discuss the risks and benefits of antibiotic and non-antibiotic treatments. Validate the patient’s goals and concerns. Educate the patient about the expected clinical course and time to improve. Lastly emphasize open communication to bring worsening symptoms or lack of expected improvement to the clinician’s attention.

PATIENT EDUCATION

<http://www.choosingwisely.org/patient-resources/colds-flu-and-other-respiratory-illnesses-in-adults/>
https://www.cdc.gov/sore-throat/about/?CDC_AAref_Val=https://www.cdc.gov/antibiotic-use/sore-throat.html/

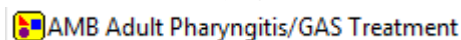
DEFINITIONS

Antibiotic stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. Antimicrobial stewards seek to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection of antimicrobial resistant strains. - See more at

<https://www.idsociety.org/clinical-practice/antimicrobial-stewardship2/antimicrobial-stewardship/>

MEDCONNECT ORDER SET:

AMB Adult Pharyngitis/GAS Treatment



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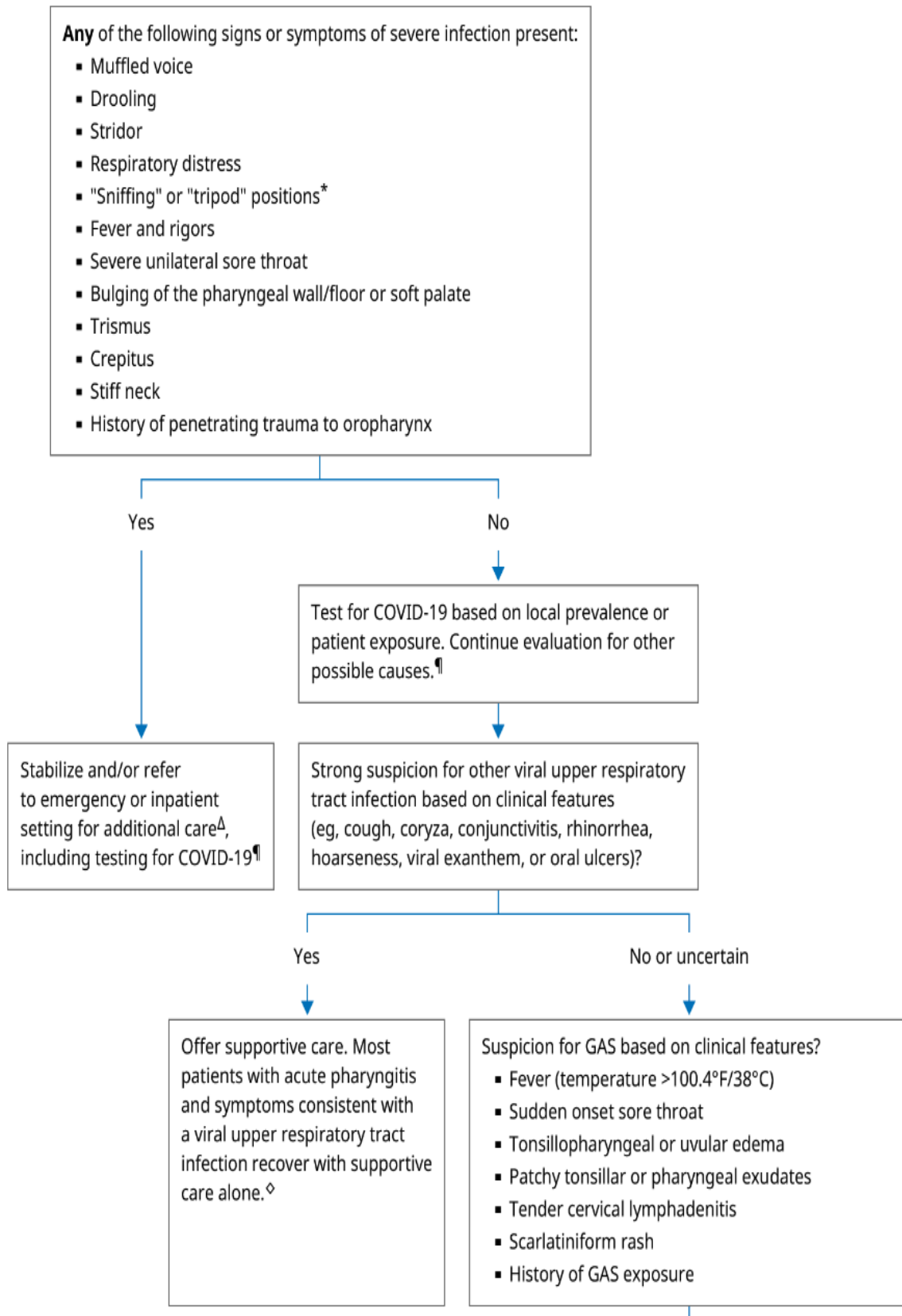
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Clinical Guidelines are reviewed every two years by a committee of experts in the field. Updates to guidelines occur more frequently as needed when new scientific evidence or national standards are published

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Evaluation of acute pharyngitis in adults

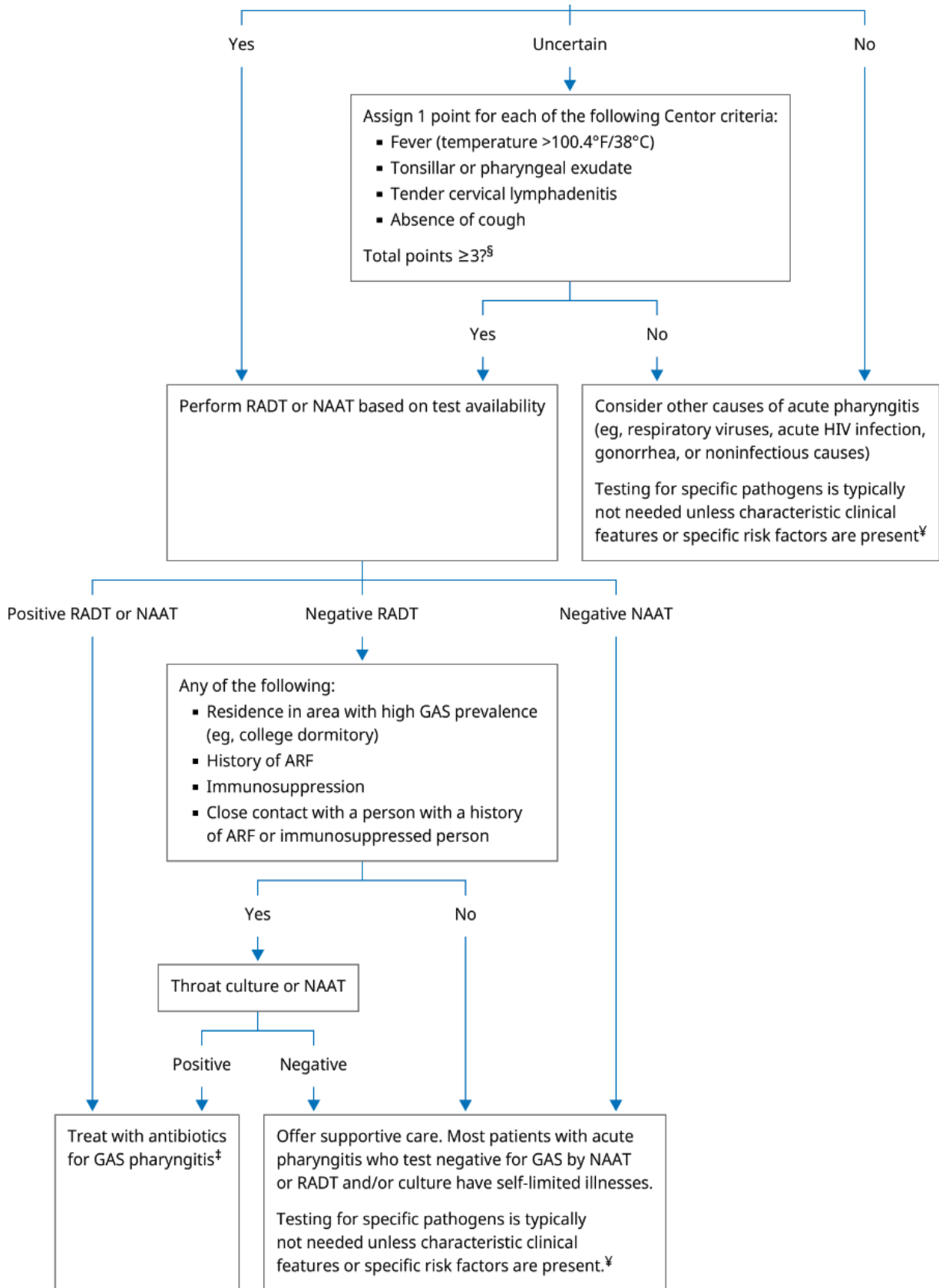


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All adults presenting with acute pharyngitis should have a thorough history and physical, including assessment for risk factors for acute HIV infection and sexually transmitted infections.

ARF: acute rheumatic fever; COVID-19: coronavirus disease 2019; GAS: group A *Streptococcus*; HIV: human immunodeficiency virus; NAAT: nucleic acid amplification test; RADT: rapid antigen detection test.

* A sitting position with the trunk leaning forward, neck hyperextended, and chin thrust forward in an effort to maximize the diameter of the obstructed airway.

¶ Refer to UpToDate content on COVID-19 for additional detail on clinical features, testing, and infection control.

Δ Refer to UpToDate topics on evaluation of pharyngitis in adults, evaluation of the adult with dyspnea, and deep neck space infections.

◇ Refer to UpToDate content on symptomatic treatment of pharyngitis in adults.

§ Some practitioners test patients with Centor scores ≥ 2 .

¥ Refer to UpToDate topic on evaluation of pharyngitis in adults.

‡ Refer to UpToDate content on treatment and prevention of streptococcal pharyngitis.

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