Diagnosis and Treatment of Respiratory Illness in Children and Adults

ICSI
INSTITUTE FOR CLINICAL SYSTEMS IMPROVEMENT

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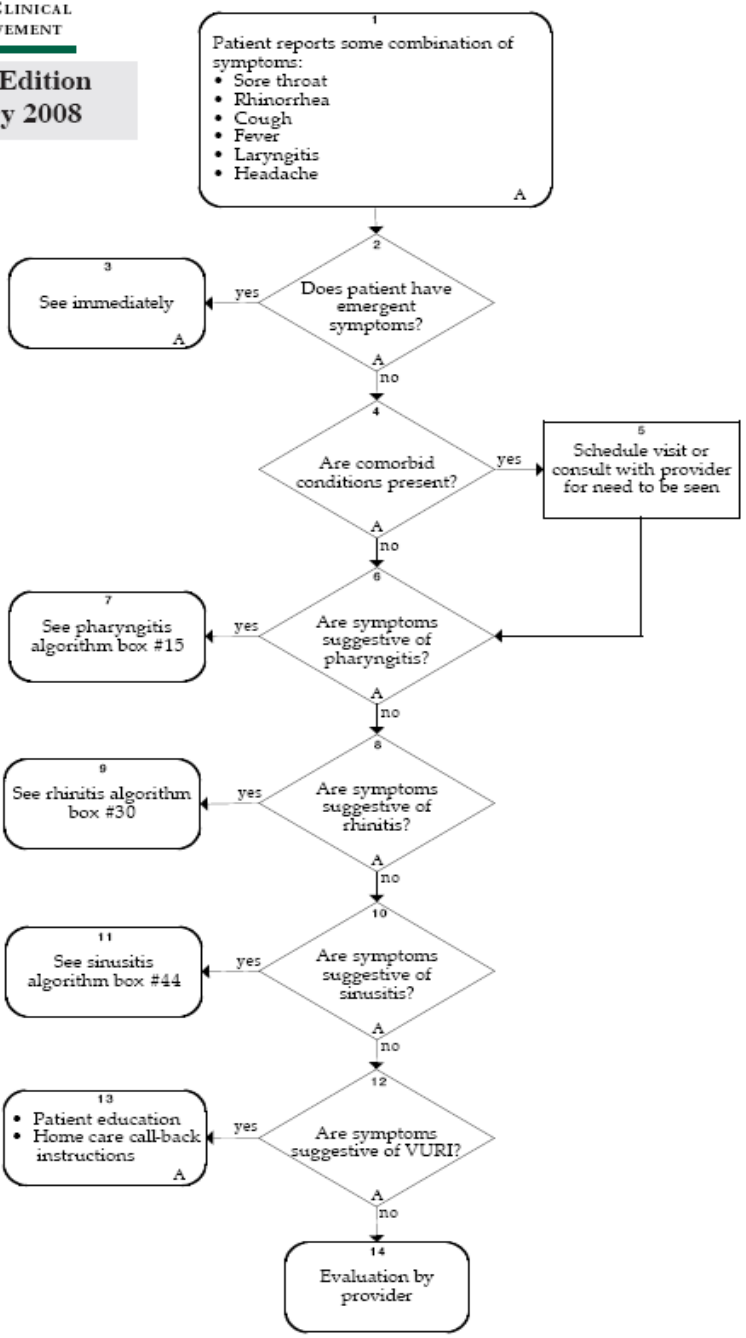
Health Care Guideline:
Diagnosis and Treatment of Respiratory Illness in Children and Adults



A = Annotation

6
Symptoms of pharyngitis:
- Sudden onset of sore throat
- Exudative tonsilitis
- Tender anterior cervical adenopathy
- History of fever
- Headache
- Abdominal pain
- No rhinorrhea, cough, hoarseness

8
Symptoms of rhinitis:
- Pruritis of the eyes, nose, palate, ears
- Watery rhinorrhea
- Sneezing
- Seasonal changes
- Family history of allergies
- Sensitivity to specific allergens, especially dust, animal dander, pollen and mold
- Atopy
- Nasal congestion
- Postnasal drip

10
Symptoms of sinusitis:
Upper respiratory symptoms present greater than 7 days. Two or more of the following factors present at a point of greater than 7 days after onset:
- Cough
- Documented past history of sinusitis
- Ear pressure/fullness
- Facial pain, particularly if aggravated by postural changes or by valsalva maneuver
- Fatigue
- Fever
- Hyposmia/anosmia
- Known anatomical nasal blockage
- Nasal congestion
- Nasal drainage
- Poor response to decongestive
- Postnasal drip
- Tenderness over sinus area
- Tooth pain

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Adapted from Institute for Clinical Systems Improvement (ICSI). Diagnosis and treatment of respiratory illness in children and adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); Second Addition January 2008. Clinical Quality Improvement Committee (CQIC) Adopted 11/05 Reviewed /Approved 4/06, 10/07, 11/08. Quality Improvement Committee (QIC) Review Approval Date: 4/09
All CPG's are routinely reviewed at least every two years. Reviews will occur more frequently when new scientific evidence or national standards are published before the two-year review date. Refer to the Molina Healthcare Website at www.molinahealthcare.com for the most up to date information on this CPG

Diagnosis and Treatment of Respiratory Illness in Children and Adults

Main Algorithm Annotations

1. Patient Reports Some Combination of Symptoms

Patients may present for an appointment, call into a provider to schedule an appointment or nurse line presenting with respiratory illness symptoms. The symptoms of respiratory illness may include sore throat, rhinorrhea, cough, fever, headache and/or laryngitis.

2. Does Patient Have Emergent Symptoms?

Key Points

• It is recommended that patients with upper-airway obstruction, lower-airway obstruction and severe headache be seen immediately.

3. See Immediately

Use algorithm to triage patient symptoms; begin at algorithm box #6.

4. Are Comorbid Conditions Present?

Key Points:

• Patients with complicating factors should consult with a provider.

6. Are Symptoms Suggestive of Pharyngitis?

Patients report a sore throat without rhinorrhea, cough or hoarseness.

8. Are Symptoms Suggestive of Rhinitis?

Rhinitis is defined as inflammation of the membranes lining the nose and is characterized by nasal congestion, rhinorrhea, sneezing and itching of the nose and/or postnasal drainage *(Dykewicz, 1998 [R])*.

10. Are Symptoms Suggestive of Sinusitis?

Symptoms include:

• Upper respiratory symptoms present greater than seven days, and

• Two or more of the following factors present at a point of greater than seven days after onset.

- Cough
- Documented past history of sinusitis

12. Are Symptoms Suggestive of Viral Upper-Respiratory Infection?

A viral upper-respiratory infection (common cold) is a self-limited illness typically lasting 5 to 14 days manifested by rhinorrhea, cough and fever.

13. Patient Education/Home Care Call-Back Instructions

Key Points:

• It is recommended that patients, parents and caregivers be educated on prevention, comfort measures and treatment recommendations for the common cold.

• Patients with a viral illness may be aware of measures to relieve symptoms and reduce spread of infection. It is important to provide them with practical, preferably evidence-based, advice.

Key Points from Molina Healthcare

The performance measures noted below do not necessarily consider "real world" factors mitigating against “all or none” use of strep tests for Molina Healthcare Members in a minority of cases. It should be noted that best practices as recommended in this clinical practice guideline should be considered the norm in the majority of encounters. If the best practice is not met in the majority of encounters care could be considered suboptimal.

- The child's clinical presentation is so convincing, (meets all examination criteria) the clinician will treat regardless of the result of a rapid strep test or culture
- The child's sore throat coincides with recent or concurrent strep treatment of a sibling or family member and the clinician will treat regardless of the result of a rapid strep test or culture
- The child's clinical presentation is somewhat convincing, and the child has been previously dosed with an antibiotic by a parent or caretaker.
- The clinical presentation is somewhat convincing, and the child's resistance to a throat exam or swab is felt by the clinician to not be worth the struggle to perform one or both.

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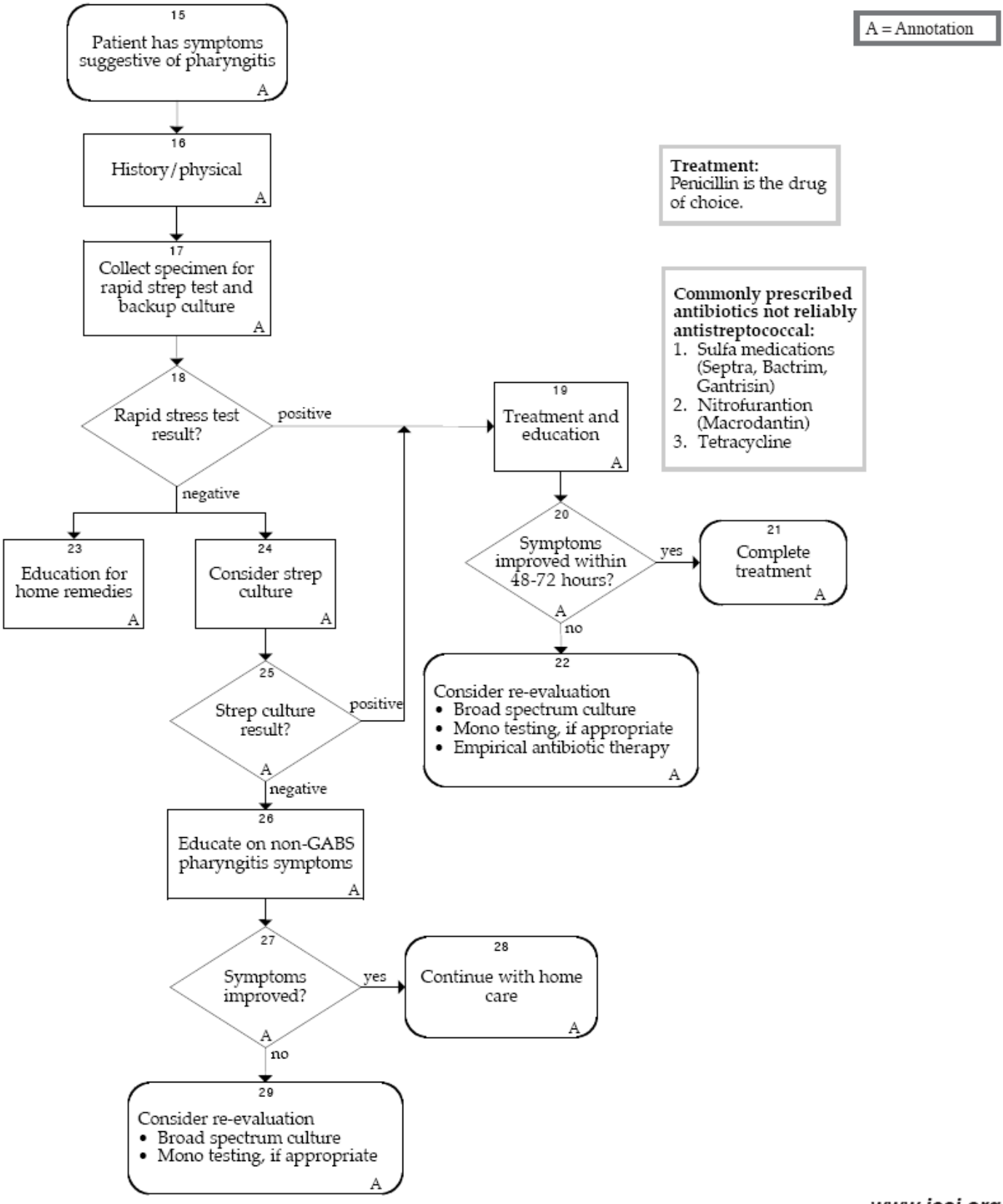
Pharyngitis Algorithm



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Pharyngitis Algorithm Annotations

15. Patient Has Symptoms Suggestive of Pharyngitis

Patients with recent strep exposure may be more likely to have group A beta streptococcal pharyngitis.

16. History/Physical

History and physical findings may increase or decrease the likelihood of group A beta hemolytic strep as the cause of pharyngitis.

17. Collect Specimen for Rapid Strep Test and Backup Culture

Several scoring systems have been developed to assist in predicting which patients will have a positive throat culture, but none has a high enough predictive value to allow treatment without a positive rapid strep test or strep throat culture.

19. Treatment and Education

Key Points:

• Penicillin (PCN) is the drug of choice for treatment of culture positive cases of group A beta streptococcal pharyngitis.
• In penicillin-allergic patients, options include cephalosporins (for some types of allergies), erythromycin and clindamycin.

20. Symptoms Improved Within 48-72 Hours?

After initiating a course of an appropriate antibiotic, improvement in symptoms related to group A streptococcal pharyngitis should be seen by 48 to 72 hours.
It is suggested that the patient be instructed to call in to the provider's office by 72 hours to confirm, or that the provider's office contacts the patient to verify improvement.

21. Complete Treatment

It is important to emphasize to the patient that completion of the course of antibiotic is important to reduce risk of recurrence.

22. Consider Re-Evaluation/Broad Spectrum Culture/Mono Testing, If Appropriate/Empirical Antibiotic Therapy

23. Education for Home Remedies

Key Points:

• Treatment failure for group A beta streptococcal is rare.
• Education is needed on home remedies for sore throats.
• The patient should be instructed to call back if the symptoms worsen or if they persist beyond five to seven days.

24. Consider Strep Culture

Key Points:

• Empiric treatment of group A beta streptococcal is discouraged due to poor diagnostic accuracy even with elaborate clinical scoring systems.

25. Strep Culture Result?

Whether or not the test is positive, patients and their families want to know results as soon as possible so that they can appropriately plan for their needs.

26. Educate on Non-Group A Beta Streptococcal Pharyngitis Symptoms

If the rapid strep test and/or the strep culture is negative, the patient needs to be educated on non-strep sore throats. This includes the duration of the symptoms, ineffectiveness of antibiotic treatment, and home remedies that will ease the symptoms. The patient should be instructed to call back if the symptoms worsen or if they persist beyond five to seven days.

27. Symptoms Improved?

Non-group A beta streptococcal would generally be expected to be improving over a period of a few days. Patients should be instructed to contact their provider if symptoms are persisting.

28. Continue with Home Care

Home care measures to alleviate symptoms should be continued as needed. See Annotation #23, "Education for Home Remedies" for additional information.

29. Consider Re-Evaluation/Broad Spectrum Culture/Mono Testing, If Appropriate

See Annotation #22, "Consider Re-Evaluation" for details.

Rhinitis Algorithm

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Rhinitis Algorithm Annotations

30. Patient Presents with Symptoms of Rhinitis
Rhinitis is defined as inflammation of the membranes lining the nose and is characterized by nasal congestion, rhinorrhea, sneezing and itching of the nose and/or postnasal drainage.

31. History/Physical
Rhinitis can present with any of the symptoms listed in the history of present illness. Allergic and non-allergic rhinitis can coexist and often do.

32. Signs and Symptoms Suggest Allergic Etiology?
With seasonal or episodic allergic rhinitis, common symptoms are sneezing, itching of the nose, palate or eyes, and clear rhinorrhea. However, nasal congestion is often the most significant complaint in patients with perennial rhinitis.

33. Initiate Symptomatic Treatment/Allergen Avoidance/Medication Therapy
Diagnostic Testing
The clinician may choose to conduct diagnostic testing at this point if the results would change management.

34. Symptoms Improved?
If symptoms have not improved after two to four weeks, the clinician should consider issues affecting compliance, and alternative medication therapy.

35. Patient Education/Follow-Up As Appropriate
If the patient has adequate relief of rhinitis and associated allergic symptoms either by instituting avoidance measures or through a medication trial, appropriate follow-up should include:
• Further education and review of information about avoidance activities
• Education and review of appropriate use of medications and possible side effects.

36. Consider Further Diagnostic Testing/Referral to a Specialty Provider

37. Signs and Symptoms Suggest Structural Etiology?
Malignant tumors of the nose and sinuses can be difficult to detect. Recent onset of pain; decreased sensation of the face, palate or teeth; decreased sense of smell; bleeding; and facial swelling and/or nasal obstruction may all be signs of a nasal or sinus cancer.
Structural abnormalities most often present with symptoms of obstruction. Deviated nasal septum, deformity of nasal bones, nasal turbinates or nasal cartilage may be detected on physical examination and may cause significant obstruction. Nasal polyps and adenoidal hypertrophy can cause obstruction.

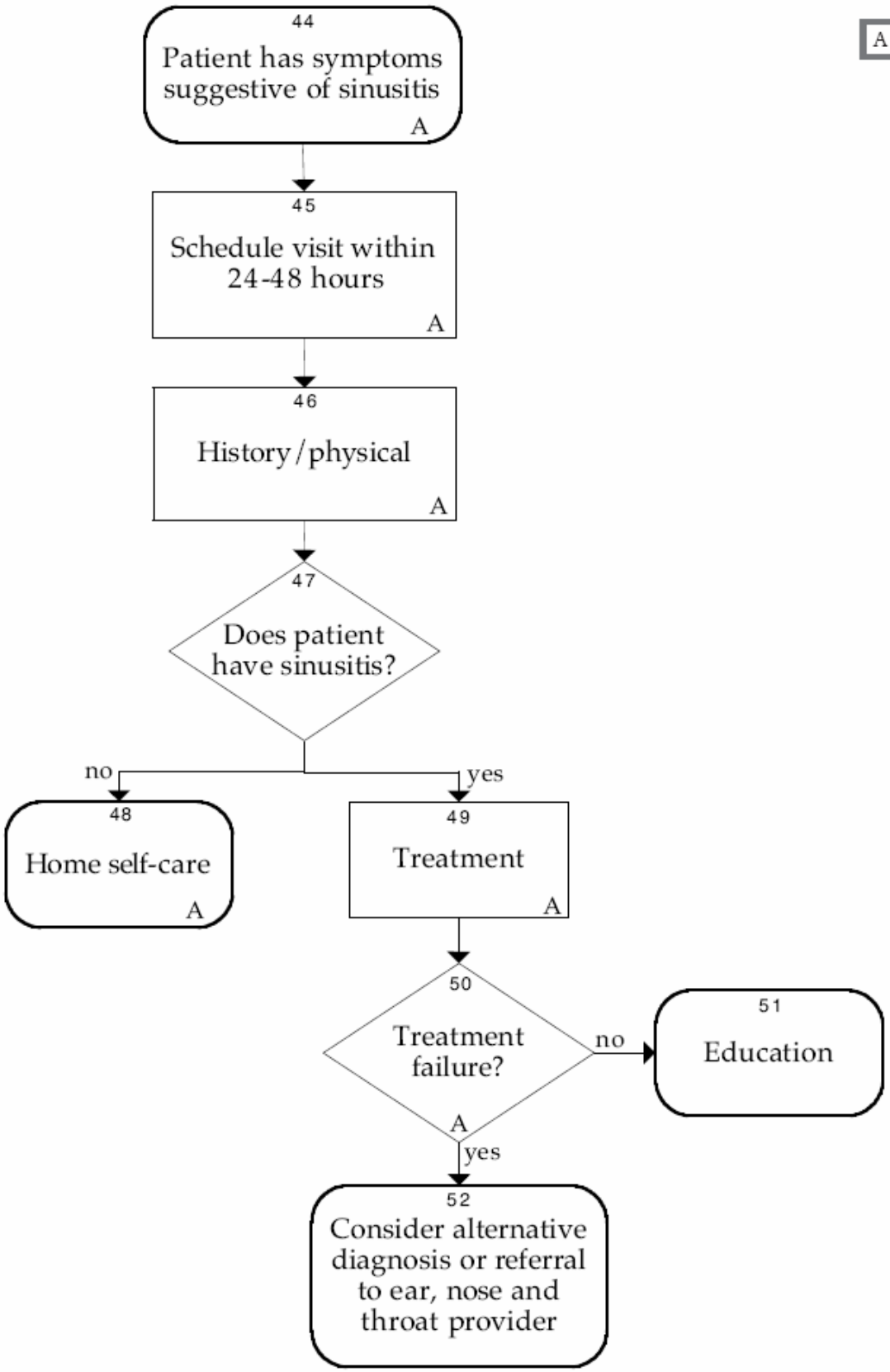
39. Non-Allergic Rhinitis
Symptoms of non-allergic rhinitis are similar to those of allergic rhinitis and may include nasal congestion, postnasal drainage, rhinorrhea and even sneezing. Examples of non-allergic rhinitis include hormonal, such as rhinitis of pregnancy; sensitivity to smells and temperature changes; non-allergic rhinitic eosinophilic syndrome; rhinitis medicamentosa from regular use of topical nasal decongestants; and atrophic rhinitis.

40. Initiate Symptomatic Treatment

41. Symptoms Improved?
If symptoms have not improved within two to six weeks, the clinician should consider issues of compliance, alternative medical treatment, or referral to a specialty provider.

42. Consider Referral to Specialist

Sinusitis Algorithm



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Diagnosis and Treatment of Respiratory Illness in Children and Adults
Sinusitis Algorithm Annotations

44. Patient Has Symptoms Suggestive of Sinusitis

45. Schedule Visit Within 24-48 Hours

An individual reporting symptoms for acute sinusitis has a reasonably high likelihood of having the disease.

46. History/Physical

Review History & Regional exam of the head and neck.

48. Home Self-Care

Patients who are in generally good health and only mildly ill may be appropriate candidates for home care/phone management of presumed acute sinusitis. Both the patient and the provider should be comfortable with home care/phone management.

49. Treatment

Nasal Steroid Spray

Intranasal corticosteroid spray may be rational but is an unproved adjunctive therapy for acute sinusitis.

Antibiotics

According to one study, the natural history of the majority of the patients with acute sinusitis is resolution without the use of antibiotics. The study was a randomized placebo-controlled trial of the treatment of acute sinusitis in the primary care setting.

50. Treatment Failure?

Partial response

Patient is symptomatically improved but not back to normal at the end of the first course of antibiotics.
An additional 10-14 days of amoxicillin 500 mg three times a day or 875 mg twice daily. **or**
Trimethoprim-sulphamethoxazor one double-strength tab twice daily x 10-14 days.

Failure or no response

Patient has little or no symptomatic improvement after finishing a 10-day course of first-line antibiotic therapy (amoxicillin or trimethoprim-sulphamethoxazor).

Failure or no response to initial antibiotic

After 10-14 days of failure of first-line antibiotic (amoxicillin or trimethoprim-sulphamethoxazor), an antibiotic that covers resistant bacteria should be prescribed.
Amoxicillin/clavulanate (Augmentin®).
or
For patients allergic to both amoxicillin and trimethoprim-sulphamethoxazor: Macrolides can be prescribed.
A cephalosporin may be considered; however, there is approximately a 10% cross-reaction between cephalosporin's and amoxicillin. A fluoroquinolone with pneumococcal coverage may also be considered.

Diagnosis and Treatment of Respiratory Illness in Children and Adults

Measurement of Efficacy of the Clinical Practice Guidelines

Three elements of this CPG (URI and Pharyngitis) are measured to gauge the efficacy of the practitioner's compliance with the Clinical Practice Guideline.

URI: The two measures are:

1) Measure:

Clinical Practice Guideline (CPG)	HEDIS® Measure	Measure
Diagnosis and Treatment of Upper Respiratory Illness and Pharyngitis in Children and Adults	Appropriate Treatment for Children with URI	Acute Nasopharyngitis (Common cold)
		URI

Detail of Performance Measure for URI Treatment

The percentage of children 3 months – 18 years who were given a diagnosis of upper respiratory infection (URI) and were **not** dispensed an antibiotic prescription on or three days after the episode date.

Measure 2

Non-HEDIS Measure	Parameters
Children and Adults with URI without antibiotics for the initial URI visit. **BUT is prescribed antibiotics on or three days after the episode date by a different practitioner or facility.**	The intake period is a 12 month window beginning July 1st of the year prior to the measurement year and ends June 30th of the measurement year.

Pharyngitis: The measure is:

2) Measure:

Clinical Practice Guideline (CPG)	HEDIS® Measure	Measure
Diagnosis and Treatment of Upper Respiratory Illness and Pharyngitis in Children and Adults	Appropriate Testing for Children with Pharyngitis	Acute pharyngitis
		Acute tonsillitis
		Streptococcal sore throat

Detail of Performance Measure for Pharyngitis Treatment

The percentage of children 2 – 18 years of age, who were diagnosed with pharyngitis, dispensed an antibiotic **and** received a group A streptococcus (strep) test for the episode. A higher rate represents better performance (i.e., appropriate testing).