Clinical practice guideline: Hoarseness (Dysphonia)

Release Date
· September 2009
Guideline Developer
· American Academy of Otolaryngology–Head and Neck Surgery Foundation
INTENDED AUDIENCE
Users
· All clinicians who are likely to diagnose and manage patients with hoarseness
Care Setting
· Any setting in which hoarseness would be identified, monitored, treated, or managed
TARGET POPULATION
Eligibility
The target patient for this guideline is anyone presenting with hoarseness (dysphonia).
Inclusion Criterion
· Hoarseness (dysphonia)
Exclusion Criterion
· History of laryngectomy (total or partial)
· Craniofacial anomalies
· Velopharyngeal insufficiency
· Dysarthria (impaired articulation)

KNOWLEDGE COMPONENTS

DEFINITIONS

RECOMMENDATION: STATEMENT 1. DIAGNOSIS

Conditional:	Clinicians should diagnose hoarseness (dysphonia) in a patient with altered voice quality, pitch, loudness, or vocal effort that impairs communication or reduces voice-related QOL {quality of life}.
	Decision Variable: patient with altered voice quality **Decision Variable:** patient with altered pitch **Decision Variable:** patient with altered loudness **Decision Variable:** patient with altered vocal effort **Decision Variable:** impairs communication **Decision Variable:** reduces voice-related QOL {quality of life} **Action:** Clinicians should diagnose hoarseness (dysphonia) **Benefit:** Identify patients who may benefit from treatment or from further investigation to identify underlying conditions that may be serious **Benefit:** promote prompt recognition and treatment **Benefit:** discourage the perception of hoarseness as a trivial condition that does not warrant attention

Risk/Harm: Potential anxiety related to diagnosis

Evidence Quality: Grade C

Recommendation Strength: Recommendation based on observational studies with a preponderance of benefit over harm

Logic: If (patient with altered voice quality OR patient with altered pitch OR patient with altered loudness OR patient with altered vocal effort) AND (impairs communication OR reduces voice-related QOL {quality of life}) Then Clinicians should diagnose hoarseness (dysphonia)

Cost: Cost: Time expended in diagnosis, documentation, and discussion

RECOMMENDATION: STATEMENT 2. MODIFYING FACTORS

Imperative: Clinicians should assess the patient with hoarseness by history and/or physical examination for factors that modify management such as one or more of the following: recent surgical procedures involving the neck or affecting the recurrent laryngeal nerve, recent endotracheal intubation, radiation treatment to the neck, a history of tobacco abuse, and occupation as a singer or vocal performer.

Directive: Clinicians should assess the patient with hoarseness by history for factors that modify management

Description: factors that modify management such as one or more of the following: recent surgical procedures involving the neck or affecting the recurrent laryngeal nerve, recent endotracheal intubation, radiation treatment to the neck, a history of tobacco use, and occupation as a singer or vocal performer

Benefit: To identify factors early in the course of management that could influence the timing of diagnostic procedures, choice of interventions, or provision of follow-up care

Risk/Harm: None

Directive: Clinicians should assess the patient with hoarseness by physical examination for factors that modify management

Description: factors that modify management such as one or more of the following: recent surgical procedures involving the neck or affecting the recurrent laryngeal nerve, recent endotracheal intubation, radiation treatment to the neck, a history of tobacco abuse, and occupation as a singer or vocal performer

Benefit: To identify factors early in the course of management that could influence the timing of diagnostic procedures, choice of interventions, or

provision of follow-up care
Risk/Harm: None
Evidence Quality: Grade C
Recommendation Strength: Recommendation based on observational studies with a preponderance of benefit over harm
Logic: If {Inclusion Criterion: Hoarseness (dysphonia) } Then Clinicians should assess the patient with hoarseness by history for factors that modify management OR Clinicians should assess the patient with hoarseness by physical examination for factors that modify management
Cost: None

RECOMMENDATION: STATEMENT 3A. LARYNGOSCOPY AND HOARSENESS

Imperative: Clinicians may perform laryngoscopy, or may refer the patient to a clinician who can visualize the larynx, at any time in a patient with hoarseness.

Directive: Clinicians may perform laryngoscopy at any time in a patient with hoarseness
Benefit: Visualization of the larynx to improve diagnostic accuracy and allow comprehensive evaluation
Risk/Harm: Risk of laryngoscopy
Risk/Harm: patient discomfort
Directive: Clinicians may refer the patient to a clinician who can visualize the larynx at any time in a patient with hoarseness
Benefit: Visualization of the larynx to improve diagnostic accuracy and allow comprehensive evaluation
Risk/Harm: Risk of laryngoscopy
Risk/Harm: patient discomfort
Evidence Quality: Grade C
Recommendation Strength: Option based on observational studies, expert opinion, and a balance of benefit and harm.
Logic: If {Inclusion Criterion: Hoarseness (dysphonia) }, Then Clinicians may perform laryngoscopy at any time OR Clinicians may refer the patient to a clinicians who can visualize the larynx at any time
Cost: Procedural expense

RECOMMENDATION: STATEMENT 3B. INDICATIONS FOR LARYNGOSCOPY

Conditional: Clinicians should visualize the patient's larynx, or refer the patient to a clinician who can visualize the larynx, when hoarseness fails to resolve by a maximum of three months after onset, or irrespective of duration if a serious underlying

cause is suspected.

Decision Variable: hoarseness fails to resolve by a maximum of three months after onset

Decision Variable: a serious underlying cause is suspected.

Description: irrespective of duration

Action: Clinicians should visualize the patient's larynx

Benefit: Avoid missed or delayed diagnosis of serious conditions in patients without additional signs or symptoms to suggest underlying disease

Benefit: permit prompt assessment of the larynx when serious concern exists

Risk/Harm: Potential for up to a three-month delay in diagnosis

Risk/Harm: procedure-related morbidity

Action: Clinicians should refer the patient to a clinician who can visualize the larynx

Benefit: avoid missed or delayed diagnosis of serious conditions in patients without additional signs or symptoms to suggest underlying disease

Benefit: permit prompt assessment of the larynx when serious concern exists

Risk/Harm: Potential for up to a three-month delay in diagnosis

Risk/Harm: procedure-related morbidity

Evidence Quality: Grade C

Recommendation Strength: Recommendation based on observational studies, expert opinion, and a preponderance of benefit over harm.

Flexibility: Intentional vagueness: The term "serious underlying concern" is subject to the discretion of the clinician. Some conditions are clearly serious, but in other patients, the seriousness of the condition is dependent on the patient. Intentional vagueness was incorporated to allow for clinical judgment in the expediency of evaluation

Logic: If hoarseness fails to resolve by a maximum of three months after onset OR a serious underlying cause is suspected. Then Clinicians should visualize the patient's larynx OR Clinicians should refer the patient to a clinician who can visualize the larynx

Cost: Procedural expense

RECOMMENDATION: STATEMENT 4. IMAGING

Conditional: Clinicians should not obtain computed tomography (CT) or magnetic resonance imaging (MRI) of the patient with a primary complaint of hoarseness prior to visualizing the larynx.

Decision Variable: patient with a primary complaint of hoarseness
Decision Variable: prior to visualizing the larynx
Action: Clinicians should not obtain computed tomography (CT)
- **Benefit:** Avoid unnecessary testing
- **Benefit:** minimize cost and adverse events
- **Benefit:** maximize the diagnostic yield of CT and MRI when indicated
- **Cost:** Cost: None
- **Risk/Harm:** Potential for delayed diagnosis

Action: Clinicians should not obtain magnetic resonance imaging (MRI)
- **Benefit:** Avoid unnecessary testing
- **Benefit:** minimize cost and adverse events
- **Benefit:** maximize the diagnostic yield of CT and MRI when indicated
- **Risk/Harm:** Potential for delayed diagnosis

Evidence Quality: Grade C
Recommendation Strength: Recommendation against imaging based on observational studies of harm, absence of evidence concerning benefit, and a preponderance of harm over benefit
Logic: If patient with a primary complaint of hoarseness AND prior to visualizing the larynx Then Clinicians should not obtain computed tomography (CT) AND Clinicians should not obtain magnetic resonance imaging (MRI)
Cost: None

RECOMMENDATION: STATEMENT 5A. ANTI-REFLUX MEDICATION AND HOARSENESS.

Conditional: Clinicians should not prescribe anti-reflux medications for patients with hoarseness without signs or symptoms of gastroesophageal reflux disease (GERD).

Decision Variable: for patients with hoarseness
Decision Variable: without signs of gastroesophageal reflux disease (GERD)
Decision Variable: without symptoms of gastroesophageal reflux disease (GERD)
Action: Clinicians should not prescribe anti-reflux medications
- **Benefit:** Avoid adverse events from unproven therapy
- **Benefit:** reduce cost
- **Benefit:** limit unnecessary treatment
- **Risk/Harm:** Potential withholding of therapy from patients who may benefit

Evidence Quality: Grade B

Recommendation Strength: Recommendation against prescribing based on randomized trials with limitations and observational studies with a preponderance of harm over benefit.
Logic: If for patients with hoarseness AND without signs of gastroesophageal reflux disease (GERD) AND without symptoms of gastroesophageal reflux disease (GERD) Then Clinicians should not prescribe anti-reflux medications
Cost: None

RECOMMENDATION: STATEMENT 5B. ANTI-REFLUX MEDICATION AND CHRONIC LARYNGITIS.

Conditional:	Clinicians may prescribe anti-reflux medication for patients with hoarseness and signs of chronic laryngitis.
	Decision Variable: patients with hoarseness **Decision Variable:** signs of chronic laryngitis **Action:** Clinicians may prescribe anti-reflux medication **Benefit:** Improved outcomes **Benefit:** promote resolution of laryngitis **Risk/Harm:** Adverse events related to anti-reflux medications **Evidence Quality:** Grade C **Recommendation Strength:** Option based on observational studies with limitations and a relative balance of benefit and harm **Logic:** If patients with hoarseness AND signs of chronic laryngitis Then Clinicians may prescribe anti-reflux medication **Cost:** Direct cost of medications

RECOMMENDATION: STATEMENT 6. CORTICOSTEROID THERAPY

Imperative:	Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness
	Directive: Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness **Benefit:** Avoid potential adverse events associated with unproven therapy **Risk/Harm:** None **Evidence Quality:** Grade B **Recommendation Strength:** Recommendation against prescribing based on randomzied trials showing adverse events and absence of clinical trials demonstrating benefits with a preponderance of harm over benefit for steroid use **Flexibility:** Intentional vagueness: Use of the word “routine” to acknowledge there may be specific situations, based on laryngoscopy results or other associated conditions, that may

justify steroid use on an individualized basis
Logic: If {Inclusion Criterion: Hoarseness (dysphonia) } Then Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness
Cost: None

RECOMMENDATION: STATEMENT 7. ANTIMICROBIAL THERAPY

Imperative: Clinicians should not routinely prescribe antibiotics to treat hoarseness.

Directive: Clinicians should not routinely prescribe antibiotics to treat hoarseness.

- **Benefit:** Avoidance of ineffective therapy with documented adverse events
- **Risk/Harm:** Potential for failing to treat bacterial, fungal, or mycobacterial causes of hoarseness

Evidence Quality: Grade A
Recommendation Strength: Strong recommendation against prescribing prescribing based on systematic reviews and randomized trials showing ineffectiveness of antibiotic therapy and a preponderance of harm over benefit
Flexibility: Intentional vagueness: The word “routine” is used in the boldface statement {clinicans should not routinely prescribe antibiotics to treat hoarseness} to discourage empiric therapy yet to acknowledge there are occasional circumstances where antibiotic use may be appropriate
Logic: If {Inclusion Criterion: Hoarseness (dysphonia) } Then Clinicians should not routinely prescribe antibiotics to treat hoarseness.

RECOMMENDATION: STATEMENT 8A. LARYNGOSCOPY PRIOR TO VOICE THERAPY

Conditional: Clinicians should visualize the larynx before prescribing voice therapy and document/communicate the results to the speech-language pathologist.

Decision Variable: before prescribing voice therapy
Action: Clinicians should visualize the larynx

- **Benefit:** Avoid delay in diagnosing laryngeal conditions not treatable with voice therapy
- **Benefit:** optimize voice therapy by allowing targeted therapy
- **Risk/Harm:** Delay in initiation of voice therapy

Action: clinicians should document/communicate the results to the speech-language pathologist

- **Benefit:** Avoid delay in diagnosing laryngeal conditions not treatable with voice therapy
- **Benefit:** optimize voice therapy by allowing targeted therapy

Risk/Harm: Delay in initiation of voice therapy
Evidence Quality: Grade C
Recommendation Strength: Recommendation based on observational studies showing benefit and a preponderance of benefit over harm
Logic: If before prescribing voice therapy Then Clinicians should visualize the larynx AND clinicians should document/communicate the results to the speech-language pathologist
Cost: Cost of the laryngoscopy and associated clinician visit

RECOMMENDATION: STATEMENT 8B. ADVOCATING FOR VOICE THERAPY

Conditional: Clinicians should advocate voice therapy for patients diagnosed with hoarseness (dysphonia) that reduces voice-related quality of life (QOL).

Decision Variable: patients diagnosed with hoarseness (dysphonia) that reduces voice-related QOL {Quality of Life}
Action: Clinicians should advocate voice therapy
Benefit: Improve voice-related QOL
Benefit: prevent relapse
Benefit: potentially prevent need for more invasive therapy
Risk/Harm: No harm reported in controlled trials
Evidence Quality: Grade A
Recommendation Strength: Strong recommendation based on systematic reviews and randomized trials with a preponderance of benefit over harm
Flexibility: Intentional vagueness: Deciding which patients will benefit from voice therapy is often determined by the voice therapist. The guideline panel elected to use a symptombased criterion to determine to which patients the treating clinician should advocate voice therapy
Logic: If patients diagnosed with hoarseness (dysphonia) that reduces voice-related QOL {Quality of Life} Then Clinicians should advocate voice therapy
Cost: Direct cost of treatment

RECOMMENDATION: STATEMENT 9. SURGERY

Conditional: Clinicians should advocate for surgery as a therapeutic option in patients with hoarseness with suspected: 1) laryngeal malignancy, 2) benign laryngeal soft tissue lesions, or 3) glottic insufficiency

Decision Variable: patients with hoarseness
Decision Variable: suspected laryngeal malignancy
Decision Variable: suspected benign laryngeal soft tissue lesions

Decision Variable: suspected glottic insufficiency
Action: Clinicians should advocate for surgery as a therapeutic option
Benefit: Potential for improved voice outcomes in carefully selected patients
Cost: Cost: None
Risk/Harm: None
Evidence Quality: Grade B
Recommendation Strength: Recommendation based on observational studies demonstrating a benefit of surgery in these conditions and a preponderance of benefit over harm
Logic: If patients with hoarseness AND (suspected laryngeal malignancy OR suspected benign laryngeal soft tissue lesions OR suspected glottic insufficiency) Then Clinicians should advocate for surgery as a therapeutic option
Cost: None

RECOMMENDATION: STATEMENT 10. BOTULINUM TOXIN

Conditional: Clinicians should prescribe, or refer the patient to a clinician who can prescribe, botulinum toxin injections for the treatment of hoarseness caused by spasmodic dysphonia

Decision Variable: for the treatment of hoarseness caused by spasmodic dysphonia
Action: Clinicians should prescribe botulinum toxin injections
Benefit: Improved voice quality and voice-related QOL {Quality of Life}
Risk/Harm: Risk of aspiration and airway obstruction
Action: Clinicians should refer the patient to a clinician who can prescribe botulinum toxin injections
Benefit: Improved voice quality and voice-related QOL {Quality of Life}
Risk/Harm: Risk of aspiration and airway obstruction
Evidence Quality: Grade B
Recommendation Strength: Recommendation based on randomized controlled trials with minor limitations and preponderance of benefit over harm.
Logic: If for the treatment of hoarseness caused by spasmodic dysphonia Then Clinicians should prescribe botulinum toxin injections OR Clinicians should refer the patient to a clinician who can prescribe botulinum toxin injections
Cost: Direct costs of treatment, time off work, and indirect costs of repeated treatments

RECOMMENDATION: STATEMENT 11. PREVENTION

Imperative: Clinicians may educate/counsel patients with hoarseness

about control/preventive measures

Directive: Clinicians may educate/counsel patients with hoarseness about control/preventive measures

Benefit: Possible prevention of hoarseness in high-risk persons

Risk/Harm: None

Evidence Quality: Grade C

Recommendation Strength: Option based on observational studies and small randomized trials of poor quality

Logic: If {Inclusion Criterion: Hoarseness (dysphonia) } Then Clinicians may educate/counsel patients with hoarseness about control/preventive measures

Cost: Cost of vocal training sessions

ALGORITHM: