Clinical practice guideline: Hoarseness (Dysphonia)

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)

RECOMMENDATIONS

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}.

IF
patient with altered voice quality
patient with altered pitch
patient with altered loudness
patient with altered vocal effort
impairs communication
reduces voice-related QOL {quality of life}

THEN
Clinicians should diagnose hoarseness (dysphonia)

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C

Evidence Quality: Grade C
Strength of Recommendation: Recommendation based on observational studies with a preponderance of benefit over harm

Reason:

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)

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.

IF

Inclusion Criterion: Hoarseness (dysphonia)

Exclusion Criterion: History of laryngectomy (total or partial) Craniofacial anomalies Velopharyngeal insufficiency Dysarthria (impaired articulation)

THEN

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

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

Evidence Quality: Grade C

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

Reason:

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.

IF

Inclusion Criterion:

· Hoarseness (dysphonia)

Exclusion Criterion: History of laryngectomy (total or partial) Craniofacial anomalies Velopharyngeal insufficiency Dysarthria (impaired articulation)

THEN

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

Evidence Quality: Grade C

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

Reason:

Logic: If {Inclusion Criterion: Hoarseness (dysphonia)}, Then Clinicians may perform laryngoscopy at any time OR Clinicians may refer the patient to a clinician 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.

**IF**
hoarseness fails to resolve by a maximum of three months after onset
a serious underlying cause is suspected.

**THEN**
Clinicians should visualize the patient’s larynx
Clinicians should refer the patient to a clinician who can visualize the larynx

Evidence Quality: Grade C

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

Reason:
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

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.

**IF**
patient with a primary complaint of hoarseness prior to visualizing the larynx

**THEN**
Clinicians should not obtain computed tomography (CT)
Clinicians should not obtain magnetic resonance imaging (MRI)

Evidence Quality: Grade C
Strength of Recommendation: Recommendation against imaging based on observational studies of harm, absence of evidence concerning benefit, and a preponderance of harm over benefit

Reason:

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)

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).

IF
for patients with hoarseness without signs of gastroesophageal reflux disease (GERD) without symptoms of gastroesophageal reflux disease (GERD)
THEN
Clinicians should not prescribe anti-reflux medications

Evidence Quality: Grade B

Strength of Recommendation: Recommendation against prescribing based on randomized trials with limitations and observational studies with a preponderance of harm over benefit.

Reason:

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

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.
| IF patients with hoarseness  
signs of chronic laryngitis | Decidable Vocab |
| Clinicians may prescribe anti-reflux medication | Executable Vocab |

**Evidence Quality:** Grade C  
**Strength of Recommendation:** Option based on observational studies with limitations and a relative balance of benefit and harm  
**Reason:**  
**Logic:** If patients with hoarseness AND signs of chronic laryngitis Then Clinicians may prescribe anti-reflux medication

---

**Recommendation**  
**STATEMENT 6. CORTICOSTEROID THERAPY**

**Imperative:** Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness

| IF  
Inclusion Criterion:  
· Hoarseness (dysphonia)  
Exclusion Criterion: History of laryngectomy (total or partial) Craniofacial anomalies Velopharyngeal insufficiency Dysarthria (impaired articulation)  
THEN  
Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness | Executable Vocab |

**Evidence Quality:** Grade B  
**Strength of Recommendation:** Recommendation against prescribing based on randomized trials showing adverse events and absence of clinical trials demonstrating benefits with a preponderance of harm over benefit for steroid use  
**Reason:**  
**Logic:** If {Inclusion Criterion: Hoarseness (dysphonia)} Then Clinicians should not routinely prescribe oral corticosteroids to treat hoarseness
Recommendation
STATEMENT 7. ANTIMICROBIAL THERAPY

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

**IF**

**Inclusion Criterion:**
- Hoarseness (dysphonia)

**Exclusion Criterion:** History of laryngectomy (total or partial) Craniofacial anomalies Velopharyngeal insufficiency Dysarthria (impaired articulation)

**THEN**

Clinicians should not routinely prescribe antibiotics to treat hoarseness.

**Evidence Quality:** Grade A

**Strength of Recommendation:** Strong recommendation against prescribing based on systematic reviews and randomized trials showing ineffectiveness of antibiotic therapy and a preponderance of harm over benefit

**Reason:**

**Logic:** If {Inclusion Criterion: Hoarseness (dysphonia)} Then Clinicians should not routinely prescribe antibiotics to treat hoarseness.

**Cost:** None
Clinicians should visualize the larynx and document/communicate the results to the speech-language pathologist.

Evidence Quality: Grade C

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

Reason:

Logic: If before prescribing voice therapy, then clinicians should visualize the larynx and document/communicate the results to the speech-language pathologist.

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).

IF
patients diagnosed with hoarseness (dysphonia) that reduces voice-related QOL {Quality of Life}
THEN
Clinicians should advocate voice therapy

Evidence Quality: Grade A

Strength of Recommendation: Strong recommendation based on systematic reviews and randomized trials with a preponderance of benefit over harm

Reason:

Logic: If patients diagnosed with hoarseness (dysphonia) that reduces voice-related QOL {Quality of Life} then clinicians should advocate voice therapy.

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

<table>
<thead>
<tr>
<th>Decidable Vocab</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF patients with hoarseness</td>
</tr>
<tr>
<td>suspected laryngeal malignancy</td>
</tr>
<tr>
<td>suspected benign laryngeal soft tissue lesions</td>
</tr>
<tr>
<td>suspected glottic insufficiency</td>
</tr>
<tr>
<td>THEN Clinicians should advocate for surgery as a therapeutic option</td>
</tr>
</tbody>
</table>

Evidence Quality: Grade B

Strength of Recommendation: Recommendation based on observational studies demonstrating a benefit of surgery in these conditions and a preponderance of benefit over harm

Reason:

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

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

<table>
<thead>
<tr>
<th>Decidable Vocab</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF for the treatment of hoarseness caused by spasmodic dysphonia</td>
</tr>
<tr>
<td>THEN Clinicians should prescribe botulinum toxin injections</td>
</tr>
<tr>
<td>Clinicians should refer the patient to a clinician who can prescribe botulinum toxin injections</td>
</tr>
</tbody>
</table>

Evidence Quality: Grade B
<table>
<thead>
<tr>
<th>Strength of Recommendation:</th>
<th>Recommendation based on randomized controlled trials with minor limitations and preponderance of benefit over harm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason:</td>
<td></td>
</tr>
<tr>
<td>Logic:</td>
<td>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</td>
</tr>
<tr>
<td>Recommendation STATEMENT 11. PREVENTION</td>
<td></td>
</tr>
<tr>
<td>Imperative:</td>
<td>Clinicians may educate/counsel patients with hoarseness about control/preventive measures</td>
</tr>
<tr>
<td>IF</td>
<td></td>
</tr>
<tr>
<td>Inclusion Criterion:</td>
<td>· Hoarseness (dysphonia)</td>
</tr>
<tr>
<td>Exclusion Criterion:</td>
<td>History of laryngectomy (total or partial) Craniofacial anomalies Velopharyngeal insufficiency Dysarthria (impaired articulation)</td>
</tr>
<tr>
<td>THEN</td>
<td>Clinicians may educate/counsel patients with hoarseness about control/preventive measures</td>
</tr>
<tr>
<td>Evidence Quality:</td>
<td>Grade C</td>
</tr>
<tr>
<td>Strength of Recommendation:</td>
<td>Option based on observational studies and small randomized trials of poor quality</td>
</tr>
<tr>
<td>Reason:</td>
<td></td>
</tr>
<tr>
<td>Logic:</td>
<td>If {Inclusion Criterion: Hoarseness (dysphonia) } Then Clinicians may educate/counsel patients with hoarseness about control/preventive measures</td>
</tr>
<tr>
<td>Cost:</td>
<td>Cost of vocal training sessions</td>
</tr>
</tbody>
</table>