

# Evaluating adherence to the American Academy of Otolaryngology – Head and Neck Surgery Choosing Wisely Guidelines

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## Abstract

### Objectives

The purpose of this study is to gauge awareness of and adherence to the American Academy of Otolaryngology – Head and Neck Surgery Choosing Wisely Guidelines at an academic tertiary care center to better understand the strengths and deficits in knowledge about otolaryngology-related practices across all specialties.

### Methods

Retrospective chart review was performed on patients seen from 2011 to 2015. Interventions and treatments were recorded to evaluate adherence to the Choosing Wisely Guidelines.

### Results

This study included 83 patients who received oral antibiotics for tympanostomy tube otorrhea, 268 patients treated with oral antibiotics for acute otitis externa, 116 patients with head CTs for sinusitis, and 102 patients with CTs/MRIs for hoarseness. No patients were found to have received head CTs for initial evaluations of sudden hearing loss. After careful chart review, subjects that received treatments that were truly noncompliant with the guidelines included: 1 patient (1%) with tympanostomy otorrhea, 3 patients (1%) with acute otitis externa, 13 patients (11%) with sinusitis, and 1 patient with dysphonia (0.25%).

### Conclusion:

The majority of physicians at this academic tertiary care center were adherent to the Choosing Wisely Guidelines, with noncompliance most prevalent in the treatment of acute rhinosinusitis.

## Introduction

Choosing Wisely is an initiative established by the American Board of Internal Medicine to provide evidence-based recommendations that will help guide clinical decision-making with the ultimate goal of improving healthcare outcomes, decreasing unnecessary and harmful interventions, and minimizing healthcare costs.

The American Academy of Otolaryngology – Head and Neck Surgery Foundation has joined this effort and generated its own list of topics for the field. It remains unknown the extent of physician awareness regarding these topics and the exact impact these guidelines have on everyday decision-making. ENT diagnoses are seen and managed by a variety of specialties, and awareness of the guidelines may vary among them.

From this study, we hope to understand the extent to which the Choosing Wisely initiative is being utilized in the field of otolaryngology amongst providers of all specialties in the Duke University Hospitals system.

## Methods and Materials

Patients were selected through the Duke Enterprise Data Unified Content Explorer (DEDUCE). Subjects were patients of all ages in the Duke University Health System who were diagnosed and treated in the period between August 1, 2011 to August 1, 2014.

Records were abstracted from 5 cohorts of patients who received the following interventions and diagnoses: 1) CT scan for sudden hearing loss, 2) Oral antibiotics for uncomplicated acute tympanostomy tube otorrhea, 3) Oral antibiotics for uncomplicated acute external otitis, 4) Imaging for uncomplicated acute rhinosinusitis, and 5) CT or MRI for dysphonia prior to examination of the larynx. Patient demographics, provider specialty (otolaryngology, medicine, primary care, surgery), practice setting (outpatient/inpatient), and type of health professional degree were collected.

Diagnoses were determined by ICD9 codes and imaging or procedures were determined by CPT codes. Patient charts were then reviewed to confirm that they have met the inclusion criteria.

Statistical analysis was conducted using Fisher exact or Chi-squared hypothesis tests with  $p \leq 0.05$  considered significant.



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American Academy of Otolaryngology – Head and Neck Surgery Foundation



**Five Things Physicians and Patients Should Question**

- 1 **Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.**  
Computed tomography scanning is expensive, exposes the patient to radiation and offers no useful information that would improve initial management. CT scanning may be appropriate in patients with focal neurologic findings, a history of trauma or chronic ear disease.
- 2 **Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**  
Oral antibiotics have significant adverse effects and do not provide adequate coverage of the bacteria that cause most episodes; in contrast, topically administered products do provide coverage for these organisms. Avoidance of oral antibiotics can reduce the spread of antibiotic resistance and the risk of opportunistic infections.
- 3 **Don't prescribe oral antibiotics for uncomplicated acute external otitis.**  
Oral antibiotics have significant adverse effects and do not provide adequate coverage of the bacteria that cause most episodes; in contrast, topically administered products do provide coverage for these organisms. Avoidance of oral antibiotics can reduce the spread of antibiotic resistance and the risk of opportunistic infections.
- 4 **Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.**  
Imaging of the paranasal sinuses, including plain film radiography, computed tomography (CT) and magnetic resonance imaging (MRI) is unnecessary in patients who meet the clinical diagnostic criteria for uncomplicated acute rhinosinusitis. Acute rhinosinusitis is defined as up to four weeks of purulent nasal drainage (anterior, posterior or both) accompanied by nasal obstruction, facial pain-pressure-fullness or both. Imaging is costly and exposes patients to radiation. Imaging may be appropriate in patients with a complication of acute rhinosinusitis, patients with comorbidities that predispose them to complications and patients in whom an alternative diagnosis is suspected.
- 5 **Don't obtain computed tomography (CT) or magnetic resonance imaging (MRI) in patients with a primary complaint of hoarseness prior to examining the larynx.**  
Examination of the larynx with mirror or fiberoptic scope is the primary method for evaluating patients with hoarseness. Imaging is unnecessary in most patients and is both costly and has potential for radiation exposure. After laryngoscopy, evidence supports the use of imaging to further evaluate 1) vocal fold paralysis, or 2) a mass or lesion of the larynx.

Figure 1: The first five AAO-HNS Choosing Wisely Guidelines

## Results

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No significant associations were found between physician specialty or medical degree and likelihood of adherence. Additionally, there was no significant difference in adherence between patients treated before the guidelines were released and after.

Table 1: Five cohorts examined for adherence to the Choosing Wisely guidelines

	Adherent	Non-adherent (%)	Total
Sudden hearing loss	--	--	0
Tympanostomy tube otorrhea	82	1 (1)	83
Acute otitis externa	265	3 (1)	268
Sinusitis	103	13 (11)	116
Hoarseness/Dysphonia	101	1 (0.25)	102

## Discussion and Conclusion

The majority of physicians at this academic tertiary care center were adherent to the Choosing Wisely Guidelines, with noncompliance most prevalent in the treatment of acute rhinosinusitis, likely due to the difficulty in accurately diagnosing sinusitis without imaging. While most physicians at this institution were compliant with the guidelines, we hypothesize that this is because they have easier access to up-to-date literature. However, further analysis of practitioners in the community might yield a higher non-adherence rate. Further studies of practice patterns in areas not affiliated with a university are needed.

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## References

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