

Incidence and Demographics in Tympanoplasty Surgery: Contemporary Epidemiologic Analysis

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INTRODUCTION

- Diseases of the middle ear, such as suppurative chronic otitis media (COM), are common in children and adults.
- COM affects more than 30 million individuals worldwide annually, leading to a health care burden of as much as \$10,000 per patient per year.
- The most frequent long-term complication in patients with COM is persistent tympanic membrane (TM) perforation and conductive hearing loss.
- These complications are surgically correctable via tympanoplasty, which is a commonly performed procedure
- The goals of tympanoplasty are to recreate a robust barrier between the canal and middle ear, as well as reestablish sound transmission to the ossicular chain in a fashion similar to the native TM.

RATIONALE

- Sparse data exist regarding the frequency and type of tympanoplasty surgery, and no recent study has evaluated relevant patient demographics in the US
- This lack of information makes understanding surgical trends over time challenging.
- It also creates difficulties for researchers attempting to justify investment in novel treatments in tympanoplasty surgical materials and methods.
- Herein, we provide a contemporary epidemiologic evaluation of tympanoplasty surgery in California, the most populous US state.

METHODS

- Retrospective analysis of healthcare cost and utilization of state ambulatory surgery and services database for California for 2010-2011, as well as from the United States Census Bureau from 2009 through 2011 was performed
- American Academy of Otolaryngology tympanoplasty codes were used (CPT 69620, 69820, 69840, 69631-5).
- Descriptive analysis was performed.

RESULTS

I. Demographic Data

- From 2010-2011, a total of 6,870 tympanoplasty procedures were performed
- Statewide incidence was 9.15 procedures per 100,000 residents per year
- Patients undergoing tympanoplasty are on average 37.0 years old (SD 22.2)
- Slight majority of patients were male (52.4%)

Figure 1: Majority of patients undergoing tympanoplasty are adults

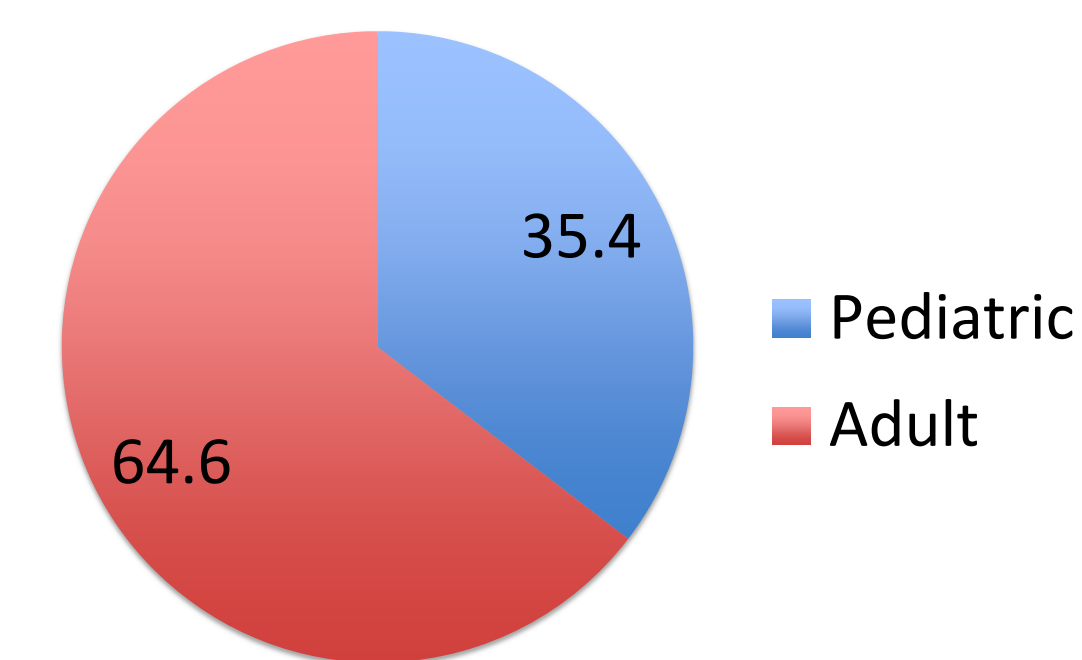
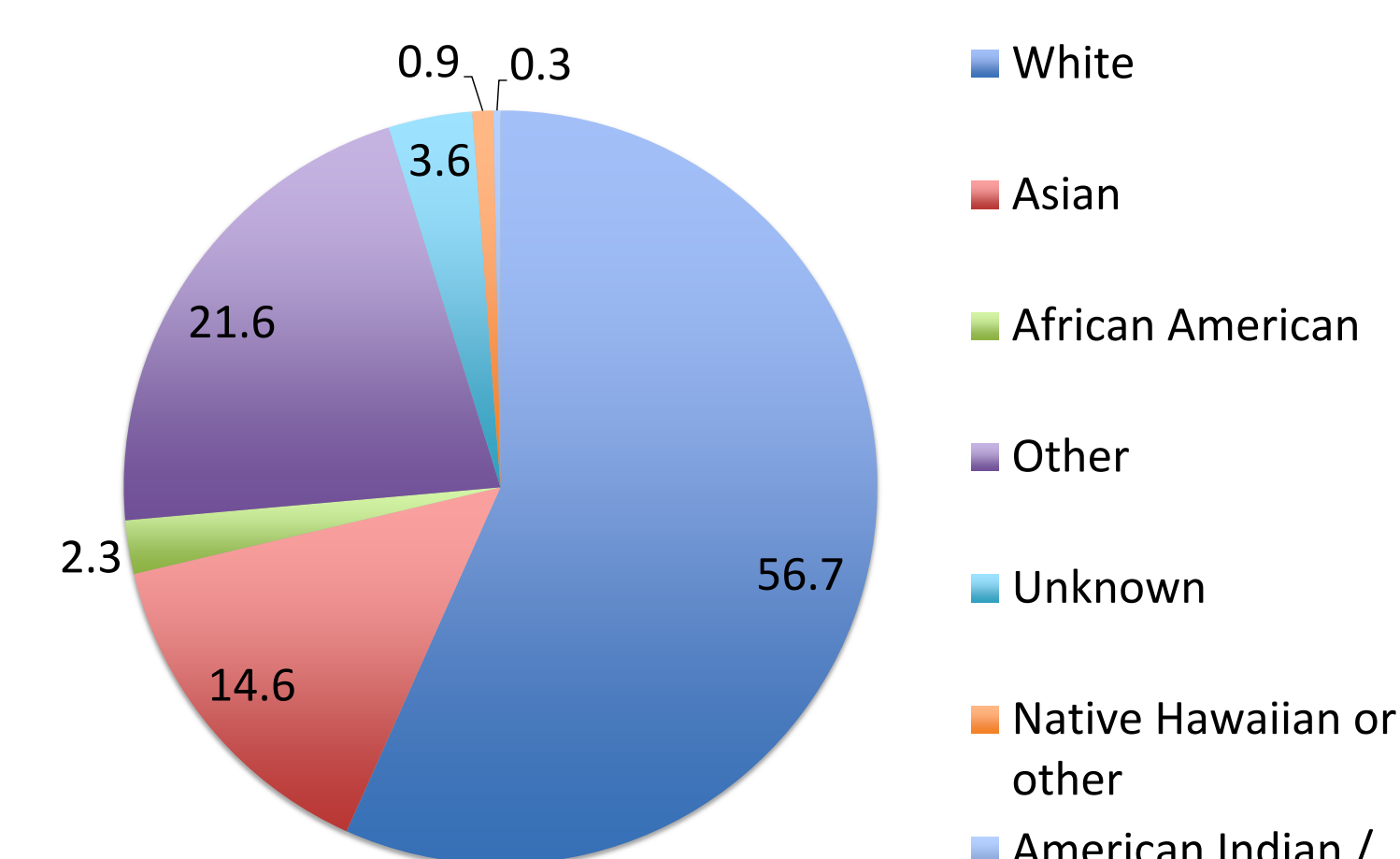


Figure 2: Majority of patients undergoing tympanoplasty are of White or Asian ethnicity

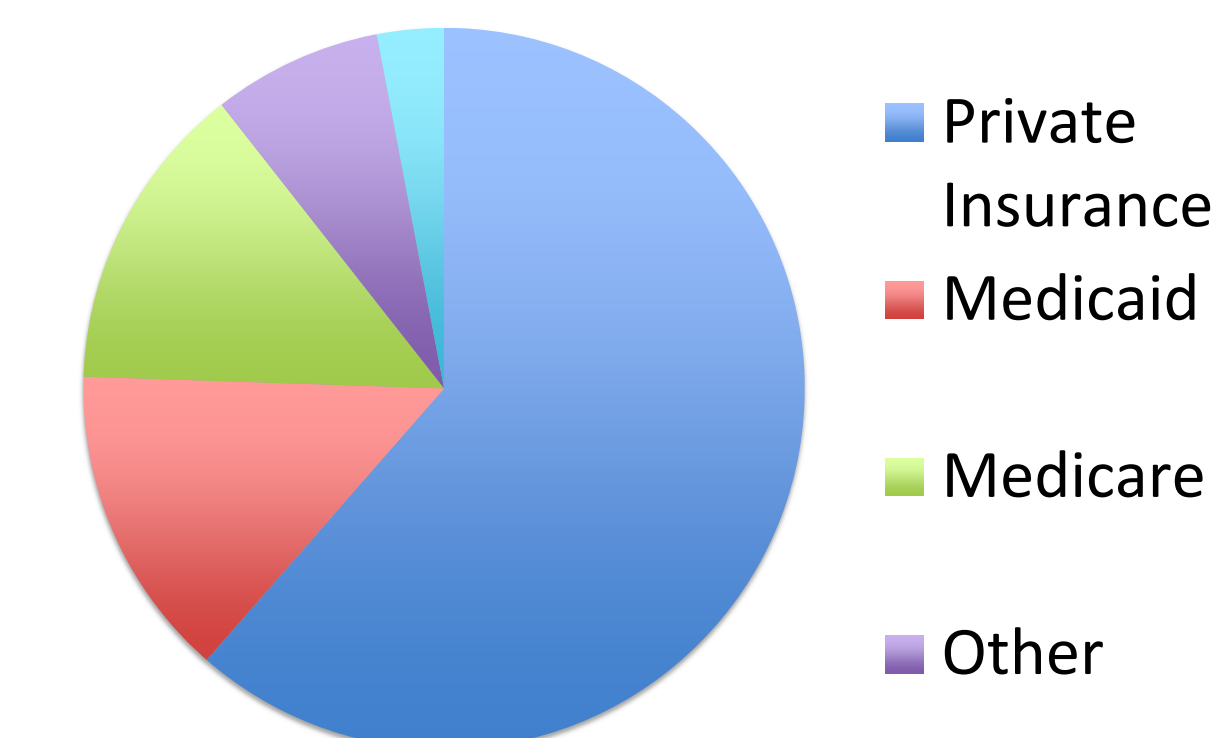


II. Insurance and Socioeconomic status

- Patients were equally distributed among income levels

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Figure 3: Majority of patients undergoing tympanoplasty are privately insured



III. Indications for tympanoplasty

- Approximately half of patients undergoing tympanoplasty have a primary diagnosis code of perforated tympanic membrane (46.7%)
- Otitis media (16.6%), and conductive hearing loss (7.58%) are the next most common surgical indications
- The majority of procedures are performed without ossiculoplasty or mastoidectomy (64.4%) and as a single procedure (53%)
- 16.7% of tympanoplasties were performed with greater than two additional procedures

CONCLUSION

- In the era of the Affordable Care Act and value based care, understanding the epidemiology of tympanoplasty surgery has important implications for provider and payor resource allocation, potential disparities in care, and surgical exposure for otolaryngology trainees.
- By reviewing data from the state ambulatory surgery and services database for tympanoplasty CPT codes, we may glean important information surrounding surgical indications and the types of patients submitted to it
- This data will serve as a helpful benchmark against which future studies can derive surgical trends.

CONTACTS

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This doesn't really make sense.
I would say that
Aaron Remenschneider, 5/3/2016