BACKGROUND

- Sudden sensorineural hearing loss (SSNHL) is an acute onset, usually unilateral, significant hearing loss that is both frightening and emotionally devastating to patients.1,2
- The etiology of SSNHL is poorly understood insults to the inner ear, and an identifiable cause is found in only 10% of cases.3
- Patients with acute sensorineural and a normal otoscope exam, or acute loss with exam findings inconsistent with middle ear pathology should be urgently referred to an otolaryngology specialist for possible SSNHL, where it can be confirmed with a formal hearing test and treated if indicated.2
- Currently, the only proven treatment is high-dose oral steroids and/or intratympanic steroid injection. However, the window for efficacy of treatment is short, making early otolaryngology specialist evaluation essential for recovering as much potential salvageable hearing ability as possible.2,3
- The quality of life burden of hearing loss is significant, and improving recognition and triage in the primary care setting would allow for more patients with SSNHL to undergo treatment, improving hearing outcomes and quality of life.
- Patients with SSNHL often first present to primary care providers, where misdiagnoses, improper treatment, and delays in care are frequent. As a result, patients often present outside of the window where treatment may be beneficial.2

Diagnosis and management of SSNHL

| Symptoms | Hearing loss over a period of less than 3 days, though usually instantaneous and unilateral. May have associated tinnitus, fullness, and/or dizziness. |
| Exam findings | Normal middle exam. Tuning forks suggest a sensorineural hearing loss, which in most cases is unilateral.5 |
| Management | Urgent referral to otolaryngology specialist. Ideally next day. This is an emergency. |
| Inconsistent findings | If diagnosis is in question, such as tuning forks not agreeing with exam findings, or there is questionable exam findings, this should be treated as an urgent situation. Urgently refer to specialist. |

PROJECT AIM

- Decrease the frequency with which patients with SSNHL are diagnosed outside of the window for treatment.

PROJECT DESIGN

1. Characterize frequency of diagnosis of SSNHL outside of the window for treatment
2. Identify the causes for delay
3. Address causes for delay (ongoing)
4. Re-measure rate of delayed presentation

CHARACTERIZING FREQUENCY AND CAUSES OF DELAY

Patients who were diagnosed with SSNHL at a tertiary referral otolaryngology clinic in West Virginia were prospectively identified over a 6 month period, and had the sequence of events from the onset of hearing loss to their presentation in the otolaryngology specialty clinic characterized in regard to timing, diagnoses, and treatments. From this data set, the following proportions were calculated 1) proportion who sought care within the 4 week window for treatment 2) proportion seen at the otolaryngology specialty clinic within the 4 week window 3) proportion inappropriately triaged or misdiagnosed prior to their eventual diagnosis.

CONCLUSION / ONGOING WORK

In West Virginia, patients with SSNHL often cannot receive treatment due to delays in diagnosis related to high rates of inappropriate recognition and triage in the primary care setting. Due to its rarity,2,4 relative to other otologic conditions with similar symptoms, and diverse settings which patients present, improving knowledge gaps and diagnosis of SSNHL is a challenging endeavor requiring far-reaching educational efforts, which are ongoing. These include:

- Informative article in the state medical journal
- Educational lectures on SSNHL in the community, particularly focusing on the otologic and tuning fork exam

REFERENCES