

UPMC LIFE
CHANGING
MEDICINE

Hearing Loss: Evaluation & Management

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The opinions and assertions presented are the private views of the author and are not to be construed as official or as necessarily reflecting the views of the American Academy of Audiology, the University of Pittsburgh Medical Center, or of the University of Pittsburgh.

Today's Learning Objectives & Agenda

Participants will be able to...

- 1) Describe the impact of untreated hearing loss on health outcomes
- 2) Identify communication strategies that can improve communication with individuals who have hearing loss



Keep an eye out for clinical pearls!



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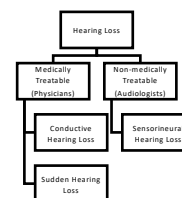
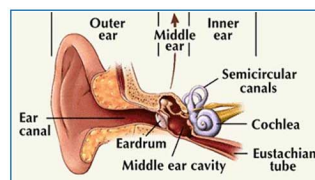
Audiology Referrals & Background Info

Audiometric testing
Relevant medications
Cerumen management tips
Hearing aids & cochlear implants

Background

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Types of Hearing Loss



Background

Background

Patient Education: Dos and Don'ts of Cerumen (Earwax)

From the American Academy of Otolaryngology-Head and Neck Surgery Clinical Practice Guidelines (Schwartz et al, 2017)

DO:

| |
|---|
| Understand cerumen (earwax) is normal. Earwax not causing symptoms or blocking the ear canal should be left alone. |
| Understand symptoms of cerumen impaction (wax blocking the ear): decreased hearing, fullness, tinnitus, and distortion/changes to hearing aid function. |
| Seek medical evaluation if you have symptoms of hearing loss, ear fullness, and ear pain if you are not certain that they are from cerumen. Otitis media (fluid behind the eardrum), otitis externa (ear canal infection), and sudden inner ear hearing loss can all masquerade as cerumen impaction. |
| Ask your provider about ways that you can treat your cerumen impaction at home. You may have certain medical or ear conditions that may make some options unsafe. |
| Seek medical attention with ear pain, drainage, or bleeding. These are not symptoms of cerumen impaction and need further evaluation. |

Background

Patient Education: Dos and Don'ts of Cerumen (Earwax)

From the American Academy of Otolaryngology-Head and Neck Surgery Clinical Practice Guidelines (Schwartz et al, 2017)

DON'T:

| |
|--|
| Overclean your ears. Excessive cleaning may irritate the ear canal, cause infection, and even increase the chances of cerumen impaction. |
| Put anything smaller than your elbow in your ear. Your mother was right! Cotton swabs, hair pins, ear keys, toothpicks . . . these can all injure your ear and may cause a laceration (cut) in the ear canal, a perforation (hole) in the eardrum, and/or dislocation of the hearing bones, leading to hearing loss, dizziness, ringing, and other symptoms of ear injury. |
| Use ear candles. There is no evidence that they remove impacted cerumen, and candling can cause serious damage to the ear canal and eardrum. |
| Ignore your symptoms if home remedies are unsuccessful. Seek medical attention if attempts at home have not resolved the problem. |
| Irrigate or try cerumen-removing/softening drops if you have had ear surgery or a perforated eardrum, unless specifically cleared to do so by your otolaryngologist (ear, nose, and throat surgeon). |
| Forget to clean your hearing aids as the manufacturer and your hearing health professional recommend. |

The audiologist's goal = matching hearing aid technology to individual patients' needs

Factors to consider:

- | | |
|---|--|
| <ul style="list-style-type: none"> Hearing loss (thresholds) Speech understanding ability Lifestyle Occupation Cognitive ability Cost Manual dexterity Tech "savviness" Tolerance of something in ear Ear health / medical issues Family support Previous HA Experience | <ul style="list-style-type: none"> Cost Appearance Phone solution Safety / alerting devices Physical challenges Assistive listening devices Ear anatomy Visual acuity Hobbies Exposure to noise Patient preference Work environment Middle ear status |
|---|--|



Background

Premium hearing aid technology isn't necessary!

Starkey 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 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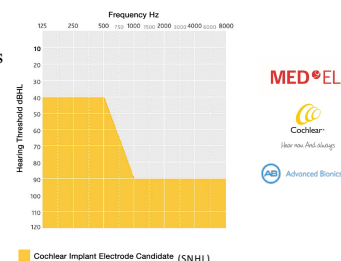
For someone who is interested in hearing aids, there are several funding options.

- Outpatient funding options for hearing aids (local to Pgh)
 - Office of Vocational Rehabilitation (school or working age)
 - Lion's Club (1 HA, \$200 donation)
 - Hear Now (2 HAs, \$250 application fee)
 - M-Lend Payment Plan
 - Free Clinics / Clinics focusing on underserved populations
 - VA Hospitals
 - In PA, State Medical Assistance for children up to age 21



Cochlear implants are an option for patients with so much hearing loss that hearing aids can't help them.

- Bypasses damaged parts of the cochlea
- Provides electrical stimulation to auditory nerve



Impact of Untreated Hearing Loss

Untreated HL = someone with a hearing loss who doesn't wear amplification

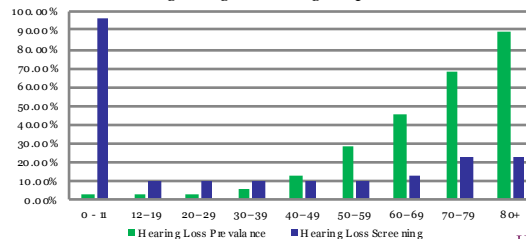
Hearing loss is a public health issue.

It's the 3rd most common chronic condition after arthritis & heart disease.

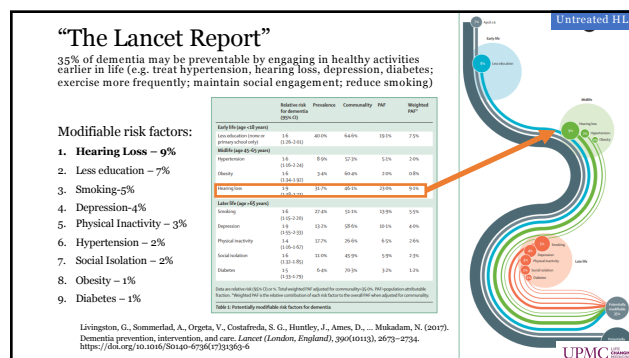
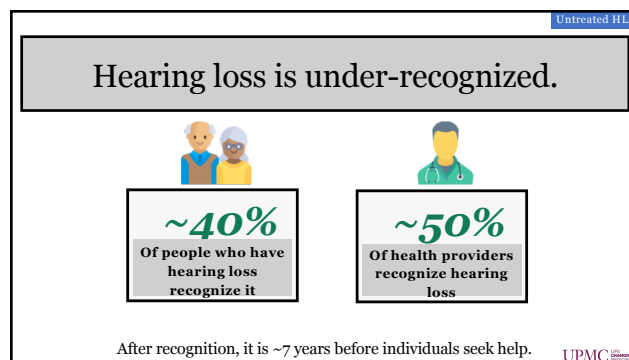
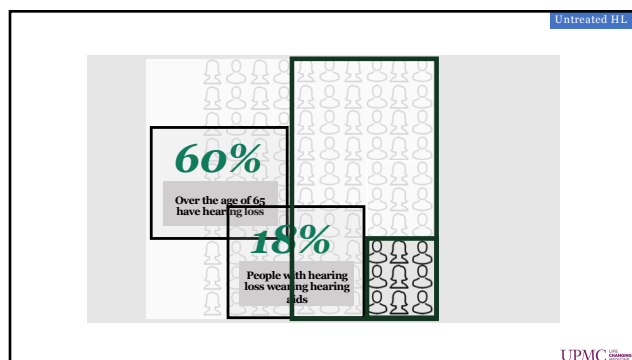
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We are very good at identifying hearing loss in babies, but we expect adults to self-identify.

Hearing testing and hearing loss prevalence



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Hearing Loss & Patient Care

Hearing is important in order to...

- ...understand care providers.
- ...participate in decision-making.
- ...stay connected to friends and family.

Patients with untreated hearing loss may be mistakenly identified as unresponsive, delirious, or cognitively impaired.

JCAHO standards clearly state that hospitals are responsible for effectively communicating with patients when providing care, treatment, and services. Specific language and references are available below.

Chapter: Provision of Care, Treatment, and Services

PC.02.01.01: The hospital *effectively communicates* with patients when providing care, treatment, and services.

Rationale: This standard emphasizes the importance of effective communication between patients and their providers of care, treatment, and services. *Effective patient-provider communication is necessary for patient safety. Research shows that patients with communication problems are at an increased risk of experiencing preventable adverse events,* and that patients with limited English proficiency are more likely to experience adverse events than English speaking patients.***

Identifying the patient's oral and written communication needs is an essential step in determining how to facilitate the exchange of information with the patient during the care process. Patients may have *hearing* or visual needs, speak or read a language other than English, experience difficulty understanding health information, or be unable to speak due to their medical condition or treatment. Additionally, some communication needs may change during the course of care. Once the patient's communication needs are identified, the hospital can determine the best way to *prevent language communication* between the patient and his or her providers in a manner that meets the patient's needs. This standard complements **RI.01.01.01, EP 3** (patient right to and need for effective communication); **RI.01.01.03, EP 2** (provision of language interpreting and translation services); and **RI.01.01.03, EP 3** (meeting needs of patients with vision, speech, hearing, or cognitive impairments).

Footnote *: Bartlett G, Elias R, Tamblin R, Clement RJ, MacGibbon B. Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *CMAJ*. 1986;135:555-556.

Footnote **: Dai C, Koss RG, Schmalz SP, Loch JM. Language proficiency and adverse events in US hospitals: A pilot study. *Int J Qual Health Care*. 19(2):60-67.

Footnote *:** Cohen AL, Rivera F, Marcuse EK, McPhillips H, Davis R. Are language barriers associated with serious medical events in hospitalized pediatric patients? *Pediatrics*. 116(3):575-579.

Elements of Performance

1) The hospital identifies the patient's oral and written communication needs, including the patient's preferred language for discussing health care. (See also **RC.02.01.01, EP 1**)

Note: Examples of communication needs include the need for personal devices such as hearing aids or glasses, language interpreters, communication boards, and translated or plain language materials.

2) The hospital communicates with the patient during the provision of care, treatment, and services in a manner that meets the patient's oral and written communication needs. (See also **RI.01.01.03, EP 1-3**)

There are a few things to keep in mind when caring for patients who have HL:

- ❖ Most patients do not accurately identify that they have a hearing loss when asked, so asking "do you have problems hearing?" is not a good plan!
- ❖ Clues that someone may have hearing loss:
 - ❖ Physical evidence of hearing loss (hearing aids, cochlear implants, etc)
 - ❖ Lack of response or inappropriate answers to questions
 - ❖ Providers or family members needing to raise their voices or speak
 - ❖ Patient repeatedly asking "What?" or for repetition
- ❖ There is currently not a cost-effective, fast, and accurate way to screen people for hearing loss.
 - ❖ UPMC is working on this!



If you suspect that your patient has a hearing loss, there are several things that you can do to improve communication during your interactions.

- ❖ Use good communication strategies
 - Ensure good lighting
 - Reduce background noise when possible
 - Give them context for the topic of conversation
 - Face-to-face communication
 - Speak slowly
 - Check for understanding
- ❖ Communicate using their preferred method
- ❖ Use a non-custom personal amplifying device
- ❖ Troubleshoot patient's personal hearing aids or refer to an audiologist



HL & Patient Care

If you have a patient that you suspect may have HL who does not have personal hearing aids or other listening devices with them, a non-custom amplifier is a great solution.

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HL & Patient Care

If you have a patient who is wearing hearing aids that are not working, there are some very simple things you could try to help them.

❖ Easy things to try:

- ❖ Replace battery (for devices that aren't rechargeable)
- ❖ Check for blocked sound channel in hearing aid

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HL & Patient Care

~~"I don't think these HAs are working – I'll put them in my patient's ears just in case."~~

Non-functional hearing aid is now an earplug (making hearing WORSE instead of better!)

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HL & Patient Care

You may consider keeping the following things in your office to help patients with hearing loss:

Hearing aid batteries (all sizes)

Non-custom amplifiers in each exam room (with headphone covers)

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How to reduce the influence of HL on verbally administered cognitive tests

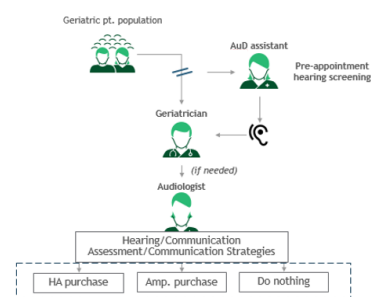
Using Cognitive Screening Tests in Audiology

Jing Shen,¹ Melinda C. Anderson,^{2*} Kathryn H. Arehart,³ and Pamela E. Souza⁴

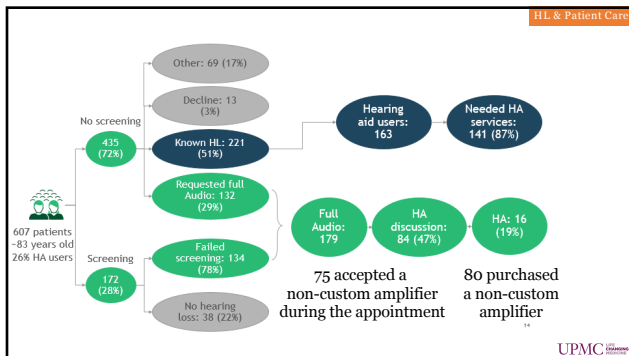
- Use **face-to-face** seating positions
- Ensure that the room is **quiet**
- Use hearing aids or a non-custom amplifier device to **improve audibility**
- If testing is done across multiple sessions, **document** the hearing devices used and **ensure that they are consistent** across sessions

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EAR: Embedded Audiology Resources



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Audiologists can customize solutions for patients based on their needs.



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Call to Action

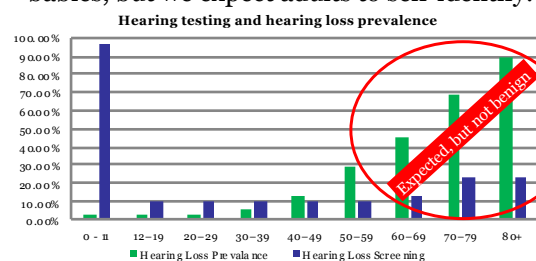
23% of adults had their hearing screened at their last physical

Compare to:

74% who get their eyes checked biennially
63% who go to the dentist annually

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We are very good at identifying hearing loss in babies, but we expect adults to self-identify.



Hearing loss is a modifiable risk factor.
If it is treated effectively...



Decrease risk of falling



Decrease cognitive decline



Decrease depression



Decrease hospitalization and readmission



Improve social participation



Decrease medical adverse events

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Take Home Messages

- ❖ Physicians, APPs, and other providers must believe:
 - Patients have hearing loss
 - Untreated hearing loss is related to inaccurate functional assessment and poor health outcomes
 - Treating the hearing loss will result in better outcomes
- ❖ Your attention to these issues can improve your ability to communicate with your patients and your patients' outcomes.
- ❖ Please team up with an audiologist who can help you to identify those with impactful hearing loss and provide customized treatment.

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