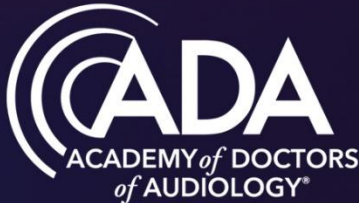
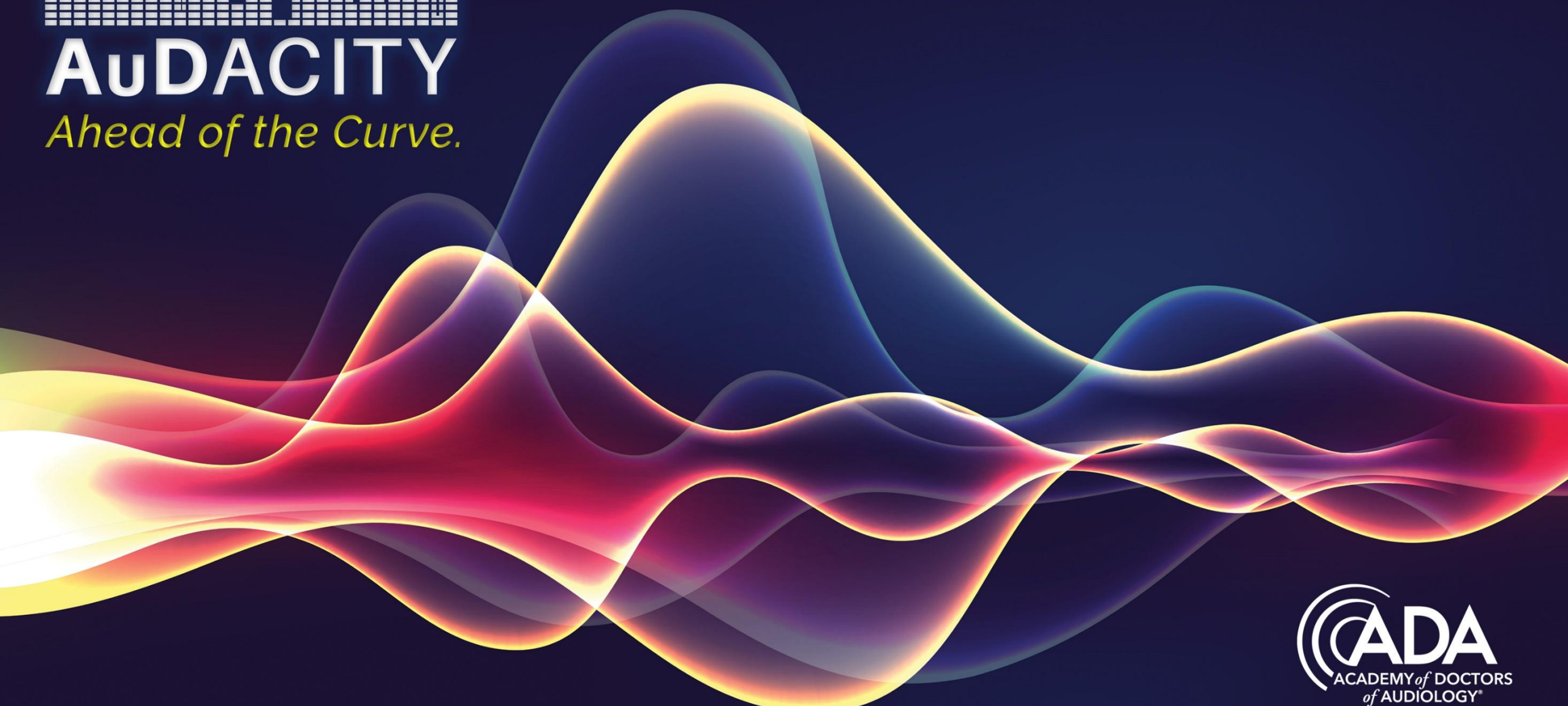




AuDACITY

Ahead of the Curve.

October 20-23, 2022
Grapevine/Dallas, Texas



Audiology Home Base Services Delivery Model

By Dr. Marshall N'Guessan

Audiology Home Base Services Delivery Model.

Goals: Improve home bound Veterans quality of life by bringing the services to their homes. Educate caretaker on hearing aids and wellness of ears as well as communication repair strategies. Capture the majority of Veterans who otherwise may not be aware that these services can be delivered to their home safely.

Prerequisites of Home Delivery services:

- 1) Develop a SOP, specifically geared to Home based Audiology Services,
- 2) Addressed safety protocols as instructed by Home Base care nurses,
- 3) Address infection controls,
- 4) Address referral protocols if indicated as well as direct services protocols,
- 5) Transportation protocols for the employees,
- 6) Service delivery model via telehealth: equipment used - Auricle, portable audiogram, syringes for ear irrigation, otolith cures, portable otoscopes,
- 7) Road map for service provision: Address who will deliver these services and how - Technicians with patients in their home & Audiologists at the clinic



Objective. The idea of providing services to State Veteran's home and Home-based care stem from the fact that audiological services in the VA have been limited to clinic settings, while those who cannot travel to the clinic due to physical/health limitation could not receive proper hearing care, rendering communication difficulties with home care base providers and family members. In addition, those Veterans who are enrolled in palliative care were left out as well, while family members needed to have their loves ones communicate their last desires. Furthermore, significant number of our Veterans, who might have clinical hearing loss and/or significant communication difficulties either were not aware our services or simply did not think that hearing is important, therefore, we have to educate primary physicians to simply Veteran contact audiology for all their hearing cares, as well have our certified CAOHC hearing technicians to be assigned to each clinic to perform basic hearing screening and send all those who fail either by pure tone air or questionnaires to audiologists to complete a comprehensive audio exam.

In addition:

As Clint McLean put it, (Hearing Journal, 2020), “both Wellness and Well-being focus on the whole person, including body, mind and spirit. McLean goes to state that Wellness emphasizes harmony or health of each of the 3 areas, while well being emphasizes satisfaction or happiness. Wellness and Well-being can also include the individual environments and situation of people that can have a profound effect on health and happiness. According to McLean : “hearing and communication play a significant role as they impact a person’s relationship, safety, occupation, and community involvement as well contributing to comorbidities like dementia, diabetes and loneliness pandemic”(hearing Journal, 2022). We believe each person must benefit from the whole health initiative regardless of where they are and their state of health. Also, Lin reported that a brain with untreated age-related hearing loss is associated with greater regional volume loss in the temporal lobe and auditory cortex compared to a brain with hearing within “normal limits”, (Lin et al, 2014, Audiology today). Also, Peele stated that as the degree of hearing loss progresses, structural differences becomes more pronounced (Peele et al, 2011, Audiology today).

This question is asked:

“Can you imagine you have a health problem in the last stage of life and you are not able to connect with your friends and family members? Then, of course, you feel lonely, stressed, or unable to hear your doctor’s recommendations for your care. Hearing care in hospice is important.

[Hearing loss](#) in hospice/retirement home patients can frequently be mixed up for [dementia](#) (madness or mental illness). The Lancet Commission on Dementia Prevention, Intervention, and Care specified 12 Potentially modifiable risks factors for dementia; early -life education, mid-life factors such as hearing loss, traumatic brain injury, hypertension, alcohol consumption or more than 21units/week, and obesity(body-mass index equal or greater than 30); and late life risks factors such as smoking, depression, physical activities, social isolation, diabetes and air pollutions(Livingston et al, 2020). If all 12 And that if all modifiable risks factors were eliminated, an estimated 40% of dementia could theoretically be eliminated or delayed globally.(Livingston et al, 2020).

It is estimated that the prevalence of hearing loss in the US is about 8.5% in the 55-64 years individuals, 25% of older adults ages 65 to 74years, and 50% of those who are 75 years and older have hearing loss of 35dB or more in the better ear(National Institutes of Deafness and other communication Disorder(NIDCD), And both hearing loss and dementia have high prevalence in older age groups and often coexist (Audiology Today, 2021).

In addition, central auditory impairment is associated with an increased risk of dementia(Panza et al, 2019; Yuan et al, 2018). Humes et al, (2012) proposed that central auditory impairment is a clinical indication of age-related or disease-related changes in the auditory systems and the brain.

But in the actual case, many of the asylum patients experience hearing impairment in this exact situation. Therefore, it becomes extremely important to know the role of hearing care in Hospice and/or in a nursing/retirement home”? (hearing journal, 2020)

Thus, our initiatives as stated above in the EPVAHCS Audiology/speech pathology, where we believe connecting the person to his/her environments, family members, health care providers, even during the last stages of their lives, as well as helping improve CNS auditory regions as well as other cross modality regions is important for the well-being our patients..

Safety/infection control protocols:

- a. Who lives in the house,
- b. Any pets? How many, what type? If so, need to be properly secured.
- c. Firearms in the home? If so, they need to be properly secured.
- d. Other weapons? If so, they need to be properly secured.
- e. Smoke detector checks? CO2 detectors.
- f. Fire extinguisher checks
- g. Overall housekeeping checks,
- h. Is the house clean/cluttered?
- i. Does the home owner have a telephone, with 911 capability?
- j. Any other hazards?
- k. Written informed consent; explained to patients the reason of visit and what procedures will be completed, in their record.
- l. Hand washing or sanitizing/gloves used as well as facial masked used at all times and between patients.
- m. Is anyone sick in the household? If so, COVID related, etc.?

How do we deliver the services to the Veterans?

At El Paso, highly trained health technicians in cerumen management, ear impressions, hearing aid repairs, accessories pairing, screening in vestibular complaints, as well as hearing screening, travel to the Veterans' home with portable audiometers, with capability to perform tympanometry, laptop with NOAH capability, Aurical for HAF, syringes and/or Earigator equipment for cerumen management, kidney buckets, otoscopes, gloves, masks etc. Once in the Veteran's homes, they connect to an audiologist via VA Video Connect (VVC) and TEAMs through the tablets, laptop and Aurical OTOCam 300 with router to examine the patients ear.

If the HHTs suspect some anomalies, if pure tone screening is indicated and/or if Veterans need their hearing aids to be adjusted or re-programmed. Screening for hearing is mainly administered via inserts or earphones. Air conduction testing at 250, 500, 1000, 2000, 3000, 4000 and 6000 Hz. The use of insert earphones is recommended if a sound-treated booth is not available. The 250 and 500 Hz test tones may be omitted if ambient noise levels exceed the ANSI standard ([ANSI, 1991](#)) or if acoustic immittance testing is done, testing below 1000hz is may be precluded.

Bone conduction should be tested (if audiologist present) from 250 to 4000 Hz or at those frequencies for which ambient noise levels are within ANSI standards ([ANSI, 1991](#)). Following bone conduction testing, the audiologist again should check carefully for collapsed canals in the event that an unexplained high frequency air-bone gap presents.

Services provided:

- 1) Otoscopy,
- 2) Ear lavage/removal via irrigation or instrumentation if indicated,
- 3) Hearing screening if indicated,
- 4) Hearing aids repair modification,
- 5) Hearing aids cleaning,
- 6) Hands-on hearing aids insertion for the care giver,
- 7) Psychosocial effects of hearing loss and effective repair strategies,
- 8) Hearing aids maintenance.
- 9) Remote programming via VA Video Connect (VVC) and TEAMs and TEAMs.

Training on care of hearing aids is important for the care giver as most of the care givers in the Veterans home or retirement homes are not familiar with hearing aids.

Hearing aids fitting/programming. Since there is no way to perform verification in their home, only programming is done without verification, via VA Video Connect (VVC) and TEAMS by the audiologist who is connected to the HHTs. Direct communication with the patients is also possible.

Same process is used if Veteran complains of “brief sensation of vertigo”, and BPPV is suspected. The audiology will guide the Veteran if he is physical able and perform the Hallpike, or the audiologist will travel to the Veteran hope to complete the procedure/treatment him/herself.

Outcomes measures for the services provided:

Coding the encounters: 92552 for PT, 92567 for tympanometry if completed, 92593/92592 for binaural/monaural HA check and V5014 for repair and V5011 for fitting, and all the rest CPT fitting codes

Hearing Loss Questionnaire

(For PCM Staff to ask Questions)

Patient Name: _____ Date of Birth: _____

Last Four: _____ Patient's Phone #: _____

HEARING RELATED QUESTIONS

- | | No | Yes |
|--|--------------------------|--------------------------|
| 1) Do you have a problem hearing over the telephone? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2) Do you ask people to repeat what they said? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3) Do people complain that you turn the TV volume up too high? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4) Do you have trouble understanding soft voices? | <input type="checkbox"/> | <input type="checkbox"/> |

Disclaimers.

- a) This is a not VHA/VA sponsored events,*
- b) The contents of this presentation is not endorsed by El Paso VA, though reviewed by the EPVHA leadership,*
- c) El Paso VAHCS does not have any financial interest in this presentation,*
- d) The presenter does not have any financial interest in this event nor did he receive any financial contribution for this event. This event is solely to explore and share ideas on how professional Audiologists in different settings, namely private sectors and VA could help patients connect to the outside worlds and their family and friends, thus mitigating the risks of isolation, anxiety and depression, whether home bound and/or cannot travel to clinic safely to receive audiological care. Occasionally, vestibular /Hallpike may be completed for those reporting positional symptoms of brief sensation of vertigo.*