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- Email customerservice@AudiologyOnline.com
Providing Care to the Oldest-Old: Considerations for the Clinician

Brian Taylor AuD and Lori Zitelli AuD

Brian Taylor’s Disclosures

- Director, Clinical Audiology, Fuel Medical
- Editor, Audiology Practices
- Editor-in-Chief, Hearing News Watch, HHTM
Lori Zitelli’s Disclosures

- Audiologist at UPMC
- Part-time lab instructor at the University of Pittsburgh
- Volunteer for the American Academy of Audiology

2018 AO Hearing & Aging Series

- Foundational Aspects of Hearing and Aging: A Research Update, Mitchell Sommers, PhD, Washington University
- Listening Effort, Fatigue and Social Isolation: Consequences of Age Related Hearing Loss, and
- A Dementia Primer for Audiologists, Barbara Weinstein, PhD, CUNY Graduate Center
Today’s Learning Outcomes

After this course, participants will be able to:

- Define the oldest-old and discuss key demographic characteristics.
- Discuss why and how to modify clinical practices to better meet the needs of aging adults.
- Provide examples of how interventional audiology is practiced outside the 4-walls of the clinic.

An Analogy
Who are the Oldest-Old?

- 85 years of age and above
- The fastest-growing segment of the total population with growth rate twice that of those 65 and over and almost 4-times that for the total population
- In the United States, this group now represents 10% of the older population and will more than triple from 5.7 million in 2010 to over 19 million by 2050

Source: Transgenerational Design Matters a private educational, research, and advocacy organization

What’s driving the increase?

- AGE DYNAMICS: The 1946-1964 baby boom
- DECLINING FERTILITY RATES - A declining share of young people within the general population causes the population’s share of older people to rise automatically.
- LONGEVITY INCREASE – Due to public health and medical advancements, there is general agreement that an increase in life expectancy will continue

Source: http://transgenerational.org/aging/demographics
Why a course on the oldest-old?

Hearing Loss Prevalence

Dementia Prevalence

van der Flier & Scheltens, J Neurol Neurosurg Psychiatry 2005;76(Suppl V):v2–v7

Age Distribution Vestibular Schwannoma
(A single medical center)

Key Statistics

- 80% or more of the Older-Old have hearing loss
- 26.5% use hearing aids
- Older adults with moderate to profound hearing loss have 59% greater odds of lower levels of physical activity compared to those older adults with normal to mild HL.


Why focus on the Oldest-Old?

- Even though the Oldest-Old are not a homogenous group, they have several unique characteristics that set them apart from “Younger Old” people.
Things to Know

- The oldest-old are more diverse in health than the younger old; they cannot all be treated the same.

- They’ve lived long enough to have acquired, on average, several specific conditions (e.g. diabetes, osteoarthritis and heart disease), a range of age-associated impairments of bodily and mental functions, and experienced the trials and satisfactions of life events.
Things to Know

- The oldest-old are more diverse in health than the younger old; they cannot all be treated the same.
- They’ve lived long enough to have acquired, on average, several specific conditions (e.g. diabetes, osteoarthritis and heart disease), a range of age-associated impairments of bodily and mental functions and the trials and satisfactions of life events.
- Significant proportions of the oldest old are not severely disabled and can look after themselves.

How do the Oldest-Old differ from other populations we see?

- More likely to have acquired other chronic medical conditions, complicating the evaluation and treatment process.
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- More likely to have acquired other chronic medical conditions, complicating the evaluation and treatment process
- These conditions often take priority over hearing loss and involve other medical professionals

- More likely to have a caregiver participating in planning daily activities
How do the Oldest-Old differ from other populations we see?

- More likely to have acquired other chronic medical conditions, complicating the evaluation and treatment process
- These conditions often take priority over hearing loss and involve other medical professionals
- More likely to have a caregiver participating in planning daily activities
- Cope with persistent and recurring health crises, thus consult with physicians/nurses more often


Consequently….

- Since social relationships influence health outcomes, the maintenance of these relationships with the Older-Old can be the difference between life and death
- Hearing acuity is a critical part of the equation and professional interventions promote meaningful social engagement and help preserve ability to function in daily life

Real World Examples

- 102 year-old woman who has outlived her friends and husband. Because her immediate family lives in other parts of the country, she depends on a couple of caregivers for interaction and support.

- 88 year old grandmother who is healthy for her age and wants to participate in several activities but is getting forgetful and contemplating a move to an assisted living center.
Promoting the Six Senses

- The Oldest-Old usually contains the frailest members of society, who are far more likely to require support from health and social services to maintain a good quality of life.
- The Six Senses approach ensures the unique needs of this Oldest-Old are more likely to be addressed by all health care providers.

Source: Mike Nolan, Age UK, www.ageuk.org.uk

Relationship-centered Care

- Rather than promoting independence, this approach recognizes people of all ages - but primarily the oldest-old - are generally interdependent and that it is the nature and quality of their relationships, not only with family and friends but also with service providers and service systems, that are of central importance.

Source: Mike Nolan, Age UK, www.ageuk.org.uk
Promoting the Six Senses

- Security: To feel safe, physically and psychologically

- Significance: To feel that who you are and what you do matter
Promoting the Six Senses

- Belonging: To feel part of a valued group, to maintain valued relationships.

Promoting the Six Senses

- Continuity: To experience consistency in care and relationships based on what matters to you.
Promoting the Six Senses

- Purpose: To be able to pursue valued goals and activities.

Achievement: To be able to realize these goals and to have your achievements recognized.
The Role of Audiology

- If the Older-Old experience these ‘senses’ in the environment in which they receive care (their own home, hospital or a care home), then their experience is significantly more likely to be positive.
- How can Audiology address these “senses?”

Clinical Considerations for the Older-Old

- Like all patients, it’s advisable to follow clinical best practices with consideration of the following “less-is-more” approach:
  - Inclusion of caregiver
  - Recommend use of non-custom amplifiers when appropriate
  - Take services to their location (home/assisted living center)
  - Focus on the “Six Senses” approach
There is no such thing as the average “oldest old” patient.

- There is a wide continuum of patients over the age of 85 in terms of:
  - Hearing, cognitive status, physical and emotional health, function, etc.
- On average, the “oldest old” experienced 6.4 concurrent chronic conditions and took 6.8 medications (Tsoi et al, 2014).

Issues Impacting a Senior’s Ability to Access Services

- Accessibility
- Affordability
- Recognition that they have hearing loss
- Physician practices
Opportunities to Reach the Oldest Old

Meet Anita:
(96 years old when she first saw an audiologist)
• Anita is a snowbird
• In Florida, March 2012: fall (broke pelvis)
• Acute rehab, then lived at home for 1 month with 24/7 care
• In Pittsburgh, August 2012: moved in Personal Care Community
  • Aide assists with dressing, bathing
  • Uses a walker
  • At the time, no UPMC audiologists available in these communities

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**Senior Living Communities**

<table>
<thead>
<tr>
<th>Independent Living</th>
<th>Personal Care</th>
<th>Assisted Living</th>
<th>Skilled Nursing/Rehab</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Self-sufficient</td>
<td>□ Support for day-to-day routines (medications, nutrition, etc.)</td>
<td>□ Similar care provided in PC settings</td>
<td>□ Residents require 24-hour nursing care and other health care services</td>
</tr>
<tr>
<td>□ Healthy</td>
<td>□ Help with personal care</td>
<td>□ Capability to care for people who require heavier care for a longer period of time</td>
<td>□ Most residents enter SNF after being discharged from hospital</td>
</tr>
<tr>
<td>□ Can independently complete ADLs</td>
<td>□ Bedroom may be shared with up to 3 people</td>
<td>□ Licensed in PA</td>
<td>□ Care is typically focused on providing rehabilitative services</td>
</tr>
<tr>
<td></td>
<td>□ No provision of acute medical care</td>
<td>□ Focus on “Aging in Place”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Preparing meals</td>
<td>□ Private living space (own kitchen &amp; bathroom)</td>
<td></td>
</tr>
</tbody>
</table>
Audiologic Clinical Process Considerations (Senior Living Communities)

- Evaluation Process
  - Portable equipment
- Recommendations
  - May not include HAs!
  - Specific situations
- Counseling approaches
  - Involve family/caregivers
- Audiologist
  - Flexibility in provision of services & scheduling
  - Good "match"
- Logistics
  - Contract
  - Relationship with staff

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**HearCARE**

<table>
<thead>
<tr>
<th>Cumberland Crossing Manor</th>
<th>UPMC Life Changing Medicine</th>
</tr>
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</table>

**HearCARE** is a new model of delivering audiology services and communication assistance to residents in UPMC skilled nursing, assisted living, personal care, and independent living facilities.

- **Available services include:**
  - Hearing evaluations (with an order from your physician)
  - Development of communication plans
  - Assistance with TV, phone, and group listening situations
  - Selection & fitting of cost-effective hearing aids & hearing assistive devices
  - Maintenance & repair of hearing aids & hearing assistive devices
  - Cerumen (earwax) removal

- **This is a free service regardless of where devices were purchased!**

Dr. Cassidy will be available in this facility on the 3rd Monday of each month to help with your hearing needs.

**Dr. Cassidy can be contacted at 724-940-5751 if you have any questions.**

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Amanda Cassidy, AuD
Licensed Audioligist
Audiology Assistant or Communication Facilitator

- Provides assistance throughout the facility to ensure that all residents are communicating adequately throughout their daily activities whether those occur in public spaces or in their private apartments.
- Improves:
  - Access to seniors
  - Provision of services to seniors

Training Program for Communication Facilitator
Palmer, Mulla, Dervin, & Costigan (2017)

| Overview of facility and program |
| Communication, communication breakdown, and its impact on QOL |
| Ear anatomy and physiology |
| Conducting otoscopic evaluation |
| Hearing loss: types and degrees |
| Communication strategies for HL |
| Hearing aids and ALDs |
| Other communication disorders in geriatric population |
| Data logging and documentation |

Reported problem list:
- Anita denies trouble with hearing

Prevalence of HL (Hearing Loss >25 dB in Speech Frequency PTA)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Prevalence of HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-74</td>
<td>45.6%</td>
</tr>
<tr>
<td>75-79</td>
<td>67.6%</td>
</tr>
<tr>
<td>80-84</td>
<td>78.2%</td>
</tr>
<tr>
<td>&gt;85</td>
<td>80.6%</td>
</tr>
</tbody>
</table>

Lin et al (2011)
- Problem List:
  - Gait abnormality 781.2
  - Unspecified essential hypertension 401.9
  - Kyphosis deformity of spine 737.10
  - Osteoporosis 733.00
  - Urinary incontinence 788.30
  - Hypothyroidism 244.9
  - Depression with anxiety 300.4
  - Anemia 285.3
  - Conjunctival hemorrhage 372.72
  - Cerumen impaction 380.4
  - Enlarged lymph node 785.6

  *Pt reported worsening HL. Otoscopy revealed occluding cerumen bilaterally*

- Plan:
  - 9. Cerumen impaction. She was referred to ENT for removal of the wax. I have given her Debrox to use to soften it up.

- Cerumen removed

- Rx HA Discussion
- Accompanied by: son

- Anita’s concerns

- Considerations

- BTEs w/ molds

Dexterity (arthritis)

Anita’s “handling” of HAs

Help from aides at PCC

- Accompanied by: son, daughter, son-in-law

- Delivery of binaural Unitron Quantum2 10 BTEs with molds
  - Button set for VC
  - Set auto TC

- Anita’s concerns

- Care & maintenance reviewed with Anita & family

- Family will review with caregivers
Ultimately, Anita felt she was unable to handle the hearing aids
  …what she was saying all along!

Son returned them
  Anita did not come to the appointment

Refund issued

Audiologic Clinical Process Considerations
(Outpatient audiology offices)

- Evaluation Process
  - Anecdotal: Poor WRS? Ischemic changes?

- Recommendations
  - May not include HAIs!
  - Combination of Medicare + Medicaid insurance likely = no coverage for HAIs

- Counseling approaches
  - Involve family/caregivers
- ER visit due to witnessed fall
  - Near syncopal episode while taking a shower
  - Claims that she felt off balance and dizzy when her caretaker was able to brace the fall.
  - Anita bumped the side of her body on the sink (no head trauma)

- Pelvic fracture

- Admitted to hospital

- If pt ID’d with HL, audiology can be consulted

- Services:
  - Diagnostic testing
  - Amplification (hearing aid services, non-custom amplifiers)

- Device brought to bedside the same day

- Audiologists take call throughout the year
27% of patients seen were age 86+

Non-Custom Amplifiers Delivered to PUH/MUH Inpatients

0 100 200 300 400 500 600

YTD
Audiologic Clinical Process Considerations (Inpatient settings)

- Evaluation Process
  - Bedside vs clinic
  - Precautions
  - Transport
- Recommendations
  - Counseling approaches
- FY 2017:
  - 1,669 admissions >85
  - ~80% of pts >85 have HL
  - Estimated 1335 pts >85 with HL
  - 154 amplifiers delivered to pts >85

- Accompanied by: son and caregiver
- Hx of known SNHL (no hearing screening completed)
- No longer has amplifier from hospital visit (???)
- Rx: use of non-custom amplifier for appointment, cerumen removal, and updated audiogram
- Anita had no interest in pursuing hearing aids
- Anita reported significant improvement in communication using amplifier and decided to purchase it for home use

Geriatric Clinic now has an audiologist on staff!
UPMC Shadyside Senior Care Center

Age of inpatients seen by UPMC Audiology Department in 2017 & 2018

37% of patients seen were age 86+

Patients Accessing Geriatric Care with Measured Impactful Hearing Loss who Report that they have Hearing Problems

The oldest old were more likely to report they have hearing problems.
Patients Offered Amplifiers for Appt in Geriatric Clinic

The oldest old were more likely to accept the offer of a non-custom amplifier during their geriatrician appointment.

Audiologic Clinical Process Considerations (Geriatric Offices)

- Evaluation Process
  - Portable equipment
  - Exam room
- Recommendations
  - Think of appointment time as well as home use
  - May not include HAs!
  - Specific solutions
- Counseling approaches
  - Involve family/caregivers
  - Physician buy-in makes a difference
- Audiologist
  - Make it work!

http://www.microaud.com/earscan3s.aspx
https://pathme.de/product-versions-sentiero-tymp-diagnostic/
Goal of hospice care: improve the quality of life for patients with serious illnesses and their families (Olson & McKeich, 2017)

Potential opportunities for collaboration with hospice and palliative care providers?
- HL is largely a silent and underappreciated problem in this population
- Hospice and palliative medicine providers believe age-related hearing loss impacts care for many of the patients they care for.
- Only 13% reported screening for HL

Smith et al., 2016

Audiologic Clinical Process Considerations (Hospice setting)

- Evaluation Process
  - Partner with Hospice providers to educate them to look for HL

- Recommendations
  - Audibility!!!
  - One indicator of the quality of hospice care is communication

- Counseling
  - Involve family/caregivers
Opportunities to Reach the Oldest Old

Outpatient audiology clinics

Senior Living Communities

Hospitals

Geriatric or Senior Care Offices

Hospice Care

Thanks for listening!

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Brian Taylor, AuD
btaylor@fuelmedical.com
References/Suggested Reading

- Improving later life: Understanding the oldest old Retrieved from www.ageuk.org.uk