An Integrative Hearing Healthcare Model for Outpatient Clinics

“Ensuring the right care, at the right time, and the right place.”

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Disclaimer

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Learning Outcomes

After this course, participants will be able to:

• Identify current hearing health trends/statistics and recent studies supporting the need to update ways to deliver hearing health to adults.

• Identify barriers to obtaining hearing health services and the reasons why change is needed to improve adult access to hearing services.

• Identify the three possible components for an integrated hearing health delivery model and technology and tools that can be used to deliver hearing health services.

Agenda

• Hearing Health Trends
• Emerging Research
• Published Reports
• Barriers to Hearing Health
• Reasons for Change
• Integrated Hearing Health Model
Hearing Loss Trends

2nd Leading Cause of ‘Years Living with Disability’
https://www.who.int/pbd/deafness/facts/en/

3rd Most Common Chronic Physical Condition
https://www.cdc.gov/niosh/topics/ohl/default.html

One of the Most Common Conditions in Older Adults
https://www.nidcd.nih.gov/health/age-related-hearing-loss

According to the CDC:

About 40 million Americans ages 20-69 have hearing loss that may be due to noise exposure.

More than 1:2 adults with hearing damage from noise do not have noisy jobs.

About 1:4 adults who report excellent to good hearing already have hearing damage.

https://cdc hearing.org/facts-about-hearing-loss/
Emerging Research

Hearing loss may increase some disabilities:

- Cognitive dysfunction
- Vestibular impairment

Greater incidence of hearing loss in populations associated with:

- Dementia
- Diabetes
- Smoking
- Depression

Common Themes

- Presence of hazardous military related noise; high levels of noise exposure; risk factors and timing of the effects of noise exposure
- Develop and promote measures to assess and improve quality of hearing health care services
- Empower consumers and patients to be more engaged in their hearing health care
- Promote hearing health care in wellness and medical visits
- Improve affordability of hearing health care
- Evaluate and implement innovative models of hearing health care to improve access, quality, and affordability

Published Reports

- Growing importance with aging population
- Nearly half of people over age 65 have hearing loss
- Number of older Americans and total persons 65 and older is expected to almost double between 2014 and 2040
- Few adults with hearing loss use hearing aids (only 20-40% of older adults with hearing loss use hearing aids)

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Hearing Loss is a Major Obstacle in Current Healthcare Delivery Models

Source: shutterstock.com

Current Hearing Health Model

- Hearing is an undervalued and ignored sense for communication.
- Hearing loss viewed as an “old age” problem.
- Hearing loss is invisible and not evident to patient in early stages.
- There is no requirement for adult hearing screening.
- Access to hearing health services is difficult, delayed, and expensive.
- PCP awareness and knowledge of audiology is limited.
Reasons to Change

- Right Time for Change
  - Boothless Hearing Technology
  - Aging Baby Boomer Population
  - Over-the-Counter (OTC) Legislation
  - Change in Payment Models (Quality not Quantity)

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Boothless Hearing Technology

- Deploy self-administered hearing screening tools (i.e., kiosks, tablets)

- Technological advancements in mobile hearing test applications
  - Easy access to individual hearing status by smart phone
  - Increased awareness and understanding of hearing health

Aging Baby Boomer Population

- The number of Americans age 65+ is projected to double in the next 25 years, from 46 million to about 72 million.
  
- Influencers of change in healthcare delivery
  - First generation to be comfortable with technology
  - E-health component to replace or enhance office-based delivery to meet complex healthcare needs
  - Interested in high-quality and individualized healthcare
  - Patients actively engaged in healthcare decision-making with providers
Over-the-Counter Legislation

- The **Over-the-Counter Hearing Aid Act** signed into law by President Trump in August of 2017
- Intended for adults with mild to moderate hearing loss
- Removes medical evaluation requirement
- OTC Hearing Aid Mandate, 2020

[https://www.govtrack.us/congress/bills/115/s670](https://www.govtrack.us/congress/bills/115/s670)

Change in Medicare Payment Models

Medicare Fee For Service payments linked to quality and alternative payment models in 2016 and 2018

- 30% FFS Linked to Quality (Cat 2-4)
- 85% Alternative Payment Methods (Cat 3-4)

2016

- 50% Alternative Payment Methods (Cat 3-4)
- 90% FFS Linked to Quality (Cat 2-4)

2018

Source: Kaufman, 2018
Healthcare Economics

Paradigm Shift in Hearing Care

“When paradigms change, the world itself changes with them.”

Kuhn (2012)
**Current versus Future**

<table>
<thead>
<tr>
<th>Current</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paternalistic Model</td>
<td>Social Model of Disability</td>
</tr>
<tr>
<td>Medical Model of Disability</td>
<td>Patient-Centered Care</td>
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<tr>
<td></td>
<td>Interventional Audiology</td>
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</table>

**Key Principles of Patient-Centered Care**

<table>
<thead>
<tr>
<th>Paternalistic</th>
<th>Patient-Centered Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>• PCP does what is medically best for the patient</td>
<td>• Value People – Listen to each other and work as a team to design and deliver services</td>
</tr>
<tr>
<td>• PCP provides the patient with treatment plan without input from the patient</td>
<td>• Life Experience - Understand the importance of a patient’s past and present experience, hopes for future</td>
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<tr>
<td></td>
<td>• Develop collaborative relationship between patient and provider</td>
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<td></td>
<td>• Organizational values are based on patient-centered care, responsive to individual needs</td>
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</table>
Shift Focus from a Medical Model to Social Model of Disability

<table>
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<th>Social Model</th>
</tr>
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<tbody>
<tr>
<td>• Individual is disabled by deficits</td>
<td>• Barriers are problems created by society</td>
</tr>
<tr>
<td>• Disabled individual is broken and needs to be fixed</td>
<td>• Disabled individual is normal and should have equal rights and access to society</td>
</tr>
<tr>
<td>• Disabled individual becomes disempowered, dependent on caregivers to make decisions</td>
<td>• Disabled individual is equal, independent, empowered, and with right to make health care decisions</td>
</tr>
</tbody>
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Interventional Audiology

• *Interventional audiology revolves around societal awareness of good hearing being central to a vibrant and active lifestyle*
  - Focus on identifying patients with hearing loss and providing them accommodations to effectively communicate with their provider
  - Results in earlier identification of hearing loss, treatment and intervention

Integrated Hearing Health Model

Integration of a Hearing Health Model Ensures...

- Effective Patient-Provider Communication (Near-term)
- Patients Receive Hearing Health Services across the Lifespan (Long-term)
- Identifies untreated hearing loss, provides assistive listening devices
- Results in more efficient, cost-effective treatment that is patient-centered
- Provides earlier diagnosis and treatment
- Prevents or mitigates hearing loss

Integrated Hearing Health Model

Will provide opportunity to:

- Identify communication limitations
- Educate on hearing loss prevention strategies
- Refer for diagnosis and treatment

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Integrated Hearing Health Model

- **Primary**: Prevention
- **Secondary**: Early Identification - Intervention
- **Tertiary**: Management and Rehabilitation

**Individual**
- Education and Counseling
- Monitoring & Counseling
- PSAPs, OTC, HAEs, Aural Rehabilitation (AR)

**Public**
- Public Health Campaign (Social Media)
- Hearing Screening at Community Events
- Aural Rehabilitation (AR) Classes

**System**
- Direct Access to Hearing Care
- Earlier Access to Hearing Services
- Earlier Access to AR Services

Adding Hearing Health to Healthcare

- DOCTOR
- TEAM
- PATIENT

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**Patient – Provider Relationship**

63% of patients list PCP as the most important source of information about where to go for hearing services (Popp, 2002)

In 1998, limited acceptance of hearing aids was due to PCP’s belief that such devices will not help treatment of SNHL (J.W. House, 1998)

Wichard (1998) found that PCPs too often gave outdated information and discouraging advice to patients who asked for information about hearing loss and hearing aids

PCP that offers negative comments regarding hearing aids will negatively influence a patient’s decision to pursue hearing services, resulting in treatment delay

Source: Survey of PCPs: Hearing Loss Identification and Counseling, Popp et al., 2002

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**PCP Knowledge of Hearing Health Services**

37% reported screening (tuning fork, whisper, audio) all patients for hearing loss on initial exam

52% did not refer patients with suspected HL to audiology

33% rated their knowledge of medical treatment for HL as fair or poor

60% rated their knowledge of hearing aids as fair or poor

Source: Survey of PCPs: Hearing Loss Identification and Counseling, Popp et al., 2002
Integrating Audiology with Primary Care: Key to Building Effective Relationships

### Visibility
- Active participation in the community
- Personal visits with PCP team
- Focus on your hearing health service and not the devices

### Authenticity
- True self first
- Do what you say, say what you mean

### Credibility
- Current with latest Science and how it relates to hearing loss
- Ability to take the latest study findings and apply it to clinical practice
- Able to communicate age-related hearing loss and its relationship to other medical conditions

Source: Forming Strategic Alliances with Primary Care Medicine: Interventional Audiology in Practice, Taylor, et al., 2014

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Increase Knowledge of Peer-Reviewed Research

|---------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|

Source: Forming Strategic Alliances with Primary Care Medicine: Interventional Audiology in Practice, Taylor, et al., 2014
Empower PCPs to Include a Hearing Health Professional on their Team

- Hearing Loss Impact on Communication
- Effective Communication Strategies
- Hearing Healthcare
- Improved Quality of Care
- Improved Treatment Outcomes

Education to PCPs and Other Medical Staff

- Hearing Check and Intervention for Patients
- Effective Communication Strategies
- Overview of PSAPS, Hearables
- Assistive Listening Devices
- Referral for Comprehensive Hearing Health Services

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Education to Patients and Family Members

Hearing Check With Boothless Audiometry
- Purpose
- Referral for comprehensive hearing health services

Effective Communication Strategies for Family and Friends

Overview of Assistive Listening Devices

Overview of PSAPS, Hearables

Overview of Comprehensive Audiology Services

Comprehensive Audiology Services

- Comprehensive hearing aid evaluation, orientation, and aural rehabilitation services
- Hearing loss prevention education, counseling, and hearing protection fittings
- Evidence-based clinical protocols (central auditory processing, vestibular evaluation and treatment, tinnitus training program)
- Auditory training exercises
- Hearing assistive technology

UNCLASSIFIED
Hearing Screening Tools and PCPs

Traditional PCP Hearing Screening Tools

- Tuning fork test
- Whisper test
- Watch test
- Finger-rub test
Hearing Screening Options: Questionnaire

Source: justaudiologystuff.com

Hearing Screening Options: Kiosk

Source: chainstorage.com
Source: justaudiologystuff.com
Hearing Screening Options:
Tablet

Hearing Screening Options:
Phone Apps

Popular screening apps:
- uHear (iPhone: free)
- Sound Check (iPhone: free)
- Play It Down (iPhone: free)
- Hearing-Check (iPhone: free)
- NOWiHEAR (Android: free)
- Test Your Hearing (Android: free)
hearScreen USA app

- Mobile application for hearing screening
- Analyzes the ability to perceive speech-in-noise
- Automatically generates a hearing score
- If test failed, referral to nearest audiologist registered in the system

Next Steps to Implement Population Hearing Health

1. Integrate audiologist into the healthcare team
2. Establish hearing health policy guideline for outpatient care
3. Establish hearing screening flow sheet
4. Develop risk assessment tracking sheet
5. Develop plan to provide individual education and counseling
6. Establish hearing health education for the medical community
7. Establish referral network of audiologists for comprehensive hearing health care
Steps for Integrating Hearing Health into PCP Clinic

- Must consider the following:
  - Who does the screening?
  - Who gets the screening?
  - What screen is used?
  - Where to conduct the screening?
  - When does the screening occur?
  - What is the referral process?

Source: Forming Strategic Alliances with Primary Care Medicine: Interventional Audiology in Practice, Taylor, et. al., 2014

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- Patients Receive Hearing Health Services across the Lifespan (Long-term)

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Continued
Integrated Hearing Health Model

CAN RESULT IN:

- Preventing ‘preventable’ hearing loss before it occurs
- Ensuring effective patient-provider communication resulting in more efficient, cost effective, better outcomes and patient-centered care
  - Mitigating (when feasible) existing hearing loss to keep it from progressing and adversely affecting patient-provider relationship and overall patient care
- Ensuring patients with untreated hearing loss are provided hearing assistive tools to allow effective patient-provider communication

Integrated Hearing Health Model

CAN RESULT IN:

- Increasing patient compliance and better overall outcomes
  - Reducing the likelihood of co-morbidities often associated with hearing loss
- Promoting healthy hearing habits for all patients, potentially reducing preventable hearing loss trends
- Improving patients overall quality of life
## Hearing Health Strategy

Increase ‘touchpoints’ with patients or community to:

1. Assess patient’s functional hearing status
2. Identify communication limitations
3. Provide Assistive Listening Device
4. Educate on effective communication strategies
5. Refer for diagnosis and treatment

## Useful Resources

- Trauma Clinic/HearCARE: Hearing and Communication Assistance for Resident Engagement, University of Pittsburgh Medical Center
- Cochlear Center for Hearing and Public Health: https://jhucochlearcenter.org/
- HEARS-Hearing Care for All: https://jhucochlearcenter.org/community.html
- https://www.oaktreeproducts.com/psap-pros-cons

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[Continued]
**Tool Kit for Integrated Audiology**

- Medifecta-Communication Skills: [https://www.medifecta.com/communication-skills.html](https://www.medifecta.com/communication-skills.html)
- Ida-institute-The Hearing Cooperation: [https://idainstitute.com/](https://idainstitute.com/)

**Summary**

- Increase patient – provider satisfaction and good quality metrics
- Direct and early access to hearing health services
- Increase hearing health knowledge and importance of hearing as a critical sense
- Earlier Intervention for mild to moderate hearing loss
- Reduce co-morbid conditions associated with untreated hearing loss
- Ensure effective patient-provider communication; reduce potential adverse outcomes related to miscommunication
- Increase overall revenue for the organization

**Improved Quality of Life Across the Lifespan**

Presented in partnership with [continued](http://continued.com)
“The ability to hear and communicate supports human connection. We should attend to it in our patients, to improve their overall quality of life.”

“What we do during a brief medical encounter has potentially broad impact on patients’ lives beyond the clinic.”

QUESTIONS?