

Interventional Audiology: When is it time to move out of the booth?

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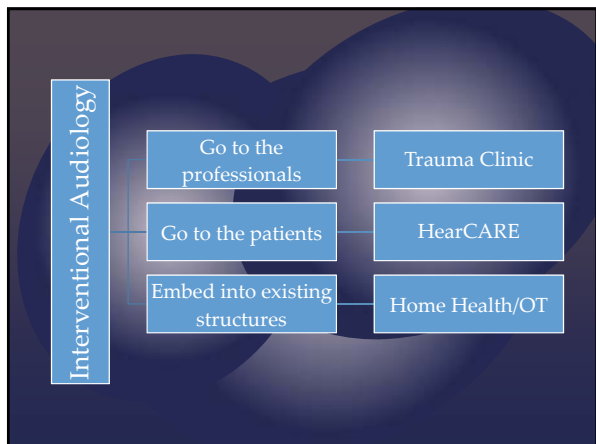
• Lori Zitelli, AuD



Thank You

Learning Objectives

- Participants will be able to describe questionnaires with psychometric data used to determine signal processing and feature selection in modern hearing aids based on patient needs.
- Participants will be able to describe the evidence currently available to support the use of signal processing and hearing aid features for specific communication challenges.
- Participants will be able to discuss cases where the evidence base does not apply to individual patients.



Interventional Audiology

Taylor & Tysse (2013)

Interventional Medicine

- Increased costs of healthcare
- Focus on *preventing illnesses*

Interventional Audiology

- Goal: Minimize impairment
- Goal: Maximize Function

Targeting patients whose primary concern may not be "hearing".

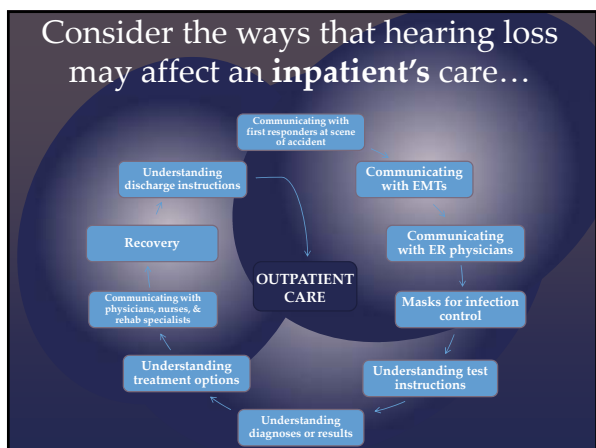
Interventional Audiology

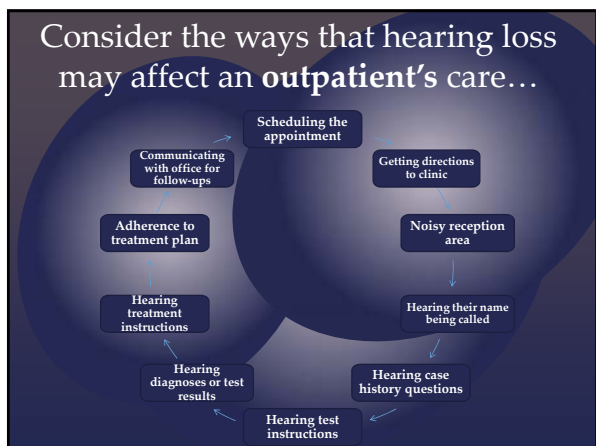
Taylor & Tysoe (2013)

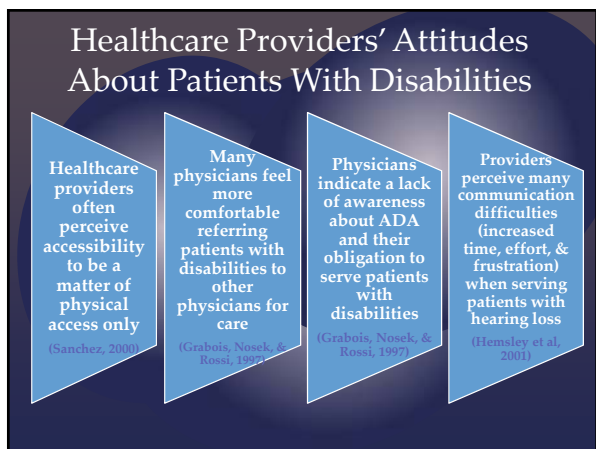
Why focus on earlier treatments for hearing loss?	Prevention, early detection, & evidence-based treatment result in:
Hearing loss interferes with a patient's ability to be treated for other medical conditions Hearing loss may accelerate some disabilities (cognitive dysfunction, etc)	Improved quality of care Patient compliance Improved outcomes Reduced overall cost of care

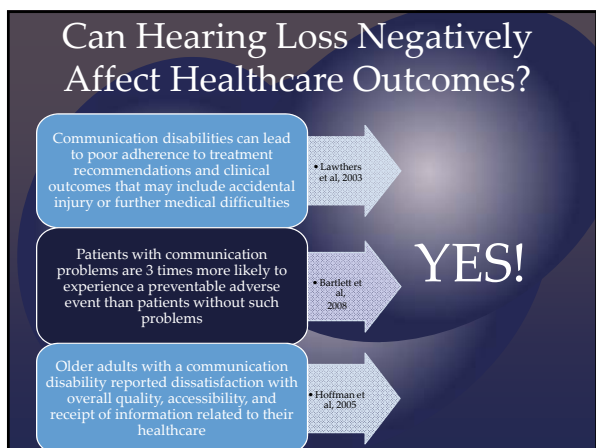
Impact of Untreated HL & Poor Communication on Healthcare

- Inpatient & Outpatient Care
- Healthcare Providers' Attitudes
- Does Hearing Matter?










Resurgence of Interdisciplinary Healthcare

(Baldwin, 1996)

- Development of interdisciplinary practice in the USA
 - Phases I (1940s) – VII (emerging)
- Why the resurgence now?
 - Declining availability of PCPs
 - Increasing number of patients w/o health insurance
 - Rising costs of healthcare
 - TQM / CQI



Interventional Audiology in the UPMC system

- *Existing:* Trauma Clinic
- *Emerging:* HearCARE: Hearing and Communication Assistance for Resident Engagement
- *Future:* Home Health/OT?



UPMC Falk Trauma Clinic

History of the UPMC Falk Trauma Clinic

- Has existed for years as a way for the Trauma Dept to follow-up with patients who have been discharged
- January 2014



Members of the Falk Post-Trauma Clinic Team

Audiology	Speech-Language Pathology	Physical Therapy	Occupational Therapy	Nutrition
Rehabilitation Counseling	Nursing	Medical Assistants	APPs	Administration



Factors Affecting Success of Interprofessional Teamwork

- **Size of the team** (Poulton & West, 1999) → small = effective
- **Composition of the team** (Borrill et al, 2000) → diversity = effectiveness
- **Leadership** (Field & West, 1995) → necessary for decision making
- **Stability of the team** (Cashman et al, 2004) → full time staff = effective
- **Organizational support** (Borrill et al, 2000) → predictor of success
- **Regular team meetings** (Rutherford & McArthur, 2004) → improves communication
- **Interpersonal relationships** (Molyneux, 2001) → necessary for effective teamwork
- **Team goals** (Poulton & West, 1999) → necessary for effective teamwork
- **Understanding professional roles** (MacDonald et al, 2010) → better collaborative effort
- **Audit/evaluation** (Field & West, 1995) → makes team feel valued

Ideality vs. Reality

Ideally, the UPMC Falk Trauma Clinic...	...Really, the UPMC Falk Trauma Clinic...
...has a small group of people.	...has 6 rehab professionals, MAs, APPs, & 1 leader
...is occupationally diverse.	...represents 9 professions.
...has established a clear leader.	...’s leader is a registered nurse
...has members who are consistently present.	...has 1-2 members from each profession who are consistently present.
...is supported by their organization.	...is supported by UPMC & Pitt.
...holds regular team meetings.	...meets 2 times per week.
...is comprised of members who enjoy working together.	...is comprised of members who enjoy working together!
...has established mutual goals.	...’s goal is to use APPs/clinicians to consolidate rehab resources & facilitate a speedy recovery.
...has a clear understanding of each member’s role.	...’s members each contribute something unique & specific to the group.
...has a way of evaluating their performance.	...seeks patient feedback. Also, we are working with the Health Policy Institute to track outcomes.

- ### Barriers to Effective Interdisciplinary Education
- (Baldwin, 1996)
- Limitations of curriculum (timing)
 - Lack of interdisciplinary role models
 - Limitations of traditional model of professional education
 - Profession & disciplinary “turf-guarding”
 - Certification & accreditation requirements
 - Administrative resistance
 - Difficulty matching schedule & skill level of students
 - Initial expense of new programs

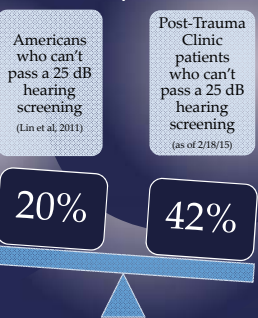
Can UPMC’s Falk Trauma Clinic be an effective teaching tool?

Barrier	Does our Trauma Clinic overcome
Limitation of curriculum (timing)	Held during clinic time, not class time.
Lack of interdisciplinary role models	Several clinicians who are excellent role models
Limitations of traditional model of professional education	Students are not required to memorize or recite information, but synthesize & act.
Profession & disciplinary “turf guarding”	Disciplines work together to achieve highest quality of care.
Certification & accreditation requirements	APPs/clinicians are not constrained by accreditation requirements in clinic.
Administrative resistance	No additional work required by University Administrative personnel.
Difficulty matching schedule & skill level	3 rd year AuD students have enough experience & No expense to the University.
Initial expense of new programs	knowledge to appreciate higher levels of learning.

Interventional Audiology

- GOALS FOR TRAUMA CLINIC:
- Intervening ON the day of clinic
- Referring for help AFTER the day of clinic
- Helping future patients BEFORE the day of clinic
- Preventing FUTURE trauma
- Promoting AWARENESS of our services

Trauma Clinic Data: Pass/Fail



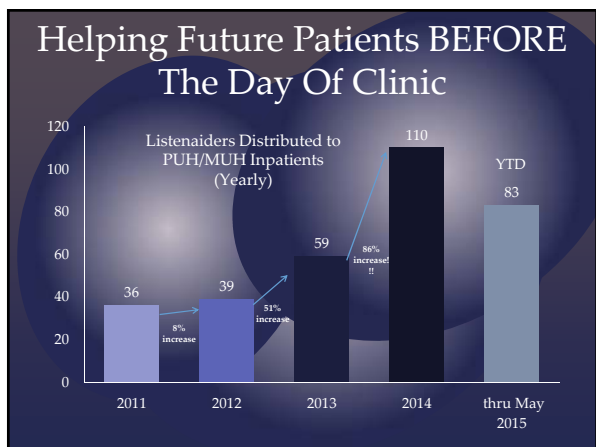
Intervening ON The Day Of Clinic

- Intervention options:
- Hearing screen
 - Inexpensive amplifier
 - Repair personal hearing aid
 - Instruction to patient, family and staff on communication strategies

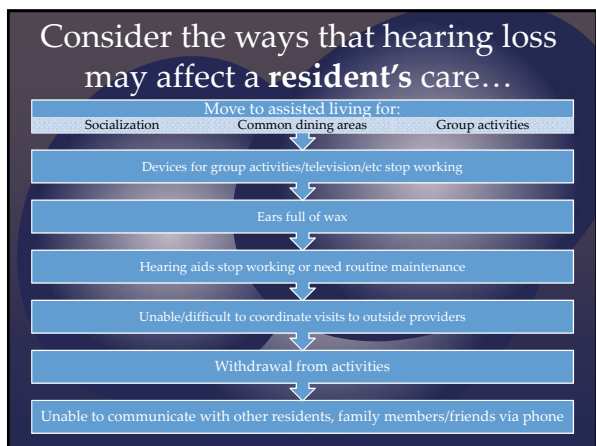
Multifactorial Risk Assessment

Weinstein (2013)

Health Condition	Yes	No
1. Do you smoke cigarettes?	1	0
2. Do you or a family member believe that you have difficulty hearing or understanding?	1	0
3. Have you been told that you now have diabetes?	1	0
4. Have you been told that you have cardiovascular disease at this time?	1	0
5. Have you been told that you now have arthritis?	1	0
6. Are you taking aminoglycoside antibiotics, cisplatin, an anti-inflammatory agent, or a loop diuretic?	1	0
7. Have you had a fall within the past year?	1	0
8. Have you been told that you have low vision or blindness?	1	0
9. Have you been told that you are suffering from depression?	1	0
TOTAL SCORE:		



HearCARE: Hearing and Communication for Resident Engagement



Creation of a new position: Communication Facilitator

Non-audiologist (cost effective)
Internal training program
Daily presence in assisted living facility

- meals
- assistance with personal and group televisions
- group activities
- device maintenance

