



Patient-centered management of hearing
loss: Learning from the past

Advances in Audiology - Tomorrow's
Solutions for Today's Challenges

Joseph J. Montano, Ed.D.
Associate Professor of Audiology
in Clinical Otolaryngology



Weill Cornell Medical College

┌ NewYork-Presbyterian Hospital
└ Weill Cornell Medical Center

Help

The Beatles



**When I was younger so much
younger than today
Never need anybody's help in
any way**



**And now my life has changed in
oh so many ways
My independence seems to
vanish in the haze**

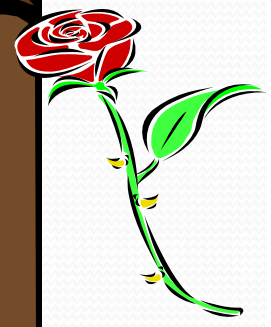
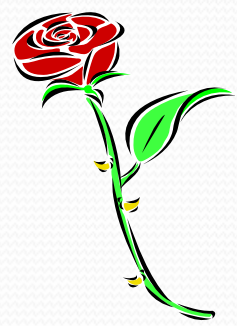


Who are our older adults? This?

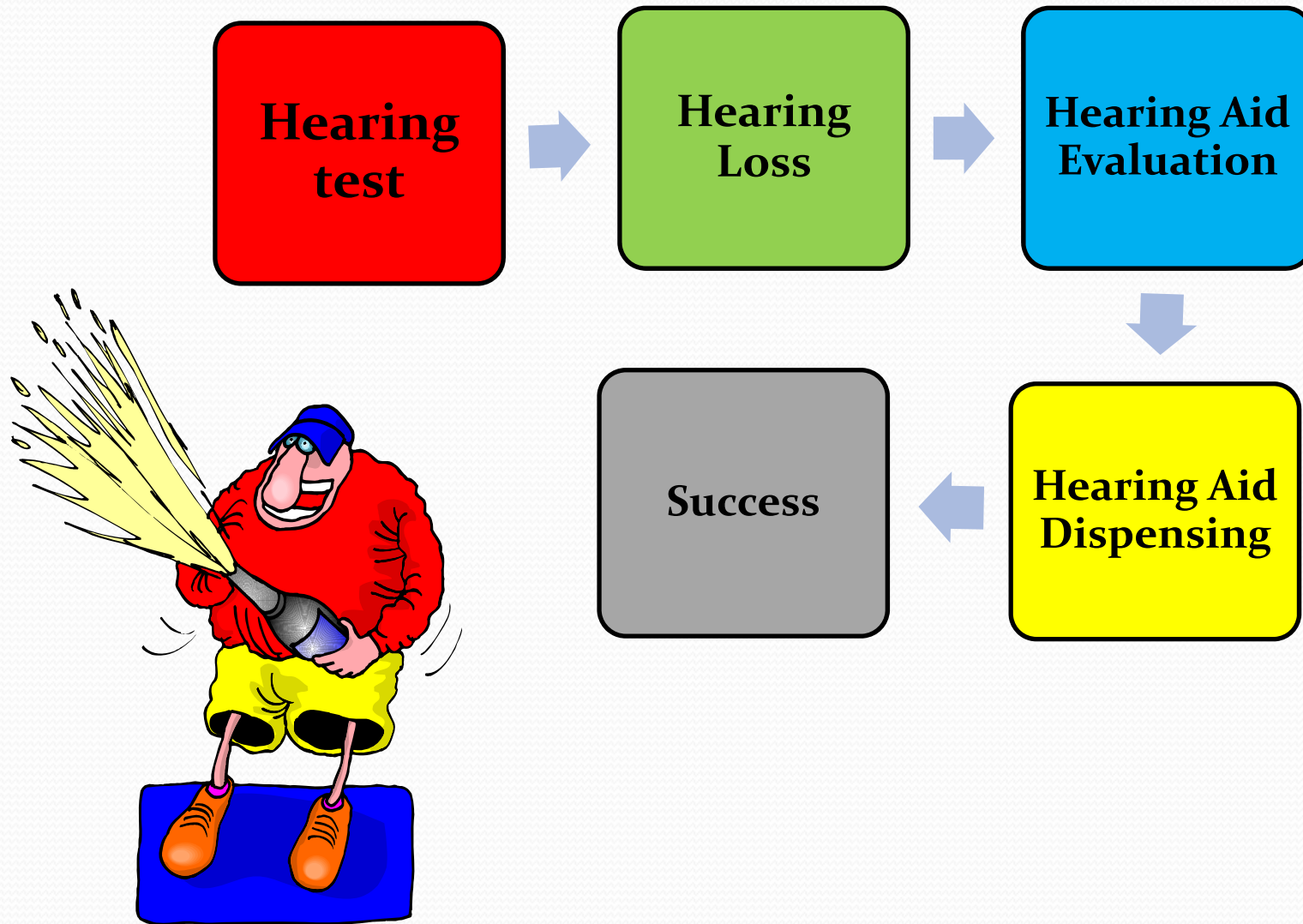




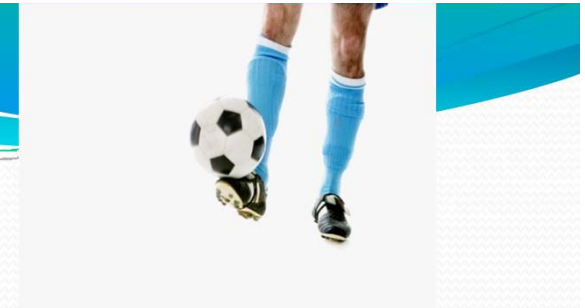
I had a dream 



Management of Hearing Loss



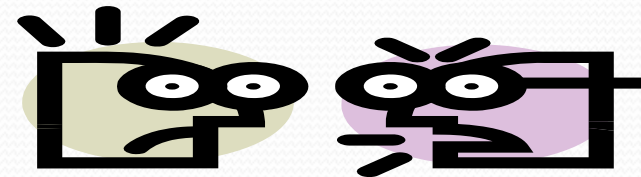
Reality



I don't need a hearing aid. I can't hear when I am at the Yankee game

I only wear it when I need to.....since I don't need to...I don't wear it.

This thing picks up too much noise

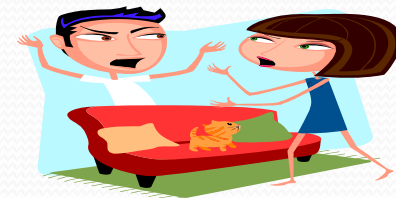


I'm doing this for my wife



I can hear I just can't understand

Do you have one that's invisible



How Do We Deal with the Reality of Hearing Loss

- **Multiple sensory changes**
 - Hearing, sight, touch
- **Co-existing conditions**
 - Diabetes
 - Heart Disease
 - Cognitive Changes
- **Financial Implications**
 - Fixed income
 - Hearing aid delivery system

Hearing Aid Delivery

- **Hearing health care providers**
 - **Audiologists, Hearing Aid Specialists, Physicians**
- **Insurance companies as dispensers**
- **Big box stores**
 - **WalMart**
 - **Costco**
- **On-line sales**

What do we have to offer?





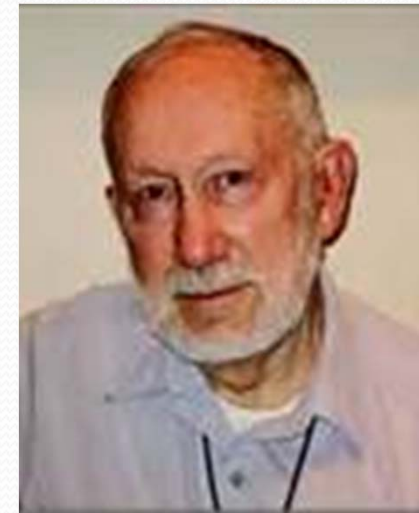
Military origins



FIGURE 18.—Fitting a hearing aid.



FIGURE 48.—A neuropsychiatric social work technician conducts a group therapy session, under supervision of the neuropsychiatrist, with U.S. disciplinary barracks prisoners.



Audiology Evolution

Ross, 1997, Bergman 2002

Military origins of Audiology

- Aural rehabilitation
- Assessment
- Hearing aid fittings
- Lipreading/auditory training
- Speech correction

Major emphasis on Aural Rehabilitation

Definitions of AR

- **Abundance of definitions/ vary significantly**
- **Some stress activities associated with rehabilitation, others focus attention on reduction of associated disabilities (Gagne and Jennings, 2009)**
- **Shift from traditional procedural AR to services designed to address emotional and social aspects**

ASHA, 1984

- **Position statement discussed the definition of and competencies for aural rehabilitation**
- **Paper revisited the 1974 ASHA Legislative Council Resolution that reported the audiologist as the primary provider of aural rehabilitation services and their role in the supervision of such services.**
- **However, in practice it was felt that the SLP was providing a significant proportion of AR**
- **New definition was developed**



ASHA 1984 Statement

AR refers to services and procedures for facilitating adequate receptive and expressive communication in individuals with hearing impairment . These services and procedures are intended for those persons who demonstrate a loss of hearing sensitivity or function in communicative situations as if they possess a loss of hearing sensitivity.



**“Audiologic rehabilitation is
audiology”**

Special Interest Division 7

Erdman, 2000

- **“Ultimate goal of rehabilitative audiology is to facilitate adjustment to the auditory and non-auditory consequences of hearing impairment”**
- **Shifting emphasis from procedure-specific to more functional driven descriptors**

Impact of the WHO on the definition of AR

- Both 1980 and 2001 versions of the WHO ICIDH and ICF have been instrumental in defining the role of AR
- Gagné, 1998, “eliminate or reduce the situations of handicap experienced by individuals who have a hearing impairment and by persons with normal hearing who interact with those individuals.”



International Classification of Function 2001

- Activities and Participations
- Activity limitation and participation restriction

What a person does or can do



**Health Condition
Impairment
Activity Limitation**

**Participation
Restriction**

**Aging
Hearing loss
Use of the telephone
Hearing the
television
Restriction in family
activities
Participation in
church activities**



Contextual Factors

- **Contextual factors represent the complete background of an individual's life and living. They include environmental factors and personal factors that may have an impact on the individual with a health condition.**
- **Emphasizes: Environment and Personal factors**



Individual lifestyles and behaviors have gained increasing focus in the effort to manage current public health challenges (WHO 2012)



ASHA 2001

“Audiologic/aural rehabilitation (AR) is an ecological interactive process that facilitates one’s ability to minimize or prevent the limitations and restrictions that auditory dysfunctions can impose on well-being and communication, including interpersonal, psycho-social, educational and vocational functioning.”

PARTICIPATION

Activities

Environment

Self

Management

Patient Centered

PARTNERSHIPS

S
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AR

Montano 2013

AR is a person-centered approach to assessment and management of hearing loss that encourages the creation of a therapeutic environment conducive to a shared decision process necessary to explore and reduce the impact of hearing loss on communication, activities and participations. In order to achieve this, the audiologist must be mindful of the factors that influence a person's sense of being including but not limited to : communication partnerships, environmental conditions, concurrent chronic or acute health conditions and readiness for self management of hearing loss.

Academy of Rehabilitative Audiology

The Best Kept Secret in Audiology





Models of Audiology Practice

- Biomedical Model
- Biopsychosocial Model

BioMedical Model to Biopsychosocial

Model (Erdman, Wark, Montano, 1994; Erdman 2009)

Biomedical Model


- Top Down Communication
- Authoritarian
- Clinician determines dx/tx
- Clinician does something to the patient
- Diseased focused
- Clinician knows what's right for the patient
- May be necessary in emergency situations
- Curative

Biopsychosocial

- Horizontal communication
- Interactive, facilitative
- Patients identified problems and decides treatment with clinical
- Patient focused
- Patients' needs and perceptions determine goals
- Ideal for chronic illness requiring adherence to tx regimes
- Empowering

Key Aspects of the biopsychosocial approach

- **A view of the patient as a whole**
- **A triadic process of observation, introspection and dialogue through which the patient's subjective experiences become scientific data**
- **A clinical interview in which the patient's narrative is allowed to unfold without interruptions**

- 
- **A practitioner-patient relationship that fosters shared and complementary communication and responsibilities.**
 - **A mutual understanding of the patient's narrative that ensures inclusion of his or her perceptions and experiences**
 - **Patient engagement in the treatment process**

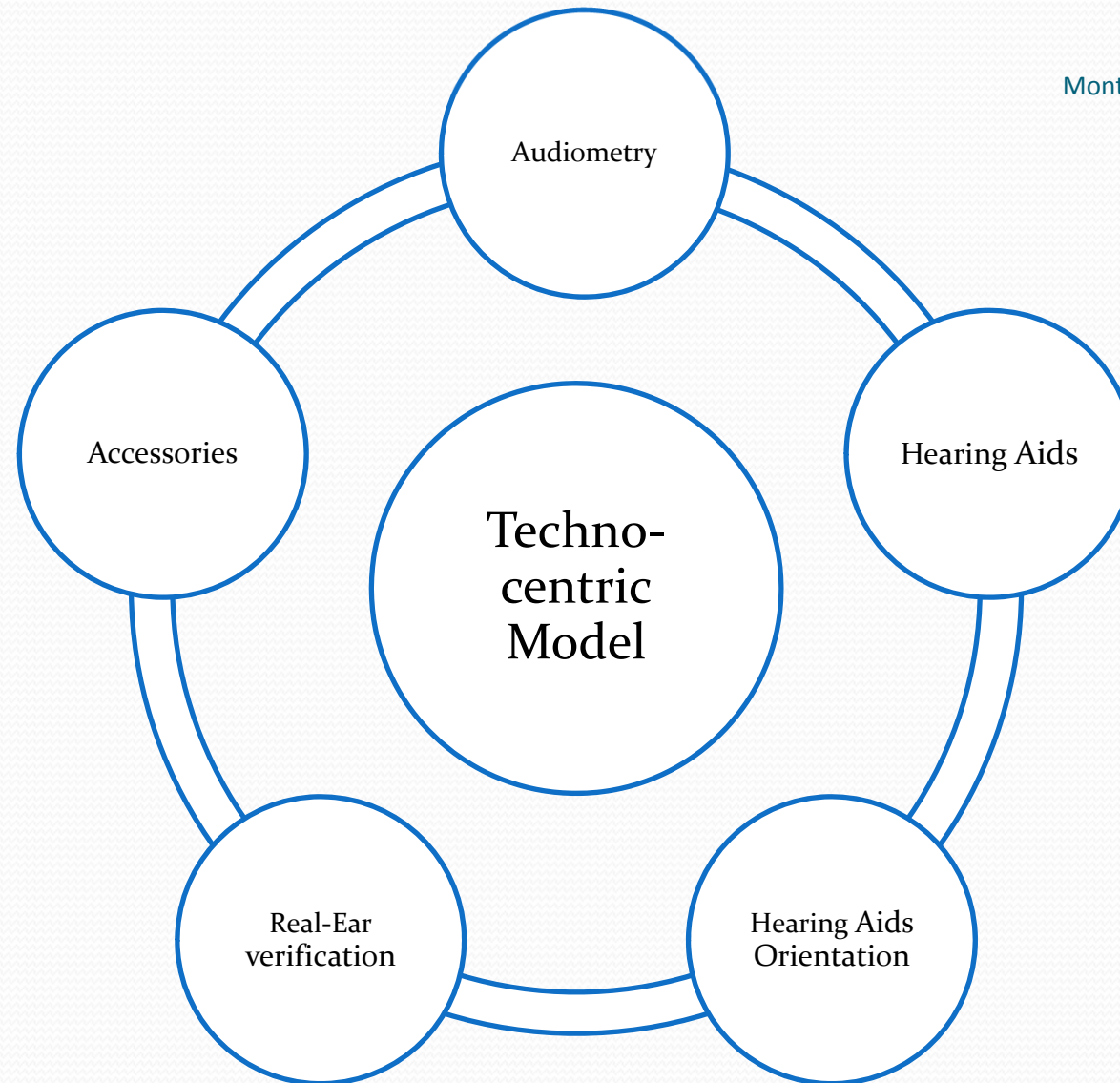


Biomedical or Biopsychosocial

Techno-centric Vs Patient-centered

Techno-centric Model

Montano 2011





ReSound



PHONAK


life is on

WIDEX[®]
HIGH DEFINITION HEARING



Hearing aid evolution







Hearing aid technology is more sophisticated than ever, yet, hearing aid uptake has not changed and satisfaction has still not achieved desired levels.



Techno-Centric

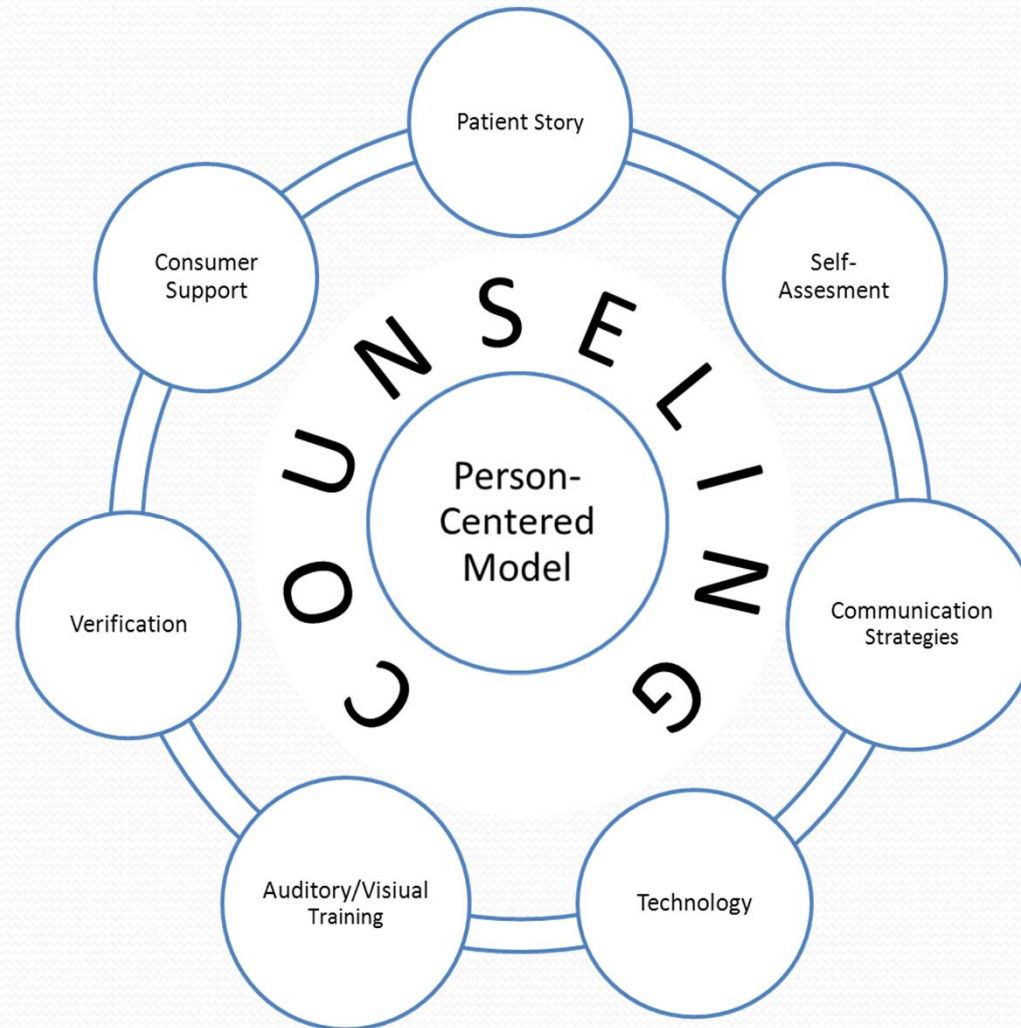
- Emphasis on the technological components of practice
- Consistent with the medical model

- 
- Audiological Assessment
 - Focus is on the audiogram
 - Nature and degree of hearing loss
 - Focus on the disease or impairment
 - Hearing Aids
 - Levels of technology
 - Hearing aid function, options, mechanics,
 - Hearing Aid Orientation
 - Teaching patient how to use the instruments
 - Care and Maintenance

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- Real-ear verification
 - Prescriptive and Objective
 - Accessories
 - Bluetooth
 - Remote controls

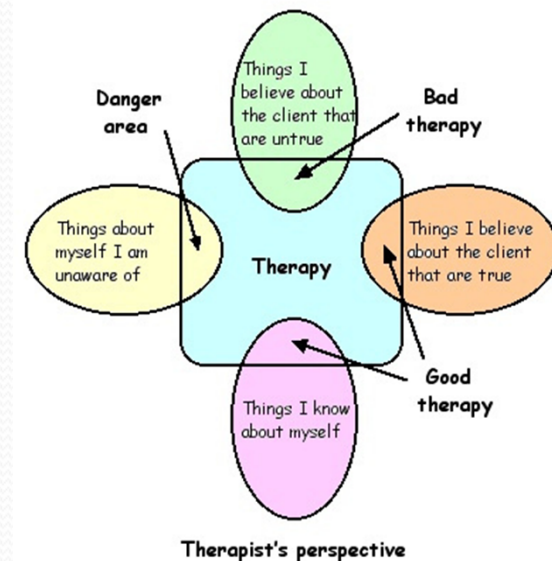
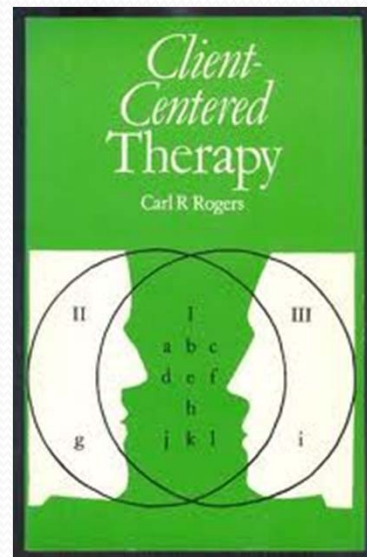
Person-Centered

Montano 2011



Carl Rodgers

- The therapist should be a very good listener.
- The therapist unreservedly accepts the client as they are at that moment in time.
- The therapist places no label or name on the client's condition.





Counseling

**The Essence of Audiologic
Rehabilitation and Person-
Centered treatment**




Person-Centered

- The Patient Story
 - Open-ended interaction
 - The heart of the biopsychosocial delivery model
 - Spark that ignites the biopsychosocial model

Self Assessment

- Self Assessment? That's so eighties!



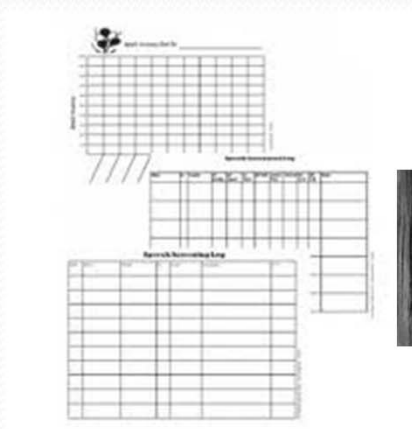
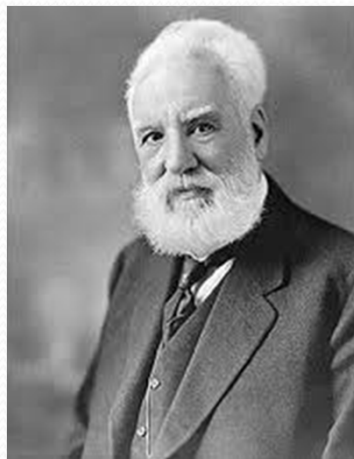
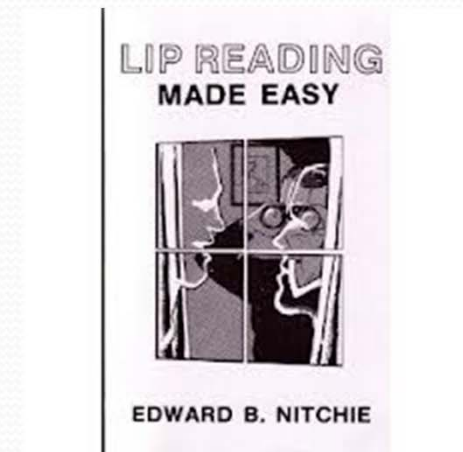
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- HHIE Ventry and Weintstein 1982, HHIA
 - CPHI Demorest and Erdman 1987
 - The Screening Test for Hearing Problems (STHP) Demorest, Wark, Erdman (2011)
 - Obtain information not available from the audiogram



Person-Centered

- Communication Strategies
 - Assessment of environments, communication partnerships
- Technology
- Auditory/Visual Training

Analytic...Synthetic.....BiSensory



Procedural Components of AR

- Emphasis on technology
- Therapy-based procedures
 - Speechreading
 - Read My Quips (Leavitt, 2011)
 - Seeing and Hearing Speech
 - Auditory Training
 - Lace (Sweetow and Sabes, 2006)
 - Read My Quips (Levitt, et al 2011)

LACE

(Listening and Auditory Communication Enhancement) Sweetow and Sabes (2006)

- Computer interactive or DVD
- Speech in background noise
- Rapid Speech Perception (Time Compressed)
- Single Competing Speaker
- Auditory Memory
- Speech Processing Speed



ReadMyQuips

- Speech Comprehension Training System:
- Simple, Fun, Effective

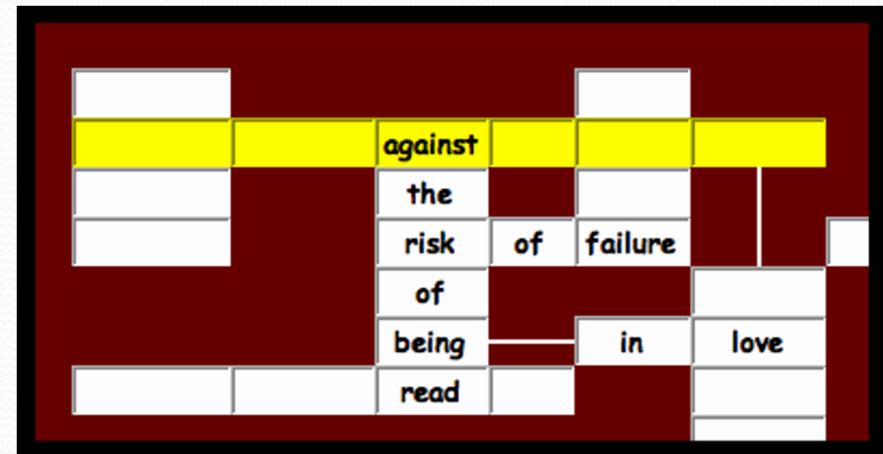
- *Harry Levitt, Chris Oden, Helen Simon, Carla Noack, Al Lotze*
- *Research Supported by NIDCD*

Read My *What?*

It's like a crossword puzzle...

Only each box contains a word, not a letter...

...and the words go together to form witty or wise quotations...



... or *Quips!*

The user selects an item to work

Or

ReadMyQuips - Speech Comprehension Training System

"But Seriously" Help

against
the
risk of failure
of
being in love
read

merely uttered to please

never made the same mistake once
know
when
you're
finished

Previous Puzzle Next Puzzle



ReadMyQuips - Speech Comprehension Training System

"But Seriously"

Help

	against			
		of	failure	
		being	in	love
		read		

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"But Seriously" Help

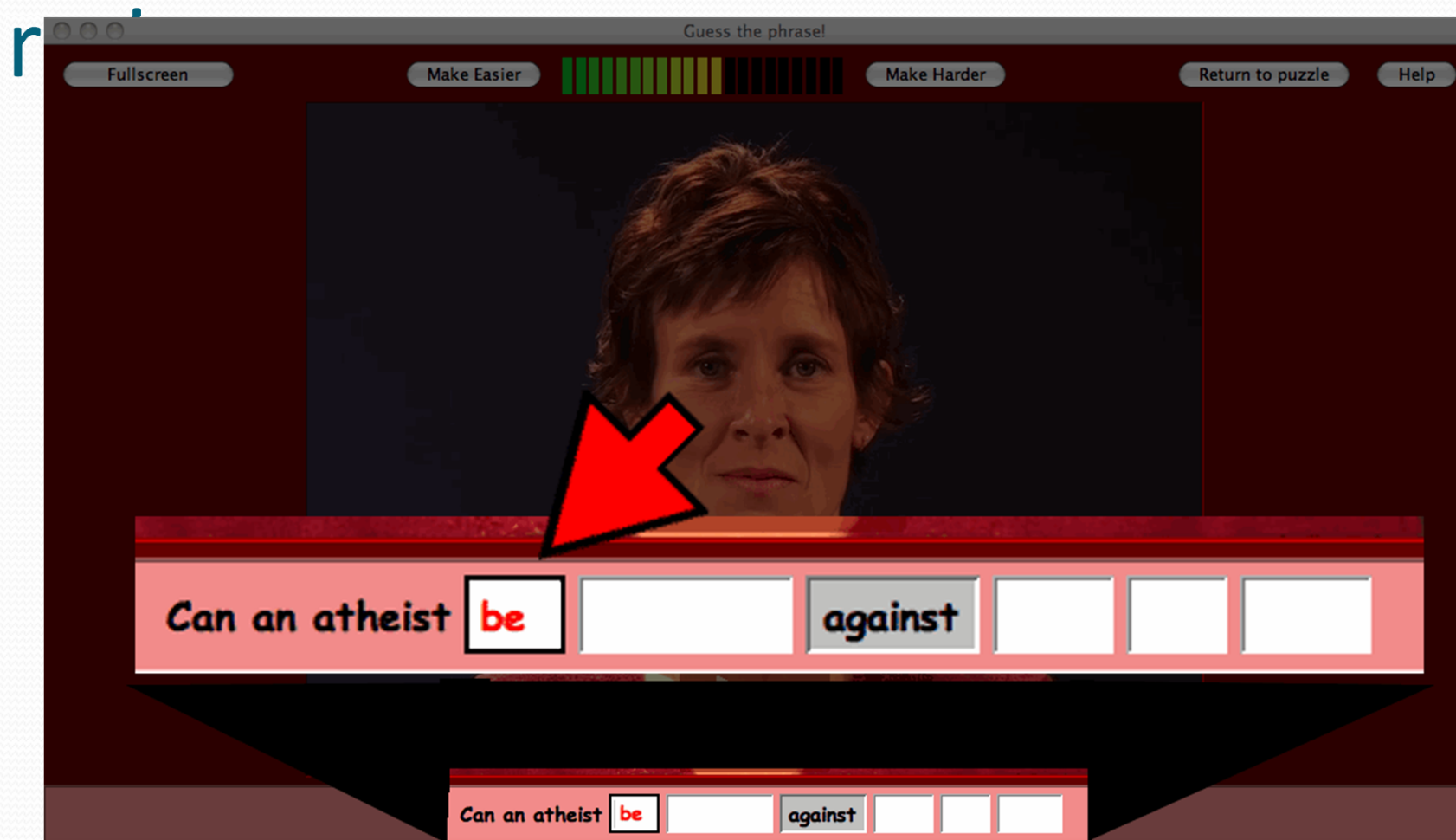
		against		
		the		
		risk	of	failure
		of		
		being		
		read		

Previous Puzzle Next Puzzle

Let's try



If she's wrong, the answer shows in





Improved signal to noise ratio

The user types her guess at the
bottom



Guess the phrase!

Fullscreen Make Easier  Make Harder Return to puzzle Help




Can an atheist get insurance against

Can an atheist get insurance against

Guess the phrase!

Fullscreen Make Easier  Make Harder Return to puzzle Help



Can an atheist get insurance against acts of God?

Can an atheist get insurance against acts of God?

...and returns to the puzzle

ReadMyQuips - Speech Comprehension Training System


"But Seriously" Help

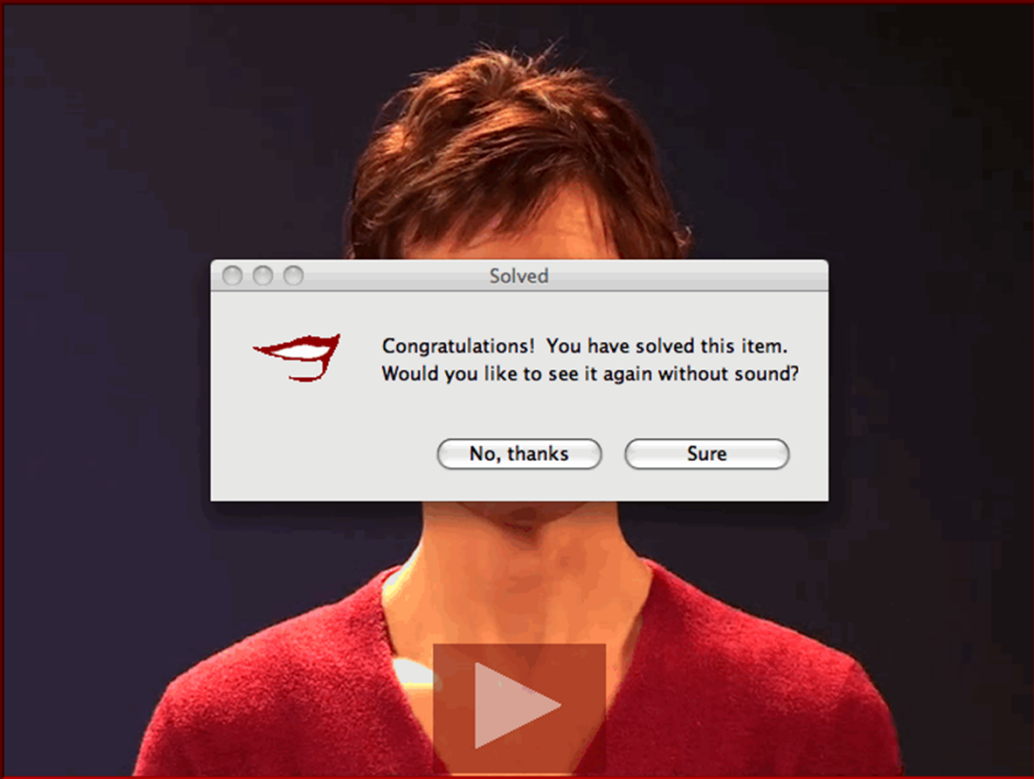
get	insurance	against	acts	of	god
		the			
		risk	of	failure	
		of			
		being			
		read			

get	insurance	against	acts	of	god
		the			
		risk	of	failure	
		of			
		being		in	love
		read			


Previous Puzzle Next Puzzle

Guess the phrase!

Fullscreen Make Easier  Make Harder Return to puzzle Help



Solved

 Congratulations! You have solved this item.
Would you like to see it again without sound?

No, thanks Sure

Can an atheist get insurance against acts of God?

"But Seriously"

Help

get insurance against acts of god

the risk of failure

being in love

read

merely uttered to please

never made the same mistake once

know when you're finished

Previous Puzzle

Next Puzzle

Person-Centered

- Verification/Validation
 - Practicing a counseling-based approach does not preclude verification and validation
- Consumer Groups/ AR Groups
 - HLAA
 - Evidence exists regarding effectiveness of groups AR (Hickson 2013) (Chisolm and Arnold, 2012)

The Heart of the Person-centered treatment



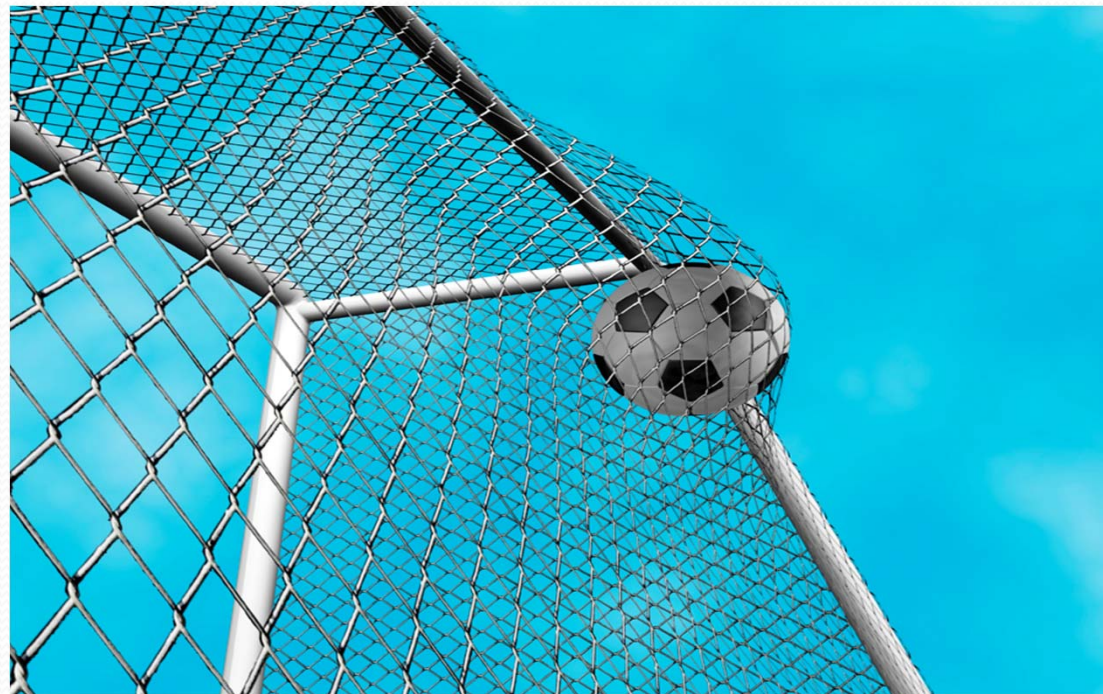
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- Sam Trychin (2009) **“It is not a hearing loss, it is a communication loss”**



Erdman 2009

“The audiologist’s responsibility is to establish a therapeutic relationship and facilitate adjustment to hearing impairment by engaging patients in the actual management of their hearing problems.”

How can the audiologist achieve this goal?





Reimbursement

- **Continues to be an issue though some headway has occurred.**
- **Cited as the main reasons Audiologists do not provide AR services**
- **Efforts to develop comprehensive Medicare reimbursement bill are underway**

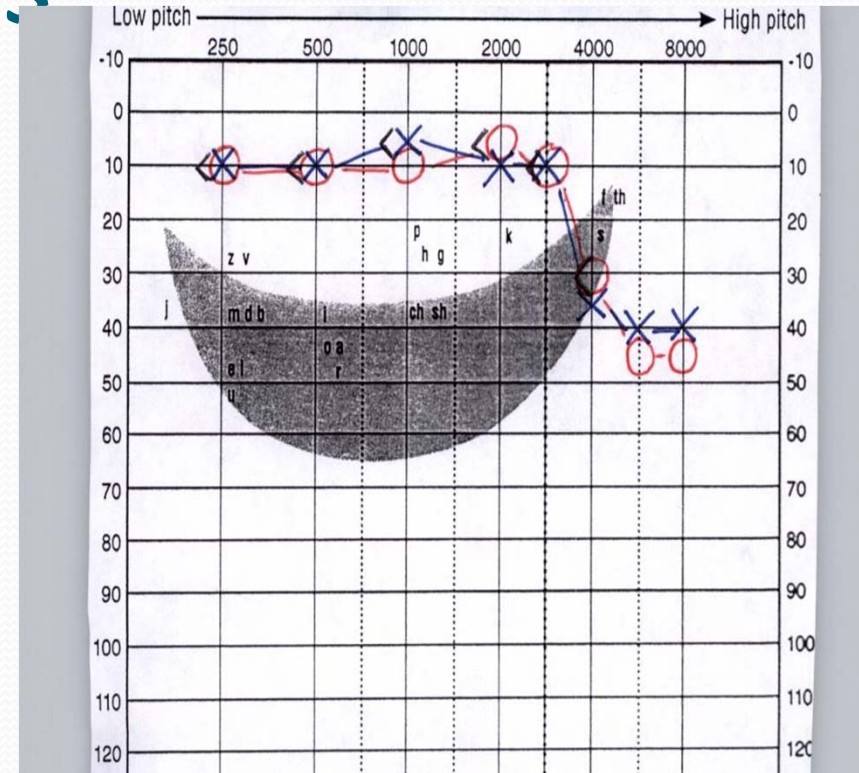


Field of Dreams Theory

- If you build it they will come
 - Resources available to help develop groups (ACE)
 - Improve listening skills.....stop talking
 - Resources available: Kris English, John Greer Clark, David Luterman, Sue Ann Erdman

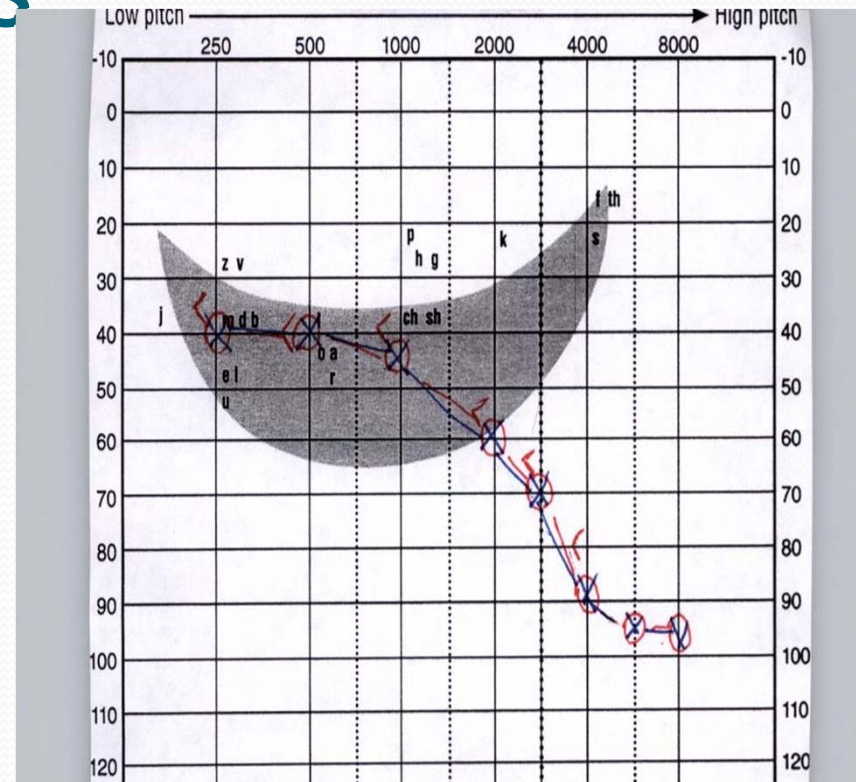
Decision Process

- Patient age 51, male, accountant
- Mild high frequency sensori-neural hearing loss
- SRT 15dB AU; Excellent speech recognition ability
- Reported difficulty in meetings, noisy situations, client interactions
- HHIA score 46
- Amplification?



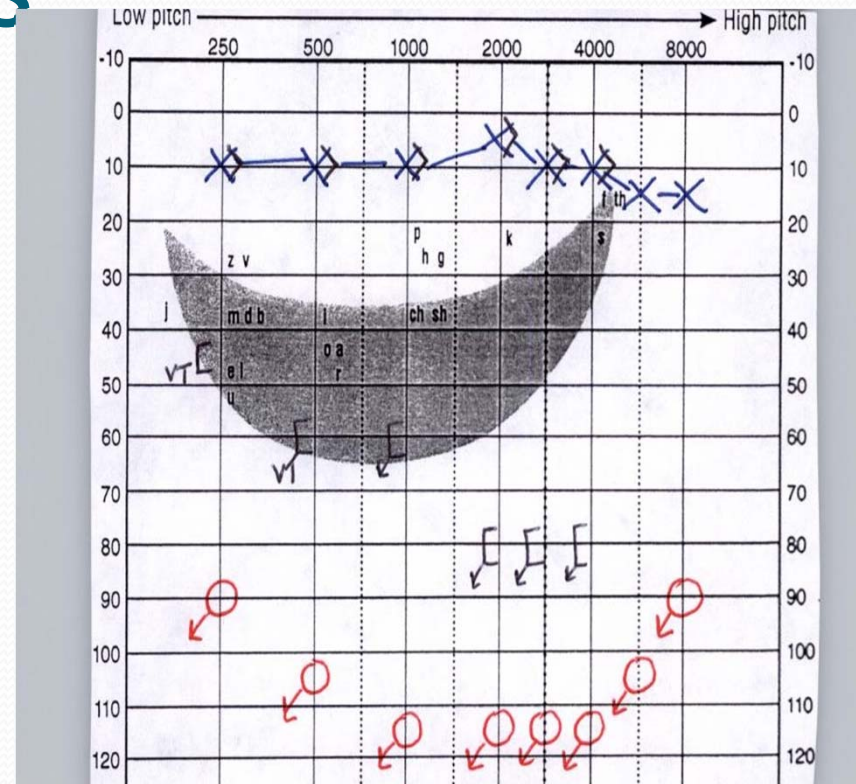
Decision Process

- Patient age 78, female, museum volunteer
- Bilateral mild to severe sensori-neural hearing loss
- SRTs 40dB; fair word recognition 68%
- Reported difficulty in restaurants
- HHIE score 12 (no self-perceived hearing loss)
- Amplification?



Decision Process

- Patient age 38 Female
- Unilateral profound SNHL
- S/P acoustic neuroma
- HHIA score 22 (mild self-perceived hearing loss)
- Osseointegrated device ?
- Cros hearing aid ?
- Nothing





Conclusion

Communication management is a process requiring the clinician to partner with the patient/client encouraging the enhancement of communication with the goal to increase activity and participation with the people in their lives within their environmental context.

Questions

