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Our Aging Patients

Part 3: Effects of Aging on Communication

Amber B. Heape, ClinScD, CCC-SLP, CDP

Learner Objectives

After this course, participants will be able to:

• Identify normal and abnormal changes in speech over the life span.
• Describe at least 3 distinct primary language factors in aging.
• Describe how to evaluate cognitive changes and appropriate interventions for patient quality of life.
Areas we will discuss...

- Voice
- Speech
- Language
- Cognition

Normal Aging Factors of Voice

- Dentition loss
- Oral, laryngeal, and glottal muscles weaken
- Vocal folds weaken
- Laryngeal cartilage ossifies
- Declining respiratory strength
- Xerostomia
- Increased thickened mucous in glottic space
- Presbyphonia- Somewhat subjective in diagnosis
Etiologies of Voice Disorders

- Laryngitis
- GERD or LPR
- SLN Palsy
- Vocal cord paralysis
- Vocal fold lesions
- Spasmodic dysphonia
- Cancer
- Etc.

Voice Disorders in Elderly

- Signs and Symptoms:
  - Prolonged hoarseness
  - Constant throat clearing
  - Throat or neck pain when phonating
  - Breathy voice
  - Quivery voice
  - Difficulty with speaking and breathing patterns
Vocal Hygiene for Older Patients

- Hydration! (at least 2 quarts per day H2O!)
- Behavioral modification
  - avoid excessive throat clearing
  - Decrease vocal straining behaviors (phonating too loud, too long, or when tired)
- Minimize exposure to irritants
  - Tobacco
  - Medications
  - Alcohol
  - Pollutants (dust, mold, grass, etc.)
- Minimize LPR/GERD
  - Medication
  - Reflux precautions
  - Dietary changes
  - Weight loss

Exercises to Maintain Normal Voice

- Hum into a straw (start with large and decrease gradually to coffee stirrer)
- Use it or Lose it- read aloud, even if no one is around
- Singing (with choir or with CD.)
- Maintain overall physical health
- Voice coach if necessary to decrease problematic behaviors
Normal Factors in Aging Speech

• Respiration- decreased respiratory support, fewer syllables per breath
• Phonation- Men rise in pitch as they age, women’s pitch begins to lower after menopause. Increased jitter and shimmer (stability of pitch/frequency and stability of loudness/amplitude)
• Resonance- anatomical changes lead to changes in modification of sound: centralized production of vowel sounds
• Articulation- potential changes in manner, place, and voicing; reduced articulatory precision
• Prosody- increased intonation and reduction in rate of speech; less smooth in flow of speech

Normal Factors of Aging on Cognition

• Brain plasticity continues in adulthood
• Brain volume slightly decreases (more after age 60)
• Information Processing Skills slightly decrease (memory)
Dementia

• Not a specific disease, but a group of symptoms
• Characterized by a loss of function in at least 2 areas of function
  – Language
  – Judgment
  – Memory
  – Spatial ability
  – Visual ability
• 2 primary categories
  – Reversible
  – Non-Reversible

Unrecognized Cognitive Impairment

• Increasing evidence of unrecognized dementia
• Potential implications of unrecognized impairment may include:
  – Decreased safety
  – Potential for catastrophe
  – Irreversibility/Inability to slow progress

Global Deterioration Scale

- 7 Stages
  - GDS 1- Normal adult
  - GDS 2- Forgetfulness
  - GDS 3- Early Confusional State
  - GDS 4- Late Confusional State (Mild Dementia)
  - GDS 5- Moderate Dementia
  - GDS 6- Severe Dementia
  - GDS 7- Late/Severe Dementia

Language vs. Cognition

- Language and cognition are intertwined
- ASHA and Medicare LCDs often list as “cognitive communicative” or “cognitive communication” disorders
Changes in Language

• May be less obvious to the casual observer
• The average listener typically does not judge syntax or vocabulary during a conversation
• Most changes noticed are with word finding difficulty or difficulty in comprehension
• Changes in perceptions of language (family members, etc.) may affect relationships (role reversals, elderspeak, etc.)
• It is important not to “talk down” to an older patient

Normal Factors in Language

1. Semantics (meaning)
   – Vocabulary recognition
     • Passive Vocabulary- basic vocabulary (improves until about age 70), especially when given a choice
   – Storage of new information (strategies)
     • Declines with age
     • Strategies (encoding) can have a positive effect
   – Word retrieval speed and accuracy
     • Measureable declines begin early in adulthood
     • Retrieval speed increases
     • Elderly demonstrate increased frontal lobe activation during naming
TOT Experiences

• “Tip of tongue” experiences or phenomenon
  – Increased in older adults
  – Proper nouns (names) affected more than common nouns
• Mixing elements of words also increases
  – Has to do with phonological and motor planning for semantic content
• Dood gog
• Minnie and Jitch

Normal Factors in Language

2. Syntax (word order- meaningful language)
• Basic syntax processing in aging doesn’t change under optimal conditions, but does change with complexity and other factors.
• Decreased ability to process complex sentences.
• Decreased with distractors or increased speech rate.
• “Holding” beginnings of sentences while processing the remainder of sentence is difficult. (working memory)
Normal Factors in Language

3. Discourse (conversation, expanded/extended language)
   • Elderly give more meaning to emotional and interpersonal factors in discourse
   • More personalized comments/stories about life/emotional themes
   • Changes in topic of choice: more autobiographical or life stories rather than current events.
   • Varied abilities to hold lengthy conversations, especially in comprehension
   • Types of discourse
     – Narratives (personal stories)
     – Procedural (instructions)
     – Expository (informing)
     – Conversation (in social situations)

Normal Factors in Language

3. Discourse (continued)
   • Pragmatics
     – Variable throughout aging
     – Elderspeak (inappropriate accommodations)
       • Elderly person may become frustrated and avoid future interaction
   • Reading and Writing
     – Abilities widely differ
     – Health communication is crucial
     – Link between increased literacy and retained memory in elderly without dementia
Prevention

• Cognitively Stimulating Activities
• Education and Training for Healthcare Providers (to interact appropriately)
• Communication programs for older adults to maintain language

Disorder: Aphasia

Aphasia- decreased ability to use language: understand, speak, read, and write
NOT always linked to stroke!
Aphasia characteristics are linked:
• Nature
• Extent
• Location of Neurological Damage
• Influenced by pre-existing cognitive communication deficits
Disorder: Aphasia

• Paraphasias:
  – Phonological paraphasia- less than half the word is altered (pomputer, childrick, melophone)
  – Semantic paraphasia- real word is used instead of target word (fork for spoon, girl for boy)
  – Neologistic paraphasia- words don’t exist in the English language (pedibo for popsicle, rerook for cereal)
• Agrammatic Speech: lacks connecting words (morphemes for plurals, articles, etc.)
• Paragrammatism: extraneous words added
• Anomia: Inability to name

Assessing Domains of Language

• Auditory comprehension (pointing, yes/no questions, following commands)
• Spontaneous speech (greetings, politeness, automatic tasks)
• Verbal expression (naming, repeating, describing picture, retelling story)
• Written Language (single words, sentences, everyday print, personal information)
• Other (attention, orientation, memory, visuospatial, problem solving, sequencing and organization)
Treatment - Language

• Stimulation Approach
  – Find what the client is successful in, then reduce supports or increase complexity by 1 step at a time

• Cognitive Intervention
  – Convergent naming (list as many animals as you can in 1 minute)
  – Divergent naming (tell 3 different ways to use a spoon)

• Social Approach
  – Partner and conversational coaching
  – Group Treatment (social support context)

• Environmental Intervention
  – Take away distractions or deterrents
  – Identify and teach family to minimize distractions as well

Treatment: Language

• Intensive Treatment Approach
  – Constraint induced therapy (requires verbal communication only and is lengthy in time)

• Language Specific Intervention
  – Targets specific language behavior (cards, photos)

• Classification and/or Behavior specific intervention
  – Specific treatments for aphasia type or associated behaviors

• Computer based treatment

• Alternative and Augmentative Communication
  – Communication book/board
  – Speech Generating Device
Treatment

• Caregiver Interventions
  – Education
  – Counseling
  – Identification of communication breakdown
  – Validation of feelings
  – Support (ongoing)

Assessment of the Non-Verbal Patient

• DS-DAT (Discomfort Scale- Dementia of Alzheimer’s Type)
• CNPI (Checklist of Nonverbal Pain Indicators)
• PAIN-AD (Pain Scale- Alzheimer’s Dementia) [Link]
• PACSLAC (Pain Assessment Checklist for Seniors with Severe Dementia) [Link]
**Documentation Matters!**

- Medicare contractors are not usually therapists!
- Documentation shouldn’t *assume* that the reviewer understands why the skill of an SLP is needed.
- Documentation should clearly demonstrate (in layman’s terms when possible) the skilled nature of the services necessary and/or provided.

**Documentation Matters!**

- If you don’t document it, you didn’t do it in Medicare’s eyes!
- Daily notes (if required) and plans of care MUST demonstrate the medical necessity of services!
- No universal documentation exists
  - Forms vary by facility and/or payer type
Included in Progress Notes

- Assessment of current level of function for each goal
- Additional evaluation results
- Recommendation for continued treatment
- Revisions of any goals
- Statement to justify the medical necessity of services provided during reporting period

What if the Patient Declines?

- Regression or plateau may happen at times
- In order to continue therapy, the SLP should:
  - Document the reason for lack of progress or plateau
  - Document justification for continued treatment
  - Document changes in treatment approach, environment, strategies implemented, etc.
Daily Notes

- Creates a record of skilled interventions
- Should include:
  - Treatment type
  - Treatment time
  - Signature and credentials of therapist providing treatment

Skilled Therapy Examples

- Analyze data and select appropriate evaluation tools
- Design plan of care
- Develop and deliver evidence-based treatments that reflect a hierarchy of complexity
- Modify activities during treatment (complexity, cuing, criteria for success)
- Engage patients and provide reinforcement in establishing new behaviors
- Ongoing assessment of function
- Patient/caregiver education and feedback
- Instructing patient in use of communication system
- Develop functional maintenance program
- Evaluate functional performance, provide treatment for optimization of functional ability, and prevent deterioration (for patients with degenerative conditions)
Unskilled Therapy Examples

• Basic reporting on activities without describing skill of therapist
  – Patient performed 80% of word finding tasks
  – Patient tolerated treatment well
• Repetition of activities without hierarchy of difficulty or modifications
• Activities that do not relate to goals
• Observing caregivers with no feedback or education provided

http://www.asha.org/Practice/reimbursement/medicare/Documentation-of-Skilled-Versus-Unskilled-Care-for-Medicare-Beneficiaries/