Abstract:

Accumulating evidence suggests that language performance deficits are key early indicators of potential impairment. SLPs have a unique role in identification and assessment of MCI and dementia. In this session, cognitive-communication impairment profiles across all stages of the cognitive impairment continuum and guidelines for effective clinical assessment will be discussed.

Session Objectives:

Explain the behavioral criteria for diagnosing MCI and dementia producing diseases.

Describe cognitive-communication profiles of MCI and dementia producing diseases.

Describe guidelines for effective clinical assessment.

Specify tests useful for assessing cognitive-communicative function.

Importance of early identification and management

- Explosion in number of individuals in US with AD
  - 50% of people 75+ have dementia
  - By 2030, the US older population will double!
  - Approximately 50% of people, who meet diagnostic criteria for dementia, have never received a diagnosis.
  - Especially vulnerable are ethnic minorities.

- Early identification gives individuals pharmacologic and behavioral treatment options that can delay or prevent evolution to frank dementia.

- Other benefits:
Access to clinical trials
- Can plan for future
- Avoid medications that worsen cognitive function
- Take advantage of support services

If intervention delayed onset by 5 years, there would be:

- 57% reduction in number of AD patients
- Reduction in Medicare costs of 230 billion!

**Risk Factors:** age, ApoE carrier status, diabetes, hypertension, depression, increased cholesterol, high alcohol consumption, lack of exercise.

**Protective Factors:** Absence of ApoE 4 variant, lifetime of exercise, one alcohol drink per day, nonsmoking, controlled cardiovascular risks, social stim, youth, healthy diet high in anti-oxidants.

**Clinical Essentials for Diagnosis:**

#1. Know the diagnostic criteria for MCI and dementia.

#2. Know the evidence-based standard by which to judge test performance.

#3 Know that change in language performance is a recognized early marker of pathology.
MCI defined:

- Characterized as a transitional zone between normal cognitive function and dementia although not all individuals with MCI develop dementia.
- Is associated with many etiologies but Alzheimer’s disease (AD) is by far the most common.
  - On average, 10 to 15% per year; 12% to 20% convert by 30 months; approximately 48% thereafter

Diagnostic criteria for MCI

- Self-report of memory problems or report by a qualified informant
- Objective evidence of deficit (1-2 SD below the mean)
- Generally intact cognitive functions with no significant difficulties with instrumental activities of daily living

Diagnostic Criteria for Dementia

- Individual exhibits significant cognitive decline from a previous level of performance. (2 or more SD below the mean)
- The cognitive deficits are sufficient to interfere with independence in everyday activities. The cognitive deficits do not occur exclusively in the context of delirium.
- The cognitive deficits are not better explained by another mental disorder.

Language deficits an early marker

- Early changes in:
  - Language expression
  - Language comprehension
  - Defining
  - Quality of written discourse
  - Verbal memory
  - Category naming
Testing Guidelines:

#1 Use an Assessment with Normative Data.

#2 Use assessments with more than one measure of a cognitive domain.

#3 Use measures with a gradient of difficulty.

#4 Include a test of episodic memory.

#5 Look for red flags.

Testing for MCI and Dementia

- Look for a pattern of performance across tests.

- Emerging focus is on language testing as well as memory function.
  - Pilot data (McCullough & Bayles, 2016; 2017) indicate potential of certain language subtests from the Arizona Battery for Communication Disorders of Dementia (ABCD) are sensitive to MCI: following commands, concept definition, generative naming, and repetition.

- Certain cognitive deficits are red flags for a specific disease.
  - Episodic memory impairment is a red flag for possible AD.
  - Visual spatial impairments are a red flag for possible Lewy body disease.
  - Prominent language disorders that occur early are a red flag for possible primary progressive aphasia.
  - Aberrant behavior early is a red flag for the behavioral variant of FTD.
Selected References


McCullough, K., and Bayles, K. (2017). Why SLPs have an Important Role in Early Identification of MCI. Session presented at the American Speech-Language Hearing Association annual convention, Los Angeles, CA.


Tripodis, Y., Coleman, B., Martin, B. M., Chaisson, C. E., Steinberg, E., Kowall, N. W., . . . Stern, R. A. (2017). Significant subjective memory and language complaints predict conversion to MCI and