New Tools for Assessment that Account for Comorbidity

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Overview

- Sensory impairment in clinic setting
- Screening tools to determine sensory impairment
  - Hearing
- Cognitive assessment tools to account for sensory impairment
  - Vision
- Knowledge gaps and research opportunities
Sensory Impairment in the Memory Clinic

- Accuracy of testing

- Difficulty in communicating with the patient
  - Patient in the periphery of discussion
Clinic Setting

Finger Rub Test

Tuning Fork Test

Whispered voice test, ticking watch test
Clinic Setting

Finger Rub Test

Sensitivity 98%, Specificity 75%

Tuning Fork Test

Rinne Test

Sensitivity 60-90%, specificity 95-98%

McGee Evidenced-Based Physical Diagnosis 2017
Research Setting

• No instructions regarding assessment of sensory impairment prior to testing

• No specific cognitive tool to account for sensory impairment
New Screening Tool
New Screening Tool

Not consistently reliable for self administration in patients with MMSE < 26
Administration time 5-20 minutes

Pletnikova et al, manuscript in préparation
Barriers to Screening for Sensory Impairment

• The U.S. Preventive Services Task Force (2011) (hearing) 2016 (vision)
  • Insufficient evidence for screening

• Memory Clinic
  • New patient: Nursing time – 45 minutes; Physician time – 45 minutes
  • Follow up patient: Nursing time – 30 minutes; Physician time – 30 minutes
  • Much of the nursing time spent on taking history, medication reconciliation, cognitive testing, counseling, documenting on the computer
New Cognitive Assessment Tools

• Killen et al. Age Ageing 2013
  • Individuals with vision impairment performed poorly on vision dependent items on Mini Mental Status Exam (MMSE) and Clock Drawing Test

• Vision independent (VI) items on MMSE and Clock Test for the visually impaired
Knowledge Gaps and Research Opportunities

• Lack of knowledge about test characteristics of screening tools in patients with cognitive impairment
  • Further understanding of sensitivity, specificity, etc. of widely used clinical tools in individuals with cognitive impairment (ex. ipad based portable audiometer)

• Lack of understanding about important clinical outcomes related to sensory impairment in individuals with cognitive impairment
  • Further research about what patients with cognitive impairment and their caregivers value as important clinical outcomes
  • Conducting larger, good quality studies of screening and treating sensory impairment with the above outcomes

• Lack of knowledge about cognitive assessment tools that account for sensory impairment in clinic and research settings
  • Determining ideal, standardized assessment tools for dissemination