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COGNITION
AGE-RELATED HEARING LOSS & COGNITION

Addressing a leading dementia risk factor by integrating hearing screening into memory care admission protocols

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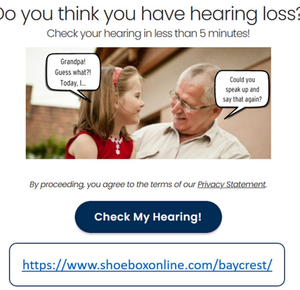
Background

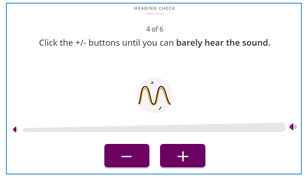
- Hearing loss is independently associated with dementia[1] and is the leading potentially modifiable risk factor for it[2]
- Though highly prevalent among older adults, affecting 65% of those over 60 years of age, hearing loss goes largely unreported and unidentified in this population[3]
- Early identification and intervention with hearing aids and auditory rehabilitation may help slow cognitive decline and reduce incident dementia associated with it [4,5]
- Knowledge of patients' hearing loss could be of immediate benefit to health care providers and their patients/clients by informing communication strategies, facilitating assessment and management and improving treatment outcomes
- Screening for hearing loss is not typically recommended by physicians for older adults; easy to use, reliable tools are needed to identify hearing loss at point-of-care, informing patient management and facilitating access to hearing care

Aims

- Objectives of this 2-part project included assessing the suitability of an online hearing screening tool for use with older adults at risk for dementia, evaluating the effectiveness of identifying hearing loss through screening and determining the extent to which clients or their caregivers seek and benefit from hearing help resources
- Firstly, a pilot study screened patients' hearing on admission to a Memory Program in order to assess ease of use of an online screening tool, enhance physicians' awareness of hearing loss and inform management practices, thereby improving access to timely care
- Secondly, a customized online screening tool linked to audiology resources was implemented more broadly into admission protocols of clinical and residential programs at Baycrest, a leading Canadian geriatric care facility, in order to demonstrate that knowledge of hearing status is helpful to older adult clients and their care providers, leading to help-seeking and improved communication



Methods and Materials



- Participants of the pilot study were physicians at the Baycrest Memory Clinic (n=3) and a 6 month convenience sample of their patients with untreated hearing loss identified by screening on admission, who consented to a follow up phone interview and chart review (n=60)
- Physicians were surveyed about the usefulness of the screening information and referral of patients to audiology
- Post-appointment phone interviews with patients provided information about their screening experience and compliance with referral to Audiology
- A customized screening tool linked to an optional phone consultation with an audiologist was subsequently implemented as a requirement of admission protocols of 3 clinical and residential care programs over a 6-month period
- Participants (n=39) of the implementation study were clients (n=28) or dyads of clients and care partners (n=11), where possible, consenting to complete
  - a short survey 3 months post screening to determine if knowledge of hearing status was helpful in prompting them to seek and obtain care
  - a brief hearing handicap inventory (RHHIE-S or RHHIE-SO) at baseline and 3 months post-screening to assess impact on communication function

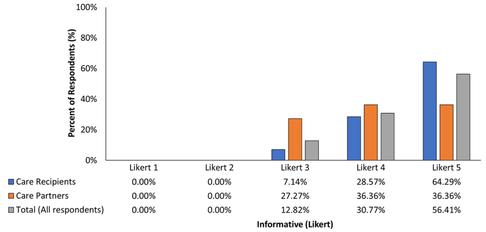
Results

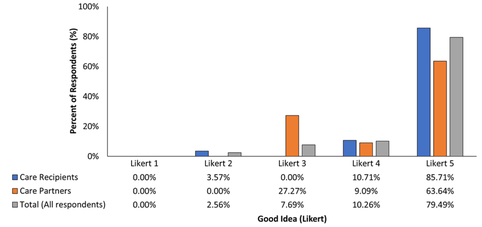
Pilot Study: Participant demographics: Average age = 77 years; 53% male; Alzheimer's disease (45%), MCI (40%)

- Hearing loss identified in 68% with screening vs. 27% with self-report
- 60% screened in-office (n=30) and 47% screened remotely (n-=30) able to complete independently
- Most (87%) patients or caregivers reported online test easy to use; 94% think including hearing screening in clinic protocol is a good idea
- Physicians made referrals to Audiology for the majority (2/3) of participants whose screening results indicated hearing loss
- All physicians agreed that hearing screening provided useful information, increased their awareness of the prevalence of hearing loss in their patients and helped them decide if a referral to audiology was needed

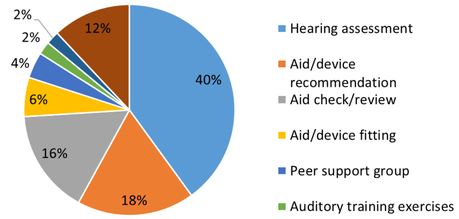
Implementation study:

- Hearing loss identified in 78% with screening vs. 45% with self-report
- Clients and care partners reported hearing screening was informative and approved of inclusion into admission protocols



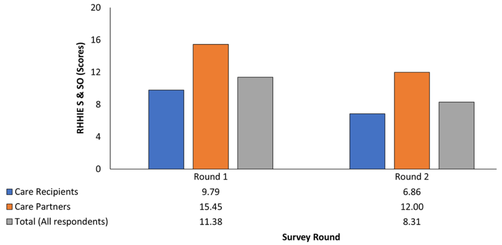


- 71% of clients were referred to audiology, with 32% pursuing hearing aids or assistive listening device recommendations



Services accessed by clients, from participant survey responses at 3-mo f/u

- Average 3-point reduction in perceived communication handicap reported in RHHIE-S and SO inventories



RHHIE (S and S-O) scores at baseline and 3-months post-screening (n=39)

Conclusions

- Significant differences in identification of hearing loss through screening vs self-report indicates the need for some form of measurement to reliably inform physicians and care providers about their patients' hearing status
- Screening helped physicians, patients and caregivers and improved access to care by raising awareness of the presence of hearing loss, informing management decisions and the need for referral to audiology
- Hearing screening is a useful component of admission protocols of clinical practice or residential programs for older adults, particularly those at risk for cognitive decline, facilitating timely access to management and addressing an important risk factor for dementia
- Establishment of robust referral pathways and support systems is key to ensuring individuals identified with hearing loss receive appropriate management and assistance in navigating their hearing health journey

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