

# CONDUCTING COMMUNICATIVELY ACCESSIBLE HEARING SCREENINGS FOR PEOPLE WITH APHASIA:

## *A Pilot Project*

Lisa Samson, M.H.Sc. S-LP (C), Reg. CASLPO  
Aphasia Institute, Toronto, ON

Joanne DeLuzio, Ph.D. Audiologist, Reg. CASLPO  
University of Toronto Graduate Program in  
Speech-Language Pathology, Toronto, ON

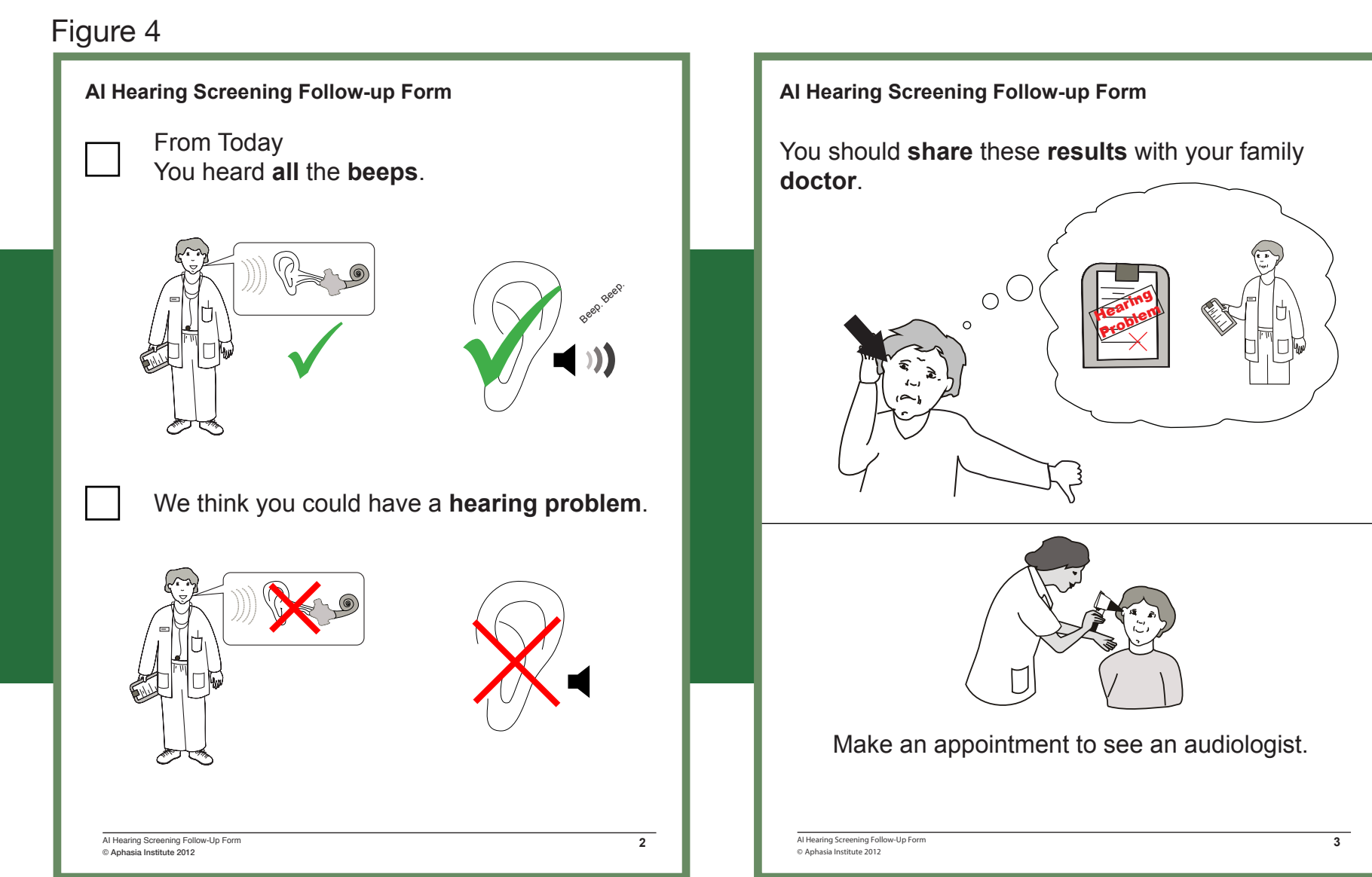
Canadian Stroke Congress September 17-19, 2015

## BACKGROUND

In Ontario, Canada, 35% of stroke survivors have aphasia (Dickey et al., 2010). Aphasia is an acquired language disorder that impacts expressive and receptive language (Parr, Byng, & Gilpin, 1997). People with aphasia (PWA) already experience difficulty communicating and therefore it is critical to determine if they also have hearing loss. Untreated hearing loss may exacerbate existing communication issues and impact audiological services and quality of life (Silkes, 2012). Hearing screening protocols for adults frequently pair an air conduction pure tone screening with a questionnaire. Questionnaires measure the impact of hearing loss on ability to function. A barrier to hearing screenings for PWA is that instructions and related information for pure tone screening and completion of questionnaires require intact language skills. Therefore, hearing screenings and any health information for PWA should be communicatively accessible (Rose, Worrall, & McKenna, 2003) and must incorporate Supported Conversation for Adults With Aphasia (SCA™) (Kagan, 1995b, 1998). SCA™ is a method designed to facilitate conversations with PWA (Kagan, Black, Duchan, Simmons-Mackie, & Square, 2001). The aim of this study was to pilot a communicatively accessible hearing screening program for PWA.

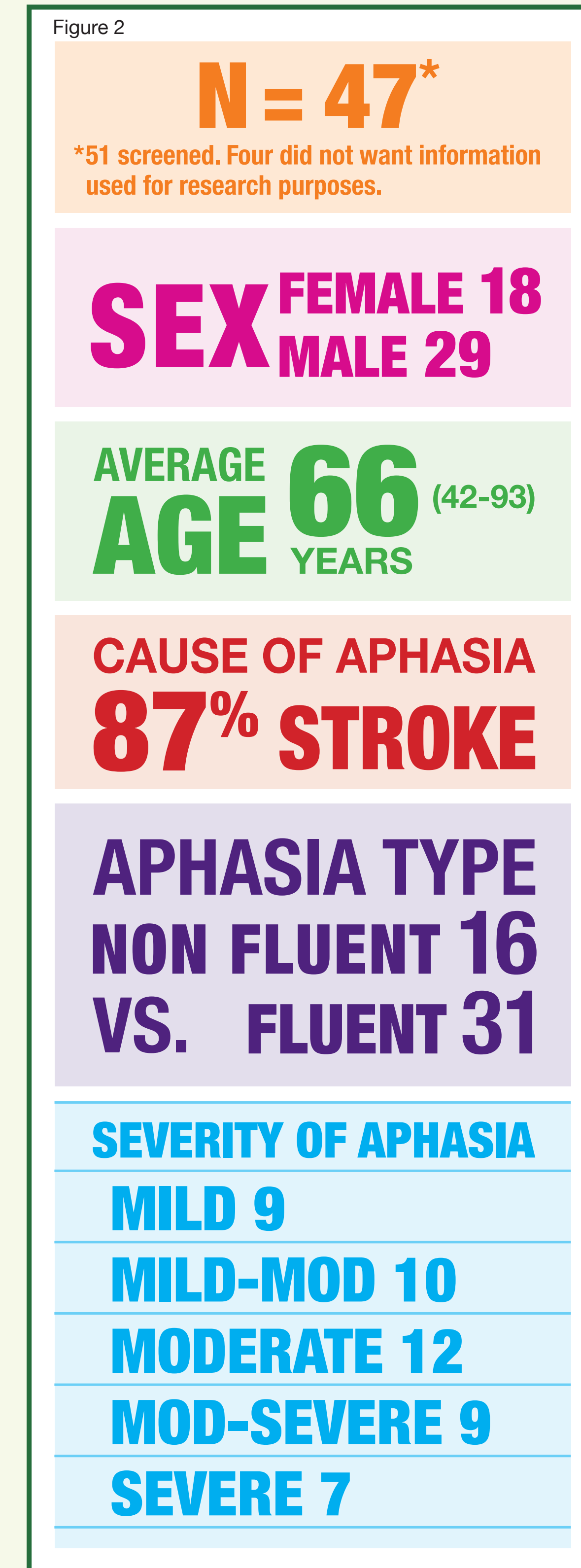
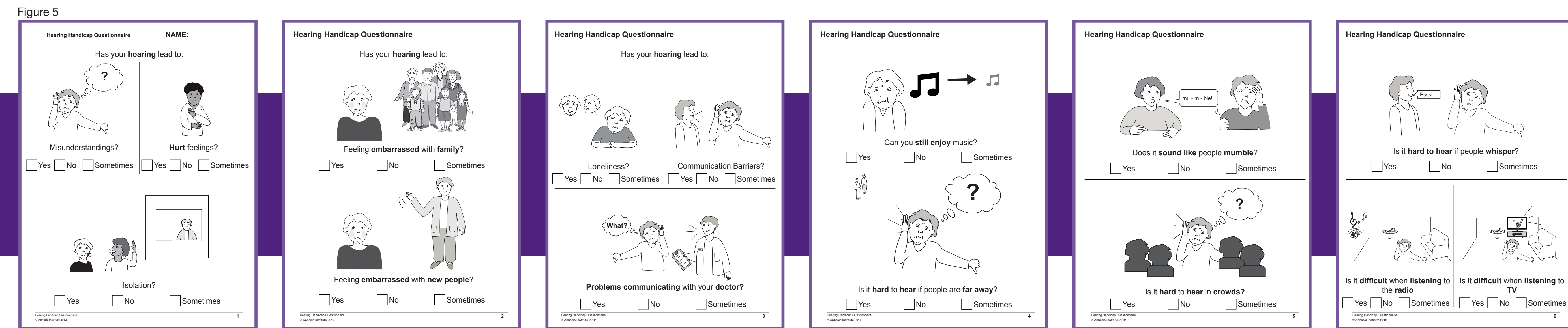
## HEARING SCREENING

The students conducted hearing screenings at 1000, 2000 and 4000 Hz at 25 dB HL. Participants received either a “pass” or a “refer” result (see figure 4).



## HEARING HANDICAP QUESTIONNAIRE

A CAHHQ was constructed using the format of the Hearing Handicap Index for the Elderly, short version (Ventry & Weinstein, 1983). The students administered the questionnaires to participants in an interview format (see figure 5).



## METHODOLOGY

### PARTICIPANTS

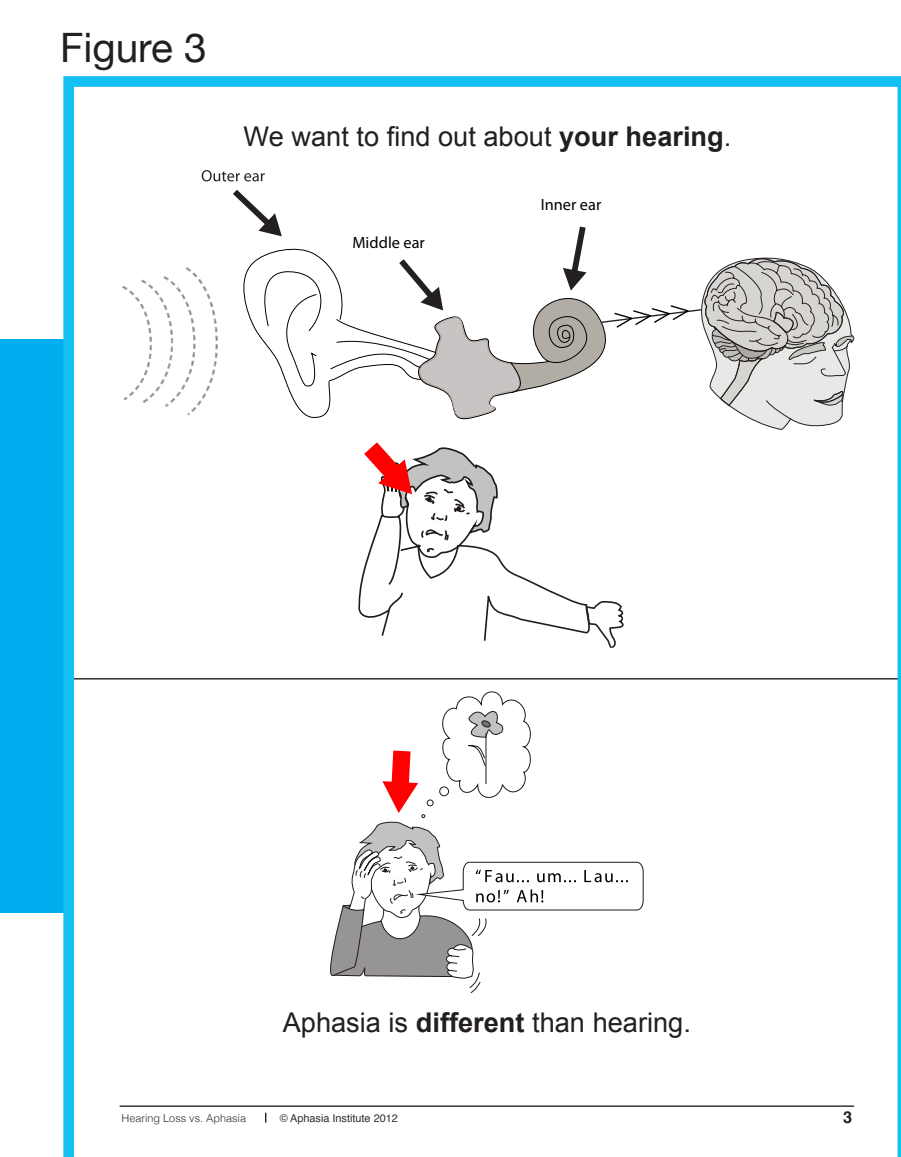
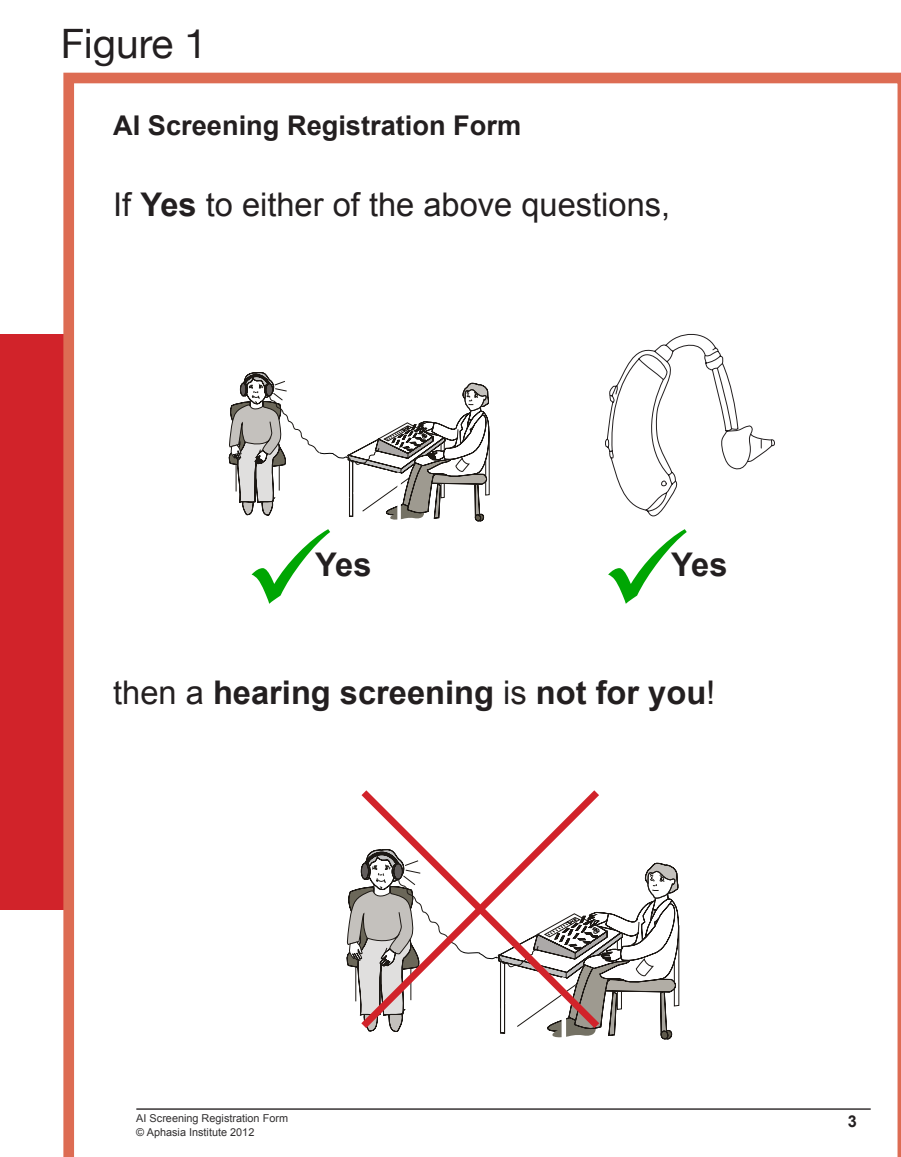
Inclusion criteria: 1. Person with aphasia, 2. No previous diagnosis of hearing loss (see figure 1). All demographic information and type and severity of aphasia were identified through chart review (see figure 2).

### COMMUNICATIVELY ACCESSIBLE RESOURCES AND SCA™

A speech-language pathologist (S-LP) developed all communicatively accessible resources prior to the hearing screening (i.e., consent form, hearing screening instructions, communicatively accessible hearing handicap questionnaire (CAHHQ), results and follow-up information). SCA™ and resources were paired throughout the pilot project (see figure 3).

### STUDENT TRAINING

Eight graduate students in speech-language pathology, who had completed a course in Applied Audiology, were provided with basic SCA™ training and oriented to the equipment. An audiologist and S-LP provided training and students were supervised throughout the pilot project.



## RESULTS AND DISCUSSION

100% of participants were able to complete the hearing screening and CAHHQ. The results were statistically significant ( $p = .01$ ), indicating that the participants perceiving themselves to be more impacted by hearing loss on the CAHHQ were the same participants that received a “refer” result on the hearing screening. 70% of the participants received a “refer” result. Of significance is the fact that receiving a “refer” was related to their age ( $p = .009$ ) as well as their overall hearing handicap score and not related to the severity of the aphasia. The one question that achieved significance on its own was “Does it sound like people mumble?” ( $r_s = .3, p = .04$ ). Consequently, this question might be the most important of the questions used in determining whether PWA feel their hearing related issues impact their ability to function.

## CONCLUSION

This pilot study successfully implemented a communicatively accessible hearing screening protocol with PWA. Use of communicatively accessible resources for audiological services is consistent with Silkes (2012), Rankin, Newton, Parker, and Bruce (2014) as well as the Canadian Best Practice Guidelines for Stroke Care (Lindsay, Gubit, Bayley, & Phillips, 2013). Hearing screenings and hearing handicap questionnaires can be successfully administered to PWA when used with SCA™ and when communicatively accessible.

REFERENCES:  
Dickey, L., Kagan, A., Lindsay, M.P., Fang, J., Rowland, A., & Black, S. (2010). Incidence and profile of inpatient stroke-induced aphasia in Ontario, Canada. *Arch Phys Med Rehabilitation*, 91, 196-202.  
Kagan, A. (1995b). Revealing the competence of aphasic adults through conversation: A challenge to health professionals. *Topics in Stroke Rehabilitation*, 2, 15-28.  
Kagan, A. (1998). Supported conversation for adults with aphasia: Methods and resources for training conversation partners. *Aphasiology*, 12(9), 816-830.  
Kagan, A., Black, S.E., Duchan, J.F., Simmons-Mackie, N., & Square, P. (2001). Training volunteers as conversation partners using "supported conversation for adults with aphasia" (SCA): A controlled trial. *Journal of Speech, Language, and Hearing Research*, 44, 624-638.  
Lindsay, M. P., Gubit, G., Bayley, M., & Phillips, S. (Eds.). (2013). *Summary of stroke best practice recommendations 4th Edition*, 2012-2013 Update. Canada: Heart and Stroke Foundation. <http://www.strokebestpractices.ca/wp-content/uploads/2013/10/SBP-Recommendations-2012-2013-Update.pdf>  
Parr, S., Byng, S., & Gilpin, S. (1997). *Talking about aphasia*. Buckingham, UK: Open University Press.  
Rankin, E., Newton, C., Parker, A., & Bruce, C. (2014). Hearing loss and auditory processing ability in people with aphasia. *Aphasiology*, 28(5), 576-595.  
Rose, T., Worrall, L., & McKenna, K. (2003). The effectiveness of aphasia-friendly principles for printed health education materials for people with aphasia following stroke. *Aphasiology*, 17(10), 947-963.  
Silkes, J. P. (2012). Providing Audiological Services to Individuals With Aphasia: Considerations, Preliminary Recommendations, and a Call for Research. *American Journal of Audiology*, 21(1), 3-12.  
Ventry, I. M., & Weinstein, B. E. (1983). Identification of elderly people with hearing problems. *ASHA*, 25(7), 37-42.