

National Perspectives on the Management of Hearing Loss in Patients with Limited English Proficiency

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Introduction

- An estimated **8%** of the overall US population has limited English proficiency (LEP)
- Hearing loss (HL) introduces additional vulnerabilities, adding to healthcare disparities from language barriers
- HL is typically evaluated using a combination of audiometric and speech testing, many which are only available in English or select few other language
- There is no consensus approach to evaluating hearing loss and cochlear implant candidacy in LEP patients
- Objective:** Evaluate current practices among providers caring for adult LEP hearing loss patients

Methods

- This is a two-part prospective narrative study of hearing loss providers from across the US, with a focus on the twelve US cities encompassing the top ten highest immigrant populations and top ten non-English languages spoken in households, as determined by US Census data
- A cross sectional national survey was distributed, and structured interviews were conducted regarding practice setting, experiences, and perspectives in managing hearing loss in LEP patients, with a subset focus on cochlear implantation (CI)
- Two study members analyzed data from audio transcriptions using modified grounded theory approach (a four-phase, iterative axial coding scheme for data distillation in qualitative research), with a third reviewer adjudicating

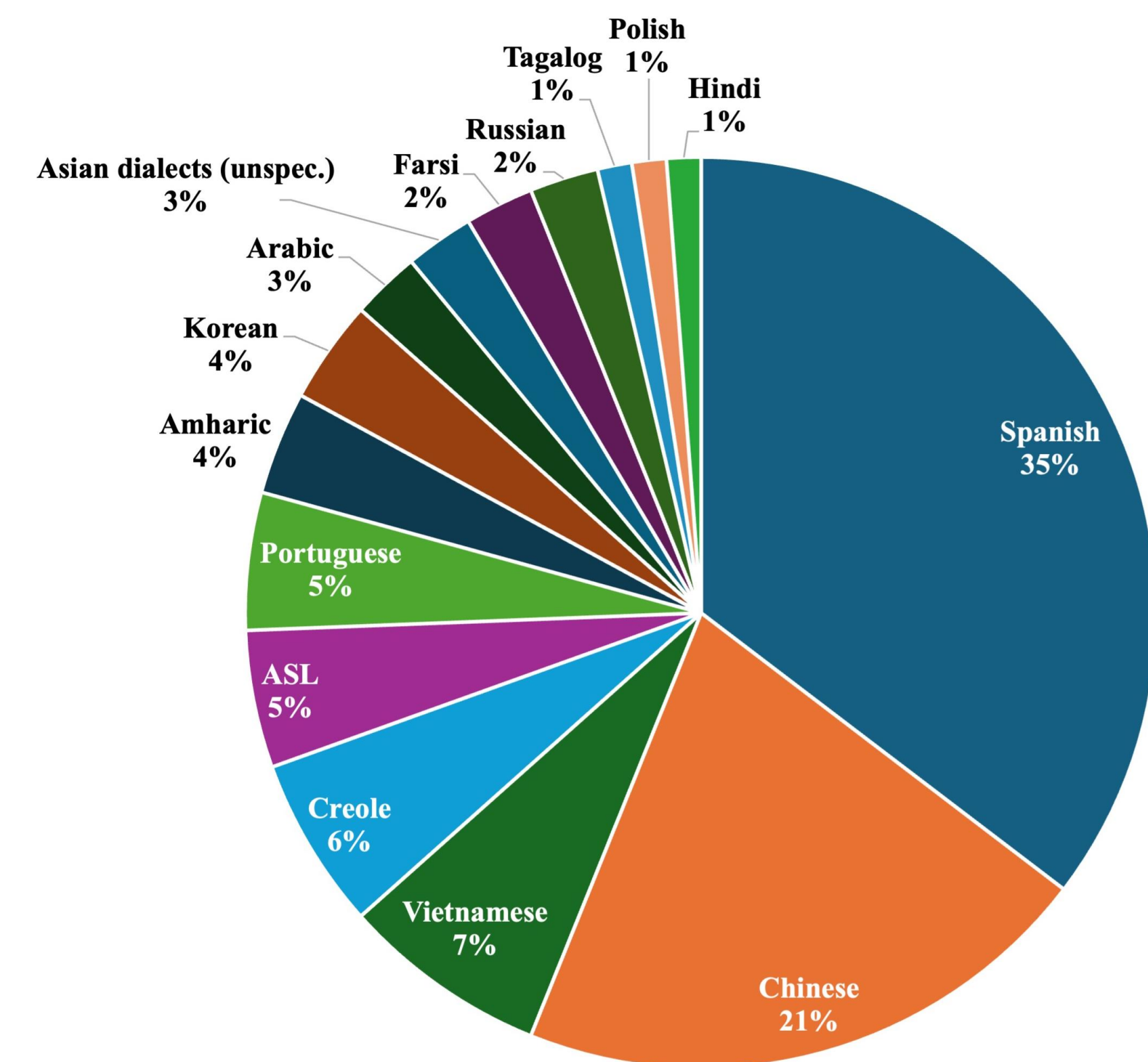


Figure 1. Top non-English languages seen by interview respondents (n=29)

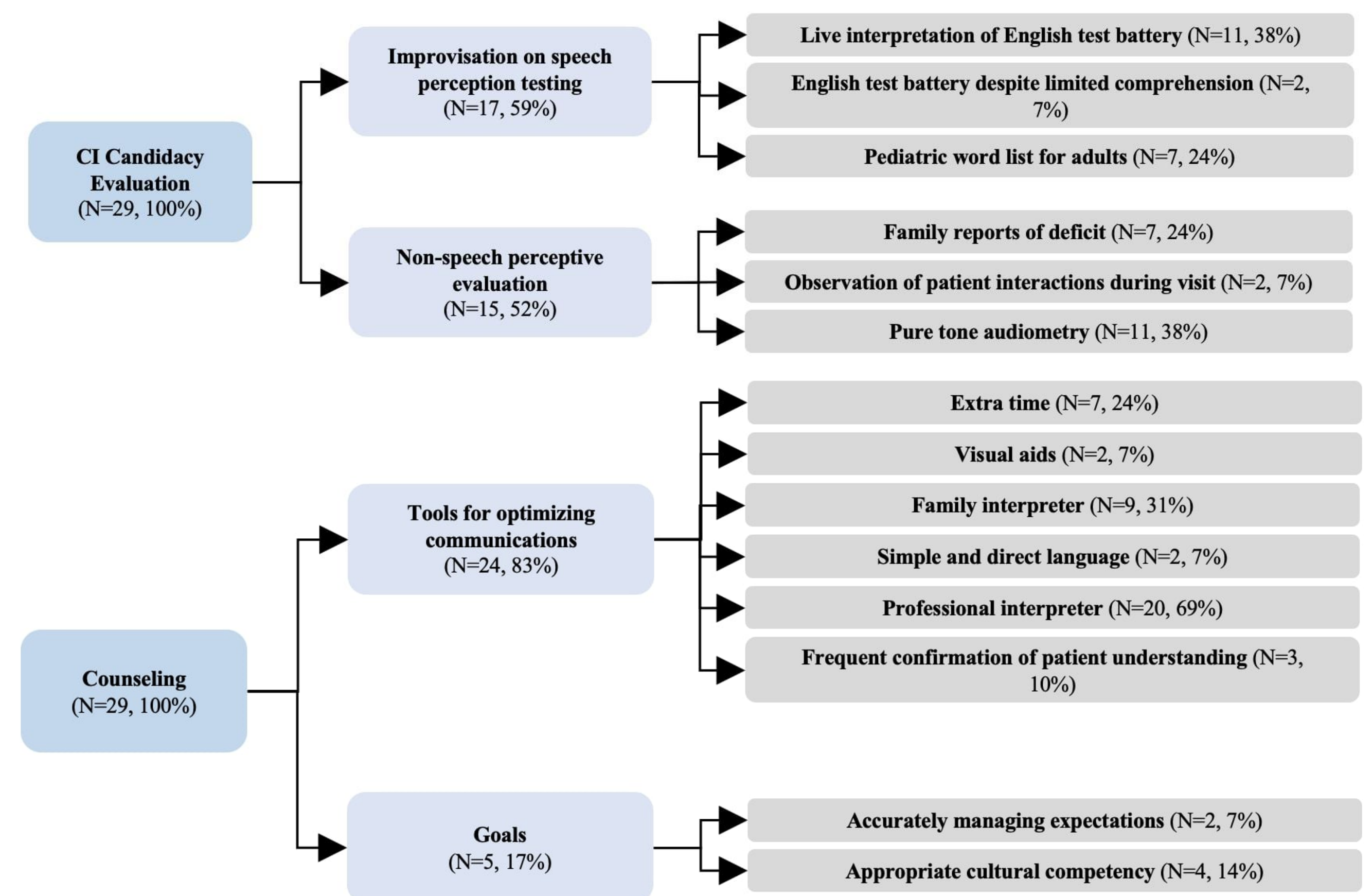


Figure 2. Axial coding scheme derived from four thematic domains from qualitative provider interviews

Results

- 29 providers participated in interviews (**Table 1**)
 - LEP comprised 34% of respondents' practices
 - 21% of CIs performed were in LEP patients
 - 21 respondents (72%) cited lack of validated non-English tests as a barrier to treatment
 - Most common LEP language was Spanish, followed by Chinese (**Figure 1**)
 - Nearly all providers noted patient desire as a major barrier to treatment (97%; n=28), influenced by cultural perceptions of healthcare (41%; n=12) and health literacy (34%; n=10)
 - Providers were significantly less confident in speech perception testing and post-surgical counseling in LEP patients
- Four domains were derived from interviews (**Figure 2**)
 - CI candidacy evaluation
 - Counseling
 - Barriers to care
 - Ideal resources
- 87 providers completed the survey (**Table 2**)
 - 66% urban practice; 13% suburban practice
 - 20 states represented
 - Most common practice for PTA testing were in-person or video interpreter
 - Most common practice for speech discrim was recorded CNC word list in English

Characteristic	Mean (Range)
Reported Number of Providers by Provider Type	
Audiologists	12 (2-40)
Implant Audiologists	4 (0-10)
Surgeons	4 (1-12)
Cochlear Implant Surgeons	3 (1-6)
Annual Cases in LEP	
Otologic Cases	93 (30-320)
Cochlear Implantations	48 (0-160)
Number of Respondents by Geography	
South	13
Northeast	8
West	7
Midwest	1
Average Number of Years in Practice	9.5

Table 2. Background of survey respondents.

	Number of Neurotologists Interviewed	Number of Audiologists Interviewed	Neurotologists' Average Number of Years in Practice	Audiologists' Average Number of Years in Practice
South	6	7	7.2	10.4
East	5	3	7.4	10.3
West	4	3	7.0	8.7
Midwest	1	0	29	N/A
Total	16	13	8.6	10.0

Table 1. Background of interview respondents.

Discussion

- There is **no clear standard** for resource utilization, nor is there a consistent approach to management of language barrier, in the management of LEP patients with HL
- Without regular access to language-specific testing materials, patients with LEP may be systematically delayed in receiving treatments that could improve hearing and quality of life
- The profound impact of HL is compounded in those with LEP, representing an especially vulnerable population that would benefit from treatment, but may be unintentionally excluded from receiving it
- This study *underscores the need for:*
 - Language specific speech perception testing
 - Improved and universally accessible tools for communication
 - Culturally tailored counseling and intervention that integrates health literacy with accessible services to the micro communities that comprise all US regions and cities.