

# How Audiologists Can Improve Cochlear Implant Utilization

By Alejandra Ullauri, AuD, MPH

**A**ural rehabilitation, which includes the evaluation, fitting, verification, and validation of hearing technology such as hearing aids, is a key part of clinical audiology practice. Validating hearing aid outcomes helps audiologists determine hearing aid benefit—the lack of which being a key factor when assessing cochlear implant (CI) candidacy. To objectively assess hearing aid benefit, audiologists conduct a speech perception test battery and use the scores to determine whether the patient meets the cochlear implantation criteria. However, a 2017 survey found that only 15 percent of audiologists routinely conduct speech-in-noise testing to validate hearing aid outcomes.<sup>1</sup> In terms of the kind of validation tool used, the authors found that 48 percent conduct the QUICK-SIN test and 13 percent the HINT test. One could argue that the lack of validation of hearing aid outcomes is negatively influencing the already low CI utilization rate; less than 10 percent of adults who need a CI actually have one.<sup>2</sup> That percentage drops to five to seven percent in the United States.<sup>3</sup> Is the lack of speech perception testing in audiology practices standing as one of the major barriers for patients to access CI technology?

## FOCUS ON OUTCOMES

Strategies are being developed to identify barriers to CI utilization, with the hope of helping more patients access CIs sooner rather than later. Those of us in private practice can play a significant role in helping achieve that. First, if one considers a lack of hearing aid benefit as a key component of CI assessment, audiologists can objectively assess this lack of benefit using a speech perception test battery. For audiologists trained in conducting complex diagnostic tests such as evoked potentials, vestibular assessments, and others, conducting speech perception testing should be relatively feasible



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if they are familiar with the test, the set-up, and a standardized evidenced-based testing protocol.

As Lindsey Jorgensen, PhD, stated, “contemporary hearing rehabilitation of adults with acquired hearing loss is patient-centered and outcome-driven.”<sup>4</sup> Audiologists in private practice providing aural rehabilitation through the fitting of hearing aid technology must prioritize objective measures of outcomes. This will help identify patients who experience limited hearing aid benefit and need a comprehensive assessment to determine if they meet audiological criteria for cochlear implantation.

## DATA FROM PRIVATE PRACTICE

To give readers some degree of perspective on how many patients need us to validate outcomes and initiate referrals, I would like to share some of my practice results.

**Demographics:** This is a private and independent practice located in Chicago, a city that can be described as a CI hub, with four major CI hospital-based programs within 10 miles of our location. The practice has been in business for four years, and it started building a patient caseload from zero.

**Clinical Partnerships:** University of Chicago Cochlear Implant Program.

**Clinician:** The practice has one hearing health care provider who holds an AuD degree and the Cochlear Implant Specialty Certification (CISC) from the American Board of Audiology since 2010. One audiology student also comes to the practice for a 10-week rotation.

**Population:** Ninety-two percent of patients are 18 years of age or older, and eight percent are 6 months to 18 years of age.

**Main services provided:**

- Comprehensive hearing assessment
- Hearing aid selection, fitting, verification, and validation
  - Hearing aid fittings performed using NAL-NL2 or DSL prescription formulas
  - Verification performed through real-ear measures (i.e., speech mapping to NAL NL2 or DSL targets)
  - Validation performed through speech perception testing (e.g., AzBio sentences in noise presented at +5 dB SNR)
- Hearing aid follow-ups, repairs, and programming
  - Monitoring of hearing sensitivity and performance overtime
  - Speech perception test battery performed to assess CI candidacy, as warranted. We use the minimum reporting standards recommended for adult cochlear implantation: CNC word lists and AzBio sentences in quiet and noise for the left ear, right ear, and bilaterally.<sup>5</sup>
- CI mapping and follow-up
  - Speech perception test battery performed to assess unilateral CI progress and/or bilateral CI candidacy, as warranted. We use the minimum reporting standards recommended for adult cochlear implantation: CNC word lists and AzBio sentences in quiet and in noise for the left ear, right ear, and bilaterally.<sup>5</sup>
- Other services: cerumen management, ear molds, ear-plugs

**Cochlear Implant Results:**

- One hundred and seventy-nine adult patients received hearing aids (78% binaural rate).
  - Seventeen underwent assessment to determine CI candidacy.
  - Six became CI users.
  - Five did not meet the CI candidacy criteria.
- Thirty-two established CI users (28 adults and four children), implanted at other centers, transferred audiological services to us.
  - Seven became bilateral CI users after undergoing CI assessment for monitoring purposes.
  - Nine acquired a contralateral hearing aid.
- Nine of the 13 patients who received a CI continued to receive hearing services at our practice after implantation.
- Four patients are awaiting the completion of a medical assessment prior to cochlear implantation.

The reader might think these numbers are insignificant in the broader scope, and that is correct. However, it is estimated that 40 percent of audiologists work in private practice,<sup>6</sup> and audiology private practices represent 31 percent of all the hearing care settings in the United States.<sup>7</sup> To help bring perspective to this discussion, one can take these numbers from a new/small/one-provider-only practice and extrapolate them to a multi-provider/well-established practice. One might see that the number of patients who could benefit from a CI might double, triple, or more depending on the size of the practice.


## INSURANCE COVERAGE

One should also not forget that cochlear implants may be covered by Medicare and many private insurance plans. Medicaid coverage for adults varies from state to state.<sup>8</sup> Coverage extends beyond the device, including audiological services pre- and post-implantation. When assessing CI candidates and recipients, the speech perception test battery is used to assess auditory function. In those cases, the CPT codes used for reimbursement purposes are 92626 and 92627. Starting in 2020, the American Medical Association has approved changes to the description of these CPT codes:<sup>9</sup>

- CPT code 92626: Evaluation of auditory function for surgically implanted device(s), candidacy, or post-operative status of a surgically implanted device(s); first hour.
- CPT code 92627 for the evaluation of auditory function for surgically implanted device(s), candidacy, or post-operative status of a surgically implanted device(s); each additional 15 minutes.

In the post-implantation phase, programming (mapping) of cochlear implants is also covered by Medicare and private insurance plans. The CPT codes used in those cases are 92603-92604. These codes are age-sensitive (7 years of age or older).

Incorporating speech perception testing as an outcome measure into our aural rehabilitation protocols brings many benefits to the patient, the clinician, and the practice. Such benefits include: (1) quantifying functional hearing post-intervention in an objective and standardized form, (2) determining a baseline for monitoring performance overtime, (3) identifying those in need of a CI assessment, (4) initiating the referral process for implantable hearing technologies earlier than otherwise anticipated, (5) conducting patient-centered counseling based on individual results, and (6) generating new channels of revenue for the practice by expanding the type of services provided.

Audiologists can have a significant impact on improving CI utilization rate by using existing clinical tools, such as a speech perception test battery, to validate a patient's hearing aid outcomes and determine his or her CI candidacy. Ultimately, this approach might prove to be a beneficial collateral strategy. 

References for this article can be found at <http://bit.ly/HJcurrent>.