

Telephone Use by Patients Fitted with the Ineraid Cochlear Implant



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ABSTRACT

A survey of telephone use by 66 patients fitted with the Ineraid cochlear prosthesis revealed that 51% initiate telephone calls (most calls are to family or friends) and that 66% answer the telephone. Of the patients who answer the telephone, 49% indicated that they could identify the gender and/or age of the caller most of the time, 27% could identify a familiar caller most of the time, and 48% indicated that they could understand a conversation most of the time if speaking to a familiar speaker about a familiar topic. Understanding dropped rapidly as the speaker and topic became unfamiliar (Ear Hear 12 5:368-369).

IN THIS REPORT, we describe the results of a questionnaire study of telephone use by patients who hear by means of the Richards/Ineraid cochlear implant (Eddington, 1980; for a recent review, see Dorman, Hannley, Dankowski, Smith, & McCandless, 1989). The study was prompted by the very limited data on telephone use by implant patients (Cohen, Waltzman, & Shapiro, 1989) and by the repeated questions from our patients about whether they would be able to use the telephone following implantation of the prosthesis.

METHOD

The questionnaire shown below was sent to 102 patients who use the Ineraid prosthesis. Eighty patients returned the questionnaire. Fourteen were discarded because of incomplete information.

Scores on the Central Institute for the Deaf (CID) sentence test, administered live voice, were available for 40 of the patients.

RESULTS

The results are shown in Table 1.

DISCUSSION

The responses to the questionnaire leave no doubt that many Ineraid patients use the telephone. About half of the sample initiate calls and about two-thirds answer the telephone. Of the 66% who answer the telephone, 48% indicated that they could understand a familiar caller and a familiar topic most of the time. Thus, about one-third of the total sample claimed to understand a telephone conversation with a familiar speaker and a familiar topic. As the speaker and message uncertainty increased, the number of patients who claimed to understand a caller decreased to a lower limit of only 5%, who claimed to understand an unfamiliar caller and an unfamiliar topic.

A relationship between CID sentence intelligibility and telephone use, suggested first for hearing-impaired students at the National Technical Institute for the Deaf (NTID), and which held for a small sample of Nucleus patients (Cohen et al, 1989), holds for Ineraid patients. That is, patients with scores greater than 50% on the CID sentences are significantly more likely to initiate calls than patients with scores less than 50% ($z = 3.8$, $p < 0.001$). Eighty five percent of patients with CID scores greater than 60% initiate calls, whereas only 31% of patients with scores less than 40% initiate calls.

Table 1. Scores on the CID sentence test administered live voice.

1. Do you initiate telephone calls?	Yes = 51.5	No = 48.5	11. Can you understand a familiar caller if the topic of the call is unfamiliar?	
2. Do you initiate calls to:			a. Yes, most of the time	15.9
1. friends and/or family		92.5	b. Yes, some of the time	54.8
2. make appointments		27.5	c. No	29.5
3. ask for information about a product or service		17.5	12. Can you understand a stranger if the topic is familiar?	
4. to conduct business		30	a. Yes, most of the time	17.0
5. other		30	b. Yes, some of the time	39.0
3. How frequently do you use the telephone each week?		5.4	c. No	43.9
4. How soon (in months) after receiving the sound processor were you able to interact with strangers on the telephone?		13.4	13. Can you understand a stranger if the topic is unfamiliar?	
5. Do you answer the telephone?	Yes = 66.2	No = 33.8	a. Yes, most of the time	7.0
6. Can you tell if the caller is a man, woman or child?			b. Yes, some of the time	27.9
a. Yes, most of the time		48.9	c. No	65.1
b. Yes, some of the time		41.9	14. Do you, or did you, practice to improve your telephone skills?	
c. No		9.3	a. Never	18.6
7. Can you recognize familiar voices on the telephone?			b. Less than 10 times	48.8
a. Yes, most of the time		27.3	c. More than 10 times	32.6
b. Yes, some of the time		45.7	15. Describe the quality of sound from a telephone as compared to listening to someone in the same room without lipreading.	
c. No		27.3	a. The sound is about the same	21.0
8. Do you do more than just tell the caller to wait until you bring someone else on the line?	Yes = 72.7	No = 27.3	b. The sound is a little poorer	37.0
9. Can you participate in more than a "yes"—"no" conversation?			c. The sound is much poorer	42.0
a. Yes, most of the time		40.9	16. Descriptions of sound quality over the telephone:	
b. Yes, some of the time		34.1	a. far away-weak	33.0
c. No		25.0	b. hollow	24.0
10. Can you understand a familiar caller if the topic of the call is familiar?			c. tinny	24.0
a. Yes, most of the time		47.7	d. has echo	12.0
b. Yes, some of the time		34.1	e. fuzzy	20.0
c. No		18.2	f. distorted in other ways	30.0

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