

MarkeTrak IV: Will CICs Attract A New Type Of Customer—And What About Price?

By Sergei Kochkin

This is the second article in a multipart publication on MarkeTrak IV, the fourth survey of the hearing-impaired market. Because of the emergence of a market for completely-in-the-canal (CIC) hearing instruments, research specifically designed to explore this market opportunity will be presented first.

In our first article, we demonstrated that CIC hearing instruments represent a marvelous opportunity for the hearing industry.¹ In the United States, nearly one third of all hearing instrument owners and slightly more than one fourth of the nonowner population are positively inclined to purchase a low-profile CIC (e.g., a brown instrument at the first bend in the ear canal) within the next 5 years. That is a total of 7.3 million people, of whom 1.3 million would be incremental purchasers attracted by the CIC's impact on alleviating stigma.

Purchase intent for a low-profile CIC is 56% higher than for an in-the-canal (ITC) instrument and 24% higher than for a CIC at the entrance of the canal. The CIC also has a very positive image among the 20 million hearing-impaired nonowners in the United States. Nonowners believe that, in comparison to traditional hearing instruments, CICs are superior with respect to cosmetics, comfort, performance, value, and technology.

The figures presented here should be viewed as the upper bounds of the CIC market, since they represent only consumer *interest* in the CIC product. The actual CIC market size will, of course, be impacted by many factors, including product availability, the physical characteristics of the potential user (e.g., manual dexterity, physiology of the ear canal), the degree and type of hearing loss, performance versus cosmetic tradeoffs, the retail price of the hearing instrument, and perceptions of value.

Since we began studying the market in 1984, we have seen few changes in the demographic make-up of hearing instrument owners. Owners tend to be retired elderly (65% over the age of 64) males (60%) on fixed incomes (39% with incomes less than \$20,000 a year).² Hearing-impaired nonowners, on average, are younger (29% above age 64), are more likely to be employed full-time (51% versus 24% for owners), are more educated, and have significantly higher household incomes.

Clearly, it would be desirable to attract younger customers into the industry, consumers who are satisfied with their hearing instruments, wear them in the cor-

porate world, and speak positively about the product to their friends and associates. An infusion of youth with mild-to-moderate hearing losses into our customer base would have a positive impact on the market. First, it would help change the stereotype of the typical user (i.e., a feeble, elderly person who is nearly deaf). Second, because they are younger, such consumers would have a greater chance to make repeat purchases in the future.

This article will address the following questions: Can CIC hearing instruments attract this new type of customer? And how will retail price impact growth of the CIC market?

SURVEY METHOD

In the September 1994 *Hearing Journal*, the MarkeTrak IV survey method was described in great detail, so it will not be repeated here.¹ With respect to this paper, two analyses are presented below. In the first analysis, we segmented subjects who expressed interest in any CIC, whether it was at the entrance of the canal, below the entrance, at the first bend, or completely invisible, and we compared those people to the current hearing instrument owner population.

After viewing a randomly assigned photo of a man wearing one of the CIC hearing instrument styles, respondents were asked to rate their purchase intent for that CIC over the next 5 years. Purchase intent was assessed on an 11-point semantic differential scale anchored as follows: 0 = Definitely will not purchase in the next 5 years, 10 = Definitely will purchase in the next 5 years. Subjects were classified as purchase intenders if their purchase intent ratings were 6 or higher. The demographics of intended purchasers of CICs are compared for both hearing instrument owners and hearing-impaired nonowners in the results section below.

The second analysis is designed to isolate the impact of CIC retail price on sales volume. Hearing-impaired subjects were asked to indicate their purchase intent (on the same 11-point scale described above) for a "completely invisible hearing aid which fits in your ear" at a specific price point. In total, there were 10 price points, one of which was ➤

randomly assigned to the subject. The average number of usable surveys returned per price point was 519.

RESULTS

In Tables 1 and 2 we compare the demographics of hearing instrument owners with subjects who indicated an interest in CICs and subjects who were either neutral or negative in their CIC purchase intent. The data are expressed as percentages within a particular population and variable. For instance, 1% of hearing instrument owners in our sample were under age 18 and 35% were

between the ages of 65 and 74. The final column indicates whether the potential new owners are significantly different from current owners on the demographic variable in question. The larger the chi-square, the greater the likelihood that the two populations are different and that we are attracting a new type of customer to our industry.

WILL CICs ATTRACT A NEW TYPE OF CUSTOMER ?

The results are extremely encouraging. Table 1 shows that nonowners with an interest in purchasing a CIC are signifi-

cantly younger than hearing instrument owners. While 71% of owners (1994 figure) are at retirement age, only 36% of nonowners are.

The nonowner tends to be employed full-time (47% of nonowners versus 20% of owners), have a higher education (60% some college or better versus 47% for owners), have a higher income (43% greater than \$40,000 versus 28% for owners), and be less likely to be an "older single" or "retired couple." There are no significant differences between nonowners with a positive CIC purchase intent and the current hearing instrument owner population with respect to gender or the size of the respondent's city.

With respect to hearing instrument owners, the only factor differentiating positive purchase intenders and neutral/negative purchase intenders is household income. Those with a positive CIC purchase intent are more likely to have higher incomes than those not intending to purchase (38% greater than \$40,000 versus 27%).

Table 2 compares the purchase intent groups on five hearing loss variables. Nonowners with a positive CIC purchase intent are significantly different from typical hearing instrument owners on all hearing loss variables. Compared to hearing instrument owners, they are more likely to have a hearing loss in only one ear (46% versus 25%), to have lower perceptions of hearing handicap (HHIE-S^{3,4} scores less than 20: 62% versus 43%), to report less difficulty hearing in noise (49% versus 71% quite/extremely difficult), to perceive less often that their hearing is a problem "most of the time" (28% versus 59%), and more likely to view their hearing loss as "mild" (29% versus 8%).

With respect to hearing instrument owners, there is a slight tendency for persons with greater hearing losses to have more of a purchase intent for CIC hearing instruments. Furthermore, the style of hearing instrument owned is not related to CIC purchase intent (data not shown). Current BTE owners are just as likely to want a CIC as are ITC owners. As demonstrated earlier, approximately one third of current hearing instrument owners would be interested in purchasing a CIC in the next 5 years.¹

It can be argued that the above findings regarding the type of customer attracted to CIC hearing instruments are a function of the differences in demographics between the owner and

Table 1. Demographics of hearing-impaired populations with an interest in CIC hearing instruments.

Demographic Variable	Total Population (n=2,595)	CIC Purchase Intent?				Chi-square(df) Owners vs Nonowners Purchase Intent
		Hearing Instrument Owners		Hearing-Impaired Nonowners(%)		
		No (n=856)	Yes (n=298)	No (n=1,139)	Yes (n=353)	
By Age						
<18	1	1	2	4	2	208 (df = 7)**
18-34	2	2	5	9	6	
35-44	4	5	5	17	14	
45-54	7	6	8	18	20	
55-64	14	14	16	18	23	
65-74	35	36	32	20	26	
75-84	29	29	26	11	9	
85+	7	7	6	2	1	
By Sex						
Male	60	62	61	58	59	13 (df = 1)
Female	40	38	39	42	41	
By Household Income						
<\$10K	13	13	12	11	9	42 (df = 6)**
\$10-10K	25	26	22	17	15	
\$20-29K	19	20	15	18	18	
\$30-39K	14	16	13	16	16	
\$40-49K	8	9	10	12	11	
\$40-59K	6	6	7	9	9	
\$60K+	14	12	21	17	23	
By Education						
Elementary	6	6	6	4	3	18 (df = 6)*
Some high school	12	13	8	8	10	
High school graduate	34	33	33	32	28	
Some college	23	24	24	26	28	
College (AA)	4	4	4	6	4	
College (Bachelors)	12	12	12	12	17	
Graduate studies	8	9	12	11	11	
By Employment Status						
Full time	20	19	26	47	47	115 (df = 3)**
Part time	8	7	8	8	9	
Retired	66	66	63	34	39	
Unemployed	6	8	3	11	6	
By City Size						
<50K	26	29	21	28	29	5 (df = 3)
50-500K	17	16	17	19	20	
500K-1.9 million	21	21	25	19	16	
2+ million	36	34	37	34	35	
By Lifestyle						
Roomates	1	1	1	2	1	117 (df = 9)**
Young singles	0	0	0	1	2	
Middle singles	5	5	6	7	7	
Older singles	18	17	15	7	8	
Younger couple	2	2	3	5	4	
Working older couple	19	22	19	17	23	
Retired older couple	36	36	34	20	21	
Young parent	2	2	3	10	7	
Middle parent	4	4	6	12	8	
Older parent	13	11	13	18	20	

*p<.001 **p<.0001

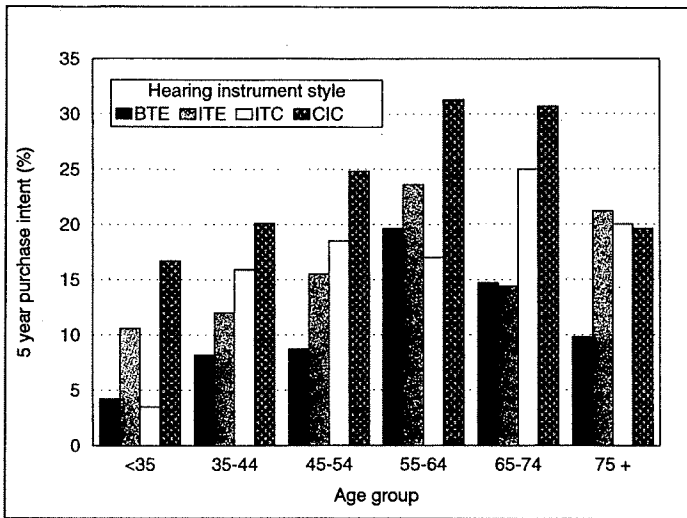


Figure 1. Nonowner 5-year purchase intent by hearing instrument style controlling for age.

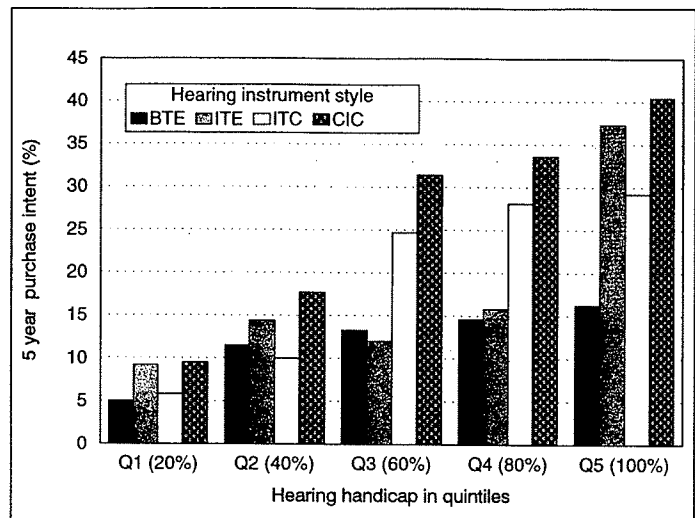


Figure 2. Nonowner 5-year purchase intent by hearing instrument style controlling for perception of hearing handicap.

nonowner populations. To counter this argument the reader is referred to Figures 1 and 2, which show purchase intent over the next 5 years for a BTE, ITE, ITC, and CIC controlling for age and perception of hearing handicap as measured by

the HHIE-S (segmented into five equal groups of 20% each).

In general, these figures confirm that the CIC *does* incrementally attract a different type of customer to the industry. This judgment is made by comparing

CIC purchase intent with ITC or ITE purchase intent; if the CIC did not have an impact on the market, purchase intent for this type of instrument would be equivalent to purchase intent for ITE instruments. The figures also confirm that the differences in demographics between hearing instrument owners and hearing-impaired nonowners with a positive CIC purchase intent are also partly due to the inherent differences between the populations. Figure 1 shows that visibility of the hearing instrument is an issue for all age groups; however, CICs do not stimulate the market among subjects over age 75.

In Figure 2, purchase intent for the four hearing instrument styles is segmented by perception of hearing loss in quintiles (e.g., Q1 consists of the 20% of subjects with the least hearing loss handicap). It can be seen that the largest incremental business due to CICs will come from subjects with above-average hearing loss handicaps.

Table 2. Hearing loss characteristics of hearing-impaired populations with an interest in CIC hearing instruments.

Demographic Variable	Total Population (n=2,595)	CIC Purchase Intent?				Chi-square(df) Owners vs Nonowners Purchase Intent
		Hearing Instrument Owners		Hearing-Impaired Nonowners (%)		
		No (n=856)	Yes (n=298)	No (n=1,139)	Yes (n=353)	
By Number of Impaired Ears						65 (df = 1)**
One	25	28	25	53	46	
Two	75	72	75	47	54	
By Hearing-Handicap Score						66 (df = 7)**
0-4	3	3	3	16	2	
5-9	6	7	3	19	13	
10-14	16	18	14	29	24	
15-19	18	19	14	16	23	
20-24	26	26	28	13	23	
25-29	11	11	12	3	7	
30-34	14	12	17	3	5	
35-40	7	6	8	1	3	
By Difficulty of Conversing In Noise						97 (df = 4)**
Extremely difficult	36	33	41	7	14	
Quite difficult	35	36	35	18	35	
Somewhat difficult	21	24	19	38	35	
Slightly difficult	6	7	5	31	15	
Not at all difficult	0	0	0	7	1	
By How Often Hearing Is Problem						120 (df = 3)**
Most of the time	59	54	64	21	28	
Some of the time	38	42	34	60	68	
Hardly ever	3	3	2	16	4	
Never	1	1	0	3	0	
By Perceived Degree of Loss						201 (df = 3)**
Mild	8	7	8	48	29	
Moderate	55	57	52	39	60	
Severe	33	31	36	10	10	
Profound	5	6	4	3	1	

**p<.0001

IMPACT OF RETAIL PRICE ON CIC DEMAND

Figures 3 through 6 graphically portray the expected 5-year purchase intent for an "invisible" CIC at increasing price points for selected subpopulations. [Note: for legal reasons, the price points have not been specified.] Because the study addressed pricing for an "invisible" hearing instrument, these figures could be significantly reduced depending on the degree of visibility of the hearing instrument. In the previously published visibility study, an invisible

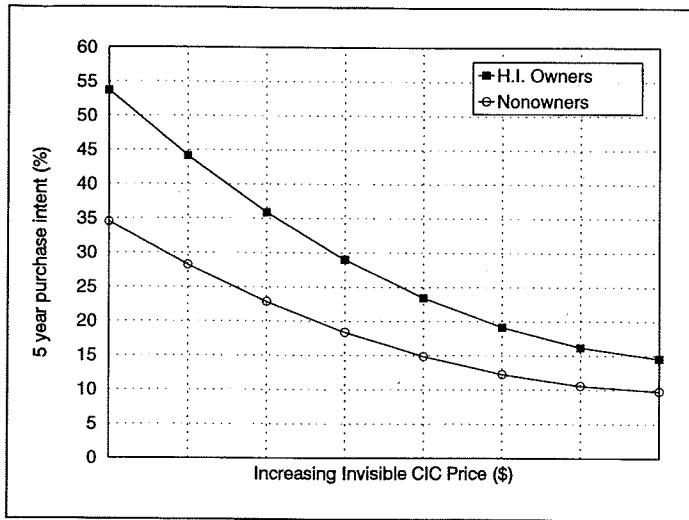


Figure 3. Relationship between CIC price and volume for hearing instrument owners versus hearing-impaired nonowners.

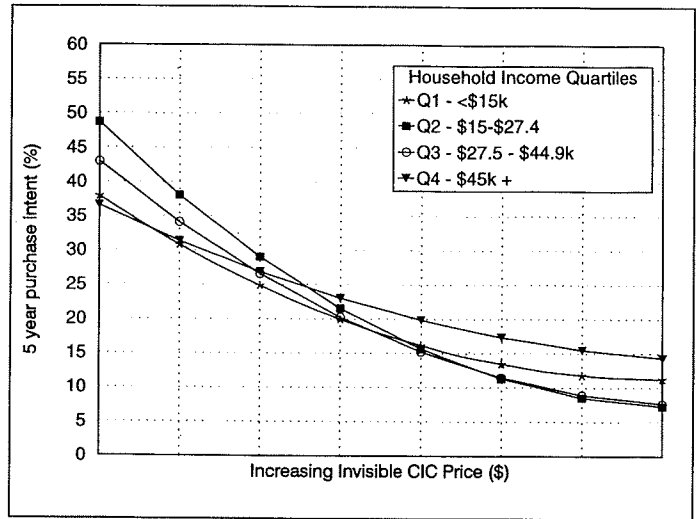


Figure 4. Relationship between CIC price and volume by level of household income.

CIC was associated with a 24% greater purchase intent than was a CIC at the entrance of the canal.¹

Referring to Figure 3, if we simultaneously alleviated price and stigma as obstacles to market penetration in this industry, only about 35% (note: estimated from intercept) of the nonowner population would obtain CIC hearing instruments and 54% of owners would be interested in obtaining CIC hearing instruments in the next 5 years. Across the entire price range (points shown but not labeled) demand varied narrowly between 15% and 35% of the nonowner market. Thus, it is clear there are other powerful factors keeping hearing-impaired persons out of the market; close to 70 reasons for not purchasing hearing instruments were documented in the MarkeTrak III survey.⁵ I am hypothesizing that making hearing instruments invisible will be effective in alleviating stigma in only a portion, perhaps a minority of the nonowner market. This is because stigma is an internal issue which affects the individual's self-esteem. By wearing an invisible hearing instrument, the nonowner still must admit to himself or herself that he or she has a hearing loss and therefore is subject to all the other negative associations of hearing loss (e.g., "I am getting old"). Other powerful factors that will continue to block growth of the market, even if price and external stigma were solved are: negative perceptions of hearing instrument performance and value, lack of consumer awareness of their hearing loss, negative physician attitudes toward hearing instruments, negative word-of-mouth ad-

vertising from dissatisfied customers, consumer misinformation about hearing loss issues and hearing instruments, and trust in dispensers. The price curve for hearing instrument owners is steeper than for nonowners, which indicates that using pricing strategies to stimulate demand will be more effective with current owners than with hearing-impaired nonowners.

Household income is not a good predictor of purchase intent for CICs (Figure 4). This finding is consistent with the fact that hearing instrument ownership is more common among households with lower incomes.² This counter-intuitive finding probably reflects the fact that retirees tend to have lower fixed incomes but higher assets. This finding implies that targeted direct-mail strategies based on household income will not be very effective.

Figures 5 and 6 show the price curves by age and hearing handicap scores (in quintiles) as measured by the HHIE-S.^{3,4} Subjects over the age of 46 have very similar price curves, while the under-46 population has a significantly lower price profile, probably because of lower levels of hearing loss and lower amplification needs. Figure 6 dramatically demonstrates that the CIC hearing instrument appeals to subjects with moderate and greater hearing losses. Using price to entice mildly impaired subjects (lower 40% on hearing loss handicap) into the marketplace will be ineffective.

The results indicate that demand for CICs will be relatively inelastic, especially for the mildly impaired and younger subjects. However, local pricing

strategies should be weighed against the hearing needs of the consumer (actual need to hear better), the consumer's lifestyle (cosmetics, stigma factor, manual dexterity, level of activity), the derived benefit (difference between aided and unaided performance in multiple listening situations), and our ability to meet the consumer's expectations. Previous research by this author has demonstrated that consumer perceptions of value (defined as hearing instrument performance per dollar spent) is the single most important factor differentiating satisfied from dissatisfied consumers.⁶ That implies that our industry can significantly increase customer satisfaction by basing the price of our product on the degree to which we can meet or exceed consumer needs.

CONCLUSIONS

- The CIC will attract a younger, more affluent, and more educated consumer to the market.
- The CIC customer will have significantly lower hearing losses than current hearing instrument owners. Binaural sales for CIC hearing instruments should be significantly lower among new owners.
- Incremental sales will come from populations with the greatest need for hearing instruments.
- If our industry were to offer invisible hearing instruments to the 20 million hearing-impaired nonowners in the United States, only 35% would be interested. Clearly there are additional powerful obstacles to growth of the

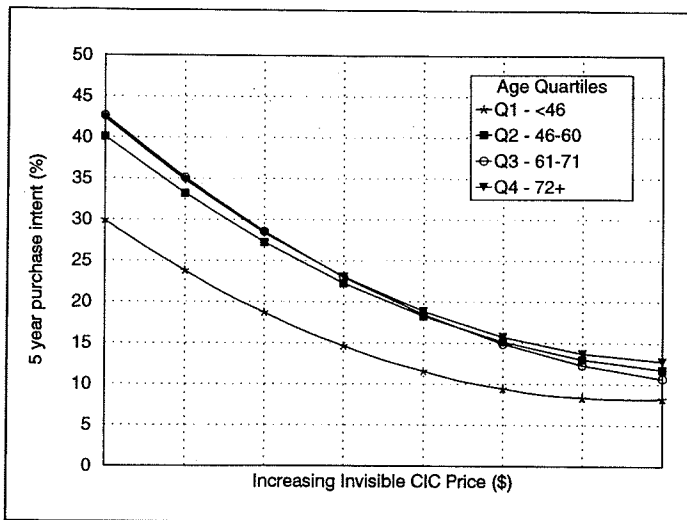


Figure 5. Relationship between CIC price and volume by age.

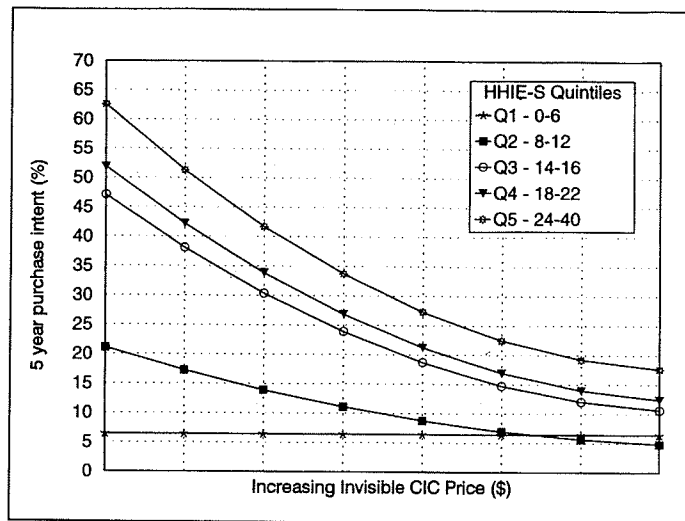


Figure 6. Relationship between CIC price and volume by level of perceptions of hearing handicap as measured by the HHIE-S.

hearing instrument market (e.g., negative perceptions of hearing instrument performance and value, denial of hearing loss, negative physician attitudes, negative word-of-mouth advertising, etc.)

- While lower prices do result in higher sales volume, the market for CIC hearing instruments is relatively inelastic, especially for the mildly impaired younger markets. A reduction in the price of CIC hearing instruments will not result in a complementary increase in volume.
- Household income is not a good indicator of ability to afford hearing in-

struments. Thus, it may be a poor criterion for choosing direct-mail lists.

- Using price to attract the mildly impaired and younger markets will be ineffective in growing the market.

REFERENCES

1. Kochkin S: MarkeTrak IV: Impact on purchase intent of cosmetics, stigma, and style of hearing instrument. *Hear J* 1994;47(9):29-36.
2. Kochkin S: MarkeTrak III: Higher hearing instruments sales don't signal better market penetration. *Hear J* 1992;45(7):47-54.
3. Lichtenstein MJ, Bess HB, Logan SA: Validation of screening tools for identifying hearing-impaired elderly in primary care. *JAMA* 1988; 259:2875-2878.
4. Weinstein BE: Validation of self-assessment scales as outcome measures in hearing instruments fitting. *Semin Hear* 1993;14:326-337.
5. Kochkin S: MarkeTrak III: Why 20 million in US don't use hearing aids for their hearing loss. *Hear J* 1993;46(1):20-27; 46(2):26-31; 46(4):36-37.
6. Kochkin S: MarkeTrak III identifies key factors in determining consumer satisfaction. *Hear J* 1992; 45(8):39-44.

Sergei Kochkin, PhD is Director of Market Research and Market Development at Knowles Electronics, Inc. He is also an officer on the Board of Directors of the Better Hearing Institute and a member of the Collaborative Marketing Committee. Correspondence to Dr. Kochkin at Knowles Electronics, 1151 Maplewood Drive, Itasca, IL 60143.