1974

Consumer reactions to the Senior Citizens Audiological Services Program

Joan Dee Cantieri
The University of Montana

Let us know how access to this document benefits you.
Follow this and additional works at: https://scholarworks.umt.edu/etd

Recommended Citation
Cantieri, Joan Dee, "Consumer reactions to the Senior Citizens Audiological Services Program" (1974). Graduate Student Theses, Dissertations, & Professional Papers, 8730.
https://scholarworks.umt.edu/etd/8730

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
CONSUMER REACTIONS TO
THE SENIOR CITIZENS AUDIOLOGICAL SERVICES PROGRAM

By

Joan Dee Cantieri
B.A., University of Iowa, 1972

Presented in partial fulfillment of
the requirements for the degree of
Master of Arts
1974

Approved by:

Chairman, Board of Examiners

Dean, Graduate School

Date
I am grateful to Dr. Robert B. Chaney for being so generous with his time and for his guidance. For their advice and comments, thanks are also due to the other members of my committee, Dr. Evan Jordan, Dr. Wesley Shellen and Mr. Darrell Micken. Gratitude is also expressed to Dr. Mike Jakupcak for his helpful suggestions, Kathy McCain for her empathy, and Mike Fisher for his assistance, patience and encouragement. Special thanks goes to Mr. Carl Hoblitt for being a thoughtful and generous person.
TABLE OF CONTENTS

ACKNOWLEDGMENTS ................................................................. i
LIST OF TABLES ................................................................. v

Chapter

I. INTRODUCTION ................................................................. 1
   The Senior Citizens Audiological Services Program ......... 2
   Statement of Problem and Purpose ................................. 5

II. PROCEDURES ................................................................. 6
   Cover Letter ................................................................. 6
   Questionnaire Design ................................................... 6
   Interview Design ........................................................ 10
   Analysis of the Data ..................................................... 12

III. RESULTS AND DISCUSSION ........................................ 14
   Questionnaire Results ................................................. 17
      How the respondents learned of the program ............... 17
      Evaluation of personal consideration, counseling
      and services received at the Speech and Hearing
      Clinic ................................................................. 19
   Recommendations reportedly received from the Speech
   and Hearing Clinic following the audiological
   evaluation and reactions to those recommendations ......... 23
   Counseling and services ............................................. 27
   Usage patterns of the hearing aid .............................. 36
Satisfaction and benefit from the use of the
hearing aid ................................................. 40
Sources of the hearing aids ................................................................. 44
Rehabilitative services offered and accepted .................. 47
Miscellaneous ................................................................................. 51
Comparison of previous and present hearing aids ........... 51
Follow-up visits received from the University of
Montana Speech and Hearing Clinic ............................................ 53
Respondents' estimation of the value of the
audiological services received .................................................. 54
Source of the questionnaire responses ..................................... 56
General success of the Senior Citizens Audiological
Services Program ........................................................................ 57
Interview Results .............................................................................. 58
Observations ..................................................................................... 59
Interview questions .......................................................................... 62
Recommendations reportedly received from the Speech
and Hearing Clinic following the audiological
evaluation and reactions to those recommendations . 62
Reported satisfaction with a hearing aid worn prior
to the audiological evaluation ......................... 68
Satisfaction with hearing aids worn following the
audiological evaluation ......................................................... 72
Reported use of the hearing aid ....................................................... 77
Reported counseling on the use and care of the
hearing aid and adjustment to its use ........................................ 81

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
## LIST OF TABLES

**Table**

1. Sample Breakdown ................................................................. 15
2. Agreement between the Questionnaire, Interview and File on Selected Recommendations from the Program ................. 91
CHAPTER I
INTRODUCTION

At present, according to W. Donahue (1968), 10 percent (18-20 million) of the population in the United States are over 65 years of age and that number is expected to rise to 20 percent by the end of this century (Harless and Rupp, 1972). In 1967, the U.S. Department of Health, Education and Welfare reported nearly six million people 45 years of age or older having some hearing loss in one or both ears. Of these, 3.5 million were 65 years of age or older (Harless and Rupp, 1972). It was suggested by the Senate Committee on Aging, in 1968, that 30 to 50 percent of those over 65 years of age were significantly restricted by hearing losses (Harless and Rupp, 1972).

The elderly are often faced with various problems of adjustment and uncertainty, some stemming from failing health. Rupp (1970) found that elderly persons rated auditory and visual capabilities as first in importance to health at this age. Many people in this age group are retired, so greater emphasis is placed on social and cultural outlets. However, these activities can be significantly limited by a hearing loss. Compared to the many other problems encountered by the elderly population, the limitation of communication resulting from a hearing loss may cause the greatest difficulty in adjustment to aging (Harless and Rupp, 1972). Braceland (1962) stated that with the reduction in auditory stimuli the individual tends to feel isolated.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
"There is probably no other age group as the one past age 64, with so many associated problems which must be taken into consideration in the overall aural rehabilitation process" (Alpiner, 1965, p. 455). Due to these associated psychological, social, and physiological problems, proposed aural rehabilitation is not readily accepted by the hearing impaired elderly individual (Alpiner, 1965). Dealing with all of these factors poses a challenging clinical situation.

In a survey of the hearing impaired, one of the most frequent complaints encountered was the cost of the hearing aid (Smith, 1971). Many elderly are financially limited and, consequently, are not able to purchase a hearing aid even though its benefit has been indicated. On the other hand, many individuals purchase hearing aids without thorough evaluation and counseling. As a result they may be ignorant of the proper use and maintenance of the instrument and thus not receive maximum benefit from its use.

The Senior Citizens Audiological Services Program

In the past, this segment of the population has often not been provided adequate audiological and speech rehabilitative services. No single governmental or private program or agency "provides a total diagnostic and rehabilitative service needed to insure that this group will be rehabilitated to the greatest possible extent" (Title I, Higher Education Act Final Report, 1972). It has long been recognized "that a total rehabilitative program must include thorough diagnosis, fitting of proper hearing aids where necessary, rehabilitative therapy, including auditory training, speechreading and speech conservation when required,
and counseling to assist the patient in learning to use the hearing aid and residual hearing to the fullest extent" (Title I, Higher Education Act Final Project Report, 1972). In an attempt to establish a demonstration program for the hearing impaired elderly, which would address itself to these problems, the Audiological Services for Senior Citizens Program was established at the University of Montana Speech and Hearing Clinic under the Title I, Higher Education Act of 1965. The purpose of the Community Service and Continuing Education Program in Montana was to "increase the ability of institutions of higher education to aid in the solution of major community problems through effective educational programs" (Title I, Higher Education Act of 1965). This program began on October 1, 1971 and terminated on March 1, 1974.

The specific goals of this program as presented in the Title I, Higher Education Act Final Report were as follows:

a. To actively seek out individuals 55 years of age or older who need audiological attention.

b. To conduct diagnostic audiometric testing to determine the extent and pathology of any existing loss.

c. To provide hearing aid evaluations using appropriate hearing aids to determine short term benefit of amplification.

d. To provide appropriate hearing aids and earmolds, where indicated, on a no charge basis to determine the long-range benefit of amplification.

e. To provide counseling over an extended period of time to insure that each patient achieves maximum potential from the hearing aid.
f. To plan and provide a program of rehabilitation, including speechreading and speech conservation, tailored to fit the individual.

g. To conduct periodic audiological evaluations to determine the course of each individual's hearing acuity to insure extended benefit from the program.

Accordingly, the University of Montana Speech and Hearing Clinic staff contacted groups such as the Missoula Welfare Department, the City-County Health Department, and the regional chapter of the American Association of Retired Persons and explained the Senior Citizens Program.

Since then a total of 248 individuals received services under this program. These included case histories, diagnostic testing and counseling. Some of these individuals received evaluation and fitting for hearing aids to "determine the initial benefit from amplification" (Title I, Higher Education Act Final Project Report, 1972).

It was further reported that other people were dispensed hearing aids in order to determine the benefit from daily use of amplification. These hearing aids were provided at no cost, to those individuals who showed financial need, as demonstrated by a confidential financial statement. Some individuals already owned hearing aids which were adequate after adjustments were made and/or counseling was conducted.

Followup counseling sessions were conducted to determine the adequacy of the hearing aids and to assess their patterns of use. These visits were made at their homes, over the telephone, or at the University of Montana Speech and Hearing Clinic.
In addition to these services, "an audiological rehabilitation program taking into account age, social strengths and weaknesses, speech and/or language deterioration and other related factors, was considered for individuals selected on the basis of audiological need and geographical availability" (Title I, Higher Education Act Final Project Report, 1972). Finally, followup audiological examinations were conducted after a reasonable period of time to determine whether changes in hearing acuity or need for amplification had occurred.

**Statement of Problem and Purpose**

A stipulation of the programs funded under the Title I Higher Education Act of 1965, was that upon termination, an evaluation of the services provided be conducted. In an attempt to measure participants' reactions to the Senior Citizens Audiological Services Program, a questionnaire was constructed and distributed to all individuals (minus the four used in the pilot study) who participated in the program. This was followed by a direct interview with a stratified sample of forty individuals. Only those who returned the questionnaire were considered eligible for a subsequent interview. The data gathered was used in an evaluation of the effectiveness of some aspects of the program.
CHAPTER II
PROCEDURES

The names of all those who were seen in the Audiological Services for Senior Citizens Program were placed in a separate file. Each of those individuals were mailed the questionnaire, accompanying cover letter and a self-addressed stamped envelope. Oppenheim found that self-addressed, stamped return envelopes produce a higher response rate than business reply envelopes or no envelopes (Oppenheim, 1966). Three weeks after the questionnaire was mailed, forty individuals were telephoned to schedule a personal interview.

Cover Letter

The cover letter (Appendix A) to the questionnaire was in open letter form, as it has been found "that personalizing the accompanying letter makes no difference in the return rates" (Oppenheim, 1966, p. 35). This letter explained the purpose of the questionnaire and contained directions on how to complete it.

Questionnaire Design

The structured, closed-form questionnaire (See Appendix B) consisted of thirty multiple-choice questions and one checklist question. Some questions allowed the respondent to expand on his answers if he desired. Other questions required the respondent to specify his answer if the proper choice was not provided. "Closed form questionnaires are used
when categorized data are required, that is, when they need to be put into definite classifications" (Young, 1966, p. 190). The checklist of question number 17 was used as a probe to remind the individual of certain situations. The respondent was not asked to make a choice, but to respond to each item on the list.

The questions were designed with respect to the following guidelines as suggested by Young (1966, p. 193).

1. The vocabulary chosen should be simple—within easy grasp of the least intelligent of the group studied.
2. The syntax should be clear and straightforward.
3. Professional "jargon" and technical words should be avoided.
4. Questions and statements of a leading character--ones that put replies into the mouth of the respondent--are to be guarded against.
5. Complex questions that require the respondent to go through several steps of reasoning before answering are undesirable and have often resulted in misleading information.
6. The required answers should be within the informational scope of the respondent.
7. The length of the questions and statements used should be governed by an estimate of the respondent's comprehension level.
8. The questions placed first in the questionnaire should be those easiest to answer.
9. Placing a question early in a questionnaire that can affect answers to later questions on the form should be prevented wherever possible.
10. A time sequence should be observed in the arrangement of questions.

11. Insofar as possible, all questions pertaining to one subject should be grouped together. In fact, if time-sequence and subject matter sequence conflict and both cannot be observed, it is usually more important to retain the subject matter sequence.

A pilot study to evaluate the clarity and design of the questionnaire was conducted involving five individuals. Four of these individuals were taken from the population seen through the Audiological Services for Senior Citizens Program. One individual was not evaluated under this program but had received audiological services from the University of Montana Speech and Hearing Clinic in the past. The questionnaire and cover letter were given to each individual. They were asked to read the cover letter and complete the questionnaire in the presence of the interviewer. After completion of the pilot study and guided by the reactions of the respondents, the following alterations were made:

1. All questions were redesigned to a multiple choice format.

2. Ten questions which proved to be redundant or unnecessary were removed from the questionnaire; some were placed in the interview guide.

3. Those questions which caused confusion were rewritten.

4. The respondent was assured of the confidentiality of the questionnaire in the cover letter.

As Young (1966) points out, there are some shortcomings to the use of multiple choice questions which need to be carefully considered.
It may be difficult or impossible to cover the whole range of the subject. Attempting to do so may result in too many choices for the respondent to keep in mind. If the goal is to have the respondent make only one choice from several presented, then the choices must be mutually exclusive, and this is sometimes difficult. Another danger lies in the possibility that persons may tend to select the middle positions and avoid the extremes, thus adding another area for investigation and other factors to be taken into account in the analysis (p. 199).

Questionnaires have the advantage of eliminating interviewer bias and effect (Oppenheim, 1966). It is also possible to contact more people at less expense using this means of survey research. Lazarsfeld and Frenzen believe that answers to personal questions are more frequently given in an anonymous mail reply; also, the mail reply is filled out at leisure and thus produces more thoughtful answers (Young, 1966). "Other studies point also to the fact that self-administered questionnaires--which remove the physical presence of the interviewer and the possibility of interpersonal involvement--thereby decrease interviewer effect and consequently bias" (Young, 1966, p. 202).

Herbert Hyman (1954), however, believes that the physical absence of the interviewer does not exclude the "reactive effect" upon respondents. The respondents answer the questions in anticipation of the reactions of the individual who will be reading the replies.

Several authors (Young, 1966; Oppenheim, 1966; Hyman, 1955) point out further disadvantages of a questionnaire, such as the difficulty of ascertaining the representativeness of the data. Also, mail questionnaires are usually perused before being answered, so that respondents often skip questions or come back to them later, which results in biased responses. Another source of error arises from questions which are answered in perfunctory manner, or are misinterpreted. Structured questionnaires
sometimes fail to yield reliable results because they impose selection of topics and thus control the content of responses; they prescribe length of responses and thus may inhibit full revelations; they indicate form of response and may thereby frustrate even articulate informants in their attempts to relate situations as they see them (Young, 1966).

Interview Design

In an attempt to control for the above mentioned deficiencies of the questionnaire, a direct interview was scheduled. Only those who returned the questionnaire were eligible for the interview. Each return envelope had been coded with a different room number in the address and in this manner, the identity of the respondent was preserved.

Forty individuals were selected for interviewing based on the amount of services received at the Speech and Hearing Clinic under the program, and geographical location. All individuals who returned the questionnaire were placed in one of the following six categories:

1. Those who were dispensed a hearing aid from the Speech and Hearing Clinic and who had at least one follow-up evaluation either in their home, over the telephone, or at the clinic. (HCF)
2. Those who obtained hearing aids from sources other than the clinic after their audiological evaluation at the Speech and Hearing Clinic. (HA)
3. Those who wore hearing aids prior to their audiological evaluation and to whom continued use of the hearing aid was recommended. (CW)
4. Those to whom the recommendation was made that they not wear a hearing aid. (NH)

5. Those who reportedly were dispensed a hearing aid from the University of Montana Speech and Hearing Clinic, but who reported no follow-up evaluations. (HC)

6. Those whose questionnaires were incorrectly or incompletely filled out and thereby could not be placed in one of the above categories. (U)

Twenty individuals were randomly chosen from the first category, ten from the second category, and five each from categories CW and NH. No individuals in the last two groups were selected for an interview since these groups were not established prior to the mailing of the questionnaire. The selected interviewees were telephoned in order to schedule a time for the interview. The interview took place in the respondent's home and took 30 to 45 minutes excluding travel time.

The interview was a focused interview and used an interview guide (Appendix C). A focused interview:

(1) takes place with persons known to have been involved in a particular concrete situation; (2) it refers to situations which have been analyzed prior to the interview; (3) it proceeds on the basis of an interview guide which outlines the major areas of the inquiry and the hypotheses which locate pertinence of data to be secured in the interview; (4) it is focused on the subjective experiences—attitudes and emotional responses regarding the particular concrete situations under study. Although the whole situation is carefully structured and the major areas of the inquiry mapped out, the interviewee is given considerable freedom to express his definition of the situation that is presented to him (Young, 1966, p. 219).

The interview was recorded using a cassette tape recorder so that the interviewer was able to give her full attention to the interviewee. These recorded interviews were replayed at a later time and the results were recorded by hand.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
As Young points out, the interview is usually used as a supplement to other techniques. It allows a more permissive atmosphere than other techniques of investigation. Questions not readily understood by the interviewees can be rephrased or repeated with proper emphasis and explanations when necessary. Also, the interviewer has a better opportunity to appraise the accuracy and validity of replies. Contradictory statements can be followed up to determine possible reasons for contradiction.

The greatest limitation on an interview technique arises from interviewer-interviewee biases (Young, 1966). Each may misinterpret the other and there is a great deal of subjectivity in the evaluation of both questions asked and answers received. The interviewee is also limited by his own memory and the ability to adequately articulate his feelings. However, it was felt that the combination of the questionnaire and the interview would minimize the limitations of each.

Analysis of the Data

A comparison was made of the questionnaire data and the interview data in order to determine the degree of agreement. Therefore, the results of the forty interviews were compared to the results of the forty corresponding questionnaires. The results of questions 4, 18, 23, and 27 on the questionnaire and questions 1, 7, 16, and 19 on the interview, which pertained to recommendations and subsequent rehabilitation, were compared to information taken from each individual’s file at the Speech and Hearing Clinic in order to determine the degree of correspondence. These specific questions were chosen since they duplicated information in the file.
This comparison provided an indication of how clearly the professional personnel involved with this program conveyed information concerning the audiological testing and subsequent recommendations to the clients of the Senior Citizens Audiological Services program. Although it was difficult to establish an adequate level of criteria, it was the consensus of the committee members and this writer that 70 percent or more agreement between the results of the questionnaire, the interview, and the file would be grounds for concluding that the personnel involved in the Senior Citizens Audiological Services had done an adequate job of conveying the information and recommendations. If there were less than 70 percent agreement between the results of the questionnaire interview and file, it would be considered evidence the professional personnel did not adequately convey the audiological information and recommendations.

Evaluative questions 2, 3, 5, 16, 22, 25, 28, and 29 on all returned questionnaires were analyzed in the following manner: if 51 percent or more individuals checked "a" or "b" on each of the above-mentioned questions, it would be felt that the Senior Citizens Audiological Services program was, in general, successful. These questions called for an evaluation of certain aspects of the program. The 51 percent criteria level was selected because it indicated that a majority of the respondents were satisfied with the overall services. The results from the remaining questions on the questionnaire were reported narratively.
CHAPTER III
RESULTS AND DISCUSSION

Of the 244 questionnaires mailed, 176 were returned. Three of those questionnaires were completed by the spouses of deceased participants, therefore could not be used. One questionnaire was returned by a woman who claimed that she never received the services and two were returned stating that the individuals were not at the posted address. The resulting 170 questionnaires provided a 70 percent return rate.

The 170 questionnaires were divided into six different groups according to the recommendations and services reportedly received from the Speech and Hearing Clinic. Group HCF (hearing aid from clinic with follow-up) were those individuals who had received their hearing aids from the University of Montana Speech and Hearing Clinic and who reported at least one follow-up visit. There were 29 individuals in this group, equivalent to 17 percent of the total questionnaires returned. Group HA consisted of those individuals who received a hearing aid from another source after their evaluation at the University of Montana Speech and Hearing Clinic (hearing aid from another source). Twenty-four, or 14 percent, of the 170 individuals were placed in this group. Thirty-four individuals, or 20 percent, fell into group CW (continue wearing hearing aid). These people stated on the questionnaire that they had hearing aids prior to their evaluation and continued wearing their hearing aids upon the recommendation of the Speech and Hearing Clinic.
It was recommended to the individuals in group NH (no hearing aid) that they not wear a hearing aid. Thirty-eight, or 22 percent, of the sample stated on the questionnaire that this recommendation was made. Group HC consisted of 21 (13 percent) persons who stated they received a hearing aid from the University of Montana Speech and Hearing Clinic but reported receiving no follow-up evaluations, therefore could not be placed in group HCF (hearing aid from clinic with follow-up). Group U (unclassified) consisted of those individuals whose questionnaires were inconsistently or inadequately filled out, and could not be placed in one of the five previously mentioned groups. There were 24, or 14 percent, of the total 170 questionnaires that were placed in this unclassified (U) group.

**TABLE I**

**SAMPLE BREAKDOWN**

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCF (hearing aid from clinic with follow-up)</td>
<td>29</td>
<td>17%</td>
</tr>
<tr>
<td>HA (hearing aid from another source)</td>
<td>24</td>
<td>14%</td>
</tr>
<tr>
<td>CW (continue wearing hearing aid)</td>
<td>34</td>
<td>20%</td>
</tr>
<tr>
<td>NH (no hearing aid)</td>
<td>38</td>
<td>22%</td>
</tr>
<tr>
<td>HC (hearing aid from clinic)</td>
<td>21</td>
<td>13%</td>
</tr>
<tr>
<td>U (unclassified)</td>
<td>24</td>
<td>14%</td>
</tr>
</tbody>
</table>

**TOTAL** 170 100%
The results for each question are presented in Appendix D with respect to the percentages of responses found in each of the six groups and the combined sample for each foil. Due to rounding some of the columns may not total 100 percent. It was found that the U (unclassified) group presented the most deviant results, mostly due to the high percentage of "no responses" for many questions. Some of the "no responses" on questions 8 through 22 could have been due to a misunderstanding of the directions. Those who had received the recommendation to wear a hearing aid were to answer questions 8 through 22. Those who did not receive this recommendation were to proceed to question 23 and answer all remaining questions. It is possible that some of the individuals in the U group received the recommendation to wear a hearing aid but misunderstood the directions and proceeded to question 23, thereby leaving questions 8 through 22 unanswered.

Another explanation may have been the possible limitations of the psychological and mental abilities of some individuals which comprise this group. This may in turn have limited their ability to correctly and adequately answer the questionnaire. One can only present the possibilities but definite reasons for the inconsistent responses could not be found with the information provided in the questionnaire.

Due to the large number of "no responses" from this group, they will not be discussed in detail. However, their responses were maintained when computing the combined percentages.
Questionnaire Results

Twenty-six questions and one checklist were grouped into eight clusters of closely related questions. Four additional questions which were not closely related to any of the other questions in the questionnaire were placed in a "miscellaneous" group. Each of the eight clusters of questions and four miscellaneous questions are discussed separately below. The procedure for reporting results in each of the clusters is as follows: (1) a definition of the cluster in terms of the purpose of the questions included; (2) a listing of the questions contained in the cluster; (3) a percentage breakdown of the most frequent responses given to the questions by each of the five groups of respondents and the combined groups; and (4) a discussion of the results. Appendix D contains the detailed percentage breakdown by each of the groups of respondents and combined groups in the study for each question.

How the respondents learned of the program

Questions 1 and 29 comprised the first cluster to determine where and how the respondents learned of the services. The questions were as follows:

1. How did you learn of the Audiological Services for Senior Citizens?
2. Do you feel the Audiological Services were beneficial enough to recommend to another person?

The results from question 1 showed that most of the individuals in the HCF (hearing aid from clinic with follow-up) and HC (hearing aid from clinic) groups reported learning of the services through a friend or relative (HCF - 28%; HC - 19%). Most of the respondents in the HA
(hearing aid from another source), CW (continue wearing) and NH (no hearing aid) groups stated they learned of the services through a friend or relative (HA - 50%; CW - 59%; NH - 60%) or through other sources (HA - 21%; CW - 12%; NH - 13%) such as senior citizens meetings or centers or the Missoulian, a local daily newspaper.

With respect to the sample, the results from question 1 indicated that 48 percent learned of the Senior Citizens Audiological Services program through a friend or relative. The second highest percent (15 percent) learned of the program through other sources as local newspapers, senior citizens meetings, or senior citizens centers. Twelve percent reported learning of services through the American Association of Retired Persons, 4 percent through the Missoula Welfare Department and none through the Missoula County Health Department.

The results from question 29 showed that 93 percent of the respondents in the HCF (hearing aid from clinic with follow-up) group and 92 percent of those in the NH (no hearing aid) group stated that they would highly recommend the services. Eighty-eight percent of the CW (continue wearing the hearing aid) group, 86% of the HC (hearing aid from clinic) group, and 83% of the HA (hearing aid from another source) group reported the same.

With respect to the total sample results from question 29, 85 percent reported they would highly recommend the services and 5 percent reported they would recommend some of the services.

Originally, the staff from the University of Montana Speech and Hearing Clinic contacted the Missoula Welfare Department, the City-County Health Department and the regional chapter of the American
Association of Retired Persons and explained the Senior Citizens Audiological Services Program. Twelve percent of those responding stated they learned of this program through the American Association of Retired Persons while only 4 percent of the sample related that they heard of the services through the Missoula Welfare Department and none through the City-County Health Department. It would appear that the program was best advertised by word of mouth as most people reported of learning of the services through a friend or relative (48%). The efforts made by the staff to make the existence of the program known resulted in informing less than one-fourth of the sample which responded to this questionnaire. However, relatively few individuals of this sample may have had contact with either the City-County Health Department or the Missoula Welfare Department, which might in part explain these results. It is also possible that those individuals who did learn of the services through either the American Association of Retired Persons, or the Missoula Welfare Department, were the same individuals who subsequently informed their friends of the program.

The results from question number 29 on the questionnaire lend support to the results of question 1. Eighty-five percent of the total sample felt they would highly recommend the Audiological Services and, it appears from question 1, many individuals did just that.

Evaluation of personal consideration, counseling and services received at the Speech and Hearing Clinic

Questions 2, 3, 22, and 28 asked the respondent to rate the personal consideration, competence of the staff, counseling and overall services of
the program as either excellent, good, fair or poor. The questions were as follows:

2. How would you rate the personal consideration given to you while being tested?

3. How would you rate the competence or skill of the individual(s) who conducted the hearing evaluation?

22. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?

28. Taking everything into consideration, how would you rate the services you received at the University of Montana Speech and Hearing Clinic?

The results of question 2 showed that 91 percent of the CW (continue wearing hearing aid) group, 90 percent of the HCF (hearing aid from clinic with follow-up) group, 89 percent of the NH (no hearing aid) group, 83 percent of the HA (hearing aid from another source) group and 76 percent of the HC (hearing aid from clinic) group gave an "Excellent" rating to the personal consideration given to them while being tested at the Speech and Hearing Clinic.

With respect to the combined sample results on question 2, 86 percent gave an "excellent" rating to the personal consideration given to them while being tested at the Speech and Hearing Clinic.

The results from question 3 showed that 86 percent of the HCF (hearing aid from clinic with follow-up) group, 82 percent of the CW (continue wearing) group, 76 percent of the NH (no hearing aid) group, 75 percent of the HA (hearing aid from another source) group and 71 percent of the HC (hearing aid from clinic) group gave an "excellent" rating to the competence or skill of the individual(s) who conducted the hearing evaluation.
With respect to the combined sample results on question 3, 77 percent gave an "excellent" rating to the competence or skill of the individual(s) who conducted the audiological evaluation.

The results from question 22 showed that 86 percent of the HCF group (hearing aid from clinic with follow-up), 76 percent of the HC group, 71 percent of the HA group and 68 percent of the CW group gave an "excellent" rating to the counseling they received at the University of Montana Speech and Hearing Clinic. The NH (no hearing aid) group were not to respond to questions 8 through 22 on the questionnaire. Those individuals who were told they need not or should not wear a hearing aid, were to omit those questions, since those questions dealt, in general, with the use, care and adjustment to the hearing aid.

With respect to the combined sample results on question 22, 67 percent gave an "excellent" rating to the counseling received at the University of Montana Speech and Hearing Clinic.

The results from question 28 showed that 90 percent of the HCF group, 82 percent of the CW group, 79 percent of both the HA and NH groups and 76 percent of the HC group gave an "excellent" rating to the services received at the Speech and Hearing Clinic.

With respect to the combined sample, the results from question 28 showed that 78 percent of the respondents gave an "excellent" rating to the services received at the Speech and Hearing Clinic.

Analysis of the results of questions 2, 3, 22 and 28 showed that essentially the largest percentages with respect to the excellent rating came from the HCF (hearing aid from clinic with follow-up) group (#2 - 90%; #3 - 86%; #22 - 86%; 90%). This may be due to the fact that
the personnel involved with this program had greater contact with the members of this group as they were dispensed hearing aids from the University of Montana Speech and Hearing Clinic. Also, these individuals did not have to pay for these hearing aids, which may have influenced their responses.

Fewer members of the HC (hearing aid from clinic) group gave "excellent" ratings on these four questions (#2 - 76%; #3 - 71%; #22 - 67%; #28 - 76%). This group differed from the HCF group in terms of the number of follow-up evaluations reported. The HCF group reported one or more follow-up visits while the HC group reported none. It was impossible to determine from this information whether it was a shortcoming on the part of the clinic or the client which resulted in no follow-up visits with the members of the HC group. Possibly, if the follow-up visits had taken place with the members of this group, there may have been a larger percentage of "excellent" ratings from this group.

On questions 2, 3, and 28, 70 percent to 80 percent of the sample gave an "excellent" rating to the personal consideration, competence of the staff and overall services of the program. Only 67 percent of those responding gave an "excellent" rating to the counseling (question 22). The reason for this lower percentage can be found in the U (unclassified) group. Only 29 percent of this group felt the counseling was excellent, but 58 percent did not respond to the question. Taking this into consideration, it appeared that with respect to the total sample, a sizable majority felt the services they received were excellent. Upon analyzing the results of questions 2, 3, 22 and 28 in connection with questions 1 and 29, one may assume that the best advertising came from
the "satisfied customer." Many individuals were highly satisfied with
the services and recommended them to others.

Recommendations reportedly received from
the Speech and Hearing Clinic following
the audiological evaluation and
reactions to those recommendations

Questions 4, 5, 6, and 7 dealt with the recommendations the
respondents recalled receiving following the audiological evaluation at
the Speech and Hearing Clinic and their reactions to those recommendations.

The questions were as follows:
4. What recommendations were made to you after the hearing
evaluation?
5. Did you agree with the recommendations?
6. Did you follow the recommendations?
7. If you checked "b" or "c" in the previous question, please
explain the reasons for not following the recommendations.

The results from question 4 showed that 55 percent of the HCF
(hearing aid from clinic with follow-up) were recommended to wear a
hearing aid on a trial basis and 21 percent were told to try a new hearing
aid as the one worn at the time of the evaluation was not adequate.
Forty-six percent of the HA (hearing aid from another source) reported
the recommendation to wear a hearing aid on a trial basis and 21 percent
could not recall the recommendations given. Eighty-five percent of the
CW (continue wearing ) reported that they were told the hearing aid worn
at the time of the evaluation at the Speech and Hearing Clinic was adequate.
Six percent reported that they were referred to a physician and another
6 percent reported that no recommendations were made. Fifty percent of the
NH (no hearing aid) group indicated that they were told their hearing was not normal but would not benefit from the use of a hearing aid. Forty-five percent were told their hearing was normal for their age and need not wear a hearing aid. Fifty-seven percent of the HC (hearing aid from clinic) reported the recommendation to wear a hearing aid on a trial basis and 14 percent were told that the hearing aid they were wearing at that time was adequate. Another 14 percent stated they could not recall the recommendations.

With respect to the combined sample, the combined results from question 4 showed that 28 percent reported receiving the recommendation to wear a hearing aid on a trial basis, while 20 percent indicated they were told that the hearing aid worn at the time of the evaluation was adequate. Twelve percent stated they were told their hearing was not normal but they would not benefit from the use of a hearing aid. Ten percent of the sample indicated they were told their hearing was normal for their age and they need not wear a hearing aid.

The results from question 5 showed that 86 percent of the HC (hearing aid from clinic) group, 84 percent of the NH (no hearing aid) group, 79 percent of the HCF (hearing aid from clinic with follow-up) group, 70 percent of the CW (continue wearing) group and 67 percent of the HA (hearing aid from another source) group indicated they agreed completely with the recommendations they received following the audiological evaluation at the Speech and Hearing Clinic.

With respect to the combined sample, the results from question 5 showed that 74 percent agreed completely with the recommendations received from the Speech and Hearing Clinic.
The results from question 6 showed that 79 percent of the HCF group, 71 percent of the HC group, 65 percent of the CW group, 63 percent of the NH group and 62 percent of the HA group stated they followed all the recommendations given to them by the Speech and Hearing Clinic following the audiological evaluation. Thirty-four percent of the NH group, 25 percent of the HA group, 24 percent of the CW group, 14 percent of the HC group and 10 percent of the HCF group made no response to question 6.

With respect to the combined sample, the results from question 6 showed that 63 percent indicated they followed all the recommendations while 26 percent made no response.

The results from question 7, which asked the respondent to explain the reasons for not following the recommendations if he had indicated such in question 6, showed that most individuals who should have did not respond to this question. The most frequently stated reasons for not following the recommendations were inability to cope with amplified sound or living alone, therefore not wearing the hearing aid. The inability to afford purchasing a hearing aid and not finding the time to purchase an aid were also mentioned.

Group CW (continue wearing hearing aid) and NH (no hearing aid) were established based upon what recommendations the respondents reported as being made. Eighty-five percent of the CW group stated that they were told the hearing aid they were wearing at the time of the evaluation was adequate. The remaining respondents in this group stated that no recommendations were made, they could not be recalled, or that they were referred to a physician. Upon examination of the responses from these individuals on question 18 and 19 on the questionnaire, which asked
about obtaining a hearing aid and the reasons for not doing so, these respondents could be placed in the CW group. These individuals stated that they did not obtain a hearing aid after the evaluation (#18) since they already had one and were told to continue wearing it (#19).

Ninety-seven percent of the individuals in group NH (no hearing aid) reported that they were told that they need not or should not wear a hearing aid. The remaining individual (3 percent) reported that the recommendation was made that he discuss his hearing with his physician. This individual did not respond to questions 18 through 22. Only those individuals to whom it was recommended that they wear a hearing aid were to respond to these questions. Consequently, it was concluded that this individual did not receive this recommendation, therefore was placed in the NH group.

The greatest percentage of those who stated they agreed completely with the recommendations came from the HC (hearing aid from clinic) and NH (no hearing aid) groups with 86 percent and 84 percent, respectively. However, only 63 percent of the NH group reported they followed all the recommendations while 71 percent of the HC group responded in this manner. The only group in which no difference was seen between the percent who agreed completely with the recommendations and the percent that followed all the recommendations was in the HCF group (hearing aid from clinic with follow-up). Seventy-nine percent stated they were in complete agreement and followed the recommendations fully. These results may be due to the greater contact by the staff with the members of this group since they were dispensed a hearing aid from the clinic and received at least one follow-up visit. With this greater contact with staff the
recommendations were perhaps more likely to be followed, since the members of the HCF group were more closely "supervised."

Seventy-four percent of the total sample stated that they agreed completely with the recommendations made. However, only 63 percent reported that they followed all of the recommendations. The major excuse as to why the recommendations were not fully followed was the lack of time. The other reasons included the cost of the hearing aid, the inability to cope with the amplified background noise and living alone, therefore not wearing the hearing aid. Many clinicians agree the geriatric population is one of the most difficult to counsel concerning the wearing of a hearing aid. Due to their often limited financial situation and failing health, this group of hearing impaired individuals may have more urgent concerns than their decreasing hearing acuity. Since financial limitations should not have been a factor in either the HCF (hearing aid from clinic with follow-up) or the HC (hearing aid from clinic) groups, one would expect that a greater percentage would have followed the recommendations than any of the other groups. We found this was in fact the case (HCF - 79%; HC - 71%).

Counseling and services

Questions 8, 13, 14 and 15 dealt with the clients' report of counseling and the services they received. The results from these questions were compared to the results from question 9, which was a countercheck question with respect to the counseling and the services reported. It was felt that if adequate counseling had been conducted, those individuals who wore hearing aids would know how to use and care for them and be fully aware of their limitations.
Question 11 was also added to this cluster of questions for analysis. This question asked if another hearing aid would be sought if something happened to the one presently worn. It was felt that satisfaction or dissatisfaction with the hearing aid or services provided would be reflected in the responses to this question. The questions were as follows:

8. Were you allowed to try different hearing aids during the evaluation?
9. Do you have any complaints about your hearing aid?
11. Would you seek another hearing aid if your present one became damaged or lost?
13. Were you told how to use and care for your hearing aid by the personnel at the Speech and Hearing Clinic?
14. Was it your understanding that the hearing aid would provide "normal" hearing?
15. Was it your understanding that your hearing aid would amplify only speech and not background noise?

The results from question 8 showed that 55 percent of the HCF (hearing aid from clinic with follow-up) group, 48 percent of the HC (hearing aid from clinic) group, 29 percent of the HA (hearing aid from another source) group, and 26 percent of the CW (continue wearing) group indicated that they were allowed to try different hearing aids during the evaluation. Fifty-eight percent of the HA group, 44 percent of the CW group, 43 percent of the HC group and 21 percent of the HCF group reported that they were not allowed to try different hearing aids during the evaluation.
With respect to the combined sample, the results from question number 8 showed that 36 percent of the respondents indicated they were allowed to try different hearing aids during the evaluation and 39 percent reported they were not allowed to do so. Nineteen percent made no response to question number 8.

The results from question 9 showed that 67 percent of the HC (hearing aid from clinic) group, 45 percent of the HCF (hearing aid from clinic with follow-up) group, 32 percent of the CW (continue wearing) group and 25 percent of the HA (hearing aid from another source) group had no complaints about their hearing aids. Twenty-nine percent of the HA group, 28 percent of the HCF group, 18 percent of the CW group and 14 percent of the HC group complained that the hearing aid made everything sound too noisy. Twenty-four percent of the CW group, 12 percent of the HA group, 10 percent of the HCF group and 5 percent of the HC group felt the batteries did not last long enough.

With respect to the combined sample, the results from question 9 showed that 36 percent of the respondents had no complaints, 20 percent felt the hearing aid made everything sound too noisy and 11 percent felt the batteries did not last long enough. Twenty-four percent of the respondents made no response to this question. Many of the respondents checked more than one foil when answering question 9. When the percentages were computed, they were figured in terms of how many of the total group members chose that particular foil. Consequently, the percentages total over 100 percent, for both individual groups and combined results.

The results from question 11 showed that 52 percent of the HCF (hearing aid from clinic with follow-up) group, 48 percent of the HC
(hearing aid from clinic) group, 38 percent of the HA (hearing aid from another source) group and 20 percent of the CW (continue wearing) group indicated that they would seek the same model of hearing aid if the one presently worn became lost or damaged. Twenty-nine percent in each the HA and CW groups, 19 percent of the HC group and 7 percent of the HCF group indicated that they would seek another hearing aid but a different model than the one presently worn. Twenty-four percent of both the HCF group and the CW group, 8 percent of the HA group and 5 percent of the HC group remained undecided as to whether they would seek another hearing aid. Twenty-four percent of the HC group, 14 percent of the HCF group, 6 percent of the CW group and 4 percent of the HA group indicated that they would obtain another hearing aid only if they did not have to pay for it.

With respect to the combined sample, the results from question 11 showed that most of the respondents indicated they would seek another aid of the same model if the one presently worn became lost or damaged (32%), 17 percent indicated they would seek a different model of hearing aid and 15 percent remained undecided. When answering question 11, many of the respondents checked more than one foil. When the percentages were computed, they were figured in terms of how many of the total group members chose that particular foil. Consequently the percentages for the individual groups and combined sample total over 100 percent.

The results from question 13 showed that 86 percent of the HC (hearing aid from clinic) group, 79 percent of the HCF (hearing aid from clinic with follow-up) group, 62 percent of the CW (continue wearing) group and 17 percent of the HA (hearing aid from another source) indicated
they were told how to use and care for their hearing aids by the personnel at the Speech and Hearing Clinic. Twenty-five percent of the HA group, 15 percent of the CW group, 7 percent of the HCF group, and 5 percent of the HC group indicated they did not receive these instructions.

With respect to the combined sample, the results from question 13 showed that most of the respondents indicated they were instructed on the use and care of the hearing aid by the personnel at the Speech and Hearing Clinic (52%). Eleven percent of the respondents indicated they did not receive these instructions.

The results from question 14 showed that 67 percent of the HA (hearing aid from another source) group, 59 percent of the HCF (hearing aid from clinic with follow-up) group, 52 percent of the HC (hearing aid from clinic) group and 44 percent of the CW (continue wearing) group indicated that it was their understanding the hearing aid would not provide "normal" hearing. Thirty-three percent of the HC group, 24 percent of the CW group, 17 percent of both the HCF group and the HA group indicated that it was their understanding the hearing aid would provide "normal" hearing.

With respect to the combined sample, the results from question 14 showed that most of the respondents indicated it was their understanding the hearing aid would not provide normal hearing (47%). Twenty percent of the respondents indicated that it was their understanding the hearing aid would provide normal hearing.

The results from question 15 showed that 66 percent of the HA (hearing aid from another source) group, 62 percent of both the HCF (hearing aid from clinic with follow-up) group and CW (continue wearing)
group and 52 percent of the HC (hearing aid from clinic) group indicated that it was their understanding the hearing aid would not amplify only speech. Twelve percent of both the HA group and CW group, 10 percent of the HCF group and 5 percent of the HC group indicated that it was their understanding the hearing aid would amplify only speech and not background noise.

With respect to the combined sample, the results from question 15 showed that most of the respondents had the understanding that the hearing aid would not amplify only speech (51%). Eleven percent of the respondents indicated that it was their understanding the hearing aid would amplify only speech and not background noise.

Analysis of the results from question 8, which asked if the respondent was allowed to try different hearing aids during the evaluation, showed that 55 percent of the HCF (hearing aid from clinic with follow-up) group, 48 percent of the HC (hearing aid from clinic) group, 29 percent of the HA (hearing aid from another source) group, and 26 percent of the CW (continue wearing) group indicated they were allowed to do so. This difference in percentage between the groups was understandable when considering that the HCF and the HC group members received a hearing aid from the University of Montana Speech and Hearing Clinic while the members of the CW and HA groups did not. The personnel had more direct responsibility to the members of the two former groups. Also there would be little point to having the client try on hearing aids if he already had one that was considered adequate or was being referred to a hearing aid dealer who would service that individual. However, the reader must be cautioned with respect to the results of this question. Due to the
wording of the question it was impossible to determine if the respondent's answer was with reference to the Speech and Hearing Clinic or another agency.

When answering questions 9 and 11 many of the respondents checked more than one foil. When the percentages were computed, they were figured in terms of how many of the total group members chose that particular foil. Consequently, the percentages total over 100 percent.

The greatest percentage of individuals who stated they had no complaints about their hearing aids (question 9) came from the HCF (45%) and HC (67%) groups. This might indicate that the personnel involved with this program were more successful in satisfying their clients than the personnel from whom the members of the CW (continue wearing) and HA (hearing aid from another source) groups obtained hearing aids (CW - 32%; HA - 25%). However, examination of the results of question 9 showed that a greater percentage of the HCF (hearing aid from clinic with follow-up) group members checked the complaints than did not. The most frequently chosen complaint by all groups except the CW group was that the hearing aid made everything sound too noisy.

Perhaps since the questionnaire and the hearing aid came from the same source, the respondents of the HCF group felt that if a complaint was indicated, a follow-up on that complaint by this clinic would be conducted.

When asked if another hearing aid would be sought if the one presently worn became lost or damaged, the majority of the respondents who stated "yes, the same model" came from the HCF (52%) and HC (48%) groups. No respondents reported that they would want to obtain a hearing aid from a different source. However 14 percent of group HCF and 24 percent of
group HC stated that they would only get another hearing aid if they did not have to pay for it. Approximately one-fourth of the HCF group (25%) stated that they remained undecided whether they would seek another hearing aid or not.

Thirty-eight percent of the HA group and 21 percent of the CW group reported they would seek the same model of hearing aid. Compared to the results of the HCF (52%) and HC (48%) groups with respect to this question one could possibly assume the members of both the HCF and HC groups were more satisfied with the aid fitted to them than the members of the HA and CW groups. However, only 9 percent of the CW group and none of the HA group stated they would seek a hearing aid from another source. Far fewer of the members of these two groups (HA - 4%; CW - 6%) indicated they would not be willing to pay for another hearing aid than shown in either the HCF (14%) or HC (24%) groups. The individuals from the HA (hearing aid from another source) and CW (continue wearing) groups could possibly be of higher economic status than the members of the HCF and HC groups. As previously stated, hearing aids were dispensed by the Speech and Hearing Clinic with consideration of financial need. Those who could afford to purchase a hearing aid were referred to a hearing aid dealer (HA group). Those who could not were dispensed aids by the clinic. The CW group members (continue wearing) already owned a hearing aid. It would appear that since they could afford to buy that aid they would be more likely to be able to buy another if the necessity arose.

The greatest percentage of the "yes" answers to question 13 concerning receiving instructions on the use and care of the hearing aid, came from the HCF and HC groups with approximately 80 percent for each of
the two groups. The CW group was third with 62 percent and the HA group was fourth with only 17 percent of its members responding affirmatively. Upon further examination it was found that the remaining respondents reported that they had not received such instructions, the instructions could not be recalled, or no response was given. Here again the staff involved with this program probably felt more responsible for the members of the HCF (hearing aid from clinic with follow-up) and the HC (hearing aid from clinic) groups than to those of the HA (hearing aid from another source) group. Since the hearing aid was dispensed by the clinic it was the duty of the personnel to insure that these individuals know how to use and care for the hearing aid and, therefore, encourage maximum benefit. The members of the HA group were referred to another source to obtain a hearing aid. It was the responsibility of that agency to instruct its clients of the use and care of the hearing aid and not the Speech and Hearing Clinic's.

A large percent of the members of the CW group (62%) reported that they were told how to use and care for their hearing aid by the personnel at the Speech and Hearing Clinic. This was surprising since these individuals owned and wore a hearing aid at the time of the evaluation at the Speech and Hearing Clinic, therefore, one might assume they already knew this information. Either this information was wrongly reported which, due to the large percentage did not appear to be the case, or in fact they did receive these instructions from the Speech and Hearing Clinic. Possibly this information was reviewed for them by the clinic even though they had received such instructions from the source of the hearing aid.

More respondents in the HC (hearing aid from clinic) group stated that it was their understanding the hearing aid would provide "normal" hearing.
(33%) than found in the other groups (HCF - 17%; HA - 17%; CW - 24%). The members of HC group received their hearing aids from the Speech and Hearing Clinic but received no follow-up evaluations. The HCF group also were dispensed hearing aids from the Speech and Hearing Clinic but reported at least one follow-up visit. Only 17 percent of the HCF group felt the hearing aid would provide normal hearing while 33 percent of the HC group reported this. Perhaps if the HC group had a follow-up evaluation they would have learned the hearing aid would not provide "normal" hearing.

Most of the respondents reported that they did not believe the hearing aid would provide "normal" hearing (47%) nor that it would amplify only speech and not background noise (51%), which would be considered the appropriate answers. This indicated that either the respondents knew this information prior to the evaluation, they were thus informed during the evaluation or they discovered that this was the case after wearing the hearing aid.

Usage patterns of the hearing aid

Questions 10 and 12 were asked in order to estimate how often the respondent wore his hearing aid. These questions were used as a crosscheck for one another. In other words, it was felt if the aid was worn daily, all day long, and the battery case removed when not in use, the battery should last approximately ten to fourteen days. If the aid was worn less frequently, the battery, if cared for properly, would last longer. Therefore foil "a" on question 10 (Daily, all day long) should correspond to the results from foil "c" on question 12 (Less than every two weeks).
The questions were as follows:

10. How often do you wear your hearing aid?

12. How often do you need to replace the batteries in your present hearing aid?

The results from question 10 showed that 54 percent of the HA (hearing aid from another source) group, 38 percent of both the HCF (hearing aid from clinic with follow-up) and CW (continue wearing) groups and 24 percent of the HC (hearing aid from clinic) group indicated they wore their hearing aids daily, all day long. Forty-eight percent of the HC group, 44 percent of the CW group, 34 percent of the HCF group and 25 percent of the HA group indicated they wore their hearing aids daily but only for part of the day.

With respect to the combined sample, the results from question 10 showed that the greatest percentage of the respondents wore their hearing aids, daily, all day long (36%). Thirty-one percent indicated they wore their hearing aids daily, but only for part of the day.

The results from question 12 showed that 33 percent of the HA (hearing aid from another source) group, 28 percent of both the HC (hearing aid from clinic) group and HCF (hearing aid from clinic with follow-up) group and 15 percent of the CW (continue wearing) group indicated they needed to replace the batteries in their hearing aids less than every four weeks. Twenty-four percent of both the HCF and HC groups, 21 percent of the HA group and 12 percent of the CW group indicated that they needed to replace the batteries in their hearing aids less than every three weeks. Thirty-five percent of the CW group, 21 percent of the HA group, 14 percent of the HCF group and 10 percent of the HC group indicated that they needed
to replace the batteries less than every two weeks. Fifteen percent of
the CW group, 14 percent of the HCF group and 10 percent of the HC group
indicated they needed to replace the batteries less than every week.
None of the respondents from the HA group reported this.

With respect to the combined sample, the results from question 12
showed that most of the respondents indicated they needed to replace the
batteries in their hearing aids less than every four weeks (20%).
Sixteen percent indicated they needed to replace the batteries less than
every three weeks and 17 percent of the respondents indicated they needed
to replace the batteries in their hearing aids less than every two weeks.

Analysis of the results of questions 10 and 12 showed a low degree
of correspondence between foil "a" on question 10 (Daily, all day long)
and foil "c" on question 12 (Less than every two weeks). Only half of
those respondents in groups HCF, HA and HC stated they wore their hearing
aid daily, all day long and reported that they replaced the battery less
than every two weeks. The greatest correspondence was seen from the
CW (continue wearing) group. Apparently since they had worn hearing aids
for a longer period, they were more familiar with this aspect of its use
and care.

Approximately 70 to 80 percent of the respondents in each of the
groups HCF, HA, CW and HC reported that they wore their hearing aids either
daily, all day long or part of the day. Group CW (continue wearing) had
the largest percentage with 82 percent and the HCF (hearing aid from clinic
with follow-up) and HC (hearing aid from clinic) groups, the smallest
with 72 percent each. Fewer individuals who were issued hearing aids from
the Speech and Hearing Clinic were wearing their hearing aids daily when
compared to the other two groups. There were many possible explanations for this.

1. The personnel from the Speech and Hearing Clinic did not adequately counsel the individuals in the HCF and HC groups on the use, care and limitations of their hearing aids. Therefore, they became frustrated or discouraged and saw no need to wear the hearing aid.

2. Since the individuals from the HCF and HC groups did not have to pay for their hearing aids they lacked the added incentive the expenditure might have added.

3. Possibly many individuals who obtained hearing aids from the Speech and Hearing Clinic never, before the examination felt the need to seek a hearing aid. Therefore, they may have lacked the motivation to wear the aid found in the HA (hearing aid from another source) and CW (continue wearing) groups who had made an effort to obtain an aid.

Those individuals who reported that they must replace their batteries less than every week were apparently using a poor quality of battery or were not taking proper care of the hearing aid by removing the battery when not in use. Fourteen percent of the HCF (hearing aid from clinic with follow-up) group, 10 percent of the HC (hearing aid from clinic) group and 15 percent of the CW (continue wearing) group chose this foil. This was an indication that they did not understand how to care for their hearing aid or they were never told in the first place.

Those individuals who stated they wore their hearing aids daily, but only for part of the day (foil "b") could not be easily compared to any specific foil of question 12. There was no way to determine what "part
of the day" meant in terms of hours. One would need to know this information to closely estimate the life of the battery. In fact neither foil "a" or foil "b" on question 10 corresponded closely to any foil of question 12, in terms of the total population or individual groups. Therefore no valid deductions can be made.

The results from these questions did not necessarily indicate that those individuals did not know how to care for their hearing aids, although this possibility should be considered. But rather, it was possible that these individuals had not yet become familiar with this aspect of their hearing aids, and this familiarity will come with experience.

Satisfaction and benefit from the use of the hearing aid

Question 16 and checklist 17 were included to determine the respondent's satisfaction with his hearing aid and to estimate the benefit the respondent received from its use. The questions were as follows:

16. Is the hearing aid helping you?
17. I have difficulty hearing in the following situations: without the aid; with aid.

The results from question 16 showed that 38 percent of both the HCF (hearing aid from clinic with follow-up) and HC (hearing aid from clinic) groups, 33 percent of the HA (hearing aid from another source) group and 18 percent of the CW (continue wearing) group felt the hearing aid had measured up to their fullest expectations. Thirty-eight percent of both the CW and HC groups, 34 percent of the HCF group and 33 percent of the HA group indicated they were satisfied with the hearing aid but it had not measured up to their initial expectations. Fourteen percent of the
HCF group reported specific complaints such as inability to get the mold in place, pain caused by wearing the hearing aid and inability to cope with amplified background noises.

With respect to the combined sample, the results from question 16 showed that most of the respondents were satisfied with the hearing aid, but not up to their initial expectations (30%). Twenty-six percent of the sample felt the hearing aid had measured up to their fullest expectations.

The results from checklist 17 showed that 79 percent of the HCF (hearing aid from clinic with follow-up) group, 70 percent of the CW (continue wearing) group, 58 percent of the HA (hearing aid from another source) and 57 percent of the HC (hearing aid from clinic) indicated that when not wearing a hearing aid, one of the more difficult situations in which to hear was conversations in a noisy room. Eighty-one percent of the HC group, 79 percent of the HCF group, 58 percent of the HA group and 53 percent of the CW group reported that faint voices caused them difficulty when not wearing the hearing aid. Seventy-six percent of the HCF group, 67 percent of the HC group, 59 percent of the CW group and 50 percent of the HA group indicated that when not wearing a hearing aid one of the more difficult situations in which to hear was large group conversations. Forty-eight percent of the HCF group, 46 percent of the HA group, 44 percent of the CW group, and 28 percent of the HC group indicated that while wearing the hearing aid, one of the most difficult situations was conversations in a noisy room. Forty-six percent of the HA group, 41 percent of both the HCF and CW groups, and 24 percent of the HC group indicated that, while wearing the hearing aid, one of the more difficult situations was hearing conversations in a noisy room.
With respect to the combined sample, the results from checklist 17 showed that when not wearing the hearing aid the three most difficult situations in which to hear were: (1) conversations in a noisy room (61%), (2) listening to faint voices (61%) and (3) large group conversations (58%). When wearing the hearing aid, the two most difficult situations in which to hear were: (1) conversations in a noisy room (36%) and (2) large group conversations (33%).

Analysis of these results showed that 38 percent of the HCF (hearing aid from clinic with follow-up) and HC (hearing aid from clinic) groups reported that the hearing aid had measured up to their fullest expectations. Thirty-three percent of the HA (hearing aid from another source) also replied in this manner. Essentially an equal percent in each of these three groups stated that they were satisfied, but not up to their initial expectations (HCF - 34%; HA - 33%; HC - 38%). More than twice as many respondents in the CW (continue wearing) group reported that they were satisfied, but not up to initial expectations (38%) than replied that the aid had measured up to their fullest expectations (18%). Perhaps adequate counseling had not been done when these individuals received their aids.

The most specific complaints came from the HCF (hearing aid from clinic with follow-up) group. The inability to get the mold in place, to cope with amplification and pain caused by wearing the aid were mentioned. One might hypothesize that these complaints may have occurred because the questionnaire and the hearing aid came from the same source. Therefore possibly the respondent felt that if a specific complaint was stated, a follow-up on that complaint would be conducted.
The greatest percentage (30%) replied that they were satisfied, but not up to their initial expectations. Twenty-five percent of the total sample stated the hearing aid had measured up to their fullest expectations. Therefore the majority of the respondents are satisfied with their hearing aids, even though some of them were not satisfied up to their initial expectations. However, the results indicate that most of the respondents expected more than the hearing aid was able to provide. Perhaps these higher expectations stem from some advertising these individuals saw or they were misinformed when being fitted with the hearing aid.

With respect to the checklist of 17 all the groups showed a higher percentage of difficult situations without the hearing aid than with the hearing aid. Although the HA (hearing aid from another source) group members also followed this trend, they showed the least change in percentage when compared to the other groups. Referring back to question 11, only one-third of the members of the HA group stated they would seek another hearing aid similar to the one presently worn (21%). Also, more respondents from this group stated they would never use another hearing aid (13%). As indicated from the checklist of 17, the HA groups showed less benefit from the use of the hearing aid. From this information it may be assumed that this group was more dissatisfied with their hearing aids.

Fewer individuals indicated difficulty hearing with the hearing aid than without the hearing aid, suggesting that these individuals received help from their hearing aids. The most frequently chosen situations which caused difficulty regardless of whether or not the hearing aid was worn was (g) large group conversations and (h) conversations in a noisy room.
Sources of the hearing aids

Questions 18 and 19 were asked to determine whether or not the respondent obtained a hearing aid following the audiological evaluation at the Speech and Hearing Clinic and, if not, why. Also, question 20 was asked in order to determine the source of the hearing aid worn at the time of answering this questionnaire. The questions were as follows:

18. Following this evaluation, did you obtain a hearing aid?
19. If you checked "no" in the previous question, please give the reasons in the space below.
20. From whom did you obtain your present hearing aid?

The results from question 18 showed that 100 percent of both the HOF (hearing aid from clinic with follow-up) and HC (hearing aid from clinic) groups indicated they were dispensed a hearing aid from the University of Montana Speech and Hearing Clinic following the audiological evaluation. One hundred percent of the HA (hearing aid from another source) group and 29 percent of the CW (continue wearing) group indicated they obtained a hearing aid from another source besides the Speech and Hearing Clinic following this evaluation. Fifty percent of the CW group reported that no hearing aid was obtained following the audiological evaluation at the Speech and Hearing Clinic, while 21 percent of this group made no response.

With respect to the combined sample, the results from question 18 showed that most of the respondents obtained a hearing aid from the Speech and Hearing Clinic following the audiological evaluation (39%). Twenty-six percent of the sample indicated that following the audiological evaluation at the Speech and Hearing Clinic, they obtained a hearing aid
from another source besides the clinic. Twenty-one percent indicated that no hearing aid was obtained following the audiological evaluation.

The results from question 19 showed that 50 percent of the CW (continue wearing) group reported that no hearing aid was obtained since the respondents already owned one. The other individuals in the sample did not respond to this question since all the respondents indicated they obtained a hearing aid following the audiological evaluation at the Speech and Hearing Clinic.

The results from question 20 showed that 88 percent from both the HA (hearing aid from another source) and CW (continue wearing) group, 10 percent of the HC (hearing aid from clinic) group and 7 percent of the HCF (hearing aid from clinic with follow-up) group indicated that they obtained the hearing aid worn at the time of answering this questionnaire from a hearing aid dealer. Eighty-six percent of the HCF group and 81 percent of the HC group indicated that the aid presently worn was dispensed from the Speech and Hearing Clinic.

With respect to the combined sample, the results from question 20 showed that 45 percent of the respondents indicated that the aid presently worn was obtained from a hearing aid dealer. Thirty-two percent of the sample indicated that the hearing aid presently worn was dispensed from the Speech and Hearing Clinic.

The initial differentiation of the HCF (hearing aid from clinic with follow-up) and the HC (hearing aid from clinic) groups from the rest of the sample came from the responses on question 18. The respondents must have chosen the foil which indicated they received their hearing aids from the University of Montana Speech and Hearing Clinic. One hundred
percent of the HFC and HC groups responded accordingly. Two individuals from the HCF group reported on question 20 that they obtained a hearing aid from the Speech and Hearing Clinic following the evaluation but their present hearing aid was obtained from a hearing aid dealer. Since these individuals had worn a hearing aid from the Speech and Hearing, therefore receiving services similar to those of the other members of the HCF group, they were placed in that group. These two respondents had stated in their questionnaires that they had decided to purchase one of their own after they found a hearing aid to be beneficial. A similar instance was reported in the HC group.

The CW group results on question 18 should be discussed. Twenty-nine percent of these respondents reported that after the evaluation they obtained a hearing aid from another source besides the Speech and Hearing Clinic. Since it was reportedly recommended to these individuals that they continue to wear the aid worn during the evaluation these results provided a source of contradiction. Possibly these individuals incorrectly answered question 4 and had consequently been placed in the wrong group. Perhaps question 18 was misunderstood and the respondents should have answered negatively, that no hearing aid was obtained. In this instance they may have responded with respect to the original source of the hearing aid which they had prior to the audiological evaluation at the Speech and Hearing Clinic. However, since this group was established based on the results of question 4, which asked what recommendations were made following the audiological evaluation at the Speech and Hearing Clinic, this group was maintained despite these discrepancies.
Rehabilitative services offered and accepted

Questions 23 and 24 were asked to determine whether or not rehabilitative services such as lipreading, speech conservation and auditory training were suggested to the respondents, and if so, whether or not they were accepted. Question 25 was asked to obtain the respondents' reactions to these services if they participated. Question 26 asked those individuals to whom the suggestion of participation in these rehabilitative services was not made if they would have been accepted, had they been offered. This information would provide an estimation of the successfulness of such services for the hearing impaired senior citizens. The questions were as follows:

23. Were any of the following rehabilitative services suggested to you?
   - Lipreading
   - Speech conservation
   - Auditory training

24. Referring to the previous question did you follow through with any of these suggestions?

25. If you answered "yes" to question number 24, how would you rate the usefulness of these services?

26. If the above rehabilitative services had been offered, would you have accepted them?

The results from question 23 showed that 10 percent of the HCF (hearing aid from clinic with follow-up) group, 9 percent of the CW (continue wearing) group, 8 percent of the HA (hearing aid from another source) group, 5 percent of the NH (no hearing aid) group and no respondents from the HC (hearing aid from clinic) group indicated that rehabilitative services
such as lipreading, speech conservation and auditory training were suggested to them. Eighty-one percent of the HC group, 79 percent of the HCF group, 71 percent of the CW group, 63 percent of the NH group and 58 percent of the HA group indicated these rehabilitative services were not suggested to them.

With respect to the combined sample, the results from question 23 showed that 67 percent of the respondents indicated that rehabilitative services such as lipreading, speech conservation and auditory training were not suggested to them. Six percent of the sample indicated that these rehabilitative services were suggested to them.

The results from question 24 showed that 12 percent of both the HA (hearing aid from another source) group and CW (continue wearing) group, 3 percent of both the HCF (hearing aid from clinic with follow-up) group and NH (no hearing aid) group and none of the respondents from the HC (hearing aid from clinic) group indicated that they followed through with the suggestion of participating in rehabilitative services such as lipreading, speech conservation or auditory training. Twenty-four percent of the HC group, 21 percent of the HCF group, 9 percent of the CW group and 8 percent of both the HA and NH groups indicated that they had not followed through with the suggestion of rehabilitative services. Eighty-nine percent of the NH group, 79 percent of the HA group, and 76 percent of each of the HCF, CW and HC groups made no response to this question.

With respect to the combined sample, the results from question 24 showed that 82 percent of the respondents made no response and 12 percent of the sample indicated they did not follow through on the suggestion of rehabilitative services. Six percent of the sample indicated that they followed through with the suggestion of rehabilitative services.
The results from question 25 showed that 17 percent of the HA (hearing aid from another source) group, 10 percent of the HC (hearing aid from clinic) group, 9 percent of the CW (continue wearing) group, 5 percent of the NH (no hearing aid) group and 3 percent of the HCF (hearing aid from clinic with follow-up) group felt the rehabilitative services were "very useful." Ninety-three percent of the HCF group, 92 percent of the NH group, 90 percent of the HC group, 85 percent of the CW group, and 83 percent of the HA group did not respond to this question.

With respect to the combined sample, the results from question 25 showed that 8 percent of the respondents felt the rehabilitative services were "very useful." Ninety percent of the sample did not respond to this question.

The results from question 26 showed that 39 percent of the NH (no hearing aid) group, 29 percent of the CW (continue wearing) group, 21 percent of the HCF (hearing aid from clinic with follow-up) group, 8 percent of the HA (hearing aid from another source) and 5 percent of the HC (hearing aid from clinic) indicated they would have accepted rehabilitative services such as lipreading, speech conservation or auditory training, had they been offered. Twenty-five percent of the HA group, 24 percent of the HC group, 9 percent of the CW group, 7 percent of the HCF group and 3 percent of the NH group indicated they would not have accepted these rehabilitative services had they been offered. Thirty-eight percent of the HC group, 34 percent of the HCF group, 21 percent of the HA group, 18 percent of the CW group and 5 percent of the NH group remained undecided whether or not they would have accepted these rehabilitative services. Fifty-three percent of the NH group, 46 percent
of the HA group, 44 percent of the CW group, 38 percent of the HCF group, and 33 percent of the HC group did not respond to this question.

With respect to the combined sample, 45 percent of the respondents made no response to question 26. Twenty-four percent of the sample indicated they would have accepted rehabilitative services such as lipreading, auditory training and speech conservation had they been offered, while 14 percent indicated they would not and 18 percent remained undecided.

A total of 6 percent of the sample stated that rehabilitative services had been suggested. Therefore, only the 6 percent could have been legitimately eligible to answer the following question, which asked the respondent if he had followed through with these suggestions. Upon examination of the results to this question (number 24) however, it was observed that 18 percent of the total population responded as to whether or not they had followed through with this suggestion. Similarly, question 25, which called for rating of these services, could only be answered by those 6 percent who reported that the rehabilitative services had been offered and accepted 10 percent proceeded to rate the rehabilitative services. Due to these discrepancies it was difficult to derive any valid deductions from these three questions. Similar discrepancies were found when analyzing group results.

Sixty-seven percent of the sample reported that these rehabilitative services were not offered. However, 24 percent of the total sample said they would have accepted those services had they been offered, while 14 percent stated they would not accept the services. Eighteen percent remained undecided and a rather large percent (45%) made no response.
From these results it was assumed that these rehabilitative services were not suggested to many individuals. But if they had been, they would have been accepted by a few individuals. It was not felt that all 24 percent would have finally accepted. As shown repeatedly in the past, the elderly have many reasons why they do not care to or cannot leave their homes. However, of the individuals, it was estimated that 5 to 10 percent would have attended classes had they been offered.

Miscellaneous

Comparison of previous and present hearing aids. Question 21 asked those respondents who had worn hearing aids prior to the audiological evaluation at the Speech and Hearing Clinic and who were dispensed a hearing aid from the clinic after that evaluation to compare the two. The respondents were to indicate which one they preferred or that the two hearing aids help them equally. The question was as follows:

21. If you had a hearing aid previously, how does it compare to the hearing aid that was issued to you by this clinic?

The results from question 21 showed that 38 percent of the HC (hearing aid from clinic) group, 31 percent of the HCF (hearing aid from clinic with follow-up) group, 4 percent of the HA (hearing aid from another source) and none of the individuals in the CW (continue wearing) group indicated they preferred the hearing aid dispensed to them by the Speech and Hearing Clinic. Ten percent of the HCF group, 6 percent of the CW group, 5 percent of the HC group and 4 percent of the HA group indicated that the two hearing aids helped them equally. Eighty-five percent of the CW group, 83 percent of the HA group, 45 percent of the HCF group and 33 percent of the HC group did not respond to this question.
With respect to the combined sample, the results from question 21 showed that 68 percent of the individuals made no response to this question. Fourteen percent indicated they preferred the hearing aid issued to them by the Speech and Hearing Clinic. Five percent of the sample indicated that the two hearing aids helped them equally.

Four percent of the HA (hearing aid from another source) group indicated that they preferred the hearing aid issued to them from the Speech and Hearing Clinic as compared to one worn prior to the audiological evaluation. Referring back to the results from question 18, which asked the respondents to identify the source of the hearing aid obtained following the audiological evaluation at the clinic, none of the respondents from the HA group indicated they were dispensed a hearing aid from the Speech and Hearing Clinic. Therefore the 4 percent who indicated on question 21 that they preferred the hearing aid dispensed to them by the Speech and Hearing Clinic perhaps misunderstood the question and responded incorrectly. A similar explanation applies to the 4 percent of the HA (hearing aid from another source) group and the 6 percent of the CW (continue wearing) group who indicated the two hearing aids help them equally.

There was a very large percentage of "no responses" from all groups (HCF - 45%; HC - 83%; CW - 85%; HC - 33%). This was interpreted either as (1) the respondents had only experience with one hearing aid so omitted this question, (2) the respondents did not choose to answer this question or (3) the respondents never received a hearing aid from the Speech and Hearing Clinic. Thirty-one percent of the HCF (hearing aid from clinic with follow-up) and 38 percent of the HC (hearing from clinic) groups stated they preferred the hearing aid dispensed from the Speech and Hearing Clinic.
Perhaps since the questionnaire and the hearing aid came from the same source, these individuals felt obligated to respond in such a manner. Also, since the members of the other groups had never received a hearing aid from the Speech and Hearing Clinic they could not have responded to this question. It would have been interesting to follow this question by an open ended question which would have allowed the respondents to expand on the reasons for their response, therefore provided a clearer perspective for the evaluation of these results.

Follow-up visits received from the University of Montana Speech and Hearing Clinic. Question number 27 asked the respondents how many follow-up hearing evaluations or hearing aid evaluations they had received since the initial visit to the Speech and Hearing Clinic. This question was included in the questionnaire so that only those respondents who were dispensed a hearing aid from the Speech and Hearing Clinic and who had received at least one follow-up evaluation were placed in the HCF (hearing aid from clinic with follow-up) group. The numbers of the HCF group were eligible for the subsequent interview while the members of the HC (hearing aid from clinic) group were not. The question was as follows:

27. How many follow-up hearing aid evaluations or hearing evaluations have you had since your initial visit?

The results from question 27 showed that 95 percent of the HC (hearing aid from clinic) group, 68 percent of the NH (no hearing aid) group, 67 percent of the HA (hearing aid from another source) group, 53 percent of the CW (continue wearing) group and none of the individuals in the HCF (hearing aid from clinic with follow-up) group indicated that no
follow-up hearing evaluation or hearing aid evaluations had been received since the initial visit. Sixty-two percent of the HCF group, 21 percent of the HA group, 12 percent of the CW group and 11 percent of the NH group reported that one follow-up evaluation had taken place. Twenty-four percent of the HCF group and 3 percent of the CW group reported three follow-up evaluations. Seven percent of the HCF group, 6 percent of the CW group, 4 percent of the HA group and 3 percent of the NH group reported that two follow-up evaluations had taken place.

Analysis of the results from question 27 showed that 100 percent of the HCF group had received at least one follow-up evaluation while 95 percent of HC group received none. The remaining 5 percent of the HC group did not respond to this question. This 5 percent had to be placed in the HC group as opposed to the HCF group since it was impossible to determine whether or not a follow-up visit had occurred.

Respondents' estimation of the value of the audiological services received. Even though the respondents received the services under the Senior Citizens Audiological Services program without cost, question 30 was asked in order to determine what fee the respondents' felt would have been reasonable for these audiological services they had received at the Speech and Hearing Clinic. The question was as follows:

30. If monies had not been available to support these services, what fee would have seemed reasonable.

The results from question 30 showed that 45 percent of the NH (no hearing aid) group, 42 percent of the HA (hearing aid from another source) group, 35 percent of the CW (continue wearing) group, 29 percent
of the HC (hearing aid from clinic) group, and 14 percent of the HCF (hearing aid from clinic with follow-up) group indicated they felt $10.00 to $25.00 would have been a reasonable fee to pay for the audiological services received at the Speech and Hearing Clinic. Eighteen percent of the NH group, 14 percent of both the HCF and HC groups, 9 percent of the CW group and 4 percent of the HA group felt $5.00 to $10.00 would have been a reasonable fee. Fifteen percent of the CW group, 14 percent of the HCF group, 8 percent in both the HA and NH groups and none of the respondents in the HC group felt $25.00 to $50.00 would have been a reasonable fee. Fourteen percent of the HCF group, 10 percent of the HC group, 8 percent of the HA group, 3 percent of the CW group and none of the respondents in the NH group felt $50.00 to $100.00 would have been a reasonable fee for these services.

With respect to the combined sample, the results from question 30 showed that 32 percent of the respondents felt $10.00 to $25.00 would have been a reasonable fee for the audiological services received. Twelve percent of the sample indicated $5.00 to $10.00 would have been reasonable while 9 percent felt $25.00 to $50.00 would have been reasonable. Six percent of the sample felt $50.00 to $100.00 would have been a reasonable fee for the services received. Thirty-five percent of the sample made no response to this question.

Analysis of the results from question 30 showed that the HCF (hearing aid from clinic with follow-up) group and the HC (hearing aid from clinic) group tended to select larger amounts as reasonable fees for the audiological services received from the Speech and Hearing Clinic. This was probably due to the fact these individuals received their hearing aids
from the Speech and Hearing Clinic. Therefore they rated the value of the services higher than those individuals who only received an audiological evaluation.

The greatest percentage of the sample did not respond to this question. Perhaps they did not feel they could adequately estimate the value of the audiological services received from the Speech and Hearing Clinic.

Source of the questionnaire responses. Question 31 was added to determine whether or not the questionnaire was completed by the individual to whom the questionnaire was mailed or if this individual was aided by someone else when completing the questionnaire. Those questionnaires that were completed entirely by a person other than the individual to whom the questionnaire was mailed, were not used in the study. The question was as follows:

31. Who filled out this questionnaire?

The results from question 31 showed that 95 percent of the NH (no hearing aid) group, 92 percent of the HA (hearing aid from another source) group, 85 percent of the CW (continue wearing), 81 percent of the HC (hearing aid from clinic) and 76 percent of the HCF (hearing aid from clinic with follow-up) group indicated they had completed the questionnaire themselves. Twenty-four percent of the HCF group, 14 percent of the HC group, 12 percent of the CW group, 8 percent of the HA group, and 6 percent of the NH group indicated they were aided by another individual when completing the questionnaire.

With respect to the combined sample, the results from question 31 showed that 84 percent of the respondents indicated that they completed the questionnaire by themselves, while 12 percent indicated they were aided by another individual.
Analysis of the results of question 31 showed that more of the respondents in the HA (hearing aid from another source) and NH (no hearing aid) groups completed the questionnaire themselves (92 percent and 95 percent respectively), as compared to the other groups (CW - 85%; HC - 81%; HCF - 76%). More individuals in the HCF (hearing aid from clinic with follow-up) group reported receiving help with the completion of the questionnaire (24%).

General success of the Senior Citizens Audiological Services Program

Questions 2, 3, 5, 16, 22, 25, 28 and 29 were evaluative questions which required the respondent to rate certain aspects of the Senior Citizens Audiological Services Program. These questions were evaluated in the following manner: if 51 percent or more individuals checked one of "a" or "b" it would be felt that this program was, in general, successful. These questions were as follows:

2. How would you rate the personal consideration given to you while being tested?
3. How would you rate the competence or skill of the individual(s) who conducted the hearing evaluation?
5. Did you agree with the recommendations?
16. Is the hearing aid helping you?
22. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?
25. If you answered "yes" to question number 24, how would you rate the usefulness of these services?
28. Taking everything into consideration, how would you rate the services you received at the University of Montana Speech and Hearing Clinic?
29. Do you feel the Audiological Services were beneficial enough to recommend to another person?

In summary the results on questions 2, 3, 5, 16, 22, 28 and 29 show that with respect to individual group and combined responses, the 51 percent criteria level was met and surpassed. Question 25 pertained to the evaluation of the rehabilitative services. Since it has been determined that few individuals participated in this service, the 51 percent level could not have been met. This statement was reinforced by the fact that there was a total of 90 percent "no response" rate for this question. With the exception of the results of question 25, the 51 percent level was met and surpassed with respect to the results of the combined sample on all these questions. Therefore, it was felt that except for the rehabilitation services such as lipreading, speech conservation and auditory training, the Senior Citizens Audiological Services Program, in general, was successful.

Interview Results

For the subsequent forty interviews, twenty individuals were selected from the HCF (hearing aid from clinic with follow-up) group, ten from the HA (hearing aid from another source) group, and five each from the CW (continue wearing) and NH (no hearing aid) groups. The interviewees were chosen on the basis of randomization and geographical location. Group NH consisted of those individuals who were advised not to wear a hearing aid, therefore answers were not recorded for them on observations 2,
3, and 4 and questions 8, 9, 10, 11, 11a, 12, 13 and 14 which pertained to different aspects of hearing aid use, care, wear and acquisition.

The results from the interview consisted of observations and questions. The results of the four observations are discussed first, followed by the results of the 28 questions. The 28 questions were grouped around clusters of closely related questions. Each of the clusters of questions and the four observations are discussed separately below. The procedure for reporting the results for each of the clusters and four observations is as follows: (1) a definition of the cluster in terms of the purpose of the questions included; (2) a listing of the questions contained in the cluster; (3) a percentage breakdown of the most frequent responses given to the questions by each of the four groups of respondents and the combined groups; and (4) a discussion of the results reported. Appendix D contains the detailed percentage breakdown by each of the groups of respondents and combined groups in the study.

Observations

The observations were conducted in order to estimate the amount of use of the hearing aid and whether or not it was functioning adequately. The four observations were directed by the following four stimulus statements.

1. Was the interviewee wearing the hearing aid when the interviewer arrived?
2. The interviewer will examine the hearing aid for signs of wear.
3. The interviewee will be asked to put the hearing aid on and the interviewer will evaluate the ease with which this is done.
4. The interviewer will test the batteries using a battery tester and test the hearing aid for feedback.

The results from observation 1 showed that 100 percent (10) of the members of the HA (hearing aid from another source) group were wearing their hearing aids when the interviewer arrived. Eighty percent (4) of the CW (continue wearing) group members and 70 percent (14) of the HCF (hearing aid from clinic with follow-up) group members were wearing their hearing aids. Of course, the members of the NH (no hearing aid) group were not wearing hearing aids.

With respect to the sample, the results from observation 1 showed that 70 percent (28) of the interviewees were wearing their hearing aids when the interviewer arrived while 30 percent (12) were not.

The results from observation 2 showed that 100 percent (5) of the CW (continue wearing) group and 90 percent (9) of the HA (hearing aid from another source) group owned aids that showed signs of wear. Eighty-five percent (17) of the hearing aids of the HCF (hearing aid from clinic with follow-up) group showed signs of wear.

With respect to the sample the results from observation 2 showed that 89 percent (31) of the interviewees owned hearing aids that showed signs of wear. Eleven percent (4) of the interviewees owned hearing aids that did not show signs of wear.

The results from observation 3 showed that 80 percent (8) of the HA (hearing aid from another source) group were able to put the aid on quickly and easily, without assistance. Seventy-five percent (15) of the interviewees in the HCF (hearing aid from clinic with follow-up) group and 60 percent (3) in the CW (continue wearing) group were also
able to do so. Twenty percent (1) of the CW group, 15 percent (3) of the HCF group and 10 percent (1) of the HA group demonstrated some fumbling when asked to put the hearing aid on, but they were able to get it into place without assistance. Ten percent (2) of the HCF group did not know how to put the hearing aid on and required assistance in doing so. Twenty percent (1) of the CW group required some assistance when putting on the hearing aid. However, this individual was physically limited so required some assistance at all times when putting on the hearing aid.

With respect to the sample, the results from observation 3 showed that 74 percent (26) of the interviewees required no help when putting the aid on and were able to do so easily and quickly. Fourteen percent (5) of the interviewees demonstrated some fumbling but got the aid in place without assistance. Three percent (1) of the interviewees required some assistance while 6 percent (2) of the interviewees did not know how to put the aid on and required assistance to do so.

The results from observation 4 showed that all the members of the CW (continue wearing) group (5) were using batteries in their hearing aids that were adequately charged while 85 percent (17) of the HCF (hearing aid from clinic with follow-up) group and 80 percent (8) of the HA (hearing aid from another source) group did so. A battery was considered adequately charged when measuring 1.4 volts on a battery tester. There was no feedback noted in 90 percent (18) of the aids worn by the HCF group and in 80 percent in each of the HA (8) and CW (4) groups.

With respect to the sample, the results from observation 4 showed that 86 percent (30) were adequately charged. No feedback was noted in 86 percent (30) of the hearing aids examined.
A lesser percent of the interviewees from the HCF group were wearing their hearing aids when the interviewer arrived (70% or 14) as compared to the other two groups (HA - 100%, or 10; CW - 80%, or 4). Also a lesser percent of the hearing aids of the members of the HCF group showed signs of wear (85% or 17) in comparison to the other groups (HA - 90%, or 9; CW - 100%, or 5). More individuals in the HCF group stated they wore their hearing aids only when they went out of their homes and thought it unnecessary to wear the hearing aid at home. One individual complained of "head noises" which made it impossible to wear the aid. The fact that the HCF group members did not have to pay for their hearing aids may have contributed to the observation that fewer individuals of this group were wearing their hearing aids when the interviewer arrived. The lack of personal expense involved may have contributed to the lack of incentive to wear the hearing aid. Also it was noted that some of these individuals felt they functioned quite adequately in a one-to-one situation without the aid, therefore saw no reason to bother with it. More of these HCF group members exhibited unfamiliarity with the aid as compared to the other interviewees. When asked to put the aid in place more of the members of the HCF group had difficulty in doing so (25% or 5). Two interviewees required assistance as they did not know how to put on the hearing aid. Three of the individuals admitted to never or rarely wearing the aid.

Interview questions

Recommendations reportedly received from the Speech and Hearing Clinic following the audiological evaluation and reactions to those recommendations. Questions 1, 2, 2a, 3 and 3a were asked in order to determine what
recommendations the interviewees remembered as being given after the audiological evaluation at the Speech and Hearing Clinic and their reactions to those recommendations. The questions were as follows:

1. What recommendations were made to you after the hearing evaluation?

2. Did you agree with the recommendations?
   2a. If the interviewee answers "b," "c" or "d," he will be asked to explain the reasons for the lack of total agreement.

3. Did you follow the recommendations?
   3a. If the interviewee answers "b" or "c," he will be asked to explain the reasons for not following the recommendations.

The results from question 1 showed that 70 percent (14) of the HCF (hearing aid from clinic with follow-up) group and 40 percent (4) of the HA (hearing aid from another source) group indicated that it was recommended that they wear a hearing aid on a trial basis. Twenty-five percent (5) of the HCF group, 20 percent (1) of the CW (continue wearing) group and 10 percent (1) of the HA group indicated that it was recommended that they try a new hearing aid since the one worn at the time of the evaluation was not adequate. Sixty percent (3) of the CW group and 20 percent of the HA (2) group indicated they were told that the hearing aid worn at the time of the evaluation was adequate. Five percent (1) of the HCF group and 10 percent (1) of the HA group stated they could not remember any recommendations.

With respect to the sample, the results from question 1 showed that 45 percent (18) of the interviewees indicated that it was recommended that they wear a hearing aid on a trial basis. Eighteen percent (7) of the
sample reported that it was recommended to them to try a new hearing aid as the one worn at the time of the evaluation was not adequate. Twelve percent (5) of the interviewees were told that the hearing aid worn at the time of the evaluation was adequate and 5 percent (2) could not recall the recommendations.

The results from question 2 showed that 100 percent of both the HCF (hearing aid from clinic with follow-up) group (20) and NH (no hearing aid) group (5), 80 percent (4) of the CW (continue wearing) group and 50 percent (5) of the HA (hearing aid from another source) reported they were in complete agreement with the recommendations received at the Speech and Hearing Clinic following the audiological evaluation. Thirty percent (3) of the HA group and 20 percent (1) of the CW group reported partial agreement with the recommendations received. Ten percent (1) of the HA group reported some disagreement with the recommendations received.

With respect to the sample, the results from question 2 showed that 85 percent (34) of the interviewees reported complete agreement with the recommendations received at the Speech and Hearing Clinic following the audiological evaluation. Ten percent (4) of the sample reported partial agreement and 2 percent (1) reported some disagreement.

The results from question 2a showed that the 40 percent (4) of the HA (hearing aid from another source) group who did not completely agree with the recommendations stated that they did not feel they needed to purchase a hearing aid as recommended, or could not recall the source of disagreement. The individual in the CW (continue wearing) group who did not agree completely with the recommendations stated she did not agree with the physician referral due to fear of a possible subsequent operation.
The results from question 3 showed that 85 percent (17) of the HCF (hearing aid from clinic with follow-up) group, 70 percent (7) of the HA (hearing aid from another source) group, 40 percent (2) of the CW (continue wearing) group and 20 percent (1) of the NH (no hearing aid) group reported they followed the recommendations they received at the Speech and Hearing Clinic following the audiological evaluation. Sixty percent (3) of the CW group, 15 percent (3) of the HCF group and 10 percent (1) of the HA group reported they followed some of the recommendations received. Ten percent (1) of the HA group stated they followed none of the recommendations. Eighty percent (4) of the NH group had no recommendations to follow.

With respect to the sample, the results from question 3 showed that 68 percent (27) of the interviewees reported they followed all the recommendations they received at the Speech and Hearing Clinic following the audiological evaluation. Eighteen percent (7) of the sample reported they followed some of the recommendations and 2 percent (1) stated they followed none of the recommendations.

The results from question 3a showed that the 15 percent (3) of the HCF (hearing aid from clinic with follow-up) group who stated they did not follow all the recommendations reported they did not wear the hearing aid daily, as instructed. The 20 percent (2) of the HA (hearing aid from another source) reported that they did not follow the recommendations since (1) they bought a new hearing aid even though the one previously owned was felt to be adequate by the personnel at the Speech and Hearing Clinic and (2) they did not return to the clinic for another hearing evaluation as recommended since the program no longer had hearing aids.
to dispense. Forty percent (20%) of the CW group did not follow all the recommendations to see a physician because of lack of time or fear of a possible operation. One individual (20%) of the CW group stated that he did not wear the hearing aid daily as recommended.

When inquiring about the recommendations made, one individual from the CW group stated that he had been told to try a new hearing aid as the one he was wearing at the time of the evaluation was not adequate. This was compared with his questionnaire results on the similar question and it was found he had reported that he was told to continue wearing his present hearing aid. His responses were used in the CW group even after this discovery to illustrate one the weaknesses of the questionnaire and a strength of the follow-up interview. The questionnaire relied on the respondent's ability to sufficiently recall events and to correctly interpret the questions and foils. As shown, this was not always a correct assumption. The interview helped to alleviate this possible error by using an interviewer who can question the interviewee about inconsistencies in his answers. Also, as in the case of the individuals in the HCF and HA groups who could not recall the recommendations at first, further questioning aided their memory.

One hundred percent of the HCF (20) and NH (5) members agreed completely with the recommendations made while only 50 percent (5) of the members of the HA group agreed completely. This difference in the percentage of those agreeing with the recommendations perhaps may again stem from the difference in expenditure among the groups. The group to whom it was recommended to purchase a hearing aid showed the most disagreement. In contrast, no expenditure was required of the members of the HCF and NH groups.
One individual who was referred to a physician stated she did not agree with the recommendations due to fear of an operation. Therefore the recommendations were not followed. Perhaps the reason for the medical referral should have been made clearer and further counseling done so this individual would have better understood the problem and the options that were available.

Fewer individuals followed the recommendations than agreed with them in the HCF and CW groups. As previously stated some members of the HCF group reported they did not wear the aid daily, yet they agreed completely with recommendations that they should wear the aid. The greatest drop in percentage between those who completely agreed with the recommendations and those who followed all the recommendations was seen in the CW group (80% to 40%). The reasons given were fear of an operation, not wearing the hearing aid daily and inability to find time to see a physician. Apparently these individuals felt no urgency to follow the recommendations.

There were more individuals in the HA group who followed the recommendations (70% or 7) than agreed with them initially (50% or 5). Some of these individuals stated they decided to buy a hearing aid as recommended even though they did not agree with this initially. From this question it was discovered that there were two interviewees in this group who had been told to continue wearing the aid they wore at the time of the evaluation. Instead, they bought a new hearing aid. They should have been placed in the CW group, but these individuals were classified and selected for an interview based upon the responses found in the questionnaire. Therefore, they remained in the HA group.

The question which asked if the recommendations were followed did not really apply to the NH group since there were few recommendations to
possibly follow. The only advice these individuals could have received was to see a physician or to return for a reevaluation. In the case where one of these recommendations was made, it was followed.

The interviewees tended to agree more with the recommendations (85%) than the respondents on the questionnaire (74%). Possibly, the presence of the interviewer biased the responses of the interviewees.

**Reported satisfaction with a hearing aid worn prior to the audiological evaluation.** Questions 4, 5, 6 and 6a inquired about whether or not the interviewees wore a hearing aid prior to the evaluation at the Speech and Hearing Clinic and, if so, their satisfaction with that aid. The questions were as follows:

4. Were you wearing a hearing aid previous to your evaluation at the Speech and Hearing Clinic?

5. (If "yes") Where did you obtain that hearing aid?

6. Were you satisfied with that aid?

6a. If the interviewee answers "b," "c" or "d," he will be asked to explain the reasons for lack of total satisfaction.

The results from question 4 showed that 100 percent (5) of the CW (continue wearing) group, 40 percent (4) of the HA (hearing aid from another source) group, 35 percent (7) of the HCF (hearing aid from clinic with follow-up) group and 20 percent (1) of the NH (no hearing aid) group reported that they had worn a hearing aid prior to the audiological evaluation at the Speech and Hearing Clinic. Eighty percent (4) of the NH group, 65 percent (13) of the HCF group and 60 percent (6) of the HA group reported they had not worn a hearing aid prior to their audiological evaluation.
With respect to the sample, the results from question 4 showed that 42 percent (17) of the interviewees had worn a hearing aid prior to the audiological evaluation at the Speech and Hearing Clinic while 58 percent (23) had not.

The results from question 5 showed that 100 percent (4) of the HA (hearing aid from another source) group, 80 percent (4) from the CW (continue wearing) group and 71 percent (5) from the HCF (hearing aid from clinic) group who had worn a hearing aid previously, reported obtaining that hearing aid from a hearing aid dealer.

With respect to the sample, the results from question 5 showed that 76 percent (13) of the interviewees who had worn hearing aids prior to the audiological evaluation at the Speech and Hearing Clinic, obtained those aids from a hearing aid dealer. Eighteen percent (3) obtained the hearing aids from other sources as the University of Montana Speech and Hearing Clinic prior to the establishment of the Senior Citizens Audiological Services Program or from catalogs.

The results from question 6 showed that 60 percent (3) of the CW (continue wearing) group, 57 percent (4) of the HCF (hearing aid from clinic with follow-up) group and 25 percent (1) of the HA (hearing aid from another source) group who had worn hearing aids prior to the audiological evaluation were totally satisfied with that hearing aid. Fourteen percent (1) of the HCF group, 50 percent (2) of the HA group and 20 percent (1) of the CW group who had worn hearing aids previously reported they were somewhat satisfied with that hearing aid. Twenty-five percent (1) of the HA group and 20 percent (1) of the CW group who had previously worn hearing aids reported they were somewhat dissatisfied with that hearing aid.
With respect to the sample, the results from question 6 showed that 47 percent (8) of the interviewees who had worn hearing aids prior to the audiological evaluation at the Speech and Hearing Clinic were totally satisfied with that hearing aid. Twenty-four percent (4) of the sample who had worn hearing aids previously were somewhat satisfied with them while 12 percent (2) were somewhat dissatisfied.

The results from question 6a showed that the 43 percent (3) of the HCF (hearing aid from clinic with follow-up) group who had worn hearing aids prior to the audiological evaluation at the Speech and Hearing Clinic and who were not totally satisfied with that hearing aid reported that they wanted a different model, could not get the service they wanted, or that the hearing aid operated properly for only a year or two. The 75 percent (3) of the HA (hearing aid from another source) group who had worn hearing aids prior to the audiological evaluation and who were not totally satisfied with that aid reported that (1) they were bothered by feedback from the hearing aid (2) they could not get service from the source of the hearing aid, and (3) they could not understand speech even while wearing the hearing aid. The 40 percent (2) of the CW (continue wearing) group who had worn a hearing aid previously and who were not totally satisfied with it reported general dissatisfaction and speech discrimination difficulties.

Analysis of the results showed that the majority (58% or 23) of the interviewees replied that they had never worn a hearing aid prior to the evaluation. Of those that did (42% or 17) the majority obtained that aid from a hearing aid dealer (76% or 13). However, when asked about the satisfaction with the aid only 47 percent (8) were totally satisfied
with that aid. One hundred percent (4) of the HA group who wore a hearing aid prior to the audiological evaluation obtained that aid from a hearing aid dealer. Seventy-five percent (3) of these individuals reported some degree of dissatisfaction. The major complaint in all groups was the lack of service available and a dissatisfaction with the performance of the aid. It is not known if these individuals received an audiological evaluation at the time the hearing aid was fitted to them, so there was no way of knowing if there was even an attempt to fit the aid according to the configuration of the loss. Possible incorrect fitting could have been the source of some of the dissatisfaction. Also the agency from which the hearing aid came should have counseled these individuals as to the limitations of the hearing aid thereby providing the individuals with a proper perspective of the instrument's capabilities. Expectations above the capabilities of the aid may have been another source of dissatisfaction. Many of these individuals obtained their aids from businesses that were not close by or that moved away. Therefore, the complaint of insufficient services was not surprising.

Eighty percent (4) of the members of the CW (continue wearing) group were told by the Speech and Hearing Clinic that the hearing aid worn during the audiological evaluation was adequate. However, only 60 percent (3) of those individuals were totally satisfied with the performance of that hearing aid. The remaining individual who voiced dissatisfaction with the hearing aid reported that "there was plenty of volume but I had problems understanding." Speech discrimination problems are often mentioned by the elderly hearing impaired population. Due to this type of complaint it was questionnable whether a different hearing aid would have been more beneficial.
The HCF (hearing aid from clinic with follow-up) group members were dispensed hearing aids from the Speech and Hearing Clinic. Thirty-five percent (7) of these individuals wore a hearing aid prior to the audiological evaluation at the Speech and Hearing Clinic. Fifty-seven percent (4) of these individuals were totally satisfied with the performance of that hearing aid yet they were dispensed a hearing aid from the Speech and Hearing Clinic. Perhaps the hearing aids worn by these four individuals were found by the professional personnel to not be functioning correctly during the evaluation and these individuals were not aware of it. Or perhaps these hearing aids were functioning adequately and it was not necessary to dispense new hearing aids to these individuals.

Satisfaction with hearing aids worn following the audiological evaluation. Questions 7 and 11 were asked in order to determine whether or not the interviewees obtained or continued wearing a hearing aid following the audiological evaluation at the Speech and Hearing Clinic and their satisfaction with that hearing aid. It was felt question 13, which asked the interviewee if he would seek another hearing aid if something happened to the one presently worn, would reflect the interviewees' satisfaction with their hearing aids. If they were satisfied with the performance of the one presently worn it was felt they would be more likely to indicate they would seek another. The questions were as follows:

7. Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?
11. Are you satisfied with the performance of your hearing aid?

11a. If the interviewee answers "b," "c" or "d," he will be asked to explain the reasons for lack of total satisfaction.

13. Would you seek another hearing aid if your present one became lost or damaged?

The results from question 7 showed that 100 percent (20) of the HCF (hearing aid from clinic with follow-up) group and none of the interviewees from the HA (hearing aid from another source), CW (continue wearing) or NH (no hearing aid) group were dispensed a hearing aid from the Speech and Hearing Clinic. Ninety percent (9) of the HA group, 20 percent (1) of the CW group and none of the interviewees of the HCF or NH groups reported they obtained a hearing aid from another source besides the Speech and Hearing Clinic, following the audiological evaluation. One hundred percent (5) of the NH group, 80 percent (4) of the CW group and 10 percent (1) of the HA group indicated they did not obtain a hearing aid following the audiological evaluation.

With respect to the sample, the results from question 7 showed that 50 percent (20) of the interviewees reported they were dispensed a hearing aid from the Speech and Hearing Clinic. Twenty-five percent (10) of the interviewees reported they obtained a hearing aid from another source following the audiological evaluation. Twenty-five percent (10) stated they did not obtain a hearing aid following the audiological evaluation at the Speech and Hearing Clinic.

The results from question 11 showed that 80 percent (4) of the CW (continue wearing) group, 70 percent (14) of the HCF (hearing aid from clinic with follow-up) group, and 60 percent (6) of the HA (hearing aid
from another source) group reported the hearing aid had measured up to their fullest expectations. Thirty percent (6) of the HCF group, 20 percent (1) of the CW group and 10 percent (1) of the HA group reported that they were satisfied with the hearing aid but not up to their initial expectations. Ten percent (1) of the HA group stated they were a little disappointed in the performance of the hearing aid and 20 percent (2) of the same group reported they were very disappointed.

With respect to the sample, the results from question 11 showed that 69 percent (24) of the interviewees felt the hearing aid had measured up to their fullest expectations. Twenty-three percent (8) of the sample reported they were satisfied with the hearing aid, but not up to their initial expectations. Three percent (1) indicated they were a little disappointed in the hearing aid while 6 percent (2) stated they were very disappointed.

The results from question 11a showed that the 30 percent (6) of the HCF (hearing aid from clinic with follow-up) group who were not totally satisfied with the performance of the hearing aid reported (1) they would have preferred a different model, (2) either the hearing aid amplified too much or too little, (3) the inability to wear the hearing aid due to "head noises" or (4) a complaint that the hearing aid "makes things too noisy." The 40 percent (4) of the HA (hearing aid from another source) group who were not totally satisfied with the performance of the hearing aid reported (1) the expensiveness of the hearing aid, (2) the expensiveness of the batteries, (3) inability to obtain the desired service from the source of the hearing aid, (4) the desire to "understand better" and (5) irritation with amplified background noise. The 20 percent
(1) of the CW (continue wearing) group who were not totally satisfied with the performance of the present hearing aid reported that the volume was adequate but still had trouble "understanding."

The results from question 13 showed that 60 percent of both the HCF (hearing aid from clinic with follow-up) group (12) and HA (hearing aid from another source) group (6) and 40 percent (2) of the CW (continue wearing) group reported they would seek the same model of hearing aid if the one presently worn became lost or damaged. Twenty-five percent (5) of the HCF group, and 20 percent of both the HA (2) and CW (1) groups reported they would seek another hearing aid but a different model than the one presently worn. Thirty percent (3) of the HA group and 20 percent (1) of the CW group reported they would seek another hearing aid but from a different source. None of the interviewees reported they would never use another hearing aid.

With respect to the sample, the results from question 13 showed that 57 percent (20) of the interviewees reported they would seek a similar model of hearing aid if the one presently worn became lost or damaged. Twenty-three percent (10) of the sample reported they would seek another hearing aid but a model different from the one presently worn. Eleven percent (5) of the interviewees reported they would seek another hearing aid, but from a different source.

Analysis of the results showed that 20 percent (1) of the CW (continue wearing) group reported they were satisfied but not up to the initial expectations. This individual stated "there was enough volume but I had trouble understanding." This statement was interpreted to mean this individual had problems with auditory discrimination. It was possibly
felt by the staff at the Speech and Hearing Clinic that the hearing aid this individual was wearing at the time of the audiological evaluation was as beneficial as possible, considering the type of hearing loss.

As expected, 100 percent of both the HCF and NH groups stated, respectively, they were issued a hearing aid from the Speech and Hearing Clinic or they did not obtain an aid. One individual from the HA (10%) category did not obtain a hearing aid, even though it had been recommended that he do so. This individual had expected to receive a hearing aid from the Speech and Hearing Clinic but funds were not available at the time of his evaluation. He reported that he had been referred to two local hearing aid dealers but had never followed through on this.

One individual from the CW (20%) group reported that he was told the hearing aid he wore at the time of the evaluation was adequate and to continue wearing it. However, he decided to purchase a new hearing aid, which he obtained from a hearing aid dealer.

The results of question 11 may have been biased by the presence of the interviewer. The HCF group tended to rate their satisfaction with the hearing aid higher (70%) than the members of the other two groups (HA - 60% and CW - 60%). Since the interviewer was affiliated with the institution from which the aid was issued, perhaps these individuals did not feel as free to express their opinion as the members of the CW and HA groups. On the other hand, possibly the results are correct and the individuals in the HCF group were truly more satisfied than the members of the other two groups. Members from each of the HA and CW groups expressed disappointment in the performance of their hearing aids while no one from the HCF group said this. The most common complaint, in
general, was the inability to understand what was heard, even though the signal was loud enough. The next most common annoyance was from amplified background noise. Counseling may warn the individual that such difficulties may occur. But this is no assurance that the client will not be annoyed and complain about them. Only further advancement in the fields of electronics and medicine can hope to alleviate those problems. Consequently, the audiologist and the hearing aid dealer will continue to be faced with the "problem" hearing aid wearers, due to their types of loss, and limitations in the performance of the instrument.

Again it was possible that the presence of the interviewer may have influenced the individuals in their replies to question number 13. A higher percentage of individuals stated they would seek the same model hearing aid if something happened to their present one (57%) than was shown on the questionnaire results (32%). It was possible that many of those individuals who responded this way on the questionnaire were selected for the interview. It should be considered when examining the results of both questions 11 and 13 that the individuals selected for the interview based in part on geographical locality. Therefore those individuals in the HCF group live rather close to the University, thereby in easy access of the services. If some individuals who lived further from the University had been interviewed, possibly the results would have turned out differently, due to this factor of accessibility of the services.

Reported use of the hearing aid. Questions 10 and 12 were asked in order to estimate how often the interviewees wore their hearing aids. These questions were used as a cross-check for one another. For example,
if the aid was worn daily, all day long, and the battery case removed when not in use, the battery should last approximately ten to fourteen days. If the aid was worn less frequently, the battery, if cared for properly, would last longer. Therefore foil "a" on question 10 (Daily, all day long) should correspond to the results from foil "c" on question 12 (Less than every two weeks).

The questions were as follows:

10. How often do you wear your hearing aid?

12. How often do you need to replace the batteries in your present hearing aid?

The results from question 10 showed that 70 percent (7) of the HA (hearing aid from another source) group, 60 percent (3) of the CW (continue wearing) group and 35 percent (7) of the HCF (hearing aid from clinic with follow-up) group reported wearing their hearing aids daily, all day long. Fifty percent (10) of the HCF group and 30 percent (3) of the HA group reported wearing their hearing aids daily, for part of the day. Forty percent (2) of the CW group and 10 percent (2) of the HCF group reported wearing their hearing aids about once a week. Five percent (1) of the HCF group reported never wearing the hearing aid.

With respect to the sample, the results from question 10 showed that 49 percent (17) of the interviewees who owned hearing aids reported they wore them daily, all day long. Thirty-seven percent (13) of the sample who owned hearing aids reported wearing the hearing aid daily but only for part of the day. Eleven percent (4) reported they wore their hearing aids about once a week while 3 percent (1) reported never wearing the hearing aid.
The results from question 12 showed that 40 percent (2) of the CW (continue wearing) group, 30 percent (6) of the HCF (hearing aid from clinic with follow-up) group and 10 percent (1) of the HA (hearing aid from another source) group reported the need to replace the batteries in their hearing aids less than every two weeks. Forty percent (4) of the HA group and 15 percent (3) of the HCF group reported the need to replace the batteries less than every three weeks. Twenty percent (1) of the CW group, 15 percent (3) of the HCF group and 10 percent (1) of the HA group reported the need to replace the batteries less than every week. Forty percent (2) of the CW group reported the need to replace the batteries either every two months (1) or once a month (1). Twenty-five percent (5) of the HCF group reported the need to replace the batteries every two months (2), each month (2) or never (1). Ten percent (1) of the HA group reported the need to replace the batteries every day while another 10 percent (1) did not know how often the batteries needed to be replaced.

With respect to the sample, the results from question 12 showed that 26 percent (9) of the interviewees who owned hearing aids reported the need to change the batteries less than every two weeks. Twenty-three percent (8) reported the need to change the battery every two months (3), once a month (3), every day (1), or never (1). Fourteen percent (5) reported changing the batteries less than every week.

Analysis of the results from question 10 showed that a lesser percent of the interviewees from the HCF (hearing aid from clinic with follow-up) group were wearing their hearing aids daily, all day long (HCF - 35%; HA - 70%; CW - 60%) as compared to the other two groups.
There were many possible explanations for this:

1. The personnel from the Speech and Hearing Clinic did not adequately counsel the individuals in the HCF group on the use, care and limitations of their hearing aids. Therefore, they became frustrated or discouraged and/or saw no need to wear the hearing aid.

2. Since the individuals from the HCF and HC groups did not have to pay for their hearing aids they lacked the added incentive the expenditure might have added.

3. Possibly many individuals who obtained hearing aids from the Speech and Hearing Clinic never before the examination felt the need to seek a hearing aid. Therefore, they may have lacked the motivation to wear the aid found in the HA and CW groups who had made an effort to obtain an aid.

It was noted by the interviewer that a greater percentage of the interviewees from the HCF group lived alone as compared to the interviewees from the HA group. Often the interviewees of the HCF group who reported they wore their hearing aids daily, but for part of the day, stated they saw no need to wear it when alone and put it on when in the company of other people. Also more of the individuals in the HCF group felt they functioned adequately in a one-to-one situation without the hearing aid.

Originally it was felt that if the aid was worn daily, all day long, and the battery case removed when not in use, the battery should last approximately ten to fourteen days. If the aid was worn less frequently, the battery, if cared for properly, would last longer. Therefore foil "a" on question 10 (Daily, all day long) should correspond to the results from

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
foil "c" on question 12 (Less than every two weeks). There was a low degree of correspondence between these two foils, in terms of the combined result. Only half of the interviewees who reported they wore their hearing aids daily, all day long, also reported the need to replace the batteries less than every two weeks. There was a close degree of correspondence between these two foils found in the HCF and CW groups. Thirty-five percent (7) of the HCF group reported they wore their hearing aids daily, all day long and 30 percent (6) reported the need to replace the batteries less than every two weeks. Sixty percent (3) of the CW group reported they wore their hearing aids daily, all day long and 40 percent (2) reported the need to replace the batteries less than every two weeks.

The results from these questions did not necessarily indicate that some of those individuals did not know how to care for their hearing aids, although this possibility should be considered. But rather, it was possible that these individuals had not yet become familiar with this aspect of their hearing aids, and this familiarity will come with experience.

Reported counseling on the use and care of the hearing aid and adjustment to its use. Question 14 was asked in order to determine the adequacy of the counseling concerning the use and care of the hearing aid the interviewee received from the agency from which the hearing aid was obtained. It was felt that adequate counseling and service would also allow the client the opportunity to try wearing the hearing aid for a short period for a subjective evaluation before asked to purchase or...
settle for the hearing aid. Question 8 attempted to uncover this area. Question 9 asked the interviewee how long it took him to adjust to wearing his hearing aid. It was felt by this writer that if adequate counseling had been conducted concerning the use and care of the hearing aid, the individual involved would adjust to wearing it more readily. The questions were as follows:

8. In what situations were you allowed to test this hearing aid?
9. How long did it take you to adjust to your present hearing aid?
14. What were you told about the use and care of your hearing aid by personnel from whom you obtained your present hearing aid?

The results from question 8 showed that some individuals spoke of more than one situation. The percent was computed by determining how many individuals of the group total chose a situation. Therefore the percentages total more than 100 percent. Seventy-five percent (15) of the HCF (hearing aid from clinic with follow-up) group, 20 percent (1) of the CW (continue wearing) group and 10 percent (1) of the HA (hearing aid from another source) group reported they were allowed to test the hearing aid in the audiological "testing booth." Sixty percent (6) of the HA group and 50 percent (10) of the HCF group reported they were allowed to test the hearing aid in their homes. Fifty percent (5) of the HA (hearing aid from another source) group reported a one-month trial period before purchasing the hearing aid. Eighty percent (4) of the CW group, 30 percent (3) of the HA group and 5 percent (1) of the HCF group reported they were not allowed to test the hearing aid.

With respect to the sample, the results from question 8 showed that 49 percent (17) of the interviewees who owned hearing aids reported they
were allowed to test the hearing aid in the audiological "testing booth" while 46 percent (16) reported they were allowed to test the hearing aid in their homes. Fourteen percent (5) of the sample who owned hearing aids reported a one-month trial period before purchasing the hearing aid. Twenty-three percent (8) reported they were not allowed to test the hearing aid.

The results from question 9 showed that 80 percent (4) of the CW (continue wearing) group, 65 percent (13) of the HCF (hearing aid from clinic with follow-up) group and 60 percent (6) of the HA (hearing aid from another source) group reported they adjusted to the hearing aid right away. Twenty-five percent (5) of the HCF group and 20 percent in both the HA (2) and CW (1) groups reported they never adjusted to wearing the hearing aid.

With respect to the sample, the results from question 9 showed that 66 percent (23) of the interviewees who owned hearing aids adjusted to them right away while 23 percent (8) of the interviewees reported they never did adjust to wearing the hearing aid.

The results from question 14 showed that some individuals spoke of more than one instruction received. The percent was computed by determining how many individuals of the group total chose a specific instruction. Therefore the percentages total more than 100 percent. Eighty percent (4) of the CW (continue wearing) group, 60 percent (6) of the HA (hearing aid from another source) group and 50 percent (10) of the HCF (hearing aid from clinic with follow-up) group reported they were instructed on how to put in and remove the battery. Eighty percent (4) of the CW group, 50 percent (10) of the HCF group and 40 percent (4) of the HA group
reported they were shown how to adjust the volume. Eighty percent (4) of the CW group, 45 percent (9) of the HCF group and 40 percent (4) of the HA group reported they were instructed to remove the battery when the hearing aid was not in use.

With respect to the sample, the results from question 14 showed that 57 percent (20) of the interviewees who owned hearing aids reported they were instructed how to put in and remove the battery. Fifty-one percent (18) of the sample who owned hearing aids reported they were instructed on how to adjust the volume. Forty-nine percent (17) of the sample reported they were told to remove the battery case when the hearing aid was not in use.

The results from questions 8 and 14, which asked about trial situations and instructions on the use and care of the hearing aid were questionable. It was found that when these questions were asked, most interviewees made little or no reply. Therefore the foils were read aloud by the interviewer thereby changing the planned procedure of the interview. It was the feeling of the interviewer that the interviewees' responses may have been biased by this procedure, therefore the results were questionable.

Eighty percent (4) of the CW (continue wearing) group reported they were not allowed to test the hearing aid in different situations before purchasing it. Yet 80 percent (4) of this group reported they adjusted to the use of the hearing aid right away. Also a greater percentage of this group reported instructions they had received concerning the use and care of the hearing aid. Since the members of this group had worn their hearing aids for a relatively longer period of time than the interviewees
from the other two groups, perhaps the day of acquiring the hearing aid was not as clearly recalled. Therefore, perhaps the information reported had become distorted over this period of time.

**Evaluation of the counseling and services.** Questions number 15, 15a, 20 and 20a asked the interviewee to rate the counseling and the services they had received at the University of Montana Speech and Hearing Clinic as excellent, good, fair or poor and their reasons for the ratings. The questions were as follows:

15. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?

15a. Why did you rate counseling as ________?

20. Taking everything into consideration, how would you rate the services received at the University of Montana Speech and Hearing Clinic?

20a. Why did you rate services as ________?

The results from question 15 showed that 100 percent (5) of the NH (no hearing aid) group, 75 percent (15) of the HCF (hearing aid from clinic with follow-up) group, 50 percent (5) of the HA (hearing aid from another source) group and 40 percent (2) of the CW (continue wearing) group rated the counseling received at the University of Montana Speech and Hearing Clinic as "excellent." Sixty percent (3) of the CW group, 50 percent (5) of the HA group and 25 percent (5) of the HCF group gave a "good" rating to the counseling received.

With respect to the combined sample, the results from question 15 showed that 68 percent (27) of the interviewees gave the counseling an
"excellent" rating while 32 percent (13) gave the counseling received a "good" rating.

The results from question 15a showed that the most often mentioned reasons for the ratings given to the counseling were with respect to the courtesy and friendliness of the personnel involved. Fewer references were made to the competency of the staff or thoroughness of the audiological evaluation.

The results of question 20 showed that 100 percent (5) of the NH (no hearing aid) group, 85 percent (17) of the HCF (hearing aid from clinic with follow-up) group and 60 percent from both the HA (hearing aid from another source) group (6) and the CW (continue wearing) group (3) gave an "excellent" rating to the services received at the University of Montana Speech and Hearing Clinic. Forty percent (2) of the CW group, 30 percent (3) of the HA group and 15 percent (3) of the HCF group rated the services as "good."

With respect to the combined sample, 78 percent (31) of the interviewees gave an "excellent" rating to the services received while 20 percent (8) rated the services as "good."

The results from question 20a showed again that the most often mentioned reasons for the ratings given to the services received at the Speech and Hearing Clinic were with respect to the courtesy and friendliness of the staff rather than to the quality of the services or professionalism of the personnel.

It was observed, from the interviewees' responses that they made little or no distinction between the counseling and the services. Therefore, it appeared that only one question of this sort was necessary. However, the percentage of "excellent" ratings increased by 10 percent for the
question regarding the services. Possibly the word "services" was more familiar to those individuals therefore the ratings were higher. Or maybe the word "counseling" carried less appealing connotations, thereby receiving the lower ratings.

The majority of the interviewees rated the counseling (68%) and the services (78%) as excellent. It was felt that many of these individuals reacted to the personal treatment they received rather than the quality of the evaluation and the proficiency of the staff. This judgment was based upon the reasons the interviewees gave for their ratings. Many references were made to the courtesy and friendliness of the personnel and fewer made about the competency and thoroughness of the evaluation. Many of these elderly individuals live alone and have limited social outlets. Taking this into consideration they may have reacted more to the social contact than the professional aspects of the program.

The reported offering and acceptance of rehabilitative services. Questions 16, 17 and 17a were asked in order to determine whether or not rehabilitative services, such as lipreading, speech conservation or auditory training, had been offered and if they had been accepted. If they were not accepted the interviewee was asked to explain why. Question 18 asked those interviewees to whom rehabilitative services had not been suggested if they would have been accepted had they been offered. The questions were as follows:

16. Were any rehabilitative services suggested to you such as lipreading, speech conservation or auditory training?
17. (If "yes") Did you follow these suggestions?
17a. If "no," why not?

18. (If "no" to question #16) If rehabilitative services had been offered would you have accepted them?

The results from question 16 showed that 100 percent of the HA (hearing aid from another source), CW (continue wearing) and NH (no hearing aid) groups and 85 percent (17) of the HCF (hearing aid from clinic with follow-up) group reported that no rehabilitative services such as lipreading, speech conservation or auditory training were suggested.

With respect to the combined sample, 92 percent (37) of the interviewees reported that rehabilitative services such as lipreading, speech conservation or auditory training were not suggested.

The results from question 17 showed that 100 percent of those who were offered rehabilitative services (3) in the HCF (hearing aid from clinic with follow-up) group, did not accept these services.

The results from question 17a showed that the refusal to accept these rehabilitative services was due to lack of transportation, physical limitations, and reluctance to go out at night.

The results from question 18 showed that 59 percent (10) of the HCF (hearing aid from clinic with follow-up) group, 40 percent of both the CW (continue wearing) group (2) and NH (no hearing aid) group (2) and 20 percent (2) of the HA (hearing aid from another source) group reported that had these rehabilitative services been offered, they would have been accepted. Seventy percent (7) of the HA group, 60 percent (3) of the NH group and 41 percent (7) of the HCF group reported they would not have accepted such rehabilitative services had they been offered. Sixty
percent (3) of the CW group and 10 percent (1) of the HA group remained undecided.

With respect to the combined sample, the results from question 18 showed that 46 percent (17) of the interviewees reported they would not have accepted such rehabilitative services had they been offered, and 43 percent (16) reported they would have accepted them. Eleven percent (4) remained undecided.

The majority of the respondents reported that no such rehabilitative services had been offered (93%). Only 15 percent of the HCF group reported that these services had been suggested but none of these individuals followed these suggestions. The reasons for not accepting the rehabilitative services were: (1) lack of transportation, (2) physical limitations and (3) reluctance to go out at night.

Only about half of the individuals who had not been offered the services said they would have accepted them had they been suggested (43%). However it was felt by the interviewer that far less would actually participate in such rehabilitative services. As indicated by the results of the similar question in the questionnaire, it was felt the rehabilitative services was the weakest point of the Senior Citizens Audiological Services Program.

**Questionnaire, Interview and File Comparison**

A comparison was made of questions 4, 18, 23 and 27 on the questionnaire, questions 1, 7, 16 and 19 on the interview and the related information in the files were compared to determine the degree of agreement. These questions were chosen since they duplicated information in the file.
This comparison provided an indication of how clearly the personnel involved conveyed the information concerning the audiological testing and the consequent recommendations. It was felt that 70 percent or more agreement between the results of the questionnaire, interview and file would be grounds for concluding that the personnel did an adequate job of conveying this information. A detailed breakdown of the results appears in Appendix D. The questions were as follows:

4, 1. What recommendations were made to you after the hearing evaluation?
18, 7. Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?
23, 16. Were any rehabilitative services suggested to you such as lipreading, speech conservation or auditory training?
27, 19. How many follow-up hearing aid evaluations or hearing evaluations have you had since your initial visit?

A breakdown of the agreement between the questionnaire, interview and file results for these questions can be found in Table 2.
### TABLE 2.
AGREEMENT BETWEEN QUESTIONNAIRE, INTERVIEW AND FILE
ON SELECTED RECOMMENDATIONS FROM THE PROGRAM

4. 1. What recommendations were made to you after the hearing evaluation?

<table>
<thead>
<tr>
<th>Options</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. No recommendations were made</td>
<td>97%</td>
<td>93%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>b. I was told that my hearing was normal for my age and I did not need a hearing aid.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>87%</td>
</tr>
<tr>
<td>c. I was told my hearing was not normal but I would not benefit from a hearing aid.</td>
<td>100%</td>
<td>93%</td>
<td>100%</td>
<td>73%</td>
</tr>
<tr>
<td>d. I was told that the hearing aid I was wearing at that time was adequate.</td>
<td>100%</td>
<td>87%</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td>e. It was recommended that I try a new hearing aid as the one I had at that time was not adequate.</td>
<td>93%</td>
<td>93%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>f. It was recommended that I wear a hearing aid on a trial basis.</td>
<td>87%</td>
<td>93%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>g. It was recommended that I discuss my hearing with my physician.</td>
<td>97%</td>
<td>90%</td>
<td>73%</td>
<td>87%</td>
</tr>
<tr>
<td>h. Other</td>
<td>100%</td>
<td>87%</td>
<td>73%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
18, 7. Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes, from the University of Montana Speech and Hearing Clinic.</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>b. Yes, from another source besides the Speech and Hearing Clinic.</td>
<td>100%</td>
<td>95%*</td>
<td>90%*</td>
<td>100%</td>
</tr>
<tr>
<td>c. No</td>
<td>100%</td>
<td>93%</td>
<td>93%</td>
<td>100%*</td>
</tr>
</tbody>
</table>

* This percentage is the degree of agreement between the questionnaire and interview results only since this information was not mentioned in the file.

23, 16. Were any rehabilitative services suggested to you such as lip-reading, speech conservation or auditory training?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>97%</td>
<td>93%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>b. No</td>
<td>97%</td>
<td>80%</td>
<td>73%</td>
<td>73%</td>
</tr>
</tbody>
</table>
27, 19. How many follow-up hearing aid evaluations or hearing evaluations have you had since your initial visit?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. None</td>
<td>90%</td>
<td>93%</td>
<td>73%</td>
<td>87%</td>
</tr>
<tr>
<td>b. One</td>
<td>87%</td>
<td>87%</td>
<td>73%</td>
<td>100%</td>
</tr>
<tr>
<td>c. Two</td>
<td>80%</td>
<td>93%</td>
<td>100%</td>
<td>87%</td>
</tr>
<tr>
<td>d. Three</td>
<td>97%</td>
<td>93%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>e. Four or more</td>
<td>90%</td>
<td>93%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

It was found that there was more than 70 percent agreement on questions concerning the source of the hearing aid, suggestion of rehabilitative services, and number of follow-up visits, for all the foils that applied, for all four groups. The question concerning the recommendations also provided 70 percent agreement for the HCF, HA and NH groups for all applicable foils. The 70 percent level was also met and surpassed for the CW (continue wearing) group for all foils except one which should have been the most applicable to this group with respect to the categorizing that was done for this evaluation of the program. This foil stated that the individual was told that the hearing aid he was wearing at the time of the evaluation was adequate. According to the files, this was the recommendation given to 40 percent of the individuals in this group. More individuals chose this foil than received the recommendation. Apparently more people who received the recommendation to obtain a new hearing aid left thinking they were supposed to continue wearing an old one. Or
perhaps they did not feel there was an urgent need to obtain a new hearing aid so dismissed the recommendation. These possibilities should be noted by the personnel involved with the geriatric population when doing counseling in the future. Except for this aspect, the personnel involved with the Senior Citizens Audiological Services Program did an adequate job of conveying the audiological information and recommendations.
CHAPTER IV
SUMMARY

It has long been recognized that a total audiological rehabilitative program "must include thorough diagnosis, fitting of proper hearing aids where necessary, rehabilitative therapy, including auditory training, speech reading and speech conservation when required, and continued counseling to assist the patient in learning to cope most effectively with his hearing loss" (Title I, Higher Education Act Final Project Report, 1972). In an attempt to establish a demonstration program for the hearing impaired elderly, which would address itself to these problems, the Audiological Services for Senior Citizens Program was established at the University of Montana Speech and Hearing Clinic with support from the Title I, Higher Education Act of 1965 and the Montana Commission on Aging.

A stipulation of the programs funded under the Title I, Higher Education Act of 1965, was that upon termination, an evaluation of the services provided be conducted. In an attempt to measure participants' reactions to the Senior Citizens Audiological Services Program, a closed form questionnaire consisting of thirty multiple-choice questions and one checklist question was distributed to all individuals who participated in the program, except the four used in the pilot study. This was followed by a direct interview with a stratified sample of forty individuals chosen from those who returned the questionnaire.

95

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Of the 244 questionnaires mailed, 170 usable questionnaires were returned. These were divided into six groups depending upon the services reportedly received from the program.

1. Group HCF (hearing aid from clinic with follow-up) was comprised of 29 individuals who had received their hearing aids from the University of Montana Speech and Hearing Clinic and who reported at least one follow-up visit.

2. Group HA (hearing aid from another source) consisted of 24 individuals who received a hearing aid from another source after their evaluation at the University of Montana Speech and Hearing Clinic.

3. Group CW (continue wearing) was comprised of 34 individuals who had hearing aids prior to their evaluation at the Speech and Hearing Clinic and stated that they continued wearing them upon the recommendation of the clinic.

4. It was reportedly recommended to 38 individuals in group NH (no hearing aid) that they not wear a hearing aid.

5. Group HC (hearing aid from clinic) consisted of 21 individuals who stated they received a hearing aid from the University of Montana Speech and Hearing Clinic but reported receiving no follow-up evaluations.

6. Group U (unclassified) consisted of 24 individuals whose questionnaires were inconsistently or inadequately filled out, or could not be placed in one of the five groups.
Questions 2, 3, 5, 16, 22, 25, 28 and 29 were evaluative questions which required the respondent to rate certain aspects of the Senior Citizens Audiological Services Program. These questions were interpreted in the following manner: if a majority (51% or more) of the individuals checked the first or second most positive responses included that this program was, in general, successful. The results on questions 2, 3, 5, 28, and 29 showed that with respect to individual group and total responses, the 51 percent criterion level was met and surpassed. The 51 percent level was also met on questions 16 and 22 for all groups except the U group. This group showed such a high level of "no responses" that the 51 percent could not have been met. Question 25 pertained to the evaluation of the rehabilitative service. Since it has been determined that so few individuals participated in this aspect of the program, the 51 percent level could not have been met. With the exception of the results of question 25, the 51 percent level was met and surpassed with respect to the results of the combined sample, the average across groups being 85 percent. Therefore, it was felt that except for the rehabilitative services, the Senior Citizens Audiological Services Program, in general, was successful.

From the results of both the questionnaire and the interview it appeared that the rehabilitative services was the weakest aspect of the Senior Citizens Audiological Services Program. A large majority of the respondents in both situations reported they were not offered these services. It was difficult to determine the satisfaction with the services by those who participated. The results could possibly indicate a weakness in the structure of the questionnaire, an inability on the part of the
respondents to interpret this set of questions, failure on the part of professional staff to suggest the services where needed or failure on the part of the respondent to accept the services when they had been suggested.

A comparison was made of questions 4, 18, 23 and 27 on the questionnaire, questions 1, 7, 16 and 19 on the interview and the related information in the files in order to determine the degree of agreement. These specific questions were chosen since they duplicated the information in the file. This comparison provided an indication of how clearly the personnel involved conveyed the information concerning the audiological testing and consequent recommendations. It was felt that 70 percent or more agreement between the results of the questionnaire, interview and file would be grounds for concluding that the personnel did an adequate job of conveying this information. It was found that there was more than 70 percent agreement on questions concerning the source of the hearing aid, suggestion of rehabilitative services, and number of follow-up visits for all the foils that applied, for groups HCF, HA, NH and CW. The question concerning the recommendations also provided at least 70 percent agreement for the HCF, HA and NH groups for all applicable foils. The 70 percent level was also met and surpassed for the CW group for all foils except one, which should have been the most applicable to this group with respect to the categorizing that was done for this evaluation. This foil stated that that individual was told the hearing aid he was wearing at the time of the evaluation was adequate. According to the files, this was the recommendation given to 40 percent of the individuals in this group. More individuals chose this foil than received the recommendation.
Apparently more people who received the recommendation to obtain a new aid, left thinking they were supposed to continue wearing an old aid. Or perhaps they did not feel there was an urgent need to obtain a new hearing aid so dismissed the recommendation. These possibilities should be noted by the personnel involved with the geriatric population when doing counseling in the future. Except for this aspect, the personnel involved with the Senior Citizens Audiological Services Program did an adequate job of conveying the audiological information and recommendations.

In summary, it appeared the Senior Citizens Audiological Services Program was favorably accepted by the respondents. Guided by the overall findings of this study, it would appear that comprehensive management of the audiological rehabilitation for senior citizens is beneficial. However, the results would also indicate there are areas where the limitations of these individuals make total rehabilitation difficult.
An evaluation of the Audiological Services for Senior Citizens at the University of Montana Speech and Hearing Clinic is being conducted. This program was partially funded by the Title I, Higher Education Act of 1965 (Community Service and Continuing Education). Our records indicate that you have received services under this program; therefore, your evaluation is important to us. In order that the hearing services may better fulfill your needs, a confidential questionnaire is being distributed. Your cooperation in completing and returning the enclosed questionnaire will aid in evaluation of these services. Please use the enclosed self-addressed, stamped envelope when returning the questionnaire.

Place an X or a check (✓) on the line in front of the statement which best represents your feelings toward each question. Spaces are provided for further comments on appropriate questions.

Your cooperation in helping us evaluate the Audiological Services for Senior Citizens will be appreciated. If interested in the results of this study, copies will be available upon request.

Sincerely,

Evan P. Jordan, Ph.D.
Professor

100
APPENDIX B

Questionnaire for the Evaluation of Audiological Services for Senior Citizens

University of Montana
Speech and Hearing Clinic

1. How did you learn of the Audiological Services for Senior Citizens?
   a. _____ Through the Missoula Welfare Department
   b. _____ Through the Missoula County Health Department
   c. _____ Through the Department of Vocational Rehabilitation
   d. _____ Through the American Association of Retired Persons (AARP)
   e. _____ Through the University of Montana Speech and Hearing Clinic
   f. _____ Through a friend or relative
   g. _____ Through my physician
   h. _____ Other (please specify)

2. How would you rate the personal consideration given to you while being tested? Additional comments may be written below.
   a. _____ Excellent
   b. _____ Good
   c. _____ Fair
   d. _____ Poor

3. How would you rate the competence or skill of the individual(s) who conducted the hearing evaluation? Comments may be written below.
   a. _____ Excellent
   b. _____ Good
   c. _____ Fair
   d. _____ Poor
4. What recommendations were made to you after the hearing evaluation?

a. ____ No recommendations were made.
b. ____ I was told that my hearing was normal for my age and I did not need a hearing aid.
c. ____ I was told that my hearing was not normal but I would not benefit from a hearing aid.
d. ____ I was told that the hearing aid I was wearing at that time was adequate.
e. ____ It was recommended that I try a new hearing aid as the one I had at that time was not adequate.
f. ____ It was recommended that I wear a hearing aid on a trial basis.
g. ____ It was recommended that I discuss my hearing with my physician.
h. ____ I don't recall what recommendations were made.
i. ____ Other (please specify)

5. Did you agree with the recommendations?

a. ____ Complete agreement
b. ____ Partial agreement
c. ____ Some disagreement
d. ____ Complete disagreement
e. ____ Other (please specify)

6. Did you follow the recommendations?

a. ____ I followed all of the recommendations.
b. ____ I followed some of the recommendations.
c. ____ I followed none of the recommendations.

7. If you checked "b" or "c" in the previous question, please explain the reasons for not following the recommendations.
IF IT WAS RECOMMENDED THAT YOU WEAR A HEARING AID, ANSWER THE FOLLOWING QUESTIONS. IF NOT, PROCEED TO QUESTION NUMBER 23 AND ANSWER ALL REMAINING QUESTIONS.

8. Were you allowed to try different hearing aids during the evaluation?
   a. Yes
   b. No
   c. Don't recall

9. Do you have any complaints about your hearing aid?
   a. No complaints
   b. The hearing aid makes everything sound too noisy.
   c. The hearing aid is difficult to put on.
   d. The batteries do not last long enough.
   e. The ear mold hurts.
   f. Other (please specify)

10. How often do you wear your hearing aid?
    a. Daily, all day long.
    b. Daily, part of the day.
    c. About once a week.
    d. About once a month.
    e. Never

11. Would you seek another hearing aid if your present one became damaged or lost?
    a. Yes, the same model.
    b. Yes, but a different model.
    c. Yes, but from a different source.
    d. No, I would never use another hearing aid.
    e. I would only get another aid if I did not have to pay for it.
    f. Undecided.
12. How often do you need to replace the batteries in your present hearing aid?
   a. _____ Less than every four weeks.
   b. _____ Less than every three weeks.
   c. _____ Less than every two weeks.
   d. _____ Less than every week.
   e. _____ Other (please specify)

13. Were you told how to use and care for your hearing aid by the personnel at the Speech and Hearing Clinic?
   a. _____ Yes
   b. _____ No
   c. _____ Don't recall

14. Was it your understanding that the hearing aid would provide "normal" hearing?
   a. _____ Yes
   b. _____ No
   c. _____ Don't recall

15. Was it your understanding that your hearing aid would amplify only speech and not background noise?
   a. _____ Yes
   b. _____ No
   c. _____ Don't recall

16. Is the hearing aid helping you?
   a. _____ It has measured up to my fullest expectations.
   b. _____ I am satisfied, but not up to my initial expectations.
   c. _____ I am a little disappointed.
   d. _____ I am very disappointed.
   e. _____ Other (please specify)
17. I have difficulty hearing in the following situations:

<table>
<thead>
<tr>
<th>Without hearing aid</th>
<th>Wearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. _____ a. Faint voices</td>
<td>a. _____</td>
</tr>
<tr>
<td>b. _____ b. Television</td>
<td>b. _____</td>
</tr>
<tr>
<td>c. _____ c. Telephone</td>
<td>c. _____</td>
</tr>
<tr>
<td>d. _____ d. The radio</td>
<td>d. _____</td>
</tr>
<tr>
<td>e. _____ e. Conversations in a one-to-one situation</td>
<td>e. _____</td>
</tr>
<tr>
<td>f. _____ f. Small group conversations (4 or 5 people)</td>
<td>f. _____</td>
</tr>
<tr>
<td>g. _____ g. Large group conversations</td>
<td>g. _____</td>
</tr>
<tr>
<td>h. _____ h. Conversations in a noisy room</td>
<td>h. _____</td>
</tr>
<tr>
<td>i. _____ i. The sermon in church</td>
<td>i. _____</td>
</tr>
<tr>
<td>j. _____ j. I never had any difficulty in any situations.</td>
<td>j. _____</td>
</tr>
<tr>
<td>k. _____ k. Other (please specify)</td>
<td>k. _____</td>
</tr>
</tbody>
</table>

18. Following this evaluation did you obtain a hearing aid?

a. _____ Yes, from the University of Montana Speech and Hearing Clinic.
b. _____ Yes, from another source besides the Speech and Hearing Clinic.
c. _____ No

19. If you checked "No" in the previous question, please give the reasons in the space below.

20. From whom did you obtain your present hearing aid?

a. _____ From a hearing aid dealer.
b. _____ From a friend.
c. _____ From the Speech and Hearing Clinic.
d. _____ Other (please specify)
21. If you had a hearing aid previously, how does it compare to the hearing aid that was issued to you by this clinic?

a. _____ I liked my previous hearing aid better.
b. _____ I liked the hearing aid issued to me by the Speech and Hearing Clinic better.
c. _____ The two hearing aids helped me equally.
d. _____ Other (please specify)

22. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?

a. _____ Excellent
b. _____ Good, but I still had a few questions when I left.
c. _____ Fair, but I had many unanswered questions.
d. _____ Poor, I still don't know how to use and care for my hearing aid.

23. Were any of the following rehabilitative services suggested to you?

- Lipreading
- Speech conservation
- Auditory training

a. _____ Yes
b. _____ No
c. _____ Don't recall

24. Referring to the previous question, did you follow through with any of these suggestions?

a. _____ Yes
b. _____ No (If no, why not?)

25. If you answered "yes" to question number 24, how would you rate the usefulness of these services?

a. _____ Very useful
b. _____ Moderately useful
c. _____ Not very useful
d. _____ Not useful at all.

26. If the above rehabilitative services had been offered, would you have accepted them?

a. _____ Yes
b. _____ No
c. _____ Undecided
27. How many follow-up hearing aid evaluations or hearing evaluations have you had since your initial visit?
   a. _____ None
   b. _____ One
   c. _____ Two
   d. _____ Three
   e. _____ Four or more

28. Taking everything into consideration, how would you rate the services you received at the University of Montana Speech and Hearing Clinic?
   a. _____ Excellent
   b. _____ Good
   c. _____ Fair
   d. _____ Poor

29. Do you feel the Audiological Services were beneficial enough to recommend to another person?
   a. _____ I would highly recommend the services.
   b. _____ I would recommend some of the services.
   c. _____ I would recommend the services but with some reservations.
   d. _____ I would never recommend the services.

30. If monies had not been available to support these services, what fee would have seemed reasonable to pay for them?
   a. _____ 0 to $5.00
   b. _____ $5.00 to $10.00
   c. _____ $10.00 to $25.00
   d. _____ $25.00 to $50.00
   e. _____ $50.00 to $100.00
   f. _____ $100.00 to $150.00
   g. _____ $150.00 to $200.00

31. Who filled out this questionnaire?
   a. _____ Self
   b. _____ Spouse helped me.
   c. _____ Friend helped me.
   d. _____ Other (please specify)
APPENDIX C

INTERVIEW

Group Number: __________  Name: __________________________

Number: __________

Observations:

1. Was the interviewee wearing the hearing aid when the interviewer arrived?
   a. _____ Yes
   b. _____ No

2. The interviewer will examine the hearing aid for signs of wear.
   a. _____ Wax in the ear mold.
   b. _____ Other

3. The interviewee will be asked to put the hearing aid on and the interviewer will evaluate the ease with which this is done.
   a. _____ Required no help--placed aid on ear easily and quickly.
   b. _____ Some fumbling but got aid in place without assistance.
   c. _____ Required some assistance.
   d. _____ Required assistance--did not know how to put on the hearing aid.
4. The interviewer will test the batteries using a battery tester, and test the hearing aid for feedback.
   a. _____ Batteries adequately charged.
   b. _____ Batteries not adequately charged.
   c. _____ No feedback.
   d. _____ Feedback noted.

5. Comments

Questions:

1. What recommendations were made to you after the hearing evaluation?
   a. _____ No recommendations were made.
   b. _____ I was told that my hearing was normal for my age and I did not need a hearing aid.
   c. _____ I was told that my hearing was not normal but I would not benefit from a hearing aid.
   d. _____ I was told that the hearing aid I was wearing at that time was adequate.
   e. _____ It was recommended that I try a new hearing aid as the one I had at that time was not adequate.
   f. _____ It was recommended that I wear a hearing aid on a trial basis.
   g. _____ It was recommended that I discuss my hearing with my physician.
   h. _____ I don't recall what recommendations were made.
   i. _____ Other
2. Did you agree with the recommendations?
   a. _____ Complete agreement
   b. _____ Partial agreement
   c. _____ Some disagreement
   d. _____ Complete disagreement

2a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for the lack of total agreement.

3. Did you follow the recommendations?
   a. _____ I followed all of the recommendations.
   b. _____ I followed some of the recommendations.
   c. _____ I followed none of the recommendations.

3a. If the interviewee answers "b" or "c," he will be asked to explain the reasons for not following the recommendations.

4. Were you wearing a hearing aid previous to your evaluation at the Speech and Hearing Clinic?
   a. _____ Yes
   b. _____ No

5. (If "Yes") Where did you obtain that hearing aid?
   a. _____ Hearing Aid dealer
   b. _____ Friend or relative
   c. _____ Other
6. Were you satisfied with that aid?
   a. _____ Totally satisfied
   b. _____ Somewhat satisfied
   c. _____ Somewhat dissatisfied
   d. _____ Totally dissatisfied

6a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for lack of total satisfaction.

7. Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?
   a. _____ Yes, from the University of Montana Speech and Hearing Clinic.
   b. _____ Yes, from another source besides the Speech and Hearing Clinic.
   c. _____ No

8. In what situations were you allowed to test this hearing aid?
   a. _____ In the testing booth
   b. _____ On the telephone
   c. _____ In my home
   d. _____ I was not allowed to test the hearing aid.
   e. _____ Don't recall
   f. _____ Other
9. How long did it take you to adjust to your present hearing aid?
   a. _____ I adjusted to it right away
   b. _____ A week
   c. _____ Two weeks
   d. _____ A month
   e. _____ I never did adjust to wearing my hearing aid.

10. How often do you wear your hearing aid?
    a. _____ Daily, all day long
    b. _____ Daily, part of the day
    c. _____ About once a week
    d. _____ About once a month
    e. _____ Never

11. Are you satisfied with the performance of your hearing aid?
    a. _____ It has measured up to my fullest expectations.
    b. _____ I am satisfied, but not up to my initial expectations.
    c. _____ I am a little disappointed.
    d. _____ I am very disappointed

11a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for lack of total satisfaction.
12. How often do you need to replace the batteries in your hearing aid?
   a. ___ Less than every four weeks.
   b. ___ Less than every three weeks.
   c. ___ Less than every two weeks.
   d. ___ Less than every week.
   e. ___ Other

13. Would you seek another hearing aid if your present one became lost or damaged?
   a. ___ Yes, the same model.
   b. ___ Yes, but a different model.
   c. ___ Yes, but from a different source.
   d. ___ No, I would never use another hearing aid.
   e. ___ I would only get another aid if I did not have to pay for it.
   f. ___ Undecided.

14. What were you told about the use and care of your hearing aid by personnel from whom you obtained your present aid?
   a. ___ Remove battery case when not in use
   b. ___ How to clean
   c. ___ How to put in and remove battery
   d. ___ How to adjust volume
   e. ___ Other
15. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?
   a. _____ Excellent
   b. _____ Good
   c. _____ Fair
   d. _____ Poor

15a. Why did you rate the counseling as ________________?

16. Were any rehabilitative services suggested to you such as lipreading, speech conservation or auditory training?
   a. _____ Yes
   b. _____ No -- (Go to #18)
   c. _____ Don't recall

17. (If "yes") Did you follow these suggestions?
   a. _____ Yes
   b. _____ No

17a. If "no," why not?

17b. If "yes," how would you rate the usefulness of these services?
   a. _____ Very useful
   b. _____ Moderately useful
   c. _____ Not very useful
   d. _____ Not useful at all
Why did you rate the services as ___________?

18. (If "no" to question #16) If rehabilitative services had been offered would you have accepted them?
   a. _____ Yes
   b. _____ No
   c. _____ Undecided

19. How many follow-up evaluations have you received, such as home visits, telephone calls or visits to the Clinic?
   a. _____ None
   b. _____ One
   c. _____ Two
   d. _____ Three
   e. _____ Four or more

20. Taking everything into consideration, how would you rate the services received at the University of Montana Speech and Hearing Clinic?
   a. _____ Excellent
   b. _____ Good
   c. _____ Fair
   d. _____ Poor

20a. Why did you rate the services as ___________?

Comments
### APPENDIX D

**QUESTIONNAIRE RESULTS**

1. How did you learn of the Audiological Services for Senior Citizens?

<table>
<thead>
<tr>
<th>Source</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Missoula Welfare Department</td>
<td>7%</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
<td>10%</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>b. Missoula County Health Department</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c. Department of Vocational Rehabilitation</td>
<td>10%</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>5%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>d. American Association of Retired Persons</td>
<td>28%</td>
<td>8%</td>
<td>9%</td>
<td>8%</td>
<td>19%</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>e. University of Montana Speech and Hearing Clinic</td>
<td>17%</td>
<td>4%</td>
<td>15%</td>
<td>10%</td>
<td>5%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>f. A friend or relative</td>
<td>28%</td>
<td>50%</td>
<td>59%</td>
<td>60%</td>
<td>38%</td>
<td>46%</td>
<td>48%</td>
</tr>
<tr>
<td>g. Through my physician</td>
<td>0</td>
<td>8%</td>
<td>0</td>
<td>5%</td>
<td>10%</td>
<td>17%</td>
<td>6%</td>
</tr>
<tr>
<td>h. Other</td>
<td>10%</td>
<td>21%</td>
<td>12%</td>
<td>13%</td>
<td>14%</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>No Responses</td>
<td>0</td>
<td>8%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8%</td>
</tr>
</tbody>
</table>

| h. Other                                            | 1%  | 21%| 12%| 13%| 14%| 21%| 15%      |
| No Responses                                        | 0   | 8% | 0  | 0  | 0  | 0 | 8%       |

HCF—Henry King

As a University of Montana faculty member.

Article in the Missoulian

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
2. How would you rate the personal consideration given to you while being tested? Additional comments may be written below.

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>90%</td>
<td>83%</td>
<td>91%</td>
<td>89%</td>
<td>76%</td>
<td>79%</td>
<td>86%</td>
</tr>
<tr>
<td>Good</td>
<td>10%</td>
<td>17%</td>
<td>9%</td>
<td>10%</td>
<td>24%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Fair</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Responses</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12%</td>
<td>2%</td>
</tr>
</tbody>
</table>

No additional comments were given.
3. How would you rate the competence or skill of the individual(s) who conducted the hearing evaluation? Comments may be written below.

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Excellent</td>
<td>86%</td>
<td>75%</td>
<td>82%</td>
<td>76%</td>
<td>71%</td>
<td>67%</td>
<td>77%</td>
</tr>
<tr>
<td>b. Good</td>
<td>14%</td>
<td>25%</td>
<td>15%</td>
<td>21%</td>
<td>28%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>c. Fair</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>d. Poor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

No additional comments were given.

4. What recommendations were made to you after the hearing evaluation?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. No recommendations were made.</td>
<td>3%</td>
<td>4%</td>
<td>6%</td>
<td>0</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>b. I was told that my hearing was normal for my age and I did not need a hearing aid.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45%</td>
<td>0</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>c. I was told that my hearing was not normal but I would not benefit from a hearing aid.</td>
<td>0</td>
<td>8%</td>
<td>0</td>
<td>50%</td>
<td>0</td>
<td>0</td>
<td>12%</td>
</tr>
<tr>
<td>d. I was told that the hearing aid I was wearing at that time was adequate.</td>
<td>3%</td>
<td>0</td>
<td>85%</td>
<td>0</td>
<td>14%</td>
<td>4%</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. It was recommended that I try a new hearing aid as the one I had at that time was not adequate.</td>
<td>21%</td>
<td>12%</td>
<td>0</td>
<td>0</td>
<td>10%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>f. It was recommended that I wear a hearing aid on a trial basis.</td>
<td>55%</td>
<td>46%</td>
<td>0</td>
<td>0</td>
<td>57%</td>
<td>38%</td>
<td>28%</td>
</tr>
<tr>
<td>g. It was recommended that I discuss my hearing with my physician.</td>
<td>3%</td>
<td>8%</td>
<td>6%</td>
<td>3%</td>
<td>0</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>h. I don't recall what recommendations were made.</td>
<td>3%</td>
<td>21%</td>
<td>3%</td>
<td>0</td>
<td>14%</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td>i. Other</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>No Response</td>
<td>7%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8%</td>
<td>2%</td>
</tr>
</tbody>
</table>

i. Other

HCF—I had two tests, one at the Clinic and the other one with ear doctor. Both went the same—lost hearing.

HA—None

CW—None

NH—It was recommended that I have my hearing checked at least once a year. My hearing is now adequate for the type of life I lead so no hearing aid is necessary.

HC—None

U—I was a borderline case. If I felt I was unable to hear things of importance at a meeting, now or perhaps later, I would feel the need. I am 85 and do not attend clubs, so felt their idea was good. Still have no aid.
5. Did you agree with the recommendations?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Complete agreement</td>
<td>79%</td>
<td>67%</td>
<td>70%</td>
<td>84%</td>
<td>86%</td>
<td>54%</td>
<td>74%</td>
</tr>
<tr>
<td>b. Partial agreement</td>
<td>7%</td>
<td>12%</td>
<td>12%</td>
<td>13%</td>
<td>5%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>c. Some disagreement</td>
<td>0%</td>
<td>4%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>d. Complete disagreement</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>e. Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>No Response</td>
<td>10%</td>
<td>17%</td>
<td>15%</td>
<td>3%</td>
<td>10%</td>
<td>38%</td>
<td>14%</td>
</tr>
</tbody>
</table>

6. Did you follow the recommendations?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I followed all of the recommendations</td>
<td>79%</td>
<td>62%</td>
<td>65%</td>
<td>63%</td>
<td>71%</td>
<td>33%</td>
<td>63%</td>
</tr>
<tr>
<td>b. I followed some of the recommendations</td>
<td>10%</td>
<td>8%</td>
<td>12%</td>
<td>0%</td>
<td>14%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>c. I followed none of the recommendations</td>
<td>0%</td>
<td>4%</td>
<td>0%</td>
<td>3%</td>
<td>0%</td>
<td>21%</td>
<td>4%</td>
</tr>
<tr>
<td>No Response</td>
<td>10%</td>
<td>25%</td>
<td>24%</td>
<td>34%</td>
<td>14%</td>
<td>46%</td>
<td>26%</td>
</tr>
</tbody>
</table>
7. If you checked "b" or "c" in the previous question, please explain the reasons for not following the recommendations.

HCF--I tried wearing them but there was too much noise. It was hard to understand.

No response. (2)

HA--Mr. Sweeney contacted me.

I went to Beltone and got an aid put on the bow of my glasses; it helped but I didn't feel I could afford $300 to have an aid put in my glasses permanently so wore it a month and returned it. May get it later. Trial aid helped me so I thought having individual mold made for $3.00--just expense for no reason.

I was at the time consulting a hearing aid man in Missoula, a Mr. Anderson.

CW--I have an irritation in my ear at times.

No recommendations given.

I am very nervous; it was take it out or go mad. I still can't make myself wear the one for the left ear.

No response. (1)

NH--No response.

HC--I don't need the hearing aid around home. Don't use it much at home, because batteries are too expensive.

Just didn't take the time.

U--I was alone most of the time. Did not need hearing aid. Do use it when I go out.

At this time I do not think I need a hearing aid.

I haven't had time to complete the appointment with the Beltone representative.

You did not have a rental hearing aid when I was there as there was so many calls for them. You did make a mold for me.

Have been on a trip. Will follow recommendations soon.

Cannot afford hearing aids at $300.00 to $400.00 each.
Group NH was not to answer questions 8 through 22. The "Combined" consequently refers to the remaining 132 individuals who answered those questions.

8. Were you allowed to try different hearing aids during the evaluation?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>55%</td>
<td>29%</td>
<td>26%</td>
<td>--</td>
<td>48%</td>
<td>21%</td>
<td>36%</td>
</tr>
<tr>
<td>b. No</td>
<td>21%</td>
<td>58%</td>
<td>44%</td>
<td>--</td>
<td>43%</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>c. Don't Recall</td>
<td>7%</td>
<td>8%</td>
<td>3%</td>
<td>--</td>
<td>10%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>No Response</td>
<td>17%</td>
<td>4%</td>
<td>26%</td>
<td>--</td>
<td>0</td>
<td>42%</td>
<td>19%</td>
</tr>
</tbody>
</table>

9. Do you have any complaints about your hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. No complaints</td>
<td>45%</td>
<td>25%</td>
<td>32%</td>
<td>--</td>
<td>67%</td>
<td>12%</td>
<td>36%</td>
</tr>
<tr>
<td>b. The hearing aid makes everything sound too noisy.</td>
<td>28%</td>
<td>29%</td>
<td>18%</td>
<td>--</td>
<td>14%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>c. The hearing aid is difficult to put on.</td>
<td>10%</td>
<td>8%</td>
<td>3%</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>d. The batteries do not last long enough.</td>
<td>10%</td>
<td>12%</td>
<td>24%</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>11%</td>
</tr>
<tr>
<td>e. The ear mold hurts.</td>
<td>10%</td>
<td>0</td>
<td>6%</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>f. Other</td>
<td>10%</td>
<td>17%</td>
<td>29%</td>
<td>--</td>
<td>10%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>No Response</td>
<td>3%</td>
<td>8%</td>
<td>29%</td>
<td>--</td>
<td>5%</td>
<td>75%</td>
<td>24%</td>
</tr>
</tbody>
</table>
f. Other

HCF—Interfered with other outside noises, such as T.V. or other people talking at the same time.

Ear mold loose

I have a progressive hearing loss. At times voices make a rasping sound.

HA—Rubber tip wore out, and the hearing aid falls out.

Helps except in groups of people or crowds. Have new hearing aid as one I had wasn't operating satisfactorily and service was nil. I had a Sonotone hearing aid and they moved out. Mr. Vandereit of their Great Falls office was supposed to do servicing but he just failed me. Now have a Maico and quite pleased. Also pleased with the services of Mr. Anderson.

Won't wear it--it doesn't help.

I got my hearing aid from Zenith.

CW—I can't understand what people are saying unless they speak in my ear.

Cost too much.

If I wear it too long it hurts the top part of my ear. Otherwise fine.

HC—Hearing aid seems to be noisy.

Hearing aid too noisy in a crowd so I turn it off.

U—No hearing aid at present.

10. How often do you wear your hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Daily, all day long</td>
<td>38%</td>
<td>54%</td>
<td>38%</td>
<td>--</td>
<td>24%</td>
<td>21%</td>
<td>36%</td>
</tr>
<tr>
<td>b. Daily, part of the day</td>
<td>34%</td>
<td>25%</td>
<td>44%</td>
<td>--</td>
<td>48%</td>
<td>0</td>
<td>31%</td>
</tr>
<tr>
<td>c. About once a week</td>
<td>17%</td>
<td>0</td>
<td>3%</td>
<td>--</td>
<td>10%</td>
<td>0</td>
<td>6%</td>
</tr>
</tbody>
</table>
10. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>d. About once a month</td>
<td>0</td>
<td>4%</td>
<td>3%</td>
<td>--</td>
<td>10%</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>e. Never</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
<td>--</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>No Response</td>
<td>3%</td>
<td>12%</td>
<td>9%</td>
<td>--</td>
<td>0</td>
<td>71%</td>
<td>18%</td>
</tr>
</tbody>
</table>

11. Would you seek another hearing aid if your present one became lost or damaged?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes, the same model</td>
<td>52%</td>
<td>36%</td>
<td>20%</td>
<td>--</td>
<td>48%</td>
<td>8%</td>
<td>32%</td>
</tr>
<tr>
<td>b. Yes, but a different model</td>
<td>7%</td>
<td>29%</td>
<td>29%</td>
<td>--</td>
<td>19%</td>
<td>0</td>
<td>17%</td>
</tr>
<tr>
<td>c. Yes, but from a different source</td>
<td>0</td>
<td>0</td>
<td>9%</td>
<td>--</td>
<td>0</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>d. No, I would never use another hearing aid</td>
<td>3%</td>
<td>12%</td>
<td>3%</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>e. I would only get another aid if I did not have to pay for it</td>
<td>14%</td>
<td>4%</td>
<td>6%</td>
<td>--</td>
<td>24%</td>
<td>0</td>
<td>9%</td>
</tr>
<tr>
<td>No Response</td>
<td>7%</td>
<td>8%</td>
<td>9%</td>
<td>--</td>
<td>0</td>
<td>75%</td>
<td>19%</td>
</tr>
</tbody>
</table>
12. How often do you need to replace the batteries in your present hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Less than every four weeks</td>
<td>28%</td>
<td>33%</td>
<td>15%</td>
<td>--</td>
<td>28%</td>
<td>0</td>
<td>20%</td>
</tr>
<tr>
<td>b. Less than every three weeks</td>
<td>24%</td>
<td>21%</td>
<td>12%</td>
<td>--</td>
<td>24%</td>
<td>0</td>
<td>16%</td>
</tr>
<tr>
<td>c. Less than every two weeks</td>
<td>14%</td>
<td>21%</td>
<td>35%</td>
<td>--</td>
<td>10%</td>
<td>0</td>
<td>17%</td>
</tr>
<tr>
<td>d. Less than every week</td>
<td>14%</td>
<td>0</td>
<td>15%</td>
<td>--</td>
<td>10%</td>
<td>17%</td>
<td>11%</td>
</tr>
<tr>
<td>e. Other</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
<td>--</td>
<td>14%</td>
<td>12%</td>
<td>10%</td>
</tr>
</tbody>
</table>

No Response: 10% 17% 18% -- 14% 71% 10%

E. Other

HCF—Four to six weeks.

Never did replace them at all because I did not wear the hearing aid

Depends on how often I use the aid

HA—Every day

Three to five weeks

CW—Two months

More than every four weeks

NH—Does not apply

HC—Paid no attention

Less than six weeks

Every two months

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
126

U----No hearing aid at present

Not sure

Seldom, because of infrequent use

13. Were you told how to use and care for your hearing aid by the personnel at the Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>79%</td>
<td>17%</td>
<td>62%</td>
<td>--</td>
<td>86%</td>
<td>12%</td>
<td>52%</td>
</tr>
<tr>
<td>b. No</td>
<td>7%</td>
<td>25%</td>
<td>15%</td>
<td>--</td>
<td>5%</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>c. Don't Recall</td>
<td>3%</td>
<td>29%</td>
<td>15%</td>
<td>--</td>
<td>5%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>No Response</td>
<td>10%</td>
<td>29%</td>
<td>9%</td>
<td>--</td>
<td>5%</td>
<td>75%</td>
<td>24%</td>
</tr>
</tbody>
</table>

14. Was it your understanding that the hearing aid would provide "normal" hearing?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>17%</td>
<td>17%</td>
<td>24%</td>
<td>--</td>
<td>33%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>b. No</td>
<td>59%</td>
<td>67%</td>
<td>44%</td>
<td>--</td>
<td>52%</td>
<td>12%</td>
<td>47%</td>
</tr>
<tr>
<td>c. Don't Recall</td>
<td>17%</td>
<td>8%</td>
<td>15%</td>
<td>--</td>
<td>14%</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>No Response</td>
<td>7%</td>
<td>8%</td>
<td>18%</td>
<td>--</td>
<td>0</td>
<td>67%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
15. Was it your understanding that your hearing aid would amplify only speech and not background noise?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>10%</td>
<td>12%</td>
<td>12%</td>
<td>--</td>
<td>5%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>b. No</td>
<td>62%</td>
<td>66%</td>
<td>62%</td>
<td>--</td>
<td>52%</td>
<td>4%</td>
<td>51%</td>
</tr>
<tr>
<td>c. Don't Recall</td>
<td>24%</td>
<td>8%</td>
<td>12%</td>
<td>--</td>
<td>38%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>No Response</td>
<td>3%</td>
<td>12%</td>
<td>15%</td>
<td>--</td>
<td>5%</td>
<td>67%</td>
<td>20%</td>
</tr>
</tbody>
</table>

16. Is the hearing aid helping you?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. It has measured up to my fullest expectations</td>
<td>38%</td>
<td>33%</td>
<td>18%</td>
<td>--</td>
<td>38%</td>
<td>4%</td>
<td>26%</td>
</tr>
<tr>
<td>b. I am satisfied, but not up to my initial expectations</td>
<td>34%</td>
<td>33%</td>
<td>38%</td>
<td>--</td>
<td>38%</td>
<td>4%</td>
<td>30%</td>
</tr>
<tr>
<td>c. I am a little disappointed</td>
<td>7%</td>
<td>12%</td>
<td>12%</td>
<td>--</td>
<td>10%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>d. I am very disappointed</td>
<td>7%</td>
<td>4%</td>
<td>9%</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>e. Other</td>
<td>14%</td>
<td>4%</td>
<td>3%</td>
<td>--</td>
<td>5%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>12%</td>
<td>20%</td>
<td>--</td>
<td>10%</td>
<td>75%</td>
<td>23%</td>
</tr>
<tr>
<td>e. Other HCF-Aid not useable at present--couldn't get mold in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No, it did not help me to any great extent as other outside noises interfered with my hearing.
Just can't cope.

It hurts my hear.

HA--It is cumbersome--constant adjustment in driving car--large gathering. Most public places and background noises.

CW--It helps

NH--Does not apply

HC--Very happy with it as now I can hear people who speak low.

U---I have no hearing aid yet.

I really never gave the aid a fair chance.

Don't use one yet.

17. I have difficulty hearing in the following situations:

**WITHOUT HEARING AID**

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Faint voices</td>
<td>79%</td>
<td>58%</td>
<td>53%</td>
<td>--</td>
<td>81%</td>
<td>33%</td>
<td>61%</td>
</tr>
<tr>
<td>b. Television</td>
<td>38%</td>
<td>38%</td>
<td>44%</td>
<td>--</td>
<td>57%</td>
<td>17%</td>
<td>39%</td>
</tr>
<tr>
<td>c. Telephone</td>
<td>38%</td>
<td>12%</td>
<td>47%</td>
<td>--</td>
<td>43%</td>
<td>17%</td>
<td>32%</td>
</tr>
<tr>
<td>d. The radio</td>
<td>48%</td>
<td>25%</td>
<td>32%</td>
<td>--</td>
<td>38%</td>
<td>8%</td>
<td>31%</td>
</tr>
<tr>
<td>e. Conversations in a</td>
<td>45%</td>
<td>12%</td>
<td>35%</td>
<td>--</td>
<td>48%</td>
<td>8%</td>
<td>31%</td>
</tr>
<tr>
<td>one-to-one situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Small group</td>
<td>72%</td>
<td>33%</td>
<td>47%</td>
<td>--</td>
<td>67%</td>
<td>25%</td>
<td>49%</td>
</tr>
<tr>
<td>conversations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Large group</td>
<td>76%</td>
<td>50%</td>
<td>59%</td>
<td>--</td>
<td>67%</td>
<td>33%</td>
<td>58%</td>
</tr>
<tr>
<td>conversations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>h. Conversations in a noisy room</td>
<td>79%</td>
<td>58%</td>
<td>70%</td>
<td>--</td>
<td>57%</td>
<td>29%</td>
<td>61%</td>
</tr>
<tr>
<td>i. The sermon in church</td>
<td>62%</td>
<td>29%</td>
<td>44%</td>
<td>--</td>
<td>62%</td>
<td>21%</td>
<td>44%</td>
</tr>
<tr>
<td>j. I never had any difficulty in any situations</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>k. Other</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
</tbody>
</table>

k. Other

HCF-I like the hearing aid at the theater or while listening to a speech, but think my hearing is about par for a person over 65, as I am.

HA, CW, NH, HC, U--None

WEARING AID

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Faint voices</td>
<td>21%</td>
<td>29%</td>
<td>35%</td>
<td>--</td>
<td>14%</td>
<td>0</td>
<td>21%</td>
</tr>
<tr>
<td>b. Television</td>
<td>10%</td>
<td>21%</td>
<td>24%</td>
<td>--</td>
<td>14%</td>
<td>0</td>
<td>14%</td>
</tr>
<tr>
<td>c. Telephone</td>
<td>14%</td>
<td>17%</td>
<td>20%</td>
<td>--</td>
<td>19%</td>
<td>0</td>
<td>14%</td>
</tr>
<tr>
<td>d. The radio</td>
<td>7%</td>
<td>12%</td>
<td>12%</td>
<td>--</td>
<td>14%</td>
<td>0</td>
<td>9%</td>
</tr>
<tr>
<td>e. Conversations in a one-to-one situation</td>
<td>7%</td>
<td>17%</td>
<td>15%</td>
<td>--</td>
<td>14%</td>
<td>0</td>
<td>11%</td>
</tr>
<tr>
<td>f. Small group conservations</td>
<td>28%</td>
<td>38%</td>
<td>24%</td>
<td>--</td>
<td>24%</td>
<td>4%</td>
<td>23%</td>
</tr>
</tbody>
</table>
17. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>g. Large group</td>
<td>41%</td>
<td>46%</td>
<td>41%</td>
<td>--</td>
<td>24%</td>
<td>4%</td>
<td>33%</td>
</tr>
<tr>
<td>conversations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Conversations in</td>
<td>48%</td>
<td>46%</td>
<td>44%</td>
<td>--</td>
<td>28%</td>
<td>4%</td>
<td>36%</td>
</tr>
<tr>
<td>a noisy room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. The sermon in</td>
<td>14%</td>
<td>25%</td>
<td>18%</td>
<td>--</td>
<td>10%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>church</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. I never had any</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>difficulty in any</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>situations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Other</td>
<td>0</td>
<td>4%</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCF-None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA--I have 80% hearing in right ear and complete deafness in left ear and hearing aid does not balance sound.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW--None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HC--None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U--None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Following this evaluation did you obtain a hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes, from the</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>100%</td>
<td>4%</td>
<td>39%</td>
</tr>
<tr>
<td>University of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana Speech and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearing Clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Yes, from another</td>
<td>0</td>
<td>100%</td>
<td>29%</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>26%</td>
</tr>
<tr>
<td>source besides the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech and Hearing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
18. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. No</td>
<td></td>
<td>0</td>
<td>0</td>
<td>50%</td>
<td>--</td>
<td>0</td>
<td>46%</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>21%</td>
<td>--</td>
<td>0</td>
<td>50%</td>
</tr>
</tbody>
</table>

19. If you checked "no" in the previous question, please give the reasons in the space below.

HCF--None

HA--None

CW--I already had a hearing aid. (8)

My hearing aid was said to be o.k. (3). I bought my Qualitone aid from a salesman. It cost $400.00.

It seems I didn't need another as I wear it so little. Someone has a low voice I have difficulty to understand.

I obtained a hearing aid before I went to the clinic.

I had the hearing aid I had sent to the company and had it repaired.

Have used aid 35 years. Zenith Royal from 1945-1976. 7 year--Super Extended Range.

The ear mold is all that I am to receive. The girl at the desk is to mail it to me when it comes to the University Clinic. I have been using a Vanco Mini X hearing aid for many years.

HC--None

U--Waiting to get hearing aid.

I feel I can get along without unless I become worse and a good aid is too expensive for my income and don't want my children to buy one for me. I am happy as I am.

After clean out ear, I could hear much better; not 100% but better.

Not yet, but will do so on rental basis.
19. Continued

I could not afford one. (2)

Question usefulness of hearing aid at our age (80+).

Have been wearing a hearing aid over 20 years.

20. From whom did you obtain your present hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. From a hearing aid dealer</td>
<td>7%</td>
<td>88%</td>
<td>88%</td>
<td>--</td>
<td>10%</td>
<td>21%</td>
<td>45%</td>
</tr>
<tr>
<td>b. From a friend</td>
<td>0</td>
<td>8%</td>
<td>6%</td>
<td>--</td>
<td>0</td>
<td>0</td>
<td>3%</td>
</tr>
<tr>
<td>c. From the Speech and Hearing Clinic</td>
<td>86%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>81%</td>
<td>0</td>
<td>32%</td>
</tr>
<tr>
<td>d. Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>No Response</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
<td>--</td>
<td>10%</td>
<td>75%</td>
<td>19%</td>
</tr>
</tbody>
</table>

21. If you had a hearing aid previously, how does it compare to the hearing aid that was issued to you by this clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I liked my previous hearing aid better</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>b. I liked the hearing aid issued to me by the Speech and Hearing Clinic better.</td>
<td>31%</td>
<td>4%</td>
<td>0</td>
<td>--</td>
<td>38%</td>
<td>0</td>
<td>14%</td>
</tr>
<tr>
<td>c. The two hearing aids helped me equally.</td>
<td>10%</td>
<td>4%</td>
<td>6%</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>5%</td>
</tr>
</tbody>
</table>
21. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>d. Other</td>
<td>14%</td>
<td>8%</td>
<td>9%</td>
<td>—</td>
<td>19%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>No Response</td>
<td>45%</td>
<td>83%</td>
<td>85%</td>
<td>—</td>
<td>33%</td>
<td>88%</td>
<td>68%</td>
</tr>
</tbody>
</table>

d. Other

HCF—Never had another aid. (4)

HA—My previous aid was very inadequate.
   Was not given a hearing aid.

CW—None issued by the clinic.
   Didn't have one.
   I didn't get one from the clinic.

HC—This is my first hearing aid.
   None previously.
   First hearing aid I ever had. (2)

U—I have no hearing aid.

22. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Excellent</td>
<td>86%</td>
<td>71%</td>
<td>68%</td>
<td>—</td>
<td>76%</td>
<td>29%</td>
<td>67%</td>
</tr>
<tr>
<td>b. Good, but I still had a few questions when I left.</td>
<td>7%</td>
<td>21%</td>
<td>12%</td>
<td>—</td>
<td>14%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>c. Fair, but I had many unanswered questions</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>—</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
22. Continued

<table>
<thead>
<tr>
<th>d. Poor, I still don't know how to use and care for my hearing aid</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>5%</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>No Response</td>
<td>7%</td>
<td>8%</td>
<td>18%</td>
<td>--</td>
<td>5%</td>
<td>58%</td>
<td>19%</td>
</tr>
</tbody>
</table>

23. Were any of the following rehabilitative services suggested to you?

- Lipreading
- Speech conservation
- Auditory training

<table>
<thead>
<tr>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>10%</td>
<td>8%</td>
<td>9%</td>
<td>5%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b. No</td>
<td>79%</td>
<td>58%</td>
<td>71%</td>
<td>63%</td>
<td>81%</td>
<td>50%</td>
</tr>
<tr>
<td>c. Don't Recall</td>
<td>7%</td>
<td>12%</td>
<td>15%</td>
<td>3%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>No Response</td>
<td>4%</td>
<td>21%</td>
<td>6%</td>
<td>19%</td>
<td>10%</td>
<td>42%</td>
</tr>
</tbody>
</table>

24. Referring to the previous question, did you follow through with any of these suggestions?

<table>
<thead>
<tr>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>3%</td>
<td>12%</td>
<td>12%</td>
<td>3%</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>b. No (If no, why not?)</td>
<td>21%</td>
<td>8%</td>
<td>9%</td>
<td>8%</td>
<td>24%</td>
<td>4%</td>
</tr>
<tr>
<td>No Response</td>
<td>76%</td>
<td>79%</td>
<td>76%</td>
<td>89%</td>
<td>76%</td>
<td>92%</td>
</tr>
</tbody>
</table>

CW— I depend a lot on lipreading that I have picked up by myself. (3%, 1% of combined)
24. Continued
If no, why not?
HCF-Unable to attend classes.
  Suggested for future.
  Not really that serious.
  Because they were night sessions.
  No response. (2)
HA and CW-None given
HN--Condition not serious.
  Don't know where to find any.
HC and U-None given.

25. If you answered "yes" to question number 24, how would you rate the usefulness of these services?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Very useful</td>
<td>3%</td>
<td>17%</td>
<td>9%</td>
<td>5%</td>
<td>10%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>b. Moderately useful</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>c. Not very useful</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. Not useful at all</td>
<td>3%</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
<tr>
<td>No Response</td>
<td>93%</td>
<td>83%</td>
<td>85%</td>
<td>92%</td>
<td>90%</td>
<td>96%</td>
<td>90%</td>
</tr>
</tbody>
</table>
26. If the above rehabilitative services had been offered, would you have accepted them?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>21%</td>
<td>8%</td>
<td>29%</td>
<td>39%</td>
<td>5%</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>b. No</td>
<td>7%</td>
<td>25%</td>
<td>9%</td>
<td>3%</td>
<td>24%</td>
<td>25%</td>
<td>14%</td>
</tr>
<tr>
<td>c. Undecided</td>
<td>34%</td>
<td>21%</td>
<td>18%</td>
<td>5%</td>
<td>38%</td>
<td>0</td>
<td>18%</td>
</tr>
<tr>
<td>No Response</td>
<td>38%</td>
<td>46%</td>
<td>44%</td>
<td>53%</td>
<td>33%</td>
<td>50%</td>
<td>45%</td>
</tr>
</tbody>
</table>

27. How many follow-up hearing aid evaluations or hearing evaluations have you had since your initial visit?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. None</td>
<td>0</td>
<td>67%</td>
<td>53%</td>
<td>68%</td>
<td>95%</td>
<td>71%</td>
<td>57%</td>
</tr>
<tr>
<td>b. One</td>
<td>62%</td>
<td>21%</td>
<td>12%</td>
<td>11%</td>
<td>0</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>c. Two</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>4%</td>
</tr>
<tr>
<td>d. Three</td>
<td>24%</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>e. Four or more</td>
<td>7%</td>
<td>0</td>
<td>6%</td>
<td>0</td>
<td>0</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>8%</td>
<td>21%</td>
<td>18%</td>
<td>5%</td>
<td>21%</td>
<td>14%</td>
</tr>
</tbody>
</table>
28. Taking everything into consideration, how would you rate the services you received at the University of Montana Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th>Rating</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Excellent</td>
<td>90%</td>
<td>79%</td>
<td>82%</td>
<td>79%</td>
<td>76%</td>
<td>58%</td>
<td>78%</td>
</tr>
<tr>
<td>b. Good</td>
<td>7%</td>
<td>17%</td>
<td>9%</td>
<td>16%</td>
<td>19%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>c. Fair</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>d. Poor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>3%</td>
<td>4%</td>
<td>9%</td>
<td>5%</td>
<td>5%</td>
<td>21%</td>
<td>8%</td>
</tr>
</tbody>
</table>

29. Do you feel the Audiological Services were beneficial enough to recommend to another person?

<table>
<thead>
<tr>
<th>Rating</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I would highly recommend the services.</td>
<td>93%</td>
<td>83%</td>
<td>88%</td>
<td>92%</td>
<td>86%</td>
<td>62%</td>
<td>85%</td>
</tr>
<tr>
<td>b. I would recommend some of the services.</td>
<td>0</td>
<td>12%</td>
<td>3%</td>
<td>0</td>
<td>10%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>c. I would recommend the services but with some reservations.</td>
<td>3%</td>
<td>0</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>d. I would never recommend the services.</td>
<td>3%</td>
<td>4%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1%</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>0</td>
<td>6%</td>
<td>8%</td>
<td>5%</td>
<td>25%</td>
<td>7%</td>
</tr>
</tbody>
</table>
30. If monies had not been available to support these services, what fee would have seemed reasonable to pay for them?

<table>
<thead>
<tr>
<th>Fee Range</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 0 to $5.00</td>
<td>3%</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
<td>5%</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>b. $5.00 to $10.00</td>
<td>14%</td>
<td>4%</td>
<td>9%</td>
<td>18%</td>
<td>14%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>c. $10.00 to $25.00</td>
<td>14%</td>
<td>42%</td>
<td>35%</td>
<td>45%</td>
<td>29%</td>
<td>21%</td>
<td>32%</td>
</tr>
<tr>
<td>d. $25.00 to $50.00</td>
<td>14%</td>
<td>8%</td>
<td>15%</td>
<td>8%</td>
<td>0</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>e. $50.00 to $100.00</td>
<td>14%</td>
<td>8%</td>
<td>3%</td>
<td>0</td>
<td>10%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>f. $100.00 to $150.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g. $150.00 to $200.00</td>
<td>7%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>14%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

No Response 34% 38% 35% 26% 29% 50% 35%

31. Who filled out this questionnaire?

<table>
<thead>
<tr>
<th>Who Helped</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>HC</th>
<th>U</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Self</td>
<td>76%</td>
<td>92%</td>
<td>85%</td>
<td>95%</td>
<td>81%</td>
<td>71%</td>
<td>84%</td>
</tr>
<tr>
<td>b. Spouse helped me</td>
<td>7%</td>
<td>4%</td>
<td>9%</td>
<td>3%</td>
<td>0</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>c. Friend helped me</td>
<td>0</td>
<td>4%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>d. Other</td>
<td>17%</td>
<td>0</td>
<td>3%</td>
<td>3%</td>
<td>14%</td>
<td>0</td>
<td>6%</td>
</tr>
</tbody>
</table>

No Response 0 0 3% 0 5% 17% 4%
31. Continued

d. Other

HCF—Stepdaughter helped.
  Neice helped.
  Homemaker helped.
  Daughter.
  Son helped me.

HA—None

CW—Daughter helped me.

NH—Daughter

HC—Son
  Daughter helped me. (2)

U—None
INTERVIEW RESULTS

OBSERVATIONS

1. Was the interviewee wearing the hearing aid when the interviewer arrived?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>70%</td>
<td>100%</td>
<td>80%</td>
<td>0</td>
<td>70%</td>
</tr>
<tr>
<td>b. No</td>
<td>30%</td>
<td>0</td>
<td>20%</td>
<td>100%</td>
<td>30%</td>
</tr>
</tbody>
</table>

2. The interviewer will examine the hearing aid for signs of wear.

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Wax in the ear mold</td>
<td>85%</td>
<td>90%</td>
<td>100%</td>
<td>--</td>
<td>89%</td>
</tr>
<tr>
<td>b. Other</td>
<td>15%</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>11%</td>
</tr>
</tbody>
</table>

b. Other

HCF-No signs of wear.

HA--Respondent stated that he cleans mold every morning.
3. The interviewee will be asked to put the hearing aid on and the interviewer will evaluate the ease with which this is done.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Required no help--placed aid on ear easily and quickly.</td>
<td>75%</td>
<td>80%</td>
<td>60%</td>
<td>--</td>
<td>74%</td>
</tr>
<tr>
<td>b. Some fumbling but got aid in place without assistance.</td>
<td>15%</td>
<td>10%</td>
<td>20%</td>
<td>--</td>
<td>14%</td>
</tr>
<tr>
<td>c. Required some assistance.</td>
<td>0</td>
<td>0</td>
<td>20%</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>d. Required assistance--did not know how to put on the hearing aid.</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>6%</td>
</tr>
<tr>
<td>Refused to put hearing aid on.</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
</tbody>
</table>

4. The interviewer will test the batteries using a battery tester, and test the hearing aid for feedback.

<table>
<thead>
<tr>
<th>Battery Test</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Batteries adequately charged</td>
<td>85%</td>
<td>80%</td>
<td>100%</td>
<td>--</td>
<td>86%</td>
</tr>
<tr>
<td>b. Batteries not adequately charged</td>
<td>15%</td>
<td>20%</td>
<td>0</td>
<td>--</td>
<td>14%</td>
</tr>
<tr>
<td>c. No feedback</td>
<td>90%</td>
<td>80%</td>
<td>80%</td>
<td>--</td>
<td>86%</td>
</tr>
<tr>
<td>d. Feedback noted</td>
<td>10%</td>
<td>20%</td>
<td>20%</td>
<td>--</td>
<td>14%</td>
</tr>
</tbody>
</table>
1. What recommendations were made to you after the hearing evaluation?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NW</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. No recommendations were made.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b. I was told that my hearing was normal for my age and I did not need a hearing aid.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>40%</td>
<td>5%</td>
</tr>
<tr>
<td>c. I was told that my hearing was not normal but I would not benefit from a hearing aid.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>40%</td>
<td>5%</td>
</tr>
<tr>
<td>d. I was told that the hearing aid I was wearing at that time was adequate.</td>
<td>0</td>
<td>20%</td>
<td>60%</td>
<td>0</td>
<td>12%</td>
</tr>
<tr>
<td>e. It was recommended that I try a new hearing aid as the one I had at that time was not adequate.</td>
<td>25%</td>
<td>10%</td>
<td>20%</td>
<td>0</td>
<td>18%</td>
</tr>
<tr>
<td>f. It was recommended that I wear a hearing aid on a trial basis.</td>
<td>70%</td>
<td>40%</td>
<td>0</td>
<td>0</td>
<td>45%</td>
</tr>
<tr>
<td>g. It was recommended that I discuss my hearing with my physician.</td>
<td>0</td>
<td>0</td>
<td>20%</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>h. I don't recall what recommendations were made.</td>
<td>5%</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>i. Other</td>
<td>0</td>
<td>20%</td>
<td>0</td>
<td>0</td>
<td>5%</td>
</tr>
</tbody>
</table>

i. Other

HA--I was a borderline case. I got a hearing aid a year later.

I was to have a retest in six months. I was a borderline case.
2. Did you agree with the recommendations?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Complete agreement</td>
<td>100%</td>
<td>50%</td>
<td>80%</td>
<td>100%</td>
<td>85%</td>
</tr>
<tr>
<td>b. Partial agreement</td>
<td>0</td>
<td>30%</td>
<td>20%</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>c. Some disagreement</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
<tr>
<td>d. Complete disagreement</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Could not recall recommendations</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
</tbody>
</table>

2a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for the lack of total agreement.

HA-I didn't think I needed a hearing aid at first.

I didn't agree with some of the things they said, but I can't think of just what now.

I felt since I already had a hearing aid, I wouldn't get another.

They were out of funds so there was no use of going back.

CW-I was afraid of an operation so I didn't see the doctor.

3. Did you follow the recommendations?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
</table>
| a. I followed all of the recommenda-
  tions.                             |    |    |    |    | 85%      |
|                                      |    |    |    |    | 70%      |
|                                      |    |    |    |    | 40%      |
|                                      |    |    |    |    | 20%      |
|                                      |    |    |    |    | 68%      |
| b. I followed some of the recommenda-
  tions.                             |    |    |    |    | 15%      |
|                                      |    |    |    |    | 10%      |
|                                      |    |    |    |    | 60%      |
|                                      |    |    |    |    | 0        |
|                                      |    |    |    |    | 18%      |
| c. I followed none of the recommenda-
  tions.                             |    |    |    |    | 0        |
|                                      |    |    |    |    | 10%      |
|                                      |    |    |    |    | 0        |
|                                      |    |    |    |    | 0        |
|                                      |    |    |    |    | 2%       |
3. Continued

<table>
<thead>
<tr>
<th>Could not recall recommendations</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does not apply</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>80%</td>
<td>12%</td>
</tr>
</tbody>
</table>

3a. If the interviewee answers "b" or "c," he will be asked to explain the reasons for not following the recommendations.

HCF—The aid worked o.k. but I became troubled by a lot of head noise, so I don't wear it now.

Aid not worn all the time.

I don't wear it all the time because it makes me nervous. It picks up all the noise.

HA—Didn't recall recommendations.

I would have gone back if they had the funds.

I bought a Beltone even though I was told my old hearing aid was o.k.

CW—I was told to see the doctor too, but I haven't gotten around to it yet.

I don't wear my aids all the time.

I didn't go to the doctor because I was afraid of the operation.

NH—No recommendations to follow so this question does not apply. (80%)

4. Were you wearing a hearing aid previous to your evaluation at the Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>35%</td>
<td>40%</td>
<td>100%</td>
<td>20%</td>
<td>42%</td>
</tr>
<tr>
<td>b. No</td>
<td>65%</td>
<td>60%</td>
<td>--</td>
<td>80%</td>
<td>58%</td>
</tr>
</tbody>
</table>
5. (If "Yes") Where did you obtain that hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Hearing aid dealer</td>
<td>71%</td>
<td>100%</td>
<td>80%</td>
<td>0</td>
<td>76%</td>
</tr>
<tr>
<td>b. Friend or relative</td>
<td>14%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6%</td>
</tr>
<tr>
<td>c. Other</td>
<td>14%</td>
<td>0</td>
<td>20%</td>
<td>100%</td>
<td>18%</td>
</tr>
</tbody>
</table>

c. Other

HCF—University of Montana, before the program was established.

HA—None

CW—Sears and Roebuck

NH—Speigal's catalog

6. Were you satisfied with that aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Totally satisfied</td>
<td>57%</td>
<td>25%</td>
<td>60%</td>
<td>0</td>
<td>47%</td>
</tr>
<tr>
<td>b. Somewhat satisfied</td>
<td>14%</td>
<td>50%</td>
<td>20%</td>
<td>0</td>
<td>24%</td>
</tr>
<tr>
<td>c. Somewhat dissatisfied</td>
<td>0</td>
<td>25%</td>
<td>20%</td>
<td>0</td>
<td>12%</td>
</tr>
<tr>
<td>d. Totally dissatisfied</td>
<td>29%</td>
<td>0</td>
<td>0</td>
<td>100%</td>
<td>18%</td>
</tr>
</tbody>
</table>
6a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for lack of total satisfaction.

HCF—I wore a glasses aid. When I wanted to clean my glasses I had to take everything all apart. Drove me crazy.

I couldn't get the service I wanted. It was worthless.

My hearing aid didn't last long, a year or two.

HA—I would like to hear clearer. I still had problems understanding people.

I couldn't get service. The business moved away.

I was bothered by feedback.

CW—There was plenty of volume but I had problems understanding.

It's as good as they come but I'm not happy with it.

NH—Amplified noise too much and I never wear it now. I didn't bring it along to the examination. I don't think they know about it.

7. Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes, from the University of Montana Speech and Hearing Clinic</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>b. Yes, from another source besides the Speech and Hearing Clinic</td>
<td>0</td>
<td>90%</td>
<td>20%</td>
<td>0</td>
<td>25%</td>
</tr>
<tr>
<td>c. No</td>
<td>0</td>
<td>10%</td>
<td>80%</td>
<td>100%</td>
<td>25%</td>
</tr>
</tbody>
</table>

8. In what situations were you allowed to test this hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. In the testing booth</td>
<td>75%</td>
<td>10%</td>
<td>20%</td>
<td>--</td>
<td>49%</td>
</tr>
<tr>
<td>b. On the telephone</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
</tbody>
</table>
8. Continued

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. In my home</td>
<td>50%</td>
<td>60%</td>
<td>0</td>
<td>--</td>
<td>46%</td>
</tr>
<tr>
<td>d. I was not allowed to test the hearing aid</td>
<td>5%</td>
<td>30%</td>
<td>80%</td>
<td>--</td>
<td>23%</td>
</tr>
<tr>
<td>e. Don't recall</td>
<td>5%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>f. Other</td>
<td>0</td>
<td>50%</td>
<td>0</td>
<td>--</td>
<td>14%</td>
</tr>
</tbody>
</table>

f. Other
HA--Five individuals reported a one-month trial period.

9. How long did it take you to adjust to your present hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I adjusted to it right away.</td>
<td>65%</td>
<td>60%</td>
<td>80%</td>
<td>--</td>
<td>66%</td>
</tr>
<tr>
<td>b. A week</td>
<td>5%</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>6%</td>
</tr>
<tr>
<td>c. Two weeks</td>
<td>5%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>d. A month</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>e. I never did adjust to wearing my hearing aid.</td>
<td>25%</td>
<td>20%</td>
<td>20%</td>
<td>--</td>
<td>23%</td>
</tr>
</tbody>
</table>
10. How often do you wear your hearing aid?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily, all day long</td>
<td>35%</td>
<td>70%</td>
<td>60%</td>
<td>--</td>
<td>49%</td>
</tr>
<tr>
<td>Daily, part of the day</td>
<td>50%</td>
<td>30%</td>
<td>0</td>
<td>--</td>
<td>37%</td>
</tr>
<tr>
<td>About once a week</td>
<td>10%</td>
<td>0</td>
<td>40%</td>
<td>--</td>
<td>11%</td>
</tr>
<tr>
<td>About once a month</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>Never</td>
<td>5%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
</tbody>
</table>

11. Are you satisfied with the performance of your hearing aid?

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>It has measured up to my fullest expectations.</td>
<td>70%</td>
<td>60%</td>
<td>80%</td>
<td>--</td>
<td>69%</td>
</tr>
<tr>
<td>I am satisfied, but not up to my initial expectations.</td>
<td>30%</td>
<td>10%</td>
<td>20%</td>
<td>--</td>
<td>23%</td>
</tr>
<tr>
<td>I am a little disappointed.</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>I am very disappointed.</td>
<td>0</td>
<td>20%</td>
<td>0</td>
<td>--</td>
<td>6%</td>
</tr>
</tbody>
</table>

11a. If the interviewee answers "b," "c," or "d," he will be asked to explain the reasons for lack of total satisfaction.

HCF-I had hoped for a clearer help from the aid, for things to sound clearer.

It isn't strong enough, but I don't know if I could hear better with another or not.

For a while I was satisfied until I became troubled by noises in my ears.
11a. Continued

Hearing aid makes things too noisy.
I wanted a glasses aid, but I know that's all they had.
I would liked to have tried the glasses aid.

HA--I paid too much for the aid. The batteries don't last long enough and they cost too much. It whistles when I turn it up to where I can hear.
I would like to understand better.
It pulls in extra noise other than voice.
I can't get the service I want. I can't buy the batteries here in Hamilton.

CW--There was enough volume but I had trouble understanding.

12. How often do you need to replace the batteries in your hearing aid?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Less than every four weeks.</td>
<td>15%</td>
<td>20%</td>
<td>0</td>
<td>--</td>
<td>14%</td>
</tr>
<tr>
<td>b. Less than every three weeks.</td>
<td>15%</td>
<td>40%</td>
<td>0</td>
<td>--</td>
<td>20%</td>
</tr>
<tr>
<td>c. Less than every two weeks.</td>
<td>30%</td>
<td>10%</td>
<td>40%</td>
<td>--</td>
<td>26%</td>
</tr>
<tr>
<td>d. Less than every week.</td>
<td>15%</td>
<td>10%</td>
<td>20%</td>
<td>--</td>
<td>14%</td>
</tr>
<tr>
<td>e. Other</td>
<td>25%</td>
<td>20%</td>
<td>40%</td>
<td>--</td>
<td>26%</td>
</tr>
</tbody>
</table>

e. Other

HCF—Every two months (2)
Never— not worn
A month or more (2)
HA—Every day.
I don't know.
CW—Every two months.
Once a month.

13. Would you seek another hearing aid if your present one became lost or damaged?

<table>
<thead>
<tr>
<th>Option</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes, the same model.</td>
<td>60%</td>
<td>60%</td>
<td>40%</td>
<td>--</td>
<td>57%</td>
</tr>
<tr>
<td>b. Yes, but a different model.</td>
<td>25%</td>
<td>20%</td>
<td>20%</td>
<td>--</td>
<td>23%</td>
</tr>
<tr>
<td>c. Yes, but from a different source.</td>
<td>0</td>
<td>30%</td>
<td>20%</td>
<td>--</td>
<td>11%</td>
</tr>
<tr>
<td>d. No, I would never use another hearing aid.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>e. I would only get another aid if I did not have to pay for it.</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>6%</td>
</tr>
<tr>
<td>f. Undecided</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
<td>--</td>
<td>11%</td>
</tr>
</tbody>
</table>

14. What were you told about the use and care of your hearing aid by personnel from whom you obtained your present aid?

<table>
<thead>
<tr>
<th>Option</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Remove battery case when not in use</td>
<td>45%</td>
<td>40%</td>
<td>80%</td>
<td>--</td>
<td>49%</td>
</tr>
<tr>
<td>b. How to clean</td>
<td>45%</td>
<td>60%</td>
<td>0</td>
<td>--</td>
<td>43%</td>
</tr>
<tr>
<td>c. How to put in and remove battery</td>
<td>50%</td>
<td>60%</td>
<td>80%</td>
<td>--</td>
<td>57%</td>
</tr>
<tr>
<td>d. How to adjust volume</td>
<td>50%</td>
<td>40%</td>
<td>80%</td>
<td>--</td>
<td>51%</td>
</tr>
</tbody>
</table>
14. Continued

<table>
<thead>
<tr>
<th>e. Other</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30%</td>
<td>50%</td>
<td>20%</td>
<td>--</td>
<td>17%</td>
</tr>
</tbody>
</table>

e. Other

HCF—Knew how to take care of aid before the evaluation due to prior experience. (100%)

HA—Knew how to take care of aid before the evaluation due to prior experience.

I was told to watch out for dogs, because they might grab it when they hear it ring.

I received a pamphlet which told me how to take care of my hearing aid. (60%)

CW—Knew how to take care of aid before the evaluation due to prior experience. (100%)

15. How would you rate the counseling you received at the University of Montana Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Excellent</td>
<td>75%</td>
<td>50%</td>
<td>40%</td>
<td>100%</td>
<td>68%</td>
</tr>
<tr>
<td>b. Good</td>
<td>25%</td>
<td>50%</td>
<td>60%</td>
<td>0</td>
<td>32%</td>
</tr>
<tr>
<td>c. Fair</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. Poor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
15a. Why did you rate the counseling as ______________?

HCF—I don't know what else they could do. I got a thorough test. I can hear most voices now. Of course there are certain tones of voices I can't hear.

There was a good looking girl working there. Nice set up.

I liked their attitude and the treatment I received. They were very cooperative and the testing was thorough.

The people seemed like they knew what they were doing.

The hearing aid is perfect. I liked the attitude of the whole thing.

I liked the personnel. They treated me right; everything was perfect.

They did everything they could and took their time. The evaluation, I felt, was thorough. The mold is just wonderful.

I couldn't complain because I got good service.

They gave me a very thorough examination and they explained what they were doing.

They wanted to know how much of a hearing aid I needed.

I liked their attitude toward me. They were very friendly. I never met nicer people.

Mr. Micken was just wonderful. He explained every little thing. I was very pleased.

Darrell was a very nice fellow.

They didn't hurry. They took their time and were efficient.

They did the best they could for me.

The people were so nice. They tried to do everything they could.

They did all they knew what to do for me.

I was sure glad about the price of the service, and glad for the help.

They seemed to go out of their way to explain how to operate it. They sure have nice people working for them.

They tell you everything and ask for questions. They encouraged me to return if I had a problem.
15a. Continued

HA--They did an excellent job, I have recommended the services to others.

   I had a very good examination.

   I would rate the counseling as good with minor exception. They are trying to do the correct thing and those girls are in training.

   I got a good examination.

They did a good job. I liked the treatment and the results.

   It was the best I had. It was a thorough and complete exam. I was very satisfied. I would recommend it to others.

They were very courteous. They are trying to find out if they can help you.

   They were very, very nice people. I don't know what more they could do.

   I don't know much about the details but they were nice about explaining everything.

   They did all they could. Maybe my hearing is getting worse.

CW--Very good service.

   Everything seemed to work. They were more thorough than companies that sell aids.

   My hearing improved 30%.

They did well by me.

   They explained things to me and were real sincere.

NH--They were business-like and seemed to know what they were doing.

   I liked the way they handled the whole thing.

   The lady took so much time and didn't rush me.

They know what they were talking about. They were courteous and qualified.

   I liked the professional approach.
16. Were any rehabilitative services suggested to you such as lipreading, speech conservation or auditory training?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>15%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8%</td>
</tr>
<tr>
<td>b. No</td>
<td>85%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>92%</td>
</tr>
<tr>
<td>c. Don't recall</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

17. (If "yes") Did you follow these suggestions?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>0</td>
<td>DNA*</td>
<td>DNA</td>
<td>DNA</td>
<td>0</td>
</tr>
<tr>
<td>b. No</td>
<td>100%</td>
<td>DNA</td>
<td>DNA</td>
<td>DNA</td>
<td>100%</td>
</tr>
</tbody>
</table>

* Does not apply

17a. If "no," why not?

HCF--I don't feel well. I'm unsteady when I get outside.

   I had no way to get there.

   I don't like to go out at night.

17b. If "yes," how would you rate the usefulness of these services?

None of the interviewees received rehabilitative services, so this question could not be answered.
18. (If "no" to question #16) If rehabilitative services had been offered would you have accepted them? (17 respondents in group HCF)

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yes</td>
<td>59%</td>
<td>20%</td>
<td>40%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>b. No</td>
<td>41%</td>
<td>70%</td>
<td>0</td>
<td>60%</td>
<td>46%</td>
</tr>
<tr>
<td>c. Undecided</td>
<td>0</td>
<td>10%</td>
<td>60%</td>
<td>0</td>
<td>11%</td>
</tr>
</tbody>
</table>

19. How many follow-up evaluations have you received, such as home visits, telephone calls, or visits to the Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. None</td>
<td>15%</td>
<td>70%</td>
<td>20%</td>
<td>80%</td>
<td>38%</td>
</tr>
<tr>
<td>b. One</td>
<td>25%</td>
<td>10%</td>
<td>60%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>c. Two</td>
<td>15%</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>d. Three</td>
<td>25%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15%</td>
</tr>
<tr>
<td>e. Four or more</td>
<td>20%</td>
<td>10%</td>
<td>20%</td>
<td>0</td>
<td>12%</td>
</tr>
</tbody>
</table>

20. Taking everything into consideration, how would you rate the services received at the University of Montana Speech and Hearing Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Excellent</td>
<td>85%</td>
<td>60%</td>
<td>60%</td>
<td>100%</td>
<td>78%</td>
</tr>
<tr>
<td>b. Good</td>
<td>15%</td>
<td>30%</td>
<td>40%</td>
<td>0</td>
<td>20%</td>
</tr>
<tr>
<td>c. Fair</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. Poor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
20. Continued

<table>
<thead>
<tr>
<th>Refused to rate</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>2%</td>
</tr>
</tbody>
</table>

20a. Why did you rate the services as ____________?

HCF—I was perfectly satisfied. I was distressed by how my sister was handled. She was examined twice and not given a hearing aid.

Good equipment. I hope you get another allotment. They did a good job. It's a good plan. It's helping a lot of people.

Mr. Micken and that girl are doggone nice people.

I liked their attitude and the treatment I received. They were very cooperative and the testing was thorough.

I told Darrell that I thought the services were excellent. They knew just what to do.

I like the way they tested.

The exam was thorough and they made two good molds. They came to my house when I had trouble with it whistling and fixed it.

They made it clear what to expect.

I felt the services were very excellent. They seemed so interested in getting results.

They answered all my questions. I will need the services more as I get older.

They treat you so nice. They appear to do their upmost to find out what you need and then get it for you.

I really liked everything and I appreciated Mr. Micken's concern. He was awfully nice to me.

Darrell is very nice and concerned.

They were conscientious and the testing was careful. They did their best to help me.

The tests were just wonderful. I was very well satisfied.

They treated me real nice. I couldn't ask to be treated any better.

They are doing a wonderful thing. They have helped many people.
20a. Continued

I would go back anytime for help. I have told others to go.

I was treated so nice.

I was very satisfied with the services.

HA— I liked the understanding, warm, human approach. The examination seemed thorough. They didn't talk down to me.

The evaluation was thorough. I didn't have anything to say against it. It's a reliable place to go.

I was well received and well treated. I would recommend people to go there.

They did all they could. I got very nice treatment.

I was treated nice and they were as thorough as they could be. There was no difference between the way I was treated there and at Dr. Jarrett's office.

I was very satisfied and the evaluation was thorough.

The staff deserves an excellent. They try hard to help you.

They did what they could. I don't know what else they could do. They were nice and helpful and pleasant about it.

The testing was all right.

They did all they could. I was not helped by their mold. I don't want to rate them.

CW— I liked the treatment and the services.

There were nice, friendly people there and they did a good job.

I didn't have to sit the whole day there. They explained things to me and helped me understand.

They took a lot of time and consideration. They were careful.

I would recommend that people go there. I liked everything. They were real nice. They explained everything to me.
20a. Continued.

NH--They did a nice job.

I liked the way things were handled.

Offering that service was very worthwhile. It was all very fine.

The people were qualified and the atmosphere was courteous.

I liked the professional approach. I thought the examination was complete.

Questions number 4, 18, 23, and 27 on the questionnaire and questions number 1, 7, 16, and 19 on the interview were compared to the information from each individual's file at the University of Montana Speech and Hearing Clinic in order to determine the degree of correspondence. The results were as follows:
(4,1) What recommendations were made to you after the hearing evaluation?

Q = Questionnaire results  I = Interview results  F = File results

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>I</td>
<td>F</td>
<td>Q</td>
<td>I</td>
</tr>
<tr>
<td>a. No recommendations were made</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>b. I was told that my hearing was normal for my age and I did not need a hearing aid</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>c. I was told that my hearing was not normal but I would not benefit from a hearing aid</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>d. I was told that my hearing aid I was wearing at that time was adequate.</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>e. It was recommended that I try a new hearing aid as the one I had at that time was not adequate.</td>
<td>15%</td>
<td>25%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>f. It was recommended that I wear a hearing aid on a trial basis.</td>
<td>55%</td>
<td>70%</td>
<td>75%</td>
<td>30%</td>
</tr>
<tr>
<td>g. It was recommended that I discuss my hearing with my physician.</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>
(4,1) Continued

<table>
<thead>
<tr>
<th>h. I don't recall what recommendations were made.</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q I F</td>
<td>5%</td>
<td>5%</td>
<td>0</td>
<td>40%</td>
</tr>
</tbody>
</table>

| i. Other                                         |     |    |    |    |    |    |    |    |    |    |    |    |    |
| No Response                                      | 15% | -- | -- | 0  | -- | -- | 0  | -- | -- | -- | 0  | -- | -- |

(18, 7) Following the hearing evaluation at the Speech and Hearing Clinic, did you obtain a hearing aid?

<table>
<thead>
<tr>
<th>a. Yes, from the University of Montana Speech and Hearing Clinic</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q I F</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Yes, from another source besides the Speech and Hearing Clinic.</th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q I F</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

| c. No                                                            |     |    |    |    |    |    |    |    |    |    |    |    |    |
| Not mentioned, therefore cannot draw a definite conclusion.      | 90% | 20%| 100%|    |    |    |    |    |    |    |    |    |    |
(23, 16) Were any rehabilitative services suggested to you such as lipreading, speech conservation, or auditory training?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q</td>
<td>I</td>
<td>F</td>
<td>Q</td>
</tr>
<tr>
<td>a. Yes</td>
<td>10%</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>b. No</td>
<td>85%</td>
<td>85%</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>c. Don't recall</td>
<td>5%</td>
<td>0</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>10%</td>
<td>20%</td>
<td>0</td>
</tr>
</tbody>
</table>

(27, 19) How many follow-up evaluations have you received, such as home visits, telephone calls, visits, or the Clinic?

<table>
<thead>
<tr>
<th></th>
<th>HCF</th>
<th>HA</th>
<th>CW</th>
<th>NH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q</td>
<td>I</td>
<td>F</td>
<td>Q</td>
</tr>
<tr>
<td>a. None</td>
<td>0</td>
<td>15%</td>
<td>0</td>
<td>70%</td>
</tr>
<tr>
<td>b. One</td>
<td>60%</td>
<td>25%</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>c. Two</td>
<td>5%</td>
<td>15%</td>
<td>35%</td>
<td>0</td>
</tr>
<tr>
<td>d. Three</td>
<td>30%</td>
<td>25%</td>
<td>25%</td>
<td>0</td>
</tr>
</tbody>
</table>
LIST OF REFERENCES


