HEARING AIDS AND THE OLDER AMERICAN

HEARINGS

BEFORE THE

SUBCOMMITTEE ON CONSUMER INTERESTS OF THE ELDERLY

OF THE

SPECIAL COMMITTEE ON AGING UNITED STATES SENATE

NINETY-THIRD CONGRESS

FIRST SESSION

PART 2—WASHINGTON, D.C.

SEPTEMBER 11, 1973

Printed for the use of the Special Committee on Aging

U.S. GOVERNMENT PRINTING OFFICE

26-064 WASHINGTON : 1973

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price $1.65

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HEARING AIDS AND THE OLDER AMERICAN

TUESDAY, SEPTEMBER 11, 1973

U.S. SENATE,
SUBCOMMITTEE ON CONSUMER INTERESTS OF THE ELDERLY
OF THE SPECIAL COMMITTEE ON AGING,
Washington, D.C.

The subcommittee met, pursuant to recess, at 2 p.m., in room 1318, Dirksen Office Building, Hon. Frank Church, chairman, presiding.

Present: Senators Church, Percy, and Randolph.

Also present: William E. Oriol, staff director; Patricia Callahan, professional staff member; John Guy Miller, minority staff director; Robert M. M. Seto, minority counsel; Margaret Faye, minority professional staff member; Patricia Oriol, chief clerk; Gerald Strickler, printing assistant; and Pam Benner, clerk.

Mr. ORIOL (presiding). The hearing will come to order without Senator Church for the moment.

Senator Church has just called saying they were having votes back to back on the Senate floor.

I believe one of them has to do with Social Security, so Senator Church has asked that we proceed with the hearing.

My name is William Oriol, and I am the staff director of the committee.

With me is Mr. John Guy Miller, our minority staff director.

We believe this procedure is just fine and this is now in the interest of the cooperation between the executive branch and the legislative so will you please proceed with your statement.

Thank you very much for waiting with us.

Our first witness today is Hon. Virginia Knauer, Special Assistant to the President on Consumer Affairs.

Now, Mrs. Knauer will you please begin.

STATEMENT OF HON. VIRGINIA H. KNAUER, SPECIAL ASSISTANT TO THE PRESIDENT FOR CONSUMER AFFAIRS, ACCOMPANIED BY ERIC J. FYGI, COUNSEL, AND FRANK McLAUGHLIN, DIRECTOR OF INDUSTRIAL RELATIONS

Mrs. KNAUER. Before I start I would like to introduce our General Counsel, Eric J. Fygi, and Frank McLaughlin, who is our Director of Industrial Relations and has worked very closely in this area.

Mr. Chairman, members of the committee, I am grateful for the opportunity you have given me to review a problem which, I am sad to say, affects some consumers most acutely.

The exposure which your committee is giving this problem will, I am confident, contribute to its solution—since ironically the problem is aggravated by a lack of communication between two industries in the communications business and their own customers.

You have asked me to address a special handicap which already exists for a great many consumers with hearing impairments and which is likely to become even more widespread in the future: Incompatibility between certain new generation telephones and existing hearing aid devices.

The problem arose over 7 years ago with the design and introduction of a new type of telephone. The older type of telephone emitted stray magnetic leakage which could be picked up by specially equipped hearing aids.

The newer telephone, however, emits almost none of the electromagnetic energy upon which these hearing aid telephone pickup devices depend.

As a result, upward of 1 million hearing aid users stand to be deprived of the use of the telephone upon conversion to the new type.

Mr. ORIOL. Mrs. Knauer, in 1966 to which you just referred, was that simply an announcement that new models would be installed or whether some had been installed. What is the current situation as to how many of the newer models are in actual use?

Mr. MCLAUGHLIN. To the best of our knowledge, and of course this is simply hearsay, we believe that there were letters and perhaps one meeting between representatives of A. T. & T.* and the hearing aid industry in 1966, advising them of the decision to go with the new type of phone.

As to the timetable, the schedule of changeover, we have no information regarding what timetable was imparted by the telephone company to the hearing aid industry in 1966.

Mr. ORIOL. But some are?

Mr. MCLAUGHLIN. Yes, that is correct.

Mr. ORIOL. The majority is a small number?

Mr. MCLAUGHLIN. I believe about 10 percent of A.T. & T.'s phones are changeovers to the new type of telephone.

NEW GENERATION TELEPHONE EQUIPMENT

Mrs. KNAUER. I was first alerted to the situation early last year by an individual consumer, Gibson Gray of Pembroke, N.C. Mr. Gray wrote to me about the inability of many hearing aid users to use the new generation telephone equipment that had been introduced at that time in many parts of the country by the General Telephone Co.

Mr. Gray also enclosed a letter from the General Telephone Co. suggesting that the problem had not been widely recognized nor dealt with by industry because the majority of telephones in the United States had not yet been affected by the design changes that bring about incompatibility with hearing aids.

I then wrote to both the Federal Communications Commission and to Secretary Richardson of the Department of Health, Education, and Welfare and asked that those agencies look into the matter Mr.

*See appendix 4, item 38, p. 342, prepared statements of American Telephone and Telegraph Co.

Gray had raised. I also asked for their recommendations in the interest of consumers with impaired hearing. The responses I received confirmed my initial concern.

Secretary Richardson informed me that he shared my concern and recommended that production of the new telephones be delayed until hearing aid users could be adequately provided for.

FCC indicated that concern regarding the effects of the design changes upon hearing aid users was valid. However, FCC also indicated that it would be impractical to halt design changes of telephone instruments which improve service to the general public but might have the side effect of depriving the use of the standard telephone to the hard of hearing.

Mr. ORIOL. Mrs. Knauer, the FCC merely made this observation practicality. Does FCC have any power that could have halted this switch?

Mrs. KNAUER. I am not sure. What does our general counsel say?

Mr. FYGI. That is not an area which we have explored actively.

I would expect it is possible that the regulatory authority of the FCC might possibly be broad enough to permit a more active role, however, we would prefer not to intimate any views as to the fundamental legal question as to whether the Commission would be empowered to compel any particular resolution of this problem on the part of the telephone company.

Mr. ORIOL. That is FCC?

Mr. FYGI. That is correct.

FCC RESPONSE

Mrs. KNAUER. FCC also indicated that the telephone and hearing aid industries have been working on the problem since the design changes were first contemplated by the Bell Telephone system in 1966.

Unfortunately, as I was to learn, these efforts had not produced a solution for the handicapped consumer.

While FCC's response appeared to be encouraging, I was concerned that hearing aid users were not being alerted to the problems they might encounter in attempting to use the new phones. Also, while the telephone industry had reportedly designed and made available to the hearing aid industry prototype models of a coupling device which would enable persons with impaired hearing to use these telephones, questions of availability, cost, and convenience of such couplers had not been resolved.

Because of my concern about the adequacy of efforts being made to solve these current and potential problems for hearing aid users, I asked the hearing aid industry to inform me of three points: (1) The extent to which their customers, the hard of hearing, were affected by the telephone changeovers; (2) steps the hearing aid industry was taking to apprise the consumer of the situation and its potential effects; and (3) the availability and cost of coupling devices or new types of hearing aids compatible with the new generation telephone equipment.

The responses of the Hearing Aid Industry Conference suggested that an impasse had been reached between the hearing aid industry and the telephone companies.

The key question has not been resolved. Should all phones (or many phones) be made compatible with existing hearing aid devices, or should hearing aid devices be made compatible with all phones through internal modification or through the use of new battery operated coupling devices (which to our knowledge are not now being mass produced)?

The Hearing Aid Industry Conference indicated their beliefs: (1) That nearly all phones in operation and in the future should be regarded as instruments which will be used by persons with hearing aids; (2) that asking hearing aid users to carry a large, expensive, and "awkward" accessory when they leave their usual telephone location is unrealistic; and (3) that telephone companies should be willing to incur a one-time expense of a few cents per telephone to continue optimum service to all their customers by installing a special coil in the new phones to help the hearing aid user without perceptibly altering general consumer use. (A.T. & T. estimates, however, that this installation would represent approximately $3.5 million annually in capital costs.)

The Hearing Aid Industry Conference also suggested a study of the consumer interest involved. In this regard, I wrote to a number of groups interested in the problems of the hearing impaired, to learn of the experience and views of their members regarding this problem.

I learned that a few of the associations had received complaints from their members regarding the changeover, but that others had not. I also learned that none of the groups responding to my inquiry had been advised, over the 7-year period, of the problems created by the changeover by either the telephone companies or the hearing aid industry.

Mr. ORIOL. Mrs. Knauer, what sort of organizations were these?

Mrs. KNAUER. We have a list, and I will be glad to provide it to you, sir.

Mr. ORIOL. Organizations that were serving people here in Washington, that sort of thing?

Mrs. KNAUER. Yes.

Mr. ORIOL. I just wanted a general description.

Mrs. KNAUER. The groups included the Alexander Graham Bell Association for the Deaf, the Montgomery County Association of Language Handicapped Children, National Council on the Aging.

Mr. MCLAUGHLIN. There were individual hearing-impaired people, who also attended.

Mr. ORIOL. People whose direct interest in this you did not know?

Mr. MCLAUGHLIN. Previously, yes.

Mrs. KNAUER. These groups indicated generally that they were not then in a position to advise us concerning their members' views but were anxious to learn more about the problem and its proposed solutions.

CONSUMERS UNAWARE OF PROBLEM

Meanwhile, I discussed the problem in a major speech before the International Tape Association in February of this year. The consumer response to press reports concerning that speech reinforced my conviction that consumers had been largely unaware of the problem which seemingly had been growing virtually undetected for more

than 6 years. The letters I received in response to that speech and a subsequent article in our Consumer News were very enlightening. Indeed, Mr. Gray had not been the only consumer to encounter the problem, nor was he alone in his concern. Many of the consumers who wrote stated that they had already encountered the problem, although they had not known why they could not hear on some telephones.

One businessman who travels extensively in his occupation wrote that he had experienced the problem in many areas served by a certain company. Furthermore, he stated that he had been unable to arouse any interest among any of the branch managers of the telephone company about his inability to call or receive calls from his customers or to make any emergency calls.

A number of consumers who wrote offered their views regarding solution of the problem. Approximately half of those offering specific (and often multiple) comments stated that a coupler would be unsatisfactory because of its inconvenience. Over one-quarter stated that the Government should require telephone companies as public utilities to make their service available to everyone. Another one-quarter suggested that the old type of telephones be continued.

One consumer suggested that by adding $5 to the cost of hearing aid telephone switches, the hearing aid industry could easily reimburse the telephone companies for modification of all phones so that compatibility would be restored. This consumer even hinted that the hearing aid industry could afford to do this now, without additional charge to the hearing aid user.

But the single thread running through letter after letter was a plea that somebody do something so that hearing aid users would not be deprived of use of the telephone.

In March of this year, I received additional expressions of concern from Senator Jennings Randolph and Senator Church on behalf of the Senate Subcommittee on the Handicapped and the Senate Special Committee on Aging, respectively.

On May 16, representatives of A.T. & T., General Telephone & Electronics, United Telecommunications, United States Independent Telephone Associations, and the Hearing Aid Industry Conference met to explore possible solutions to the problem. The meeting was also attended by staff members of the Federal Communications Commission and my office.

During the meeting, it was pointed out that approximately 50 percent of present hearing aids are manufactured to incorporate the inductive coupler or adapter to pick up stray magnetic signals or leakage from the older U-type telephone receiver. The Hearing Aid Industry Conference estimated that between 875,000 and 1 million hearing aid users have this type of adapter built into their hearing aids for telephone use. As I mentioned earlier, however, these adapters depend upon stray magnetic signals or leakage which is not present in the newer L-type telephone receivers currently being produced throughout the country.

Old Telephones Being Phased Out

During the meeting General Telephone & Electronics reported it has converted approximately 95 percent of its phones to the newer type. A.T. & T., accounting for approximately 80 percent of the Na-

tion's telephones, indicated it has converted between 9 and 10 million phones (about 10 percent of its phones) to the newer type. A.T. & T. reported it is phasing out the older type at a rate of between 2 and 3 million per year. A.T. & T. also indicated that heavy emphasis is being placed on converting coin-operted telephones. It said the reasons for this changeover include manufactuing cost reduction, reduced loss from vandalism, and greater efficiency for general telephone users.

A.T. & T. pointed out that to modify the new phones to include a coil which would restore magnetic energy signals would cost between 20 and 50 cents per phone. Alternatively, A.T. & T. pointed out that the newer type telephones represent a savings of 30 cents per phone for materials used in manufacture, and an ultimate annual savings of over $3 million.

Senator CHURCH (presiding). I am sorry I could not be present when you began your testimony. How do you do?

I think my absence was explained earlier.

Mrs. KNAUER. Yes, Senator, Mr. Oriol did.

Senator CHURCH. Please continue.

Mrs. KNAUER. A.T. & T. has proposed to manufacture a coupling device which it would provide to consumers with impaired hearing "at cost." I am holding one in my hand now.

A.T. & T. indicated that the acoustic coupling device will enable the user of a hearing aid (whose telephone adapter is or will be rendered obsolete by the new telephones) to make his hearing aid compatible with any telephone in this country or abroad. Also, representatives of the telephone companies present at the meeting preliminarily expressed their willingness to comply with requests from consumers who might be in need of continued use of the older type telephones. They also indicated that as a general practice, however, the incompatibility problem and the availability of older phones in areas that have converted are not explained unless a person with a hearing impairment makes his problem known.

I subsequently wrote to groups representing the interests of hearing-impaired consumers disclosing to them the recent information I had obtained and inviting their representatives to attend a briefing session in the New Executive Office Building on June 29, where they were given the first real opportunity to quiz representatives of the Hearing Aid Industry Conference and A.T. & T. on the issues arising from hearing aid/telephone incompatibility. I believe that all those attending the June 29 meeting, including saff members of this and another congressional committee, benefited from the candid views expressed by and questions raised by those representing the hearing-impaired.

Let me enumerate, not as a scientist or engineer, but as a concerned layman, my major impressions concerning the genesis, direction, and future of this problem:

(1) I believe that some people will be too self-conscious in professional and social situation to fumble with the acoustic coupler proposed by A.T. & T. (These people do not regard the coupler as a good solution.)

(2) Installation of the magnetic coil in public phones and in the homes of those with severe hearing loss would greatly alleviate this problem, but would not address the working environment problem where multiple phone use is required by a worker with a hearing impairment.

(3) While I have heard of possible modifications to hearing aids and/or telephones which might obviate the need for acoustic coupling devices, I am not optimistic about an imminent breakthrough of this nature.

DIFFICULTY IN USE OF PUBLIC PHONES

(4) Those with severe hearing impairment have not, in my judgment, been properly or timely apprised of the new limitations on the functioning of equipment of these two industries. When they encounter new difficulty in the use of a public phone they may suspect diminished hearing powers on their part or malfunctioning of the aid or the phone, or simply suffer acute anguish born of ignorance.

(5) The acoustic coupler being developed by A.T. & T. is not the ideal solution, but it is the only short-run option available to those with severe hearing loss. Such people want to know right now just when the coupler will be available, from whom, and at what price.

(6) I have asked the Hearing Aid Industry Conference why it cannot support compatibility research as an industrywide endeavor rather than view the matter as a marketing concern of individual companies. I hope these hearings will supply a clear picture of the response of the hearing aid industry to this problem.

Finally, I perceive an intraindustry information gap that is preventing telephone business offices and hearing aid dealers from knowing and passing along to consumers the necessary information about devices already available, devices soon to be produced, and devices in the planning stage.

It is my hope, Mr. Chairman, that these hearings will close that information gap.

Thank you.

Senator CHURCH. Thank you very much, Mrs. Knauer, for your statement. I take it you have been engaged in a lengthy dialog with the telephone company about this problem, and that you thus far really have not found a satisfactory solution to it.

Is that a fair summation of your statement?

Mrs. KNAUER. I would think so, Mr. Chairman.

This is the latest version of the device.

Have you seen it?

Senator CHURCH. No, I don't think I have.

Mrs. KNAUER. May I pass it up?

At one time it looked as large, not quite, but almost as large as a hockey puck, and as a woman, I said no woman would want to carry that in her handbag.

This is a much smaller one.

But I understand that A.T. & T. is willing to have it produced at cost, which is around $5 or $6, and offer it at that price to people who need it or want it.

Also, they hope to have enough by the first of January to be able to make them available to those who want them.

Senator CHURCH. Now, does this just fit around the telephone?

Mrs. KNAUER. The hearing part. You slip it on——

Senator CHURCH. You slip it on to this rubber band.

Mrs. KNAUER. Yes.

PROBLEM FOR THE HANDICAPPED

Senator CHURCH. In your contact with the telephone company, what reasons did they give you for designing a new phone that would create the problem of this character for the handicapped?

Mrs. KNAUER. I am not sure that they realized that the new phone would produce this problem for people. Certainly, to produce a new and streamlined phone, this is a step that a great many people like; these slender phones all in one hand, that sort of thing.

Senator CHURCH. We have had a one-hand telephone ever since the French telephone was designed in 1912.

Mrs. KNAUER. I meant with the dialing or buttons in the handset, the new type.

Mr. MCLAUGHLIN. Senator, I think it would be fair to say that the conversations that we have had with the representatives of the telephone companies would reflect the feeling on their part that the changeover was not precipitous.

The first contact that they had with the Hearing Aid Industry Conference advising them of the changeover was in 1966.

It is true that the record does not show a great deal of communications between the two industries over that period of time since 1966–73, but I think the feeling of the telephone engineers is that the changeover was part of a slow process of "improving" their equipment.

They regard the new piece of equipment, obviously, as superior.

Senator CHURCH. Superior in human terms?

Mr. MCLAUGHLIN. Superior from an engineering standpoint.

Senator CHURCH. From an engineering standpoint, technologically superior?

Mr. MCLAUGHLIN. Technologically superior.

Senator CHURCH. Regardless of the impact on the human?

Mr. MCLAUGHLIN. Well, I think that their view pretty much is that, having produced a piece of technologically superior equipment and having notified the hearing aid manufacturers of their intent to do so, and having announced to them that they would supply the acoustical coupler and the rights to it, apparently they felt that their obligation had ended.

We felt that their obligation extended beyond that.

We felt that they had an obligation of sitting down and listening to people who have the impairment and who have strong feelings about their willingness to take out a coupler in the presence of strangers and then attach this coupler to a stranger's telephone.

Senator CHURCH. Well, I am very sorry to see what I regard as a backward step.

You begin with a telephone that everybody can use, and in the name of progress, we end with a telephone which requires special coupling devices and additional cost for those with impaired hearing.

I think, as I said yesterday, this is symptomatic of the general problems that seems to permeate this society of ours. That is, that the realities of people get the least consideration when it comes to almost anything, such as the design of buildings, the design of transportation, design of air terminals, now the design of telephones.

Name it, and the convenience of the people seem to be a factor that seems to be characteristic in the lower of priorities. And I suppose it would be with the engineers, that will always be the case.

Design for Human Needs

Somehow we have to get the people conscious of the importance of design for human needs, including those less fortunate, those that don't have all of their facilities operating at optimum levels.

And it seems that if all of our designers would keep that in mind, we would have fewer problems, not only in terms of extra cost but in terms of extra gadgets and extra devices, but also in terms of lessening the handicapped, physically and psychologically, for those that do suffer impairments.

Mrs. Knauer. I do agree with you, Senator. I also was amazed that during this period of 6 years or so, that the hearing aid industry itself did not address itself to more research.

They are constantly making new models of hearing aids and apparently through, perhaps, a distorted sense of competition, they did not put it all together and say that this is a problem for our consumers, why don't we come up with something right in the hearing device that would have not necessitated either a coupler or some other ingenious adaptation. After all, this is their industry, they are supposed to be experts—why not build this into the new generation of hearing aids?

They are going on manufacturing more and more hearing aids but without apparently doing anything in this area.

Mr. McLaughlin. Senator, 7 years after the determination to go ahead with the new telephone was communicated between these two industries, we sat down the two industries with representatives of the hearing impaired.

It was our observation that the engineers of the telephone company, who was so proud of this new technological baby, seem genuinely surprised when they heard deaf people and representatives of the hearing impaired tell them that they did not think the solution was terribly good at all.

Now, that is a long time to wait to find out that your solution does not meet the needs of those people that it is designed for.

Mrs. Knauer. You are talking about the coupling device?

Mr. McLaughlin. Yes.

Senator Church. Well, it is a typical story.

We have had hearings on automobile design, on bus design, on architectual barriers, on city planning, on Metro, you name it; and in every case, there seems to be a terrible problem to factors in consideration of the handicapped and how to accommodate them. Of course, many, if not most, of the elderly, in one way or another, suffer some sort of physical impairment.

Mrs. Knauer. Yes.

Senator Church. I am told, Mrs. Knauer, by Bill Oriol that you did see these telephone devices demonstrated.

Mrs. Knauer. Yes.

Senator Church. Today? What did you think of that?

Cost Factor Involved

Mrs. Knauer. Well, I thought it had an excellent tone. The question, of course, is whether such jacks can be put into the rest of the phones as they are manufactured and put into operation. And those 10 percent

of A. T. & T.'s telephones would have to be adapted to take this device.

How expensive that would be, none of us know; I don't think Dr. Sullivan indicated how much it would cost. There may be a cost factor in this, but though I am not a scientist, it seems to be a simple way of solving the problem. It may not be such a simple way, however, from the point of the actual manufacture.

Senator CHURCH. Senator Randolph, do you have a question?

Senator RANDOLPH. Thank you very much, Mr. Chairman.

I did not have the privilege of hearing the testimony of Mrs. Knauer. I have checked your testimony as much as possible since I arrived late, but I will read it tomorrow. However, I take it that you are not overly enthusiastic about the appliance you have been discussing; is that correct?

Senator CHURCH. That is correct.

Mrs. KNAUER. Well, it is the only thing that we have now, the only short-term solution that we have now.

Senator CHURCH. Apparently so.

Senator RANDOLPH. We are concerned here in the Congress with the Nation's current state of technology, whether it concerns clean air, clean water, solid waste disposal, emissions from automobiles, or a broad range of other problem areas.

Mr. Chairman, if it is agreeable, I would like to ask a question or two for the record.

Senator CHURCH. Surely.

Senator RANDOLPH. Is it agreeable with you, Mr. Chairman, since the chairmen of the standing committees are meeting at 3:30, that I make a brief statement now?

Senator CHURCH. Of course.

STATEMENT OF SENATOR JENNINGS RANDOLPH

Senator RANDOLPH. Thank you, Mr. Chairman.

I am privileged to present my views, and I am grateful for the opportunity that you have given me. I believe it was only recently that the subject has become one of crucial importance to the American people. The problems of the hearing impaired is an area that has been greatly neglected.

You remember, Mr. Chairman, that in the 87th Congress a former colleague, the late Estes Kefauver, conducted hearings on prices of hearing aids.

Unfortunately, because of his untimely death, the investigation stopped.

Now, we have a subcommittee on the handicapped, of the Labor and Public Welfare Committee. On this subcommittee, which I chair, we have Members of the Senate who are intensely interested in being creative and resourceful in addressing ourselves to such problems such as we have before us here today.

I know that you, Mrs. Knauer, in your capacity as Special Assistant to the President on Consumer Affairs, have called to the attention of the public this problem of the incompatibility between hearings aids and inducive pickups on the new model telephone, the one we call the Trimline.

You will recall and your files will indicate, that my subcommittee has offered our assistance, and I have instructed the staff to pursue this subject.

There have been several meetings which have had representation from our staff and the staff of this committee, as well as representatives of associations, of people who are retired or aging, and particularly those who are deaf, the telephone industry, the hearing aid industry, and Gallaudet College, among others; and we are hopefully looking for progress.

In June, I believe it was, I wrote the chairman, Chairman Dean Birch, of the Federal Communications Commission;* I talked to him, and I asked several questions which I felt should be considered.

Response General in Nature

Now, we know sometimes when we make our first inquiry, that the response will be rather general in nature; perhaps that is the only way he could come forth at this time. While I am not too critical at this point, even though I wrote the letter in June, I still have had no reply from Commissioner Engman of the Federal Trade Commission; but I hope that we can have some input from him, soon.

I did receive a letter a few days ago from Mr. Thain.** I read that letter, and I think that I recall a response to the question regarding the responsibility of two industries. It was thought that the information regarding the potential limitation of the equipment may be a violation of section 15 of the Federal Trade Commission Act.

If the members of your committee would care to comment on it, it might be of help to us.

I am going to ask that this correspondence be included in the hearing record, plus an article on hearing aids, which was published in 1971 in the issue of Consumer Reports.***

The article, I think, embodies an important, complete discussion of something which we all—including consumers—need to know more about: A complete discussion of those persons who do have hearing impairments.

I, of course, commend the effort of Senator Church to assist in helping the 2½ million Americans who use hearing aids.

Mrs. Knauer. I understand.

Senator Randolph. I think that many of us are aware that communication is vital to those with impaired hearing who use hearing aids; many, as I am, are senior citizens, and they must be able to rely on a device which enables them to communicate with their physician, their pharmacist, and certainly with hospitals or some type of medical institution. This is not only desirable; it is vital.

I well realize that there are many persons with impaired hearing. I became interested with the Zenith radio people in the screening of poor children to see if they had hearing problems, and we carried on a program over a period of some 10 or 12 years. There were several million of these children who were found to have some degree of impairment in their hearing. So while I do not speak for my colleagues from my subcommittee, I think they would want to do as I am; that is,

*See letter, appendix 2, item 2, p. 255.
**See appendix 2, item 3, p. 257.
***See appendix 2, item 4, p. 259.

to reemphasize our commitment not only to the hearing impaired; but also to do what we can in an understanding way.

Mr. Chairman, I appreciate this opportunity, and I hope that I did not interrupt the testimony of our distinguished witness.

Senator CHURCH. Senator Randolph, we are appreciative of your statement, and of your presence here this afternoon.

Senator Percy, do you have any questions that you would like to ask?

Senator PERCY. I have no questions, but I want to reiterate what Senator Randolph has just said. I speak as one of the 2½ million users of a hearing aid, and also as a member of this committee. I doubly appreciate Mrs. Knauer's initiatives on behalf of those of us who use hearing aids. Mine is service connected and results from World War II. I have done a great deal with the Navy and Army since then to try to find ways to prevent this occurrence from happening. And certainly Mrs. Knauer is to be commended for her work in this field, and we very much appreciate your support, Senator Randolph.

Senator CHURCH. Thank you very much.

I believe that concludes our questioning. I thank you very much. You have been most helpful.

Mrs. KNAUER. Thank you.

Senator CHURCH. Our next witness is Mr. James P. Ince, executive secretary of the Hearing Aid Industry Conference, who is accompanied by selected members of the hearing health professions.

Mr. Ince, before you begin your testimony, you have been present during Mrs. Knauer's testimony, and I notice that your statement does not comment at all upon the hearing compatibility of manufacturer's hearing aids with the new telephone that is being introduced in the country. Would you care to explain why the industry has failed to design a hearing aid to be compatible with the telephone that is apparently going to replace the standard phone?

STATEMENT OF JAMES P. INCE, EXECUTIVE SECRETARY OF THE HEARING AID INDUSTRY CONFERENCE*

Mr. INCE. I think probably I would take a little more positive view on it, representing the industry.

The industry was made aware of this proposed telephone design change in about 1966, maybe a bit later. At that time, already on the market were the couplers, the type of couplers that A.T. & T. was proposing. Also at that time, the industry had an ongoing research and development program in many of the companies to better accommodate telephones—excuse me, to make the hearing aids better accommodate telephone conversations without the telephone pickup, which the industry has developed in cooperation with A.T. & T. and has served very well, as you know, and as you heard, until this recent change to the Trimline style.

Directly answering your question, Senator, I think the reason the industry has not developed a more suitable replacement for the telephone pickup coil which traditionally has served so well, is that it just has not found out how to do it yet.

This is a highly competitive industry. The industry has people at work on this kind of thing every day.

*For additional statement of The Hearing Aid Industry Conference, see appendix 1, item 5, p. 239.

There will be a real marketing plus, a big profit plus, presumably, for the company that comes through with the first technique of putting into a hearing aid the same kind of telephone reception that is provided through the old telephone design and the present telephone pick-up coil.

I guess it is a matter of "still working on it," Senator.

Senator CHURCH. Insofar as you know, there is no prospect or likelihood of an immediate breakthrough, is there? In the past 5 years the industry has failed to produce a device to answer the problem, is that not so?

Mr. INCE. That is true.

CONFERENCES INITIATED

I do not want to miss an opportunity to salute Mrs. Knauer for the leadership that she is showing. There was something of a lack of communication among the various Government agencies, and the hearing aid industry, and the A.T. & T., the telephone industry.

She initiated some good conferences. We have thought, frankly, and I do not want to rediscuss several days of conferences conducted in and around Mrs. Knauer's leadership, but we did think as you have indicated you feel, that when the human factors came in for discussion in this area, instead of the technological factors, and the design, the engineering factors, then we felt we might see a change of attitude and a change of thrust on the part of the telephone company.

We are not critical of the telephone companies. They know what they have to do to successfully serve their consumers.

We think we know how to serve ours, so we are not critical when we say we did expect a change of thrust when they cranked in some of their human factors experts—public relations, their community affairs. These types of people later met with, in lieu of and sometimes with the technical people, but we have not yet seen any change in the thrust that you so much would hope for.

I think the hearing aid industry would like that change, too.

We do not believe in leaving these people either stranded or with the inconvenience of having to carry with them whenever they are away from the usual telephone, the battery-operated device which the telephone company is recommending.

Senator CHURCH. You have a statement that you have not given as yet.

Will you proceed to give it at this time?

Mr. INCE. Yes, sir.

Fortunately coming late on the program, which we enjoy, we do not have to repeat some of the material that has come before, so it is abbreviated in comparison to the prepared document you have there.

Also I have corrected a couple of facts, as I have indicated to Mr. Oriol yesterday. We were incomplete in our research at the time we gave you the advance copy. We will have results of research coming in, but it is today as current as we can make it.

As you know, Mr. Chairman, the Hearing Aid Industry Conference is the trade association of the hearing aid manufacturing field.

We represent one member of the total hearing rehabilitation team. That team includes the medical doctors, the hearing and speech cen-

ters and clinical facilities, the dealers, the audiologists, and the manufacturers.

Some arms of this coordinated team are testifying at these hearings. We note with disappointment, however, that two key elements are unrepresented, and hence you will not have an opportunity to discuss with them their attitudes on the subjects at hand.

Those missing are the organizations of the medical community in the hearing field, which we certainly regard as the most important and influential source of guidance to individuals whose hearing is impaired, and another is the community speech and hearing agencies, whose experience and effective service in some 150 localities throughout the land make them expert in the subject matter of your hearings and the testimony of some of your witnesses.

We request that the American Academy of Ophthalmology and Otolaryngology, the American Council of Otolaryngology, and the National Association of Hearing and Speech Agencies be consulted as to whether they may wish to make comments after your hearings, in order to share their thoughts and recommendations with your subcommitee.

The manufacturing segment of the industry is quite small among the Nation's manufacturing industries.

Medical Advice Solicited

Senator Church. I might say in connection with your comment that a number of letters have been sent out soliciting advice of prominent people in the medical field and also of the other academies and councils which you mentioned here.

They will be contacted so that the record can be made as complete as possible.

It is not feasible to hear everybody in 2 days of hearings, so we do keep the record open for additional commentaries.*

Mr. Ince. Yes, sir.

I think it is wonderful that you have been able to squeeze in these hearings in the busy schedule you already have.

I am glad to know that you will be in touch with roughly, I suppose, the same list of people who provided information for your hearing in 1968.

Senator Church. Yes.

Mr. Ince. Our 32 members include all of the major manufacturers and importing distributors of hearing aids and most of the smaller ones.

We also are pleased to be associated in HAIC with a number of splendid companies that are component and accessory manufacturers, and so forth.

Increasing Number of People Helped

Five years ago we had the pleasure of describing for you and your committee the activities and objectives of the industry as those relate to the interests of America's aging.

In terms of accomplishments in the consumer interest of the elderly, I intend to show that these intervening years have been 5 solid, positive years of progress for hearing-handicapped Americans during

*See appendix 4, p. 286.

which we have helped increasing numbers of people who need our products and services.

We help them hear better, live fuller, better lives.

Every day we have the responsibility and opportunity of helping more hard-of-hearing Americans than all the other arms of the hearing health field combined.

That is our business; that is our specialty.

Last year annual deliveries reached nearly 600,000 units, an increase of close to 50 percent over the 400,000 of 1968.

This is a gratifying consumer endorsement, of course, and we see nothing but an upward trend in the future with continuing progress under the present delivery system.

About half of these deliveries are repeat business. We believe this is a clear message of consumer satisfaction and support.

The other half, of course, are the new users.

As you and your colleagues well know, Senator, an industry that has been growing for 40 years does not add 50 percent to its volume in just 4 years without doing a lot of things right.

The members of HAIC are researching and developing and building better hearing instruments every year.

We are constantly delivering a better product through better qualified people. I plan to detail these improvements.

We are not so myopic or self-satisfied, however, as to fail to see that the credit for and acknowledgment as to the principal reason for this growth through service should go right to the energetic, dedicated, and proficient hearing aid specialists of America.

They work long hours, every day, serving people in their communities who have lost ability to communicate because of a hearing problem.

Dealer-Customer Relationship

Successful dealers establish a personal relationship with the customer. Not only do they sell and service hearing aids, but they also keep their customers hearing and communicating by helping them with great personal encouragement after the fitting and sale of the instrument.

They have not only a professional and compassionate interest in maximizing the success of every user, but they have a clear economic interest, and that is good.

They want to keep a satisfied customer. They know that after all of the procrastination and delay and reluctance, if a person finally gets a hearing aid and is instructed and helped to make the transition back into the wonderful world of sound and communication by mastering his hearing aid, that delighted soul will never be without his hearing aid.

He probably will be the dealer's satisfied customer for life. That means the dealer will do whatever is necessary to make that fitting a success, improving the fitting itself or improving the new owner's mental approach and confidence in the transition.

He will not demand that the infirm, the homebound, or the transportless make an appointment to come to him on a 9-to-5, 5-day-a-week basis. He will go to the home if it will help the customer's success.

With devotion and proficiency, nearly every aid can be a valuable, worthwhile asset. As a consequence, the dealer will provide batteries, accessories, repairs, and new hearing aids year after year, serving in

the way he is set up to do business and has made his career commitment, at a reasonable profit in the competitive system.

That, Mr. Chairman, is the system that will keep Medicare aids out of the dresser drawer. The hearing aid in the dresser drawer will leave the Medicare beneficiary communicatively unhelped.

Clinics, hospitals, or Government agencies simply cannot deliver that kind of success to individual users in communities all over every State, conveniently, economically, and effectively.

This seems to be on target with your objectives, Senator.

When you ask: "How about those people that live out several hundred miles from the sophisticated metropolitan facilities?", this is the system that serves them.

To summarize the difference between our existing delivery system and some of the possible alternatives, here are a few points:

(1) Some 5,500 dealerships provide hearing aids and hearing aid services to every community in the country, contrasting sharply with other proposed systems utilizing principally metropolitan facilities.

(2) Dealers provide same-day service—no waiting, no delays. That is seldom true in the other systems. Many clinics have delays of weeks and even months for the first appointment, as you elicited from one of the witnesses yesterday.

(3) The present facilities are already in place, equipped, and almost perfectly distributed. No investment of Government funds has been made or is required. Contrast that, Mr. Chairman, to the millions upon millions of tax dollars the other systems would demand for capital items.

(4) The dealer is in business to serve the hard of hearing, so he carries his message persuasively to his prospects. Hard-of-hearing people need persuasion and demonstration of how they can be helped. The dealer aggressively serves this need as a businessman, and that is the principal reason we are able to help more people every year. The opposite, of course, is that when the initiative for getting help is left to the hearing impaired, they do not get it—even if the aid is given away. In European government systems in which hearing aids are free, use on a population basis is often lower than in our present U.S. system where most hearing aids need to be paid for by the user.

(5) We believe that utilizing the present delivery system will mean that Medicare can deliver hearing aids for under $300 each, and that is the total cost, without a nickel of the taxpayer's capital required for plant, equipment, or personnel. That contrasts to unknown or excessively high costs in other proposed systems.

(6) Under the present system, Medicare hearing aid distribution would be placed in the responsible hands of the physician as the qualifying authority. The physician can determine whether an audiologist or any other involvement is necessary. Most can and should go straight from the physician to the hearing aid dealer. Some other proposed systems build in the tremendous and unnecessary expense and administrative delay of mandatory clinical audiological work in every case.

5,500 Hearing Aid Outlets

May I turn now to some reasons for the industry's progress.

Today, there are some 5,500 hearing aid outlets across these United States, well located geographically to serve rural and urban consumers conveniently and economically.

I should like to demonstrate now that this progress did not happen by accident. The hearing industry and the National Hearing Aid Society have been very busy stimulating this progress.

First, progress in regulation of hearing aid fitting and sales.

Five years ago, only five or six States required by statutes that hearing aid dealers and fitters prove their ability to serve through proficiency examinations given by the States. Today, more than 75 percent of all persons engaged in fitting and sale of hearing aids are regulated and controlled by State laws, in 38 States.

Even in the 12 States not yet licensed, moreover, there are hundreds of dealers who have earned the designation "certified hearing aid audiologist" on their own initiative and volition. Their accrediting agency is the National Hearing Aid Society, whose certification requirements are much more demanding than most State licensing procedures.

The dealers and manufacturers have been active and successful as prime movers in this matter of increasing dealer competence.

The model licensing bill, which HAIC and other responsible groups in the hearing health field initiated voluntarily, has served as an excellent and widely utilized guideline for minimum standards in licensing legislation. You may recall that it was developed under the leadership of the medical community and the sponsorship of the industry.

Although the medical organization is not involved in actual legislation, its help in bill writing has been invaluable.

One other national group—the audiology association—participated in early development conferences but dropped out when the bill became unpalatable to certain interests of a few of the leaders of the audiology association. Actually, these leaders attempted to get audiologists in the various States to block dealer licensing. They were only mildly successful, for we found plenty of audiologists who do favor dealer licensing as a logical, fair, and available means to assure upgraded dealer competence and reliability.

As a result of this successful and ongoing thrust for legislation, the consumer interest is enhanced and protected. Here is how:

(1) The dealer is required formally to demonstrate proficiency and reliability.

(2) Unethical and improper acts and procedures are clearly defined. Violations are punishable with revocation of license, imprisonment, and fines.

(3) Effective standards for medical referral are specified, and there are appropriate tests of competency in this important area.

As a result of State licensing we are seeing the marginal, or unreliable dealer falling by the wayside.

Progress in Hearing Aid Design

Second, progress in the modern hearing aid design.

Some important developments of possible interest to the committee are the following:

(1) Reliability.—Solid state circuitry, improved assembly techniques, sturdier casings, and better quality controls make today's hearing aids much tougher, longer-lasting and more trouble-free. Maintenance and repair expenses have dropped spectacularly—even up to 80 percent on some models.

(2) New amplification techniques.—New variable compression circuits now offer practical hearing assistance to persons heretofore unable to tolerate loud sounds or excessive amplification. Additionally, variable frequency response controls permit adjustment of the hearing aid for better discrimination and improved comfort.

(3) Subminiature electret microphone.—This new transducer provides broader frequency response and reduces friction noise for quieter operation.

(4) Directional hearing.—A new cardioid directional microphone permits for the first time a user to hear frontal-oriented sounds with full amplification, while reducing sounds from the rear and side as much as 20–25 dB. This provides users with better reception and understanding in noisy places such as restaurants, theaters, or meetings.

(5) Advances in earmolds.—Increased usage of open molds and venting have improved the ability of many users to have an amplification system that more effectively compensates for particular characteristics of their hearing losses. Today quite a large number of hearing aids are being fitted with excellent results with "open" molds, "vented" molds, and no molds at all.

(6) CROS and BiCROS aids.—"CROS" is an acronym for contralateral routing of signal. It's a crossover system. It receives the signal on one side and carries it to the other. CROS and BiCROS are particularly useful for unilateral or unbalanced losses.

I wear a hearing aid which incorporates some of these features; it is a CROS unit without mold. I can assure you, Mr. Chairman, that I am completely satisfied.

An important fact that should be stressed is that the improvements in instrumentation and delivery which I have just cited have been made totally without Government subsidy or assistance.

We believe few if any industries have a better record of progress in product and service than the hearing aid industry.

We have held the price line.

We did some research and discovered that the hearing aid industry is really doing a great job of fighting inflation. We studied price indexes other than hearing aids of the Bureau of Labor Statistics of the U.S. Department of Labor for the years 1955 to 1970. Against the spectacular rise of 246 percent in cost of hospital daily services over those 15 years, hearing aid retail prices rose only 23 percent. Physicians' fees rose 85 percent, dental fees 64 percent, eyeglasses 47 percent, personal care 45 percent, food 35 percent, rent 31 percent. And I repeat, at the bottom of that list, hearing aids at 23 percent. The 23-percent figure is the result of a survey of our own industry.

Improvement in Dealer Competence Programs

That small increase in hearing aid prices is more than offset by dramatic increases in product performance, the ability to fit more complicated losses, durability, reduction in maintenance expense, not to mention the marked improvement in dealer competence programs, which, by the way, also represents a considerable cost to both manufacturer and dealer.

I would like to give you a break from my testimony here for a moment, and introduce at this time one of our expert witnesses.

Senator, the gentleman is Terry S. Griffing. Mr. Griffing is director of audiology of the Qualitone Division of Seeburg Industries.

The hearing aid and audiometric instrumentation division is headquartered in Minneapolis.

An audiologist, Mr. Griffing has had a diverse and productive career devoted to the delivery of help to the communicatively handicapped.

He took his B.S. in special education, University of Oklahoma, his masters in education of the deaf at Gallaudet.

Impetus to this career is no doubt related to his being the son of deaf parents, who by the way, were teachers of the deaf until they retired recently.

His sister, with normal hearing, is a teacher of the deaf, and her husband is a hearing aid dealer.

Mr. Griffing's twin brother is assistant director of special education for the State of California, and director of the bureau of exceptional children for that State.

I detail all of this to give you an understanding of the depth of this man's interest in serving the hearing handicapped.

Mr. Griffing continued his education with 3 more years past the masters level, concentrating on communications disorders at the medical center of the University of Oklahoma.

Before accepting his present position 4 years ago, he was on the professional consulting staff at the Mayo Clinic for 10 years.

We have brought Mr. Griffing here for the benefit of the committee's understanding of audiometric aspects of the hearing aid dealer's work.

If I may, I now introduce Mr. Griffing.

STATEMENT OF TERRY S. GRIFFING, DIRECTOR OF AUDIOLOGY, QUALITONE DIVISION, SEEBURG INDUSTRIES, MINNEAPOLIS, MINN.*

Mr. GRIFFING. I am Terry S. Griffing. The machine on the table is an audiometer.

In some of the previous testimony, Senator, we have heard mention of audiometers and hearing tests.

I would like to briefly explain the use of the audiometer. This audiometer and maybe 50 models similar have been designed, developed, and manufactured by the same people who develop and sell hearing aids.

Incidentally, an audiometer similar to this is the type of instrument that is used to measure hearing by all people that make audiograms.

This particular instrument happens to be a portable model that may be taken into the field or used in an office, of course I would hope you are thinking, "What is an audiometer?

I would like to define it in 25 words or less as a standardized tone generating instrument, maintained for accuracy by standards according to the American National Standards Institute.

With an audiometer, a hearing aid specialist measures hearing impairment. He plots that on an audiogram by discreet sound frequencies or pitch, and intensity or loudness.

Do you have the audiograms with you Mr. Ince?

Mr. INCE. Yes.

*See letter, appendix 1, p. 237.

Mr. GRIFFING. I pass them out to you so that you might like to take a look at one.

I will try to talk loud, without hooking up these earphones that would be placed over a person's ear in order to make an audiogram, and for the convenience of the committee, I have hooked up a speaker and these different frequencies represent the range of pitches with which we test hearing, and these switches represent the various functions. This dial represents the loudness or hearing level. I will just give you an example. This would be a sample test tone, which, of course, is very loud.

Of course, we can change the pitch; we can change it down to lower frequencies.

I have turned them up quite loud. But our objective in making an audiogram, which we plot on this chart in front of you, is to find out how much and possibly what kind of a hearing loss may or may not exist.

We now have to ask the question: How much training is required to obtain an audiogram?

SHORT PERIOD OF INTENSIVE TRAINING

We have new men and women coming into the hearing aid distribution system, we have nurses, we have students, we have technicians, physician aides, and in many communities we have housewives, who after a short period of intensive training, which may be 2 days to a week, can do audiograms.

In the hearing aid field, of course, accomplishing the audiogram is just the first step.

I would like to take an audiogram as a picture of a hearing impairment, but other judgments are required to be made, and for that, additional training and experience is required.

Certainly that is true in so many States under licensing.

The person has to determine if the impairment is medically or surgically treatable. They do this by using criteria provided by otolaryngologists that alert hearing aid dealers when the dealer should not proceed but should make a medical referral instead.

Once we have the picture of the hearing test graphically portrayed on the audiogram, we think of hearing loss being categorized into three main types.

For example, we describe the severity of the hearing loss, such as a 60 decibel hearing loss, or to the layman we might say it is a moderate to severe impairment, enough that they would have a great deal of communication difficulty.

Also, most audiograms done in this country are not done by audiologists, they are done by people in schools, and in all kinds of places.

In conclusion, I would like to make one point, that the hearing aid specialist begins with the audiogram and does not attempt to do what is defined as diagnostic audiology.

Diagnostic audiology begins when a person has a puretone audiogram, but other signal alerts appear, from that checklist prepared by otologists, which I mentioned. The person is automatically referred to a physician, maybe his family doctor, in that case.

The family doctor may say, "This is out of my realm," and send him to an ear specialist.

The ear specialist may say, "I think this man needs an intensive battery of hearing tests," and for that he may refer him to an audiologist who has equipment. The dealers do not pretend to do this kind of diagnostic testing. Dealers do the audiogram really as a kind of screening procedure, but this is only the first step.

Also, we must realize the established fact that most people with hearing impairment in this country do not have a hearing impairment that is medically or surgically treatable.

It is a permanent impairment.

From the audiogram, the hearing aid specialist then sits down with the person, and says: "Tell me about your hearing loss, how much difficulty are you having. Tell me about the problem." And with that information and other sophisticated tests that the dealer uses, they provide the person with suitable hearing aid amplification.

Need of Medical Examination?

Senator Church. Let me ask you, can an operator of that machine who has had the kind of training that you have mentioned, a couple of days of intensive training on the use of the machine, can he tell whether a given person has need of a medical examination simply from the results of the test that he might run on the machine?

Mr. Griffing. No, sir.

I said he could do the audiogram. For intensive training past that stage using some sort of a checklist provided by the ear specialist, he could then spot these alerts.

I would say, for example, that this might be a medical or surgically treatable loss——

Senator Church. I am thinking about the typical dealer, who gives this test, and then advises the customer whether or not he needs a hearing aid, would the typical dealer really have training enough to know whether in any given occasion that a customer or a potential customer should have medical treatment?

Mr. Griffing. Yes, sir.

Senator Church. And that machine gives him sufficient evidence of that?

Mr. Griffing. A hearing aid specialist is not going to play doctor, he is going——

Senator Church. I understand that.

I just want to know how the machine in the hands of a competent and experienced hearing aid dealer will give him evidence that this person should go to a doctor.

Mr. Griffing. Well, we have three parts of the ear—outer, inner, and middle ear—and most of the surgical treatment of hearing impairment is done at the middle ear—let's say some kind of a growth, or something like that, that represents a blockage of sound going to the inner ear, the receptive part of the ear.

There are two different ways of measuring; one is by bypassing the middle ear. It is very easy to determine if there is a possible blockage in the middle ear, and that is certainly one of the alerts that they use, and there would be a proper referral for medical opinion.

We have that written into many licensing laws, that there must be a referral for an air-bone gap.

Senator CHURCH. Will this machine detect an air-bone gap?

Mr. GRIFFING. Yes, sir, it will. Most of the machines that audiologists use also will. They have bone conduction, and that is the test principally done with the air-bone gap in mind. Another example for medical referral is an unexplained hearing loss in one ear. Hearing aid specialists are trained to know that that is possibly medically significant and make the referral.

So I was going to conclude, but I think your question took care of my conclusion. I will turn it back over to Mr. Ince.

Senator CHURCH. Just one other question. The machine has tones that evolve into pictures. Is a word test also used? I notice that there are certain words there.

LEVEL OF UNDERSTANDING TEST

Mr. GRIFFING. Yes, sir. It has a built-in tape recorder, so that an assessment can be made, however, with the person with a hearing impairment, whether he understands speech, both as a threshold test, and a test of what is their level of understanding using a standardized test. Let me demonstrate.

Test demonstration:

Say the word "new"; say the word "live"; say the word "off."

That is a standardized list of words that are used commonly during hearing testing.

Senator CHURCH. Senator Percy, do you have any questions?

Senator PERCY. Yes; I would like to ask Mr. Ince if he is familiar with the Nader study?

I was not here yesterday, Mr. Chairman, but I have seen the testimony from the Nader group. I wonder if Mr. Ince has had a chance to study it, and would care to comment on it. It stands in contrast to his rhetoric about the devoted, dedicated, patriotic dealers who are in this field largely for humanitarian purposes.

When I read that, I thought you were talking about my dealer, because he is as you describe.

I was deeply impressed with him. He was wearing a hearing aid when I met him to explain my problem to him.

I thought he was a dedicated man. He knows what my problem is, but I am not sure that Mr. Nader would agree that my selection of a dealer is universally the rule.

How much control do the manufacturers actually exercise over their dealerships? They can cancel them, of course, but are they contracts? Do they require certain standards to be met? Are there professional ethics? Are they told what they must adhere to? Are they disciplined very much as the medical profession does with its own physicians?

STATEMENT OF JAMES P. INCE—Continued

Mr. INCE. Senator Percy, by your question I am going to be able to skip quite a bit of my testimony and have to ad lib up here, and probably it will be more concise.

The testimony of trade associations is sort of tenuous in preparation, so perhaps you will like the ad lib better.

Senator, the 5,500 hearing aid retailers of America are independent businessmen. They decide to make an investment of money, and they decide to invest their careers in this pursuit as an occupation. They buy hearing aids from manufacturers with whom they wish to do business, and they do not buy from others. Manufacturers attempt to have broad, comprehensive distribution of their products.

In a highly competitive scheme of things, most dealers decide that several lines are adequate. They do not need the whole 15 or 20, or what have you.

I would guess personally that the average is three-plus manufacturers' lines in a typical hearing aid dealer's availability.

The manufacturers, as you know from your experience, have little or no control in the aspect of the dealer's operations.

With the help of the National Hearing Aid Society, the trade association of dealers, and a tremendous leadership from the medical community, the Hearing Aid Industry Conference, developed over a 2-year period a model bill, which defines, stipulates, lists prohibitions, defines unethical acts, and so forth. As a result of this, only 5 years ago, Senator Church, we told you of, I think, five or six States being licensed.

Licensing Legislation "Required by Dealers"

In these intervening years, we are now up to 38. Seventy-five percent of the States are licensed, and we think more than 75 percent of the dealers in this country operate under strict, stern, fair licensing legislation which was requested by the dealers.

They kicked in money for campaigns to get these laws passed, because they were tired of not being able to control members of their occupation.

They had their trade association. They had their code of ethics. Excellent staffs. But they could in no way control the people who did not wish to join the association.

Additionally, even if they tried to enforce a code of ethics against individual businessmen who were members of their State association, they faced the prospect of stern interference by the Federal Trade Commission.

You are familiar with that kind of thing, what trade associations can do and cannot do to their members, in terms of restraining competition.

Well, now with 38 of these laws on the books, and we are getting better all of the time, we feel——

Senator Percy. Have you not had problems in the past though with dealers? Have you not tried to correct such problems as faced the encyclopedia industry with all that door-to-door selling?

Mr. Ince. No doubt about it. We have had our share of lemons and bottom-of-the-barrel types.

Senator Percy. Is the business a comfortable business? Is it competitive from the standpoint of a number of manufacturers going after the market?

Mr. Ince. At both levels, manufacturer and dealer, it is intensely competitive.

We have as I said about 32 members, maybe 18 or 20 of them are direct manufacturing members, or importing distributors, and there is competition there every day.

At the retail end most communities have the benefit of their choice of dealer.

In Washington, perhaps the yellow pages would show there might be as many as two dozen retail establishments where you can get the services you seek.

It is intensely competitive, and I believe this is an important factor in keeping the price down. The price is kept down to a level which is lower than that which is charged the taxpayers in a clinical Government subsidized operation. That is the benefit of the competition.

Senator PERCY. The Nader report indicates that only a small percentage of adults bought a hearing aid in 1972 after receiving professional and medical advice.

RELUCTANCE TO BUY HEARING AID

This tends to go along with the reluctance of people to buy a hearing aid. No one ever hesitates to buy a pair of glasses, but people procrastinate and delay for days, weeks, months, years, in buying an aid. Just getting the advice of the doctor is not enough. The industry really provides quite a service in having salesmen and dealers with an economic incentive who go out and convince them and follow up possibly in order to convince them that they ought to do something.

The doctor really hasn't got that much incentive, he is not going to try to push you to do something.

Mr. INCE. You make a darn good witness, Senator. [Laughter.]

Senator PERCY. Even so I guess there is something to the Nader report.

Nader's report goes on to say, on the other hand, a large percent, 70 percent, based their selection on advice from the hearing aid dealer or salesman. He says there is a vested interest in selling the most expensive aid the market will bear.

Now, is there any basis for that statement?

First of all, do dealers handle more than one manufacturer's products?

Do they handle several brands?

Are the dealerships, are they restrictive dealerships? Can they only be Zenith or only Audiotone, or whatever it may be?

Mr. INCE. No; there can be no restriction of the type that you are talking about, Senator.

Senator PERCY. The dealer is free to sell many brands. Many times a particular brand meets a particular need of an individual, and the dealer would be in the position to get that?

Mr. INCE. Yes, sir, dealers select their brands pretty carefully, both in terms of quality and relationships with the manufacturer, but also principally to make sure they have the kind of model that will fit every kind of hearing loss they expect to encounter.

Not every manufacturer has the most comprehensive line of models, of course.

Yes; most dealers have several brands.

Senator PERCY. In the Baltimore study* that was conducted by people aged 68 to 82, it states that in 42 percent of the cases hearing aids were recommended by dealers and the audiologists had recommended none.

Would you care to comment on that?

*See part 1, appendix 1, item 2, p. 84.

Mr. INCE. Yes. Perhaps several sentences, Senator.

In things of this kind, it would be nice to be able to brush them off and say you just have to consider the source, but that is not adequate in a hearing of this type.

That caper in Baltimore by a Nader-sponsored group reflected a complete absence of any research techniques.

They sent out a bunch of people, well motivated, I am sure, interested in helping their fellows, the age indicates that—what 62 to 82, 68 to 82. They sent them out with a list of questions. They say they gave aliases.

These people apparently all have a hearing loss, but at the time this was reported in the Baltimore papers as a result of publicity efforts by the group, it was announced that some of them did not have hearing losses, but that the dealers recommended hearing aids for them, even though they had no hearing loss.

We have a rather extensive response that we considered using, but we felt it would be regarded as too much of an attack against Mr. Nader, which we are not here to do, of course.

But that was a shambles, even the staff, the professional staff directing that excursion in Baltimore said, yes, the newspaper printed some false information.

We asked if they were going to consult with the newspaper about a retraction. They said, "No, that would not be necessary."

I do not know if that is the kind of detail you wanted, Senator, but if I have not been specific enough——

Senator PERCY. I think you ought to have a chance to rebut it, in fairness.

The report clearly points out that two dealers did not recommend an aid to persons whom the audiologists felt needed one.

Mr. INCE. You were not here yesterday when we had an opportunity for a little discussion of that while the Nader people were here, and with subsequent witnesses, it was pointed out then that the official State licensing board of the State of Maryland asked these people for more information—which was reasonable enough—the names of the people involved instead of the aliases, and to my knowledge they do not have it yet.

They did ask the leaders of the group to come into a discussion with the board. There was a dialog of several hours, I guess, and no conclusion.

I might add that this board is headed by a very distinguished president, and he led an investigation to determine whether any of these people had violated (a) any of the State laws, (b) any of the FTC trade practice rules for the hearing aid industry, or ethical considerations, and found nothing that seemed to be the basis for even a hearing for any one of these dealers, so I guess that is why I said sometimes you just have to consider the source.

Senator PERCY. I know many of the men who are dealers, and I have a high regard for their ethical policies. I feel that this report should be looked at, just as we looked at the Nader report on Congress. I found some sound statements in that report although it may have been a little overdone. But we have gotten an awful lot of good out of their reports.

I would think the industry could benefit from this, and use it with the dealers, the dealers' organizations and associations, to indicate where the industry could get a black eye. After all, we are dealing in an area of human need, and ethical standards must be very high.

What is the price range of hearing aids? If the person has a very modest low income, such as a recipient of welfare, what is the lowest cost instrument that can be obtained which is of a fairly decent quality?

Mr. INCE. Some of the manufacturers maintain a line of aids for this purpose, Senator.

The lowest standard retail price that I have seen advertised—and trade associations have to stay out of knowledge about prices, so this is personal—I noticed that one of the major manufacturers headquartered in your State, by the way, advertises an aid for $85.

There may be some lower ones. I have seen some ads from people that I have not heard of, and whose products are not standard, as far as I know, a little lower than that, but I think $85 buys a serviceable aid.

Senator PERCY. Let me ask this: How many people wear hearing aids in the United States?

Mr. INCE. We think about 3 million today.

Senator PERCY. About 3 million, and it is estimated there are about 8 million deaf or hard-of-hearing in this country. Is it then 5 million more that could use them and possibly could have them?

Mr. INCE. Probably between 8 and 10 million more that need them, who can benefit from the use of a hearing aid.

Senator PERCY. Is the industry, if you know, concentrating heavily in research?

I remember in the camera industry when we were faced with a recession years ago, we put teams of people to work to try to cut costs in half, and we designed a camera that was better than the ones we used to make before and at the same time cut the costs in half. We marketed it, and it started a whole new trend toward lower priced cameras.

Is it not possible through adequate research to see if you can broaden this market?

There are millions of people who are in need of a low-priced aid.

I know when I put mine on, I sold at least four sets.

John Sherman Cooper had been fighting this problem for years and never seemed to notice it. Finally he said if you are going to wear one, I am going to get one.

The more commonplace they are, the better it is going to be in the industry. It is a mass market, and cost is a terrific factor right now.

Mr. INCE. Yes, sir, whether they can be cut in half in price, I do not know, but I know that it is competitive enough. We have the best brains in the electroacoustical area working in the factories, both here and in Europe. If there is a way to do it, I cannot think of any reason why it would not take place.

I think it is interesting that we are a small industry. Maybe the manufacturers sell a total of $60 million—a very small industry of course.

Some corporations do that much in a single day. Some single corporations do in a day what our whole industry does in a year.

Despite that, they have chipped in some money for a thing called Better Hearing Institute.

We notice that the Better Vision Institute may have had something to do with popularizing acceptance and these statements about "destigmatizing" glasses.

BETTER HEARING INSTITUTE

Well, we do not have too much money to try, but they did reach into the jeans of the manufacturers and established a separate program called the Better Hearing Institute, and we are trying to get a lot of support from celebrity people, and we are going to be knocking on your door, Senator. I suppose I will get that job, to see if they will not say yes in 100 words or less, "I need a hearing aid, I have got one now, and I am able to continue my successful career, signed, Senator Charles Percy."

Senator PERCY. Well, I will conclude by telling our chairman about my friend, Bob Dell, of Motorola. He told me yesterday that he had invested a large amount of money in a hearing aid company up in Minneapolis. I asked him what price they sold at, and he said $250.

I said, Bob, have you seen the new Japanese hearing aid coming in selling for $2.50, and he almost dropped dead.

He said, what is it?

I said, it is very simple, it is ingenious just like Japanese products always are. It consists of a nylon cord 18 inches long, and a hook over the ear. You put it over your lapel, put it to your ear, and when you put it on, you will be surprised how much louder people will speak to you. [Laughter.]

I have always maintained it was not my hearing, it was just that everyone was mumbling, speaking too softly, you see. If they would speak up, we would all hear again.

Well, I thank you for your most interesting testimony, and I think you have a sound industry to represent. I think you do serve a tremendous human need, and we want to help in every way we can with these hearings in trying to shed some understanding and to put some light on this human need.

Senator CHURCH. We thank you very much.

Mr. INCE. I would like to introduce our expert witness who has come here from California to talk on a specific aspect at this time, Dr. Donald F. Krebs.

He is speaking for himself as an expert witness.

Dr. Krebs is the director of the San Diego Speech and Hearing Center, a division of San Diego's outstanding Children's Health Center.

The center is a voluntary, nonprofit institution.

Dr. Krebs has been there since 1964.

He is the chairman of the Hearing Health Field's Internal Umbrella Communications organization, the Intersociety Committee on Hearing, comprised of representatives of the five principal national organizations—the medical doctors, the audiologist, the centers, the dealers, and so forth.

He is on ICH as representative of the National Association of Hearing and Speech Agencies.

Prior to 1964, Dr. Krebs was director of the San Diego Hearing Society for 3 years and before that was director of hearing research for the Zenith Radio Corp., for 2 years. Prior to that he was an audiologist with the Veterans' Administration for 7½ years.

He took his B.S. and M.A. in audiology at Los Angeles State University and was conferred the Ph. D. in educational administration at the United States International University in San Diego.

STATEMENT OF DONALD F. KREBS, PH. D., DIRECTOR OF THE SAN DIEGO SPEECH AND HEARING CENTER, SAN DIEGO, CALIF.

Dr. KREBS. Senator Church and Senator Percy, my voice sounds a little hoarse because I am a little nervous and my speech pathologist tells me that is because of vocal cord tension.

I have been asked to discuss from my experience, hearing aid evaluations, optimum Medicare programs, clinics dispensing hearing aids, and hearing aid specialist licensing.

I realize you are running very short of time; I will be very brief on these. I hope that the questions you ask me will bring out further information.

Having been an audiologist for 20 years, 7½ of that with the Veterans' Administration, 2 in research with the hearing industry, and now as a director of a clinical setting, I have not yet, and I am sure the literature will bear me out, been able to say that hearing aid evaluation is a science and not an art. You hear this stated quite often and I am sure most audiologists will agree to this.

We have standardized tests that we use to help us determine what type of amplification we feel is best suited to the individual. However, among audiologists you will find considerable differences of opinion concerning the effectiveness of these tests.

And responding to one of the previous questions regarding hearing aid dealers, audiologists might also come up with different answers as to whether a person needs a hearing aid or does not need a hearing aid.

Technically, audiological results may show the need for amplification. However, counseling may dictate otherwise. The state of the art is not exact, which results in differences of opinion regarding hearing aid usage.

I feel that the industry has made commendable advances in educating their hearing aid specialists in recent years.

In so doing, the industry has utilized the audiological profession, both academic and clinical, as well as their own research and engineering sources.

NUMBER OF SEMINARS AVAILABLE

The number of seminars and training sessions that are available to the dealers today is outstanding.

One of them is the International Hearing Aid Seminar that the San Diego Speech and Hearing Center presents every year to the hearing aid industry.

Let me talk, for a minute, on the optimal Medicare program.

As you know, we do have an operating Medicaid program in the State of California at the present time.

This program utilizes the expertise of the medical doctor—the otologist—the audiologist, and the hearing aid dealer.

It is not an absolute requirement that the audiologist be part of this team; however, it is recommended in the Medicaid rules that the audiologist be utilized where available, as a part of the rehabilitation team. In my opinion this system has worked very well. Under other tax-supported programs in California, such as the department of rehabilitation and crippled children's services, there is a requirement that the audiologist be part of the team in all cases.

I feel that in most communities, where the audiologist has the respect of the doctors, he will be used as an integral part of this hearing rehabilitation team.

This is the case in San Diego.

True, we don't see all of the users under Medicare but we do see a great portion of them.

Senator CHURCH. I understood from testimony from yesterday that the costs of hearing aids under that program in California were averaged about $250. Is that true?

Dr. KREBS. It sounds like a reasonable figure.

This is considerably less than, let us say, if an audiologist in private practice, or the San Diego Speech and Hearing Center, were given the total responsibility to dispense hearing aids.

I cannot possibly provide, at a reasonable cost, all of the services that are required of the dealer in California. He is required to see this patient up to six times in the first year after the hearing aid has been dispensed.

If I, as an audiologist, see this person six times after the hearing aid has been dispensed, it is going to add up to quite a few dollars.

In the plane coming here yesterday, I did a cost analysis based on the speech and hearing center in San Diego, providing the entire package after the doctor sees the patient.

The cost of the hearing aid, of course, would be somewhere between $65 or $75 and $160 at wholesale.

Let us say, for instance, we have a $100 hearing aid. Administrative expenses, handling, ordering, and stocking, and so forth—the clerical work involved—is about $2 to $7.

Investment in stock at 10 percent over 6 months, would be $5.

Time involved in testing. Here we differ from the Veterans' Administration, that uses 2 hours of testing to determine whether a person needs a hearing aid or not.

We use 1 hour of testing. Our unit cost is $30 per hour.

Time involved in counseling, that is initial counseling, could go as high as 2 hours, so you have another $60. The earmold is $15. The processing of the sale might be $15. Dispensing the earmold and further counseling could take as long as an hour, possibly $30.

The quarterly hearing aid check and counseling which we would recommend at one-half hour each or at an hour each would be as much as $90, or more for the first year.

We are up to $432 so far.

Cost Could Be Cut

I am sure this amount could be cut by me and other directors. However, if I were to provide the service—that is my audiologist at the base rate we are now charging, we would have to charge $432 for the hearing aid, the associated tests and followup.

I am sure I am going to get arguments from my colleagues in this, and I am sure I can pare this down and provide less service.

I am comparing here our services with what the dealers are now required to provide for $175 to $281 for the hearing aid. This plus the medical doctor, which is another $25, plus our service to recommend the hearing aid, which is another $40, totals out to $240 to $346.

Recently, I have heard rumors that perhaps the Veterans' Administration might take over this program. I am totally opposed to this concept as it would virtually wipe out community speech and hearing programs as we know them today, and the service would be considerably more costly to the taxpayers. From my own experience, working in both types of settings, I am certain that a nonprofit community center is more efficient than any government-run center could ever be. Though it is nonprofit, a community clinic has to function like a business and provide for its own support.

In San Diego, 12 percent of our income is from United Way and other donors. The rest has to be earned through fees for service. So you rapidly become a businessman in running a speech and hearing center. We have a $500,000 program in San Diego.

Senator Church. In the prepared testimony, Mr. Ince's prepared testimony, there is a statement that if Medicare were to cover hearing aids, provide the devices, let me put it this way, if Medicare were to cover hearing aids in the manner that the California program does that the cost could be kept to something under $300?

Dr. Krebs. I agree with that statement.

Senator Church. Now, of that I think you pretty well delineated how much would be allocated to the device itself and how much to the service.

I think this kind of testimony is important to us because the argument is often made that Medicare cannot afford to include hearing aids under its coverage because the cost would prove prohibitive.

Dr. Krebs. I would say you are getting a pretty good deal and I think it is the most economical way for the taxpayer to approach the dispensing of hearing aids to the eligible cases under Medicare.

Senator Percy. What is the British experience, do they include it under their health insurance?

Dr. Krebs. They do but they, I probably could get better help from my colleagues here, as I understand it the Madresco hearing aid is a hearing aid designed specifically for distribution through the Government.

You have a single type of hearing aid here, you do not have the range of hearing aids that are available to the Medicare program, let us say, in California.

All hearing aids that are presented to the State are of reasonably good quality and are accepted by the State under the schedule of maximum allowances for purchase.

Senator PERCY. What is the cost to the British Government of those available through the medical service?

Is it one manufacturer or is it a group of manufacturers?

Dr. KREBS. I am going to have to defer that to the Hearing Aid Industry Conference.

Senator CHURCH. We had some testimony yesterday, I might say, Senator Percy, when you were not here, that gave us a little information concerning some of the other systems.

VA HAS DIFFERENT CHOICES

There is quite a little differentiation between the British and the Danish and the Australians in the number of devices but we have a system of our own in the Veterans' Administration that has had plenty of different choices, I understand.

The Veterans' Administration tells us that they have been able to supply these devices together with the service for about $209.

Dr. KREBS. I think they are leaving a little bit out of their cost analysis.

Senator CHURCH. Well, I would like to have your comment on that because they of course do buy these devices in wholesale lots and supplies.

Their figure of $209 is substantially below any of the figures we have been talking about. I would like to have your comments on that figure.

Dr. KREBS. They spend approximately 4½ hours fitting a hearing aid, as testified by the person sitting to my left who was recently fitted with a Veterans' Administration hearing aid. This coincides with my own experience as a VA audiologist.

The salaries the VA pays audiologists, at least in San Diego, is $2,000 to $3,000 more than I pay audiologists.

The number of cases seen by VA audiologists per day is less. In other words, at one case every 2 hours, you can only see four cases a day. My audiologists see a minimum of six to seven cases a day.

My overhead cost may be somewhat similar to theirs, however their equipment is far more elaborate and more duplicated than mine so I think their capital outlay is higher.

I do not see how they can do a hearing evaluation for less than I can do it for. Providing that we do the same type of service.

Now, I am sure the services could be compared and we would find there is a difference maybe in what I am providing and what they are providing.

I gave you a cost factor earlier in my testimony that related to what is presently being required of the hearing aid dealers under Medicaid in California and what it would cost if my center was asked to provide similar service.

Now, I certainly can cut that down and provide fewer services, but you are not going to have the availability of an audiologist free of charge, such as is presently expected of a hearing aid dealer.

Mr. INCE. Senator, may I add just a note to that?

Senator CHURCH. Yes.

Mr. INCE. I believe the figures that the VA gave you include only one aid, the Veterans' Administration provides two aids to all of its beneficiaries.

You go back 6 months after the initial fitting as I understand it and get a second aid.

So if you add the cost of that the $209 you are up well over $300.

CONVENIENCE FACTOR FOR VETERAN

Additionally, I am sure you would want to bring out for the record, the convenience factor for the veteran.

In your part of the country, and in much less remote parts of the country than Idaho, veterans are required to travel sometimes several hundred miles, take a day or two off from work, buy an airplane ticket and send the bill to the Government, and all of these things.

I think we ought to be working in the direction of taking our services to the people instead of having the people come to the Government for the services, both physically and financially, by the way.

Senator CHURCH. Well, in that connection, this did come up yesterday.

You made the statement that the present facilities of about 5,500 dealerships are almost perfectly distributed.

Can you give us more data on that? Do you have the actual data that would show the actual distribution of these dealerships?

Mr. INCE. Yes, sir.

I have my handy little directory of the National Hearing Aid Society; would you like to know how many there are in Idaho, for instance?

Senator CHURCH. Yes.

Mr. INCE. Did you mean Idaho specifically, or would you like to have it all?

Senator CHURCH. We would like to have all of the data for the record, but I would be interested in the situation in Idaho.

Mr. INCE. I know that Idaho has a particularly good association.

Some of my colleagues in the rear of the room who were at this table yesterday have expressed this to me, and I have worked closely in State legislative work and with your people out there. Your hearing aid dealers out there did a whale of a job in getting a good, stern, tough, and fair law passed by their legislature.

So I assure you that anyone who is licensed in Idaho is competent.

Well, it is well over 50 locations widely scattered; I can name the towns that they are in, if you wish, and it might be interesting if you want to take another 30 seconds for that purpose.

This directory has it both by——

Senator CHURCH. Does that directory give us the number of dealerships and their locations by towns for each State?

Mr. INCE. Only those who are identified with the State association there, who are in turn a part of NHAS.

Senator CHURCH. I see.

Mr. INCE. The licensing department there would give you the whole list.

This probably is more than half and it is over 50.

Senator CHURCH. I think that pamphlet would be helpful, and if you have an extra copy, we would appreciate having it for the record.*

*Retained in committee files.

Mr. INCE. Surely.

This compares with the figures I heard just today.

Your State was being discussed, because you are the man we are talking to here.

There are 12 board certified otolaryngologists in your State.

One physician who practices both otolaryngology and ophthalmology and two audiologists certified by ASHA, I do not think the comparison needs any elaboration.

ALTERNATIVE SYSTEM NOT AVAILABLE

Senator CHURCH. Yes; well this, of course, is the difficulty that one encounters in a State like Idaho, with proposals that the dealership be eliminated and some ideal system substituted in its place when the facts are it is not available. The alternative system is not available.

Dr. KREBS. I might add that of those two audiologists one is a practicing speech pathologist and not practicing as an audiologist, and the other one is a part time speech pathologist and audiologist.

Mr. INCE. We would like to home in to the extent that you wish on this matter of qualifications for determining medical criteria for referral to the physician.

The State of California again has led the Nation in sensible legislation of this kind, and here again it was done under the leadership and the consultation with the otolaryngologist and the otologist, Senator.

Senator CHURCH. Well, it seems to me that, of primary concern of this committee and being a committee on aging, is the problem faced by the elderly, many of whom are on such limited incomes, in paying for these devices.

And the possibility of including them under the Medicare program, and what would be the most successful and the most feasible way to doing this, and I think that you have made your recommendations. We have heard from other groups, and we are going to sift through all of these recommendations, of course, before we come to any conclusion.

But, even on the basis of the testimony already given here, and before I have had a chance to study carefully all of the written testimony and the other information that will come to us, I think it is apparent that there is a way that it can be done and that it is in fact being done in States like California and New York, each in a different manner.

And that it ought to be done, because whether the cost is $200 or $300, it represents a large amount of money to a great proportion of elderly people living on very limited incomes today.

What have you to say about the fact that many States impose sales taxes on these devices even where they do not impose sales taxes on prescription drugs and medicine?

Mr. INCE. I guess the Hearing Aid Industry Conference does not have any business position on that. I did have a call from a Congressman this very day, Senator. I have had a number recently.

There is a study being done for someone in one of the Houses at the Library of Congress.

We think that it is unfortunate that a person who has a physical handicap has to bear the further financial encumbrance of having to pay the Government for having that handicap.

Maybe that is a reasonable extension of the facts. It would seem improper.

Exemption From Sales Tax Needed

Senator Church. It would seem to me that if the State, as a matter of policy, is going to exempt, as I think it should, necessary medicines, prescribed medicines from its sales tax that it logically should follow that the same treatment should be given to the hearing aid device.

Mr. Ince. Surely, we can only support that.

Senator Church. Is there anything further that you or any member of the panel would like to add?

Mr. Ince. Mr. Chairman, I have been remiss, I failed to introduce one of the gentlemen at the table, he is Mr. Ralph Compagna from Minneapolis, the head of one of the manufacturing companies.

He is the director of the Hearing Aid Industry Conference.

He has been poking my elbow a bit, saying be sure to get this in and be sure to get that in.

Ralph, perhaps you would like to cover that, or do you want me to continue?

Mr. Compagna. I would like you to continue.

Mr. Ince. Well, the only thing, I believe, where there has been testimony that really needs to be corrected and you are going to get some more of it after our presentation, is this matter of relating component cost to retail price.

Totally irrelevant, and in order to stay within a short time, I will read the testimony on that, sir.

Among other criticism leveled at our industry, in which we continually have to explain and justify is the price manufacturers charge dealers for hearing instruments.

These are said to range on the average from $75 to $130.

These figures contrast sharply, of course, with the cost of components, which may run about $30 or $25.

I believe that the physician who follows our testimony is going to mention some numbers too, so this is partly in response to a preview of his testimony.

This kind of comparison, though, is as ridiculous as comparing component cost of a fine watch, eyeglasses, contact lenses or dentures—or cameras, Senator Percy—with the wholesale price of the finished product.

It ignores completely the many additional costs of creating and marketing a complicated product.

In our particular industry some of the overlooked factors of a manufacturer's costs are administration, research and development, design, plant and equipment, manufacturing quality control, inventory, distribution, marketing, and warranty.

Although these are perhaps typical of many industries, there are additional special cost factors peculiar to our industry.

These other factors should be understood by all concerned with today's discussions.

To name a few:

(1) The need for a wide variety of models in several styles. Some manufacturers carry more than 30 different models in current inventories. Such a variety of models is required to enable our industry to help every correctable hearing loss and to accommodate the user's preference for style and price.

(2) Hearing aids are not mass produced. Production volume of hearing aids is small even for rather large manufacturers varying from a few hundred to 10,000 or so in an entire year.

RESEARCH AND DEVELOPMENT

(3) Rapidly advancing technology in intense competition stimulate a great investment in research and development. Many companies develop and manufacture new improved models every year. This climate of rapidly advancing technology requires large outlays for engineering personnel, tooling, parts fabrication, production systems, and so forth. Members of the industry also support financially research and development—medical, surgical, and instrumentation techniques—for improved help for the testing of the hearing impaired.

(4) Our industry has an unusually high proportion of uniquely skilled, expensively trained manufacturing personnel in special production and test equipment. Some of the work, by the way, is interesting to see. It is done under industrial microscopes by hand.

(5) Spare part inventories must be maintained for all models in use for at least 5 and up to 15 years after the discontinuance of production.

(6) Field training and technical assistance for dealers and clinicians require the employment and deployment of staffs of factory experts.

(7) Complimentary clinical inventories are maintained largely at manufacturers' expense, in clinics, hospitals, universities, and other institutions all across the Nation for use by audiologists in their work. Often there are 50 to 100 instruments in a clinic, and I know of some with a great many more than that.

Reviewing these seven points, I believe, demonstrates that it is not particularly surprising that component cost is a small part of the actual cost of producing and marketing quality hearing aids to our dealers.

Hearing aid manufacturers cannot remain in business without discharging all of these responsibilities and meeting all of these regular and special expenses.

Successful managing such enterprises at a profit is the only hope for continuation of a strong productive hearing aid industry.

I have been told informally by a seasoned executive with one of the large companies that the hearing aid industry is not above average in either return on investment or profit as a percent of sales. That there is no mad rush to get into the business that would seem to demonstrate, profitwise, his point.

Much of this cost and profit detail is contained in the 533-page Kefauver report which Senator Randolph mentioned earlier in the day.

I believe you are familiar with that report, Senator.

It confirms the kind of expense, sales, and profit ratios I have just discussed.

And we would like to say that it is our impression that the Senator, Senator Kefauver, did indeed complete that study, made a formal report, and had no recommendations to make as to changing the techniques, procedures, supply mechanisms, or anything in this hearing aid industry.

Manufacturers tell me that since 1962 there has not been any change in those operating ratios.

I believe that will cover it on component costs.

Not a Franchise Industry

And I believe I have answered your question about the franchise industry that you wanted brought out, Mr. Oriol. We are not a franchise industry. No one pays—no dealer pays a manufacturer for the right to sell his aids, or for a package deal which we see in many industries.

This is strictly a manufacturer-dealer relationship.

The dealer can buy the aids from the manufacturer if he wants to. If he does not want to, he buys from somebody else.

Individually and as an industry, as any other business, we are subject to inquiry by the Government and its regulatory agencies and monitoring by consumer advocates. But as far as I know no responsible, conscientious inquiry has ever demonstrated or reached any official conclusion that the industry on the whole is doing anything but good to the citizens of this Nation.

We have seen no judgment by a Government agency or any other responsible source that there is any clear suggestion that the industry's performance might be improved if it would adopt one course of action or another, or do something to its products or about its products or its services.

On balance, in delivering nearly 600,000 hearing aids a year, we are doing quite a job of returning Americans to a communicating world. There are disappointments and failures and complaints, but they are relatively few. We'll put up our performance and consumer satisfaction record against anyone's.

We know that despite our growth in service to date, there are many more people out there who need our help than we have been able to reach so far. Our estimates are that only one out of four persons who can benefit from a hearing aid now has one. We share with your subcommittee its interest in getting hearing aids to more elderly Americans. We favor hearing aid inclusion in Medicare as we shall detail in just a few minutes.

Looking at figures on American market penetration, it appears we're not doing as well as we should. However, compared with market penetration in all other countries, including countries with free distribution, we compare extremely favorably.

Beyond that, some projections are interesting. We have delivered help to less than 25 percent of those who need it. We are slowly closing the gap. An increase of nearly 50 percent in the last 4 years is encouraging. Projecting that rate of growth to 10 years from now, we would be supplying more than 1 million new users per year, which

would pretty well close the gap. While these projections are certainly not prediction or estimates, they do show that recent progress, if continued, would narrow the unserved portion from some 10 million today to only a minor fraction of that in only 10 more years.

Back now to the subject of the inquiries, Senator. We welcome this interest in our efforts to serve the hard-of-hearing and deafened people of America. But we know from past experience that these biased studies and reports which offer no positive, practical, or informed conclusions have been disruptive to serving the needs of the hearing handicapped.

Much testimony tends to be self-serving. That's the norm. Certainly you expect me to put HAIC's best foot forward and take the bushel from the candle to let in as much light as possible.

2,200 Job Openings Annually

Some of the audiologists' suggestions you have heard, however, are simply incredible. We cannot believe they represent the considered, official judgment of the American Speech and Hearing Association. We believe, rather, that they represent only a greedy, vested thrust to make work for audiologists coming out of the colleges. It is a surplus occupation. The Department of Labor says there are about 2,200 new job openings in speech and hearing annually. Yet there are 4,700 graduates yearly. That's unfortunate, but equally unfortunate—a real paradox—is that the U.S. Government is putting your tax money and mine into subsidies to produce more speech and hearing people on campuses all over the country.

You see, there is a real machine going to educate more speech and hearing people, partly with large quantities of taxpayer dollars, and then they have to be dues-paying members of ASHA to be certified. Their association tries to help the unemployed get jobs. Not the least of the interesting possibilities they are casting their glances on is the work of hearing aid dealers. Now, we just believe this machine ought to be turned off, or at least it should not be subsidized with U.S. tax dollars.

Now, having acknowledged that we still have a lot of work to do, let's face up to one aspect of the criticism from Mr. Nader and others. That's the matter of price of hearing aids.

These critics say that the main reason more people don't have hearing aid help is the high price. That's wrong. It's simplistic. It's misleading, unfounded, and unfair.

We hate to repeat, but let's look again at the fact that even in some European countries where hearing aids are given away, the usage is lower than in the United States.

In addition to this, as marketers we know that a number of other deterring factors far outweigh the consideration of price when it comes to getting someone to use a hearing aid. A few of these are procrastination, refusal to admit the need, misinformation, fear. There is human vanity as it relates to impressions that use of a hearing aid connotes disability, incompetence, impotence, difficult communication, or advancing age. We suspicion, therefore, that you should look closely for twisted recommendations in the testimony of your witnesses.

If the industry is not performing as well as it should, tell us how to do better. Years ago we asked the FTC for help in this, and got it. FTC's trade practice rules, which we helped write, are an example of constructive action in the public interest. Repressive, punitive, and primitive suggestions certainly are not, and I think you agree with that—from your own experience and your own career.

If someone can help us do a better job in the public interest, tell us who it is. We need and encourage all the help we can get, because there are so very many millions of people out there who need hearing help and don't have it yet. We should muster all available resources to get more people who have a hearing loss to do something about it.

Now, one of your key concerns is extension of Medicare benefits to include hearing aids and hearing aid services.

HAIC favors inclusion of hearing in Medicare. We are concerned, however, about schemes which seem to ignore cost to the American taxpayer, convenience to the beneficiary, and successful long-term use of hearing instruments so provided. We don't want to see tax money go down the rathole in the form of hearing aids in dresser drawers, even if manufacturers could make a profit on a system that would lead to that kind of misuse and abuse.

Utilization of Delivery System

We have demonstrated that the best vehicle to provide this expansion of services is fuller utilization of a delivery system that is doing the job so well in the private, nonsubsidized sector. Even when hearing aids are given away free or subsidized heavily by Government, as they are in several countries in Europe, the American delivery system ranks high in use of hearing aids based on population criteria. In other words, the U.S. system achieves a great degree of effective assistance for people who need hearing aids.

This system is capable of delivery of Medicare hearing aids with greater geographic convenience and personal attention to the individual than any other system proposed. It also is the system of lowest cost to the American taxpayer and the U.S. Government.

We have little enthusiasm for untried panaceas. We welcome innovation, but let's not encourage blindly delivery techniques which seem to oppose the great weight of evidence and experience. Irresponsible attacks on a successful system will not help your task, Mr. Chairman, or the hard of hearing.

In one State, such irresponsible attacks caused a reduction of nearly 40 percent in the number of hard-of-hearing people who went to dealerships for hearing help. Nonprofit clinics in the same State, which do not dispense or sell hearing aids, reported similar disruption in their services to hard-of-hearing persons in the same period of time. One experienced the greater slowdown in services in its history.

In another State, an irresponsible newspaper report of a "shopping" study by persons who used aliases and feigned hearing losses, damaged the interest of people who need hearing help. Too late to help matters, the perpetrators admitted the press had erred. Such episodes must be stopped, in the interests of all concerned.

We must say as an industry organization that we respect and recognize the importance of all disciplines of the hearing field and the

responsible consumer advocates. We have a record of fostering productive relationships with all.

We all have a place. We all have a job to do. For the most part, these relationships are cordial and, more important, beneficial for our hearing-handicapped public whom we all serve.

What we don't appreciate and really cannot tolerate, either as a trade association in this field—or with respect to our hearing handicapped—is some of the encroaching that some of our critics seem to be recommending. We should all respect the definition of each of the legitimate specialties and make the most of the expertise in each, and keep within our own respective areas of service. This is the way to greatest progress in restoring the people we serve to better lives through better, more pleasant communicating. We are a young field, with too much important work in each area to allow these few trouble-making elements to confuse and disrupt, with no net benefit to anyone but themselves.

On that note of cooperation and mutual respect for the fine work and progress in each of the disciplines in this field, that concludes our testimony. I believe we have given you an encouraging picture of an increasingly competent and responsible industry which is doing a difficult job well and at reasonable cost to the consumer. We are delivering better hearing to more people every day, and Mr. Chairman, isn't that principally what we are supposed to be doing?

Customers Like Products and Service

Over 90 percent of our customers tell U.S. Government and independent researchers that they like our products and services. That's hard to beat. If someone has a more effective, more convenient, more economical system for the American taxpayer, we'd certainly like to know about it. I'm sure it would get our support as well as yours, Mr. Chairman.

Senator Church. We have a vote on in the Senate that we will have to leave for at this time.

I have no further questions of this panel; have you, Senator Percy?

Senator Percy. I have no questions.

Senator Church. So we want to thank you for your testimony, gentlemen; and because our next witness, Dr. Robert J. Ruben, has a time problem, I understand, I am going to ask him to take the stand at this time and commence his presentation.

Members of the staff will be present, and I will return just as quickly as I can so as not to delay Dr. Ruben any further.

Dr. Ruben. Senator Church, I feel very bad that you and Senator Percy have to leave. I have come as an individual representing patients and representing the consumers who are my patients. With all due respect to your staff, I wanted to address my comments to Senator Percy and yourself. I will be quite happy to wait. I will phone my hospital in New York and tell them I will see my patients later this evening.

Senator Church. Doctor, that will be fine with me; I was just trying to accommodate your problem.

Mr. Oriol tells me that Mildred Shapiro also has a time problem.

Mrs. Shapiro. When do you think you will reconvene?

Senator CHURCH. It will take 10 to 15 minutes.
Mrs. SHAPIRO. I will wait.
Senator CHURCH. You will wait?
I will be back as quickly as I can get back following the vote, and meanwhile, if that is your preference, the hearing will stand in recess.

AFTER RECESS

Senator CHURCH. The hearing will come to order.
Dr. Ruben is chairman of the department of otorhinolaryngology (ear, nose, and throat) at the Albert Einstein College of Medicine, Bronx, N.Y., and he is accompanied by his assistant, associate, and adviser Jim Scott.

STATEMENT OF DR. ROBERT J. RUBEN,* CHAIRMAN OF THE DEPARTMENT OF OTORHINOLARYNGOLOGY, ALBERT EINSTEIN MEDICAL CENTER, YESHIVA UNIVERSITY, BRONX, N.Y.

Dr. RUBEN. Senator Church, I am deeply honored to have been asked by your committee to come and give testimony on a problem which is a large problem and a serious problem in the care of our senior citizens.
I greatly appreciate the tolerance of the committee in letting me bring my little one with me.
I seldom get to see him; this was a delightful day that we spent in Washington this morning.
Before I go into the prepared testimony, I must say this morning we went through the science, technology, and history parts of the Smithsonian Institution. In going through that, one cannot help but be impressed of what these United States have done over the last 300 years.
In many areas, we have brought a high quality of aspects to civilization, to our citizens, and to the rest of the world. We have, however, in my own estimation, been highly negligent, almost criminally so, in bringing health care of the same quality to our citizens.
We can spend millions of dollars developing a better machinegun, or a super-duper aircraft, and yet our investment in the real human terms of our population is minimal, by and large our medical care is mediocre, and a person like myself who spends my day not in private practice but who spends my day as an employee of a medical school, taking care of people, must every day wake up with the realization that I am going to do another mediocre day's work.
At least 13 percent of the elderly Americans are afflicted with a combination of hearing losses. Such losses have a very detrimental effect on the ability of a person to earn a living, to carry out the activities of daily life, and to enjoy the social intercourse of family and friends.
It is perhaps more correct to speak of statistics in large numbers, but I am a clinician and I deal with individual patients. I feel that the story of two of my patients may best illustrate a few of the problems of hearing loss in the elderly.

*See letter, appendix 1, item 1, p. 233.

May Be Forced To Quit Work

The first is a gentleman, in his sixties, who owns a small truck. He earns his living by trucking fruits and vegetables from the wholesale market to a number of local merchants. He is totally deaf in one ear and has a severe hearing loss in the other ear. Unless something is done to improve the hearing in his one remaining ear, he can no longer drive his truck safely or hear the purchase orders given to him, and he will be forced to stop working.

The other is a grandmother and in her seventies and in excellent health. She has suffered from a gradual hearing loss for the past 15 to 20 years. Now, she has become withdrawn from her children and grandchildren. She is afraid to go out shopping or walk in the streets because she cannot hear traffic. Her life has become totally isolated and lonely. Her lack of responsiveness has on many occasions been incorrectly interpreted by her family and friends as a lack of interest or senility. In reality, she does not hear, and she is afraid of her progressively silent world.

These are just two of the hundreds of thousands of elderly Americans who are afflicted with hearing loss. Many, if not most of these individuals, may be helped to hear better and to improve their ability to communicate at a level which is socially and psychologically acceptable.

The optimal way in which this rehabilitation of hearing is carried out has been well worked out in this and other countries. The individual with a hearing loss is first seen by a physician with special training and knowledge concerning hearing.

In this country, the physician would be an otorhinolaryngologist.

A medical history is taken, a physical examination is performed, and a hearing test is obtained. The latter should be performed by an individual who has special training in doing hearing tests.

There are many serious diseases which can result in hearing loss. It is extremely important that the individual be properly examined, to make sure there are no medically treatable causes of the hearing loss, or that there are no underlying life threatening diseases which may manifest themselves with hearing loss.

After the initial examinations are performed, the patient should undergo a series of tests which are called hearing aid evaluations. This is best done by a person with special training in audiology and aural rehabilitation. These individuals usually have masters degrees and, in some cases, doctorate degrees. They are called audiologists. The audiologist will evaluate the type of hearing loss the patient has and will then empirically test the effects of several types of hearing aids.

Unfortunately we cannot determine which type of hearing aid will be best for a given patient without undertaking a moderately extensive trial and error procedure.

The audiologist has the ability of selecting hearing aids made by a large number of different manufacturers.

After a hearing aid has been selected in a test situation, it must be tried in the real life environment of the patient.

Occasionally, an aid different than the one selected in the test situation will be needed.

The audiologist will select the aid and tell the patient what make and model he or she will need.

The audiologist will tell the patient at which store this aid may be obtained.

It is our practice to recommend that the patient rent an aid for about a month to see if the aid will function well in the patient's world.

Patients Need Special Help

Many patients will also need special help in learning how to use the aid, how to listen with the aid, and some will also need to be taught other communicative skills, such as lip reading, which must be mastered in order for the patient to develop his or her best communicative potential.

The patients must be followed to monitor the hearing loss.

If the loss progresses another aid may be needed.

Other medical problems associated with the hearing loss, such as ear infections from the hearing aid molds, may develop.

Through these means, many of the elderly with hearing impairments can be significantly helped.

However, in the United States today, very few of our elderly citizens can obtain even the barest essentials of this type of care.

Only 21 percent of the population over age 65 with binaural hearing impairment have a hearing aid.

The major difficulty to be found is in the method and cost of distribution of the hearing aid.

A hearing aid is an electromechanical device which can amplify sound and, in some instances, selectively amplify the sound.

The hearing aid is a small, fundamentally inexpensive device, similar to a transistor radio, which can in part compensate for the volume and distortion problems which many of the hearing impaired have.

The first obstacle in the way of our citizens obtaining a proper hearing aid is the excessively high retail cost.

The cost of manufacturing hearing aids is about $15 to $35 a piece. These hearing aids will retail for from $200 to $600 a piece. This excessive markup is mainly due to the method of retail distribution. Most hearing aids are sold through franchised dealerships.

All of the hearing aids can be sold, and many are sold, without the citizen seeing a physician or having a proper audiological examination.

Only 25 percent of the population over 65 with hearing aids were examined by a medical specialist.

That is 25 percent of 25 percent of the total population who are hearing impaired who have received hearing aids.

Many of these stores carry only the hearing aids of one manufacturer.

The proprietor of the store has, at best, a very limited selection of aids which he can give to his customer.

The aids can be, and are, fitted without the benefit of any medical examination and many times without sufficient audiological examination.

Only 28 percent of the population over 65 with a hearing aid had an audiometric examination.

That is 28 percent of 25 percent of the population who needed a hearing aid and had an examination.

There is usually no attempt at any special aural habilitation or any attempt to teach other communication skills, such as lip reading.

Health, Education, and Welfare statistics show that only 1 percent of citizens 45 and over had any specialized hearing or speech comprehension training.

All year long I see patients who have been fitted with hearing aids, having first gone to a hearing aid store.

Many of the aids that have been fitted are inappropriate to the hearing problem.

Not infrequently I will encounter a case like Mr. L. Mr. L is a gentleman in his seventies who noted progressive hearing loss. He went to a hearing aid store and was fitted with an aid.

Inoperable Cancer of the Ear

After some years his hearing became worse and he noticed some pain and discharge from his ear. He was then seen by our physicians and was found to have an inoperable cancer of the ear. He is now undergoing palliative X-ray therapy.

If he had initially gone to a physician for his hearing problem and had been followed up by a physician, the cancer might have been recognized and treated in time.

He will now die an extremely painful and debilitating death as the cancer invades his skull, brain, sinuses, and throat.

I feel it is self-evident that an individual should have a competent medical examination and an audiological examination before a hearing aid is even considered.

Many of our elderly citizens cannot afford $200 to $600 for a hearing aid.

The price is greatly in excess of the actual cost of manufacture.

This is primarily due to the type of organization employed for the distribution of the hearing aid.

Most hearing aid stores are relatively small and do a low volume of business.

The overhead is quite high as the shopkeeper must add the cost of his rent, insurance, and a profit for himself to the price of each hearing aid he sells.

In the few instances when profitmaking cooperatives have been established or when large retail companies have undertaken the sale of hearing aids, there has been a significant drop in the retail price of the aid.

Another problem resulting from distribution of the aid through the hearing aid dealer's store is the total lack of any medical or technical control.

The proprietor of the store usually has no special electronic nor audiological training and certainly has no medical skills.

They are in business to sell hearing aids.

There are a few dealers who are quite ethical but they cannot medically evaluate a patient.

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Most hearing aids come with a set of specifications as to how the hearing aid will function.

When a group of hearing aids are tested, many of them fall far short of expected performance.

Most dealers have no way in which they can accurately test the functioning of the hearing aid.

Thus, many of the aids which are sold are not doing what they should do.

Even the citizen who can afford the aid, who has no serious medical problem and does not need special habilitative therapy, may not be helped if the aid which is purchased is defective.

Hearing impairment is at least as significant as visual impairment.

The hearing impaired citizens in our country are not given the same benefits as those with visual impairment.

They may in a way be considered the silent constituency of the elderly who are being discriminated against by the Federal Government, in that they do not receive the same consideration for their disability as those with visual impairment.

No Tax Deduction for Deaf

The most glaring example of this is to be found in our Federal income tax law.

A legally blind person is entitled to an extra deduction.

The deaf person, who may have a much more significant but less visual impairment, is entitled to no such deduction.

The two patients mentioned earlier both had the means to purchase a hearing aid.

The fruit and vegetable man has been able to continue work; the grandmother has been able to relate to her family and enjoy the pleasures of her children and grandchildren.

The vast majority of the 2,226,000 Americans over 65 with significant hearing impairment are not so fortunate.

They either do not have the money to buy the aid, they are given an improper aid, or like our unfortunate patient, Mr. L, will have an undiagnosed medical problem which will lead to his unnecessary death.

Senator Church. Thank you very much, Doctor, it is now necessary for me to go to vote. I do not know why we always have to go vote about this time in the afternoon, but it seems to be a habit.

Dr. Ruben. I am sorry, sir, I did not hear you.

Senator Church. I have another vote on the floor. My questions will have to be short.

If hearing aids were recommended under Medicare, what degree of physician involvement would you recommend as an integral part of the process?

Dr. Ruben. If they were to be recommended under Medicaid——

Senator Church. Under Medicare.

Dr. Ruben. Under Medicare, I would assume and feel strongly that there should be even more stringent regulations than we see under Medicaid at the present time. The patient should be seen by a competent physician. It would be preferable if he was a board certified otolaryngologist, but this is not necessary. Other physicians could be trained. There needs to be control in the selection of candidates, and

there definitely needs to be followup of the way in which the patient responds to the hearing aid.

I would like to cite an instance. The other night I was at another hospital visiting a friend of mine who had a baby, and I ran into one of the young physicians who I trained. I mentioned that I was coming down to the Senate. He said that he had been approached by a hearing aid company to certify Medicaid for some half dozen patients. He would not name the hearing aid company.

They came to his office, and none of them needed hearing aids. He was quite upset about this. I think this illustrates how the physician may be used or the physician may participate in abuses of the system. All aspects of the hearing aid question must be controlled: the manufacturer, the distributor, the physician, and the audiologist.

Senator CHURCH. There certainly has to be that measure of control.

As you know that perhaps the best we could get is the certification or prescription of a medical doctor, since the lack of specialist in many parts of the country is so great.

Great difficulties would be imposed if large numbers of people had to be transported great distances.

HIGHER STANDARDS OF TRAINING

Dr. RUBEN. The problem of lack of otolaryngologists should be significantly ameliorated in the next 3 to 4 years. We are producing many more otolaryngologists at higher standards of training.

The second problem of what does somebody do in Idaho or rural upstate New York. I think it is nice to think of a little hearing aid company out in a small town, but I think we are sacrificing quality for questionable quantity.

I think these problems have been solved throughout the world with regional centers—they certainly do not have to be a thousand miles away—but the State of Idaho can probably do with two or three.

Senator CHURCH. I have to run. Thank you very much, Doctor.

Mr. Oriol might have a question or two to add, and I will be back as soon as I can make it.

Mr. ORIOL. Dr. Ruben, the Veterans' Administration, as you know, has central hearing aid purchasing. Will you comment on the application of that concept of hearing aid distribution to the general public and also as to its practice abroad?

Dr. RUBEN. As practiced abroad, yes, sir. My own experience started some years ago when I decided to spend some time in Scandinavia, and subsequently I spent considerable time in England, and I will be spending almost a year there.

We have seen in Sweden where things have been worked out, that they have specifications for hearing aids, the document which your committee has a copy of already.

Mr. ORIOL. Doctor, you have also given us another statement, and there was apparently a grant from the Health Research Council of the City of New York, and the report of the trip to Denmark and Sweden. Is this for study or for inclusion in the hearing record?*

Dr. RUBEN. Your pleasure, sir.

*Retained in committee files.

I also have a list of the hearing aids approved from the Institute of the National Physics in Stockholm, and the price of these, and the prices to the individual vary, usually less than $100 apiece.

This price also includes a good part of the rehabilitation that the patient has.

They found in Sweden that approximately two-thirds of the hearing aids that were initially distributed were broken or were faulty or had to be returned, and then they instituted the quality control, and cracked down on what they would accept, and they reduced this to only 20 percent.

This list is most interesting in that there are no North American-made aids on the list, although——

Mr. ORIOL. Where do most of the aids come from?

Dr. RUBEN. Most of the aids either come from Denmark, Sweden, I think some from Germany, I am not sure, I think it is mainly the north countries.

INEXPENSIVE HEARING AIDS

Another thing that has happened, I know in Toronto, Canada, by using aids from England, they cost the patients or the hospitals somewhere between $15 and $20 apiece.

If the hearing aid does not work, they just take it off, throw it away, and give them another one if it breaks down.

It is perfectly possible to mass produce these, if you mass produce them, you might cut your quality, but our quality could not be much worse than it is now.

In answer to your question whether centralized purchasing, centralized control, such as we would control the making of penicillin or sulfa drugs, they have been able to reduce price and increase quality.

Mr. ORIOL. I wish we had time to debate. I see the industry representatives shaking their heads no.

Dr. RUBEN. I have no debate with them.

Mr. ORIOL. I guess they will be submitting statements. Please feel free to amplify your statement too since you do not have enough time right now.*

Can you tell us how many cases of this cancer that you have described in your statement, is that a common or uncommon thing?

Dr. RUBEN. No; this is a very rare type of disease. I would say I used it to illustrate the type of problem it is, but it is rare for the general population, but to the one human being it is a very disastrous type of thing.

Usually what we see are patients who have inappropriate aids given, we see not infrequently a large number of patients who have middle ear diseases which may or may not be surgical, but should at least be worked up to rule out the problems.

We do not, if the technicians could be taught how to look at the membrane, a large amount of the disease could be taken care of.

We also see people who have minimum hearing losses from fluid in their ears. This type of person, the elderly, you have to think of all types of things, from tumors to low-grade allergy.

I think the whole process goes back to where the patient had a complaint of the system, a hearing complaint, he should be seen by

*See Appendix 1, item 1, p. 233.

the physician, and realizing then whether or not he should get the aid.

I do not see why the hearing aid dealer wants the medical responsibility, I can see no reason why he should have it, and he should be grateful to get it out of his way so he does not have to fuss with something he knows absolutely nothing about.

Mr. ORIOL. As you say, even one unnecessary death is too many.

Dr. RUBEN. Yes, sir.

Mr. MILLER. I have a question or two with reference to this example.

The question rises as to whether this individual was seeing only a hearing aid dealer, or was he also seeing a physician for other problems or for his general medical needs?

Dr. RUBEN. I think the answer to this is yes, the patient was on my ward, and I questioned him quite specifically, because this was a rather dramatic thing to have him come wander into the hospital.

Mr. MILLER. He went out and bought a hearing aid, but he was not seeing a physician for any reason whatsoever?

Dr. RUBEN. He may have seen a physician. I cannot answer that.

MEDICAL NEEDS OF PATIENT

Mr. MILLER. I think you can understand the question that underlies this question—as to whether or not the physician who has a patient, the general practitioner, the internist, or whomever he may be that the individual sees, has a primary responsibility for the individual needs of the patient, the medical needs. He should be aware of the fact that the man has a hearing problem, and it would seem to me that the implication of placing the responsibility on the hearing aid dealer is a little bit farfetched. Would you care to comment?

Dr. RUBEN. Let me amplify that.

If we want to get into this problem, this gentleman comes from the South Bronx. There are very limited physician facilities there.

I doubt if many of the general physicians practicing in that area would have picked up the problem. One of the greatest problems we have is that those aspects of otorhinolaryngology dealing with hearing and communication are not taught in medical schools. This is an absurd situation as the problems of ear, nose, and throat represent anywhere from 25 percent to 35 percent of the chief complaints of all patients coming to visit physicians. It is this deficit, not the medical education system, which in many ways causes delay in treatment of all aspects of otorhinolaryngology and I suspect it is a significant factor in our grossly retarded approach to the hearing impaired.

I do not imply the hearing aid dealer has the responsibility. I implied that the system is very poor, that the hearing aid dealer is in a position where almost de facto he gets this responsibility, whether he wants it or not.

If there had been some type of law that said this man had to see a physician before he got his hearing aid, then give and take the medical structure of the geographical area where he comes from, he then would have seen another otorhinolaryngologist who would have followed him, and he would have been given followup appointments in the clinic.

The hearing aid dealer still would have sold his hearing aid.

Mr. MILLER. You would require him to see an otorhinolaryngologist?

Dr. RUBEN. Sir, there is this particular situation in the South Bronx with this individual, we want to boil it down to him, and under your ground rules, he would have seen an otorhinolaryngologist——

Mr. MILLER. But he would not have seen a physician for his general health?

Dr. RUBEN. If he had a problem with his general health, he would have seen an internist in one of the clinics of the hospital.

If he had come in specifically about a hearing problem, he would have been seen by an otorhinolaryngologist who would have screened him to see if he would have to see another physician for his general health and then follow him through in that way.

Mr. MILLER. But you do agree there that if a physician had been seeing this gentleman and was aware that he had a problem, that his medical responsibility would be related to this hearing problem and the possibility of cancer of the ear as well?

Dr. RUBEN. Yes, but in the setting that we are talking about, in the Borough of the Bronx, where I work, where I take care of the patients, I have 1½ million people, most of them indigent, most of them come without proper medical care.

Mr. MILLER. And by reference. They would have gone to a general practitioner?

Dr. RUBEN. They may never see a general practitioner. One of the fortunate things we have been able to do in our borough is to build reasonable otorhinolaryngological facilities to take care of all of the hospitals that we are responsible to.

He would have been seen in one of those hospitals in which we do have staff, we do have audiometric staff, so if he would have come to the physician first, even within all of this poverty, we still would have picked him up.

Mr. MILLER. Since this involves one particular patient, and you may wish to check your records further, we would welcome any additional details you would like to give us.

Mr. ORIOL. On another point earlier today during the presentation by HIC, we saw a demonstration, the Hearing Aid Industry Council, Mr. Ince and his associates, and there was a demonstration of the testing device.

Do you remember that?

Dr. RUBEN. Yes, sir.

Mr. ORIOL. Do you have any reservations to the way this test was given, or the way the medical needs perhaps are discovered, and with the statement that 2 days was sufficient training for diagnosis?

Dr. RUBEN. Yes. I would like to comment on this. The art and science of audiology is not easy.

TRAINING PERIOD OF 6 MONTHS

We have attempted in the New York area to train people to do much simpler screening than the screening needed for evaluation for a hearing aid, and using much more simple machines, and we have found out that we will probably need up to 6 months to train people for much simpler tasks than this.

I feel that the difficulties in audiology, the difficulties in pure-tone bone conduction, speech, the need for assessing patients, the need to know which patients have functional problems, are very complex, and I do not feel that a person necessarily needs to possess a master's degree to do this, but I do feel they need extensive training, perhaps the training of a medical assistant, which would be 1 or 2 years.

We see this working out very well abroad where audiology is done somewhat differently, it is essentially administrated by physicians, they do not have audiologists as we know them, and they have taken people whom we would call medical technicians, somewhere between a nurse and a corpsman would do well, and after several years these people would be sufficient to do routine testing.

The more difficult testing abroad is either given to one of these people with advanced work or to a physician, and in our clinics we use people with master's degrees or to Ph. D.'s.

I think a person who is so-called trained in 2 or 3 days to do this type of testing is totally inadequate. It is dangerous and fallacious to assume that a person can master the rather complicated techniques and necessary judgments in so short a period of time. If the hearing aid industry insists upon this as their standard for training, I think one must look quite hard to evaluate what else is happening. These people certainly would be able to sell hearing aids but could do little in aiding the patient or even getting the right type of hearing aid on the particular patient. I do not feel that we should substitute massive quantity for what turns out to be quite mediocre quality. In the long run we will certainly not help the aged with hearing loss and will certainly do them more harm than good by adopting mediocre, uncontrolled types of testing, as proposed by the hearing aid industry.

Senator CHURCH. Thank you very much, Dr. Ruben.

As you know, the question of general requirements of law concerning the sale and distribution of hearing aids is generally in the jurisdiction of the State government, but much of your testimony does go to those particular programs that the Federal Government either administers directly or finances in a way as to have a voice in their administration, and I have special reference to Medicaid and Medicare. In connection with those programs, and their possible extension in the future, your testimony has very real relevance.

Dr. RUBEN. Thank you, sir.

Thank you very much.

Senator CHURCH. Our next witness is Mildred B. Shapiro, director of the Bureau of Economic Analysis of the New York State Department of Health.

She is accompanied by Vivian Margulies, audiologist.

STATEMENT OF MILDRED B. SHAPIRO, DIRECTOR OF THE BUREAU OF ECONOMIC ANALYSIS OF THE NEW YORK STATE DEPARTMENT OF HEALTH*

Mrs. SHAPIRO. Thank you, Senator; I may skip a few paragraphs because of the lateness of the hour.

I am Mildred B. Shapiro, director of the Bureau of Economic Analysis of the New York State Department of Health. I am here today at your invitation on behalf of the New York State Commissioner of Health, Hollis S. Ingraham, M.D.

*See letter, appendix 1, item 3, p. 238.

We appreciate the opportunity to testify and present the health department's views on New York's experience with the purchase of hearing aids on behalf of persons eligible for medical assistance (Medicaid) and other State-aided programs.

New York's Medicaid program is ranked foremost in the reimbursement and control of hearing aid expenditures. How does our present program vary from its historical predecessors and what lessons learned manifest themselves in our current approach?

Prior to the enactment of Medicaid, hearing aids had been purchased for children receiving care under the physically handicapped children's program since 1957.

During those years, hearing aid prices were submitted annually to the department by manufacturers, with the State generally receiving the benefit of a 10–40 percent discount off the suggested retail price.

The arrangement was implemented through authorized dealers on lists submitted by the manufacturers.

New York's Medicaid program, enacted in 1966, was one of the most comprehensive, and included in addition to all the basic services, the optional ones as well, including prosthetics, orthoptics, eyeglasses, and hearing aids.

Initially the same prices which had been approved for the physically handicapped children's program were adopted for the State's Medicaid program.

An Interdepartmental Committee on Health Economics established by the Governor in 1966 was charged with advising the commissioner of health on all matters relating to fees.

From the outset, the committee staff gained experience and sophistication in techniques of surveying, negotiating and making fee recommendations to the commissioner, and ultimately to the director of the budget.

In 1970, the Bureau of Economic Analysis, the staff arm to the committee, was assigned the responsibility for completely reviewing and overhauling, if necessary, the hearing aid price schedule as a logical extension of its duties.

At that time the most obvious problem was that suggested manufacturers' list prices were frequently suspect or spurious.

Discount From Inflated Price

Thus a discount from an inflated price which automatically increased each year did not represent an equitable sales price irrespective of the discount factor.

Furthermore, ear molds and batteries frequently provided to the private patient as part of the aid was often charged additionally on Medicaid sales.

In short, we concluded any special treatment being given to New York State was hardly preferential.

Following a review of some of the reimbursement methods used by other States, numerous meetings with representatives of the hearing aid dealers and some unannounced and unsolicited visits from concerned dealers and manufacturers, the staff to the committee recommended abandonment of list prices and the gratuitous discounts associated with them.

Instead the dealer's price, or the manufacturer's wholesale price was to be adopted as the basis for reimbursement.

Additionally a flat fee was proposed to cover the cost of overhead and profit.

A percentage markup was considered unacceptable since the cost of dispensing a hearing aid does not necessarily increase with the cost of the aid.

The same principle is applicable to the field of prescription drugs. The General Accounting Office had previously recommended that State Medicaid programs abandon the principle of a percentage markup for prescription drugs as it encouraged the dispensing of high priced drugs. It was apparent that this was equally inherent in hearing aid sales.

The first reduction in hearing aid prices occurred in 1969 when spiraling Medicaid costs brought about a 20-percent reduction in all practitioners' fees.

At the inception of the first specific hearing aid price control program in 1970, all existing hearing aid prices were frozen and excessively priced units were cut an additional 20 percent.

Also, all new aids were priced at wholesale cost plus $125 for monaural aids.

In ensuing years, or stage two, all monaural aids have been priced at cost plus $125 and binaural aids at cost plus $160. The Hearing Aid Dealers Association had requested $135–$145 for monaural aids.

In the case of one company with a traditionally low markup, the list price was used as it amounted to less than cost plus $125.

This is in keeping with our assertion that Medicaid should pay no more than that paid by the general public.

The historical average markup converted to an equivalent fee ranged from a low of $55 to a high of $330, the average fee being $160 for a monaural aid.

Thus, on the average, the effective fee had been reduced by 22 percent, and for each of the major companies, price cuts ranged from $19 to $60 per aid.

The transition from the markup to a flat fee was phased in, and the change was implemented without incident.

This was in large part, in large measure attributed to meetings with hearing aid dealers prior to implementation of these changes.

The third stage was the most radical because it resulted in a reduction of 50 percent in the number of hearing aids on the State-approved list, and the setting of a price ceiling.

Wide Ranges of Prices

The Interdepartmental Committee on Health Economics noted a wide range of prices. For example, prices of monaural aids ranged from $60 to $500, and the reasons for these great variations were not evident.

Since the committee's interest on behalf of all taxpayers was to acquire the most appropriate aid for the patient at the lowest possible cost, cost effectiveness was adopted to guide all further decisions.

Audiologist consultants to the Department advised that basic aids did not vary nearly as much qualitatively as did in price, that most were flexible enough to achieve the desired results for the patient, and that exceptions would be granted if necessary.

Once assured that quality of patient care was not in jeopardy, the staff set a ceiling at the 50th percentile or median for monaural and binaural aids.

Thus $235 became the maximum for a monaural aid and $380, the maximum for a binaural aid.

A total of 360 aids was eliminated from the State list, leaving another 360 in the approved category.

Three manufacturers were eliminated completely while others were left with only two or three aids listed.

After the reverberations of the initial shock subsided, an interesting phenomenon occurred.

We received a number of extremely polite phone queries from hearing aid manufacturers who had had quite a few aids cut from the State-approved list.

In substance they asked if those aids which had been removed from the approved list because they narrowly exceeded the State maximum could be reinstated if the prices were to be reduced to that maximum.

Since we were concerned with holding the line on prices consistent with the availability of additional aids, we of course consented.

Apparently, word got around and additional manufacturers called requesting relisting on the basis of reduced prices for some of their more expensive models.

Manufacturers suggested they would work these cuts out with their dealers. The dealer in turn hinted the savings were "coming out of his hide."

Whatever the source of the savings, it seemed evident the industry needed the State as a customer more than it needed its preexisting full markup.

Subsequent to the streamlining of the list, the hearing aid dealers requested a meeting to determine why they had not been consulted in these actions and to voice their protest along with the New York State Council of Retail Merchants who represented them at the meeting.

Quality Care at Lowest Possible Cost

State officials cited their duty to provide quality care at lowest possible cost, reminding the dealers they too shared in the tax burden.

Alternate solutions were requested from the dealers since the State maintains an open mind and continuing willingness to modify its previous actions.

The association promised to give the matter serious thought and come up with an alternate solution.

Thus far its silence has been conspicuous. That has been many months ago, incidentally.

New York's Medicaid program requires that a child's problem be diagnosed at a speech and hearing center approved by the commissioner of health before a prescribed hearing aid may be purchased.

Adults are required to be diagnosed at either approved speech and hearing centers or by an otolaryngologist.

Where a speech and hearing center exists in the county, there is usually a requirement that the center be utilized in the evaluation and recommendation of the specific aid.

In some cases aids have been prescribed, particularly for children, which were not on the approved list.

In those instances exception requests have been forwarded to the department's audiologist, Vivian Margulies, who is with me today, and in most cases, exceptions have been granted based on the individual needs of the patient.

Adults requesting exception to the State list must have been evaluated by an approved speech and hearing center.

In viewing the future, we are concerned with the increasing number of revised and new models whose prices are slowly but steadily edging upward.

We are apprehensive that the ceiling become the floor to which all prices gravitate.

There are other problems. For instance we are aware that for every few aids purchased by a dealer, let us say four, he will receive the fifth at no charge.

These benefits or lower unit costs are never passed on to the State. Thus the manufacturers' wholesale cost is frequently not the effective acquisition cost to the dealer.

The major problem of the hearing aid industry is inherent in the present distribution or retailing system.

Most economists would agree that low volume accompanied by a large number of retailers breed inefficiency and high unit prices.

According to spokesmen for the hearing aid dealers, the average dealer office sells only seven and one-half aids per month, or less than two a week.

I might add I cannot vouch for these statistics. They were given to us, and it may be that is somewhat higher in a metropolitan area.

The markup on each of these aids must be adequate to cover all overhead and profit or constitute sufficient incentive to reward effort.

If prices are unusually high because of this inherent inefficiency, it is the consumer or third-party payer who is being asked to foot the bill which in effect subsidizes a high degree of inefficiency.

Should Medicare seek to expand its coverage to hearing aids is a controversial question indeed.

First, what other alternatives are being considered in the way of Medicare reform and expansion?

And, second, what efforts will be made to alter the usual and customary charge provisions of part B?

The opening section of title XVIII expresses the philosophy that there shall be no interference by the Federal Government with the manner in which medical services are provided.

If this philosophy still pervades the Medicare program, a mass infusion of Federal dollars into a field characterized by the inefficient distribution of services would lead to exhorbitant costs or runway inflation.

I will be happy to answer any questions.

Extending Medicare Coverage

Senator Church. Mrs. Shapiro, from your experience, it is obvious that your recommendation would be if Medicare coverage is extended to include hearing aids, there should be a rigid control over the cost, and the hearing aid should be obtained directly from the manufacturer, is that correct?

Mrs. SHAPIRO. I am not saying directly from the manufacturer, but I think we have to change something about the retailing system so that you have larger volumes.

Senator CHURCH. Is there any way that the present dealers could be fed into such a system without having excessive costs?

Mrs. SHAPIRO. I think you would probably need fewer dealers since it is a low-volume industry. And you do not want greater volume that is in excess of medical needs.

Probably in the metropolitan areas you may have too many dealers, I do not know. But certainly rural areas are always a special problem in the whole delivery of medical care, and I do not think we can address ourselves to that. But metropolitan areas, it seems to me you could have fewer dealers selling more aids, and sometimes selling other things as well.

I do think they should be trained, but where they rely only on hearing aids, and they are selling only a few a week, then obviously they are expecting society to support this kind of low-volume business.

I would like to mention one other thing. Most of the emphasis has been on unit cost, and I think there is the other factor—utilization, and the opportunities for overutiliaztion in this particular area.

Of course, there are two factors: one is how much each unit costs and how many units are you selling, and this is the kind of area which lends itself to excessive use.

Senator CHURCH. You said in your paper that you were apprehensive that the ceiling become the floor to which all prices gravitate.

Do costs go up because of exceptions, and how many new models are being produced each year?

Mrs. SHAPIRO. Well, some years ago before Medicaid there were very few each year, and it has just spiraled.

We get letters almost constantly, that models are obsolete, and we had something like a hundred new models in the course of a year. The manufacturers are constantly revising model numbers, and all we know is that we get a different set of letters and numbers and prices. I am no audiologist, and it is difficult to know if this is a bonafide change, or is it more an economic determination rather than a technical change.

It is difficult to tell.

Senator CHURCH. Do you have a certain number of standardized models, or a certain number of designated models in your program that qualify?

Mrs. SHAPIRO. Well, we have quite a few. It is now up to 360, and we added 125 for all those that voluntarily agreed to reduce it, so we are up to about 485. When I saw the list at the VA, they had about 39 aids on the list, so we still have quite an extensive list.

It is limited as I said by the median, but the level of prices is creeping up now which we are concerned about.

I think sometimes when you squeeze or push in one place, you get a bulge someplace else.

I will tell you what I am more concerned about. Hearing aid payments to dealers used to consist of about 80 percent of the aid, and the balance of 20 percent was for the additional items, the cords, the earmolds, the batteries.

Accessories Total 40 Percent

We now find that 60 percent is for the aid, which means the other 40 percent is now being used for accessories, I think there is a lot of extra billing going on for all of these other things.

In other words, you can make a regulation, but people find ways of getting around them.

Senator Church. Do you have in your program a ceiling that you will pay?

Mrs. Shapiro. Yes. We have a ceiling for monaural and a ceiling for binaural. It is for those exceptions that I mentioned, where they specifically send in their requests.

Senator Church. When a person wants a particular model that exceeds that ceiling, will you pay up to the ceiling and the person will pay the balance?

Mrs. Shapiro. No, this is illegal in the Medicaid program under title XIX. They may not pay additionally.

We will pay the full price if it is over the ceiling. If it goes through a speech and hearing clinic or otolarynologist or through our audiologist, Mrs. Margulies, and it is a bona fide recommendation, it will be approved at the higher price. We will pay the full price.

Senator Church. But you have bitten the bullet for Medicaid now in the sense that you do not permit fees over and above those allowed by the program itself?

Mrs. Shapiro. Right.

In a sence Medicare more recently—I do not think they did it early enough—established the 75th percentile of usual and customary fees for physicians, so Medicare too has established a ceiling. But there, where physicians have not accepted assignment, the physician charges as much as he wants.

You see, there are different regulations in Medicare. We can control this more tightly, but you are going to put the bite on the patient if you establish the ceiling, and then the patient will be paying that much more out of pocket unless there is some change such as mandated assignment.

Senator Church. Do you think that if hearing aids are to become part of the Medicare program, this factor of permitting over and above reasonable fees that Medicare will pay, ought to be modified?

Mrs. Shapiro. I think not only for hearing aids, but for all part B services.

Of the more recent studies that I have seen, the Medicare beneficiaries pay more and more out-of-pocket, and many of them are farther behind now than they were at the beginning.

Once the patient has been tested and is told he really needs an aid, he will feel hard pressed to find that extra money. Knowing how much elderly people rely on their Social Security check, with the average for a single person being $159 a month, it would really be very difficult for them.

Senator Church. Mrs. Shapiro, I have no further questions.

You are accompanied by Vivian Margulies, have you anything you would like to say, Vivian, before we close the hearing?

Mrs. Margulies. No, I think she has said it all.

Senator CHURCH. The record will remain open for those who wish to submit additional testimony.

That concludes the two days of hearing.

Thank you very much.

[Whereupon, the hearings were adjourned at 6:15 p.m.]

APPENDIXES

Appendix 1

ADDITIONAL MATERIAL FROM WITNESSES

ITEM 1. LETTERS AND ENCLOSURE FROM R. J. RUBEN,* M.D., DEPARTMENT OF OTORHINOLARYGOLOGY, ALBERT EINSTEIN COLLEGE OF MEDICINE, YESHIVA UNIVERSITY, BRONX, N.Y., TO SENATOR FRANK CHURCH, DATED OCTOBER 11, 1973, AND OCTOBER 30, 1973

Bronx, N.Y., October 11, 1973.

DEAR SENATOR CHURCH: Thank you very much for your kind letter of September 21, 1973. I spoke to Miss Callahan about the difficulty of responding to this earlier. Since attending the Senate meeting, I had to spend a week in Dallas at our senior professional meetings, presenting several papers and participating in various committees concerned with the educational aspects of otolaryngology throughout the U.S. I then went to Poland for a week. This was a fascinating experience. After having lived the life of a socialist physician for a week, one certainly sees the great advantages and opportunities which we have in this country. It becomes all the more upsetting when, with our great wealth and our real freedom, we cannot do a better job for all our citizens, the elderly not being the least of those who are badly affected by our system here. I came away from my Polish experience with the feeling that we must work out our own system to fit our own culture and our own society. We certainly cannot use those developed by other societies but must use our intelligence to seek those systems appropriate to us in the United States, to vastly improve the quality of life for all Americans. I am dictating this letter early Sunday morning as I have to be off to Toronto for another series of meetings.

The reason I have gone into such detail concerning my activities is that I feel it points out another deficiency in the system. I neither have the time nor the staff to do justice to the job which has been given me. One could decide not to participate at all but I feel this would be worse than trying to do one's best, with the full realization that the job could be done better with the necessary time and resources.

I would like to comment on some of the written testimony. The testimony of the Nader group and the New York State group, with Dr. Resnick and Dr. Sullivan, speaks for itself. The Nader experience is a good documentation of what really happens to the person seeking a hearing aid. I think, despite the statements of the hearing aid dealers' association and the manufacturers' association, that it truly gives a real message as to what happens with private hearing aid dealerships in the U.S. today.

The testimony submitted by the hearing aid dealers' association has several quite obvious flaws. One of their strongest statements is that they are serving the hearing impaired population in the U.S. From my own testimony and using statistics from the Department of Health, Education and Welfare, we see that they fall far short of this. I think they are indulging in the delusion, which they may in truth believe, that they are handling the problem, but no statistics bear this out. They imply that the hearing aid dealer is the best person and perhaps the only person who can fit the hearing aid. This is untrue. The hearing aid dealer's motivation is to keep his customer happy so that he can make a sale. These people have only the barest training and very low standards. They use the argument that they are ideally situated geographically. I do not believe that this is true. They may actually have offices in various towns. However, 70 years ago there were

*See statement, p. 216.

many people who called themselves doctors, in various and sundry small towns. Most of these people were ill trained and went to proprietary medical schools. Then there was a revolution in the standards of medical training in the U.S. and most of these "doctors" found other trades. Although a persons states that he does something, how well he does it and the effect on the people is really another matter.

I am somewhat disturbed about the quotations by the hearing aid dealers' association. One by Dr. William Hardy is a very old quotation that may have been made right after World War II when the hearing and speech profession was first getting started. I think, if one looks carefully at some of these quotations, they will find that they are either out of context or obsolete. We have no way of knowing this as they do not state where the quotations come from. I suspect that you may have noticed this yourself. I personally find that quoting without giving sources and references is an unseemly practice.

I am also disturbed by their claim that 90% of people with hearing aids are satisfied. Again, I would like to see the quote and exactly how these statistics were compiled. In my own testimony, wherever I used statistics, I quoted the sources so that these could be easily checked. They make statements without sufficient backup and this inclines one to discount the statements.

The hearing aid industry conference goes along in the same vein. They state that the U.S. market is more saturated than the market in European countries; they do not state the countries. I feel that at least in Sweden and Denmark, the use of hearing aids is proportionately greater than in the U.S. In the report of my trip to Scandinavia, some of this may be documented. If you want, I could get the exact figures from the various people involved. It would take some time but in the long run it might be valuable. Please let me know your wishes in this matter.

One of the most telling arguments throughout all the testimony is the number of hearing aids that are actually sold per dealership. The New York State deposition stated that approximately 7½ hearing aids were sold per month by the average dealer. Looking at the manufacturers' statistics, they are lower. They claim to have sold 600,000 hearing aids to 5,500 hearing aid dealers. If my arithmetic is correct, that is approximately 102 aids per dealership. Divide this by 52 and one gets the figure of less than two hearing aids per week.

One has to realize that there are some dealerships and distributors which handle large numbers of aids, such as the Veterans Administration, Sears Roebuck and some cooperatives. It would then appear that the typical hearing aid dealership probably sells very few hearing aids per week or per year. Exactly what the mode value is I do not know but I would suspect it is less than 7½ aids per month, or less than two a week.

Using this as a basis, one realizes how much has to be added to the cost of the hearing aid in order for the hearing aid dealer to survive. The argument by the hearing aid association about not wanting to set up large overhead and capital costs is erroneous. They already have excessive overhead, excessive capital costs and gross under-utilization of facilities. This has increased the cost of hearing aids. One must also look at the marginal dealer who will tend to oversell in his need to survive. This probably occurs not in large cities where the hearing aid dealerships do a large volume but in small towns and rural areas throughout the U.S. Having dealers in little towns only exacerbates the inadequate delivery of health care in these areas to our elderly citizens.

You ask in your letter about the availability of medical and professional specialists in the diagnosis and evaluation of hearing loss. I only have limited statistical data on hand and it would take me several weeks in order to get detailed information on this. If you want me to, I can obtain this information.

At the present time there is approximately one otolaryngologist per 50,000 population. The otolaryngologists that are now being trained are vastly superior to those who were trained 10, 20 and 30 years ago. There is still a large educational revolution going on within the otolaryngological world which I think will increase the quality of these people tremendously. Also, as can be seen in the testimony, many people are being trained in the hearing and speech arts.

The problem is really how to get people with knowledge of the diagnosis and habilitative treatment of the hearing impaired to the people, and how to get the people to them. One assumption must be borne in mind: because a system such as the hearing aid dealership does exist, does not necessarily make it good, nor is it necessarily the best way to take care of the problem. In other countries they have centralized their facilities and resources to some extent, for the delivery of health care for the hearing impaired. This includes not only the medical diagnosis and the fitting of the hearing aid, but also the special help needed in such areas

as lip reading, vocational habilitation and instruction in the use of special home aids, such as blinking lights and the use of electrical loops so that the telephone and television can be heard.

Each small town in the U.S. cannot and should not have such a facility. This would certainly be a waste of capital and a gross waste of human resources. The workup and the fitting of hearing aids could be done at regional centers in each state, in the same manner as a patient who needs complicated otological or cardiac surgery. There is no desire to establish this type of facility in every community within the United States, rather it is contraindicated.

The problem is to make the people aware of what can be done and to get them to the various facilities. Much of this will have to be done through the primary physicians who see the patients. This brings us to another point in my corrected testimony, that of teaching communicative disorders in medical schools. This is almost totally lacking throughout the U.S. today. I think it would be wise, in terms of legislation, to include ways in which medical students and undergraduates, masters candidates and Ph.D. candidates in hearing and speech would have more of their course time directed toward the problems of the hearing impaired. Realizing that the federal government supplies a large amount of the cost of most graduate education and a significant amount of undergraduate education in the U.S., I feel that there are probably ways and means by which this could be effected.

I know that there must be practical political considerations of what can be done in a short term. I feel that there must be freedom of opportunity for all systems. Legislation of the hearing aid industry should be set up in such a way as to allow clinics to buy hearing aids at wholesale cost. These clinics should be allowed to hire their own technicians to maintain the aids, make the molds and distribute the aids at their clinics. The various insurance bodies, such as Medicare, would pay for the aid and also the services given by the clinics. I feel that the clinics could probably compete favorably with the hearing aid dealers. The clinics will probably do much better in that they will be seeing a larger volume of patients and handle a larger volume of hearing aids. I feel that this must be one of the options in the distribution of hearing aids.

On the other hand, we will still have hearing aid dealerships for some time. These should be closely regulated, with the same type of controls and the same type of supervision that would occur in the medical centers. I feel strongly that no Medicare patient should be allowed to have a hearing aid without first being seen by an otolaryngologist or a physician who can demonstrate knowledge of ear diseases. The patient should first be tested in a recognized audiological center, in areas where they exist. The patient could then either go to a hearing aid dealer or buy the hearing aid at the center where he was tested. The cost of the hearing aid should be made quite definite. If the dealer is expected to do habilitative therapy and other work, this should be added to the cost of the hearing aid. This same system would apply in the clinic. In this way, those clinics will excellent expertise for aural habilitation could practice this, and the patient would not have to pay a double bill, one to the clinic and one to the hearing aid dealer. The factor of hearing testing should also be eliminated from the dealer's fees, if this has already been done by the clinic and by the physician.

What I am suggesting is that the cost of hearing aids should be resolved into factors: diagnostic testing, actual cost of the aid and habilitation. Needless to say, the necessary overhead would have to be included in this. It may be that when this is done, the overhead for individual dealerships selling only a few aids a week will become too costly to be maintained.

Again, let me express my sincere thanks for allowing me to participate in these hearings. I feel badly that I do not have the time or the resources to thoroughly analyze these most important problems. I am somewhat surprised that the Senate itself has not provided the resources for an objective and impartial analysis of the problem but must rely on various outside groups, with their own interests and their own funding, to generate the data on which you will have to make decisions which will become the law of the land.

Most sincerely yours,

R. J. RUBEN, M.D.
Professor and Chairman.

Bronx, N.Y., October 30, 1973.

DEAR SENATOR CHURCH: One of the problems that came up in the hearings was how to take care of rural areas. I asked Dr. James Donaldson to forward me a copy of the paper he presented at the American Academy of Ophthalmology and

Otolaryngology, which shows an excellent way in which this can be done with medical delivery of high quality. I think the paper speaks for itself. This would be at a much lower cost and there is supervision so that the quality of work would be acceptable.

Most sincerely yours,

R. J. RUBEN, M.D.,
Professor and Chairman.

[Enclosure.]

UTILIZATION OF A PHYSICIAN'S ASSISTANT AND A MOBILE EAR CLINIC TO PROVIDE OTOLOGIC CARE IN REMOTE AREAS

[From the Department of Otolaryngology, University of Washington. Reprint Requests to Department of Otolaryngology, University of Washington, Seattle, Washington 98195. Presented at the Seventy-Eighth Annual Meeting of the American Academy of Ophthalmology and Otolaryngology, Dallas, Texas, September 16–20, 1973]

James A. Donaldson, M.D., Seattle, Wash., H. Jorgen Holmquist, M.D. Goteborg, Sweden. Gustaf-Adolf Axelsson, M.D., Seattle, Wash., by invitation. Charles H. Lewis, Ph. C., Billings, Mont., by invitation. Richard L. Figenshow, Billings, Mont., by invitation.

While there are 600,000 American Indians in the United States, only 400,000 of them still live on reservations. In the Billings area, encompassing Montana and Wyoming, there are 40,250 Indians with over 28,000 living on reservations (Figure 1). One of the most common health problems for these Indians is ear disease. To help diagnose and treat this problem, clinics were established at the Blackfeet Indian Health Service Hospital at Browning, Montana in 1968. Otologic clinics were conducted every six to eight weeks and Indians requiring surgical procedures were sent to the U.S. Public Health Service Hospital in Seattle or to contract otolaryngologists in Montana.

While this did improve the otologic care provided the Indians, the follow-up care on these patients, whether they were operated at the U.S. Public Health Service Hospital in Seattle or by contract otolaryngologists in Montana, was not adequate since clinics were held only every six to eight weeks and there was no associated aural rehabilitation program. There was no active otologic program at the other service units in Montana. Cases from clinics at Fort Peck, Rocky Boy, and Fort Belknap were referred to contract physicians in Billings which meant a 400 to 600 mile round trip for a consultation. Follow-up was inadequate because of the distance involved. While the number of otolaryngologists in Montana has recently increased, they have settled in the same (larger) communities as their predecessors and the distance necessary for patient travel remains high. Middle ear disease has become the most reported disease in the Billings area either because of an increased incidence or because of greater detection and reporting.

For these reasons a mobile ear care program was initiated in 1971 with the goal of developing and implementing a method of providing excellent otologic evaluation and care to Indians on the reservation in Montana and Wyoming. Ideally, all care would be provided by a well-trained otologist and an audiologist with equipment and facilities comparable to that in a well-equipped urban medical center. With the shortage of otologists and their apparent preference for urban areas, it was felt that one could not be attracted to such a mobile unit on a full-time basis. It was postulated, however, that a paramedic under adequate otolaryngologic supervision could perform the otolaryngologic evaluations and render some pre- and post-operative evaluation and care.

With this in mind, a medical corpsman was selected. His background included nine weeks' training as a Combat Medic, a ten-week course as an EENT specialist, and a tour of duty as an EENT specialist at Madigan General (U.S. Army) Hospital in Tacoma, Washington, prior to joining this program. He then began a five-month intensive course in otolaryngology, working in the Otolaryngology Clinic at the University of Washington Hospital. During this time, in conjunction with the University of Washington program for MEDEX (physician's assistant) training, he learned to take complete otolaryngologic and medical histories, and conduct detailed otolaryngologic examinations. At the same time he was instructed in the pre- and post-operative care of patients having various otologic procedures. Over the five-month period, he became quite adept at performing these evaluations.

Another necessary member of the team was a competent audiologist. One was selected who was familiar with the geographic area, with the other audiologic and rehabilitative facilities available throughout the state, and who had an interest in improving care for Indians with ear problems.

A mobile unit (Figures 2 and 3)* was designed which would provide equipment and facilities comparable to a modern urban medical center, but would transport these facilities to remote clinics on the Indians reservations. The thirty-three foot unit was designed and built by the Gerstenslager Company and was divided into a medical examination area and an audiologic testing area, with a small waiting room separating the two. The medical area, although compact, contained a very functional examining chair (SMR Maxi-Chair), an operating microscope equipped with an observer tube and camera (Figure 4),* and a complete array of otolaryngologic diagnostic equipment (Figure 5).* A small sink was provided for washing hands and instruments and an autoclave was available for sterilizing equipment. An ear model and blackboard were present in the medical section (Figure 6)* to aid in patient explanation and education regarding ear problems and treatment. The audiologic suite consisted of an IAC 402–A sound-attenuated enclosure, together with a control booth, containing a Grason-Stadler 1701 automatic audiometer (Figure 7).* A Madsen ZO–72 Impedance Bridge was available for impedance audiometry. The mobile unit contained its own generator (Figure 8)* which could be dropped to the ground by a winch remaining connected to the mobile unit only by an electrical cable. This innovation significantly decreased sound transmission from the generator to the audiologic testing unit. With the self-contained unit, it was possible to hold clinics not only at three Indian hospitals in the area, but also at the thirteen remote Indian outpatient clinics throughout Montana and Wyoming. Additionally, screening programs could be carried out at the Indian schools on or near the reservations which have significant Indian populations.

Because a paramedic would be conducting the otolaryngologic evaluations, it was necessary to have a very close monitoring and evaluating system. To accomplish this the supervising otolaryngologist periodically travelled with the unit, evaluating the paramedic's performance and kept in almost daily telephone contact with the unit when he was not travelling with it. In addition, he very carefully reviewed the medical record of each examination performed by the paramedic. Where any question arose on his review, the patient was scheduled for a future clinic conducted by the supervising otolaryngologist. In addition, an evaluation clinic was carried out during which patients were independently examined by the supervising otolaryngologist and by the physician's assistant. Each patient had audiologic and tympanometric evaluations. The examinations and evaluations were carried out on seventy-two pathologic ears of patients ranging in years from four to sixty-five and demonstrated a 72 per cent agreement in the detailed description of ear findings, 100 per cent agreement in diagnosis based upon these findings, and a 93 per cent agreement regarding disposition and treatment.

Some of the otologic surgery required on these patients is carried out in Indian hospitals by the supervising otolaryngologist. Other surgery is carried out by local otolaryngologists under contract from the Indian Health Service when such contract funds are available. In addition, 270 hearing aid evaluations have been completed during the past two years resulting in 135 hearing aids being provided.

As a result of a two-year trial it has been determined that Indians will accept medical evaluations from the ear team described. They have done so, enthusiastically, and the show up-rate for clinics and surgery has been about twice the usual rate when the clinics have been held near their homes and the surgery is performed at a nearby Indian Health Service Hospital. The Medex can provide excellent outpatient ear diagnosis and post-operative follow-up care. Utilization of a Medex under otolaryngologic supervision, an audiologist, and a mobile ear unit can provide excellent ear care even in remote areas.

ITEM 2. LETTER FROM TERRY S. GRIFFING.** DIRECTOR OF AUDIOLOGY, QUALITONE DIVISION, SEEBURG INDUSTRIES, MINNEAPOLIS, MINN., TO SENATOR FRANK CHURCH, DATED NOVEMBER 12, 1973

DEAR SENATOR CHURCH: It has come to my attention that my testimony before you about hearing aids and the elderly has been misinterpreted.

I would like very much for you and the committee to know that some have reported on my testimony indicating that I said that an individual could be trained adequately to test hearing for the purpose of fitting a hearing aid in just a few days. I have re-read the transcript and find no indicator or support that this was the case. I tried only to emphasize that after a few days of inten-

*Retained in committee files.
**See statement, p. 195.

sive training an individual could do a pure tone audiogram. Furthermore, I stated that the audiogram was only the first step in the hearing aid procedure.

I do hope this letter as an appendix of my testimony may be included in your report to clear up any misunderstanding. It was a privilege to appear before your committee. I congratulate the committee for its in-depth study and you for your leadership. If I may be of further assistance please let me know.

Best personal regards,

TERRY S. GRIFFING,
Director of Audiology.

ITEM 3. LETTER FROM MILDRED B. SHAPIRO,* DIRECTOR, DEPARTMENT OF HEALTH, STATE OF NEW YORK, ALBANY, N.Y., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 18, 1973

DEAR SENATOR CHURCH: You may recall my testifying before the Subcommittee on Consumer Interests of the Elderly on "Hearing Aids, Hearing Loss, and the Elderly" on September 11, 1973. At that time you asked me in the event Medicare was expanded to cover hearing aids, whether an exception should be made to Part B in that a ceiling be established for aids as a departure from usual and customary fees. My response was in the affirmative.

I would like to call your attention to a precedent already established in the recent regulations for payment for renal dialysis (Part B Intermediary Letter No. 73–22). Acceptance of assignment has in effect become the rule. The regulations for free-standing facilities state ". . . no charge will be made for a covered dialysis service provided by that facility that is in excess of the charge determined under the program to be the reasonable charge of that facility and agrees to bill the program and not the patient for amounts reimbursable under the program." A footnote to that statement is as follows: "The facility may bill the patient the Part B deductible and co-insurance; such co-pay amounts plus program payment would together not exceed what is determined to be the facility's reasonable charge."

I would recommend that any extension of Medicare to hearing aid coverage contemplate the same type of controls in order that the patient be protected from large out-of-pocket expenditures.

Sincerely,

MILDRED B. SHAPIRO,
Director.

ITEM 4. LETTER FROM JAMES P. INCE,** EXECUTIVE SECRETARY, HEARING AID INDUSTRY CONFERENCE, WASHINGTON, D.C., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 25, 1973

DEAR SENATOR CHURCH: Your Commitee's Hearings concerning hearing loss, hearing aids and the elderly served as an excellent medium for acquisition of various opinions and points of view by your Committee. I know you and your staff will ascertain and sort out the facts for proper judgment and recommendations to the Congress.

We are particularly pleased to have your expression of interest in the significant upgrading in competence and reliability that has taken place in recent years in the retail arm of the hearing aid industry, the need for vigorous efforts to get people to pursue surgical or amplification help for handicapping losses, the end for delivery of services to aging Americans in communities throughout the land, and your interest in testimony by the director of a well-managed community speech and hearing facility that the cost of delivering the same instruments and services as are provided by qualified hearing aid dealers would cost some $430, on a non-profit, cost-accounted basis.

We shall be submitting for your review additional materials in the interest of broadening further your Committee's informational resources and correcting a number of errors and misinterpretations in some of the testimony we heard.

The real purpose of this note, however, is to salute you, congratulate you and thank you for being the kind of conscientious elected official who may be counted upon to reach the right judgments concerning the important subject matter of

*See statement, p. 225.
**See statement, p. 188.

your Committee's Hearings. We look forward to further opportunities to work with the Committee and its Staff in any way that we may be helpful in these deliberations.

All best wishes for continuing high achievement.

Sincerely,

JAMES P. INCE,
Executive Secretary.

ITEM 5. ADDITIONAL STATEMENT OF THE HEARING AID INDUSTRY CONFERENCE* CONCERNING HEARINGS SEPTEMBER 10–11, 1973

In addition to an oral statement presented, including discussion with the Committee, which is incorporated in the official transcript of the Hearings, and the additional prepared testimony for inclusion in the record, the Hearing Aid Industry Conference submits the following statement. We believe it is timely with respect to the interests of the Committee and Subcommittee and serves to amplify appropriately the record concerning certain subject matter included in the deliberations of the Committee and the testimony it has received.

Our additional statement follows the chronology of the Hearings, Subheadings identify the Chairman, the Committee Member, or the Witness to whose testimony the additional statement relates.

Chairman Church

Perhaps, for the sake of brevity, the Chairman omitted a connecting link between the HAIC estimate of annual wholesale hearing aid sales to dealers of $60 million and the estimate of retail sales of $175 million by the Federal Trade Commission. The inference from the Chairman's opening remarks is that there is a major discrepancy between the industry's estimate and the FTC's. There is no discrepancy. The difference is simply and wholly the retail markup, rather than any inaccuracy in either the HAIC or FTC estimates.

The Chairman quotes a Rhode Island physician as saying that "hearing aids for persons with otosclerosis will not help the patient and in some cases even delay proper treatment of the hearing loss for several years." Perhaps there is a misunderstanding, but we do wish to offer a correction of that statement. The otosclerotic patient is helped to a greater extent by a hearing aid than virtually any other hearing aid user. If the physician was simply intending to say that otosclerotic patients should be referred for medical evaluation, then we agree wholeheartedly, of course. Hearing aid dealers know when to make such referrals, principally as a result of audiometric tests.

Retired Professional Action Group

As you perhaps know, the RPAG study and report on hearing aids have been widely discredited. If this has escaped the Committee's attention HAIC would be willing to provide a compendium of critical analysis the Nader project has engendered.

In the management, research and report writing there were malicious and intellectually dishonest approaches which tend to nullify the integrity of the report in general. Some splendid research was accomplished, but interpretations and recommendations resulting from the research are uniformly biased.

HAIC requests that RPAG be required to document its testimony at your Hearings just as HAIC or any other witness would expect to do if requested. We challenge it virtually across the board in its references to the role and activities of the commercial sector.

We believe your record would be significantly impaired if many errors in RPAG testimony were left unchallenged, particularly in the following points:

1. In Mrs. Hamburger's statement there is an implicit suggestion that tests and recommendations of the certified clinical audiologists who did the pre-testing are accurate as to the individual participants' need for hearing amplification. Testimony presented by several witnesses, including professionals, explain that there is much room for error in such recommendations, for the recommendation of hearing aids is still much more of an art than a science. Audiometric testing is only the beginning. In many instances, the raw score of hearing threshold is not conclusive as to whether a hearing aid should be recommended or should not be recommended. There is no reason in the world to believe that the recommendations of an audiologist after simple audiometric testing should be more valid than the recommendation of a hearing aid dealer.

*See statement, p. 188.

(This point leaves untouched the question of whether the Baltimore "shoppers" feigned their losses. While there are assertions that dealers should have more training for their work, that probably is true of any occupation. The hearing aid dealer is typically highly qualified to serve persons needing amplification to help their hearing. No occupational group, across the board, does a better job of testing hearing for the purpose of fitting a hearing aid, plus actually selecting, adapting and fitting the aid, than the hearing aid dealer. The dealers have no reason to except persons they consider as prospective customers to be "faking" a hearing loss. When a person goes to a dealer complaining of a hearing loss, the dealer of course takes that at face value and is obliged to help him. Whether in the visitor's description of the problem or in audiometric testing, there is lots of room for the "shopper" to be misleading. It is the easiest thing in the world to delay threshold response in audiometric testing. The dealer cannot be responsible for phony tricks of this type.)

2. Mrs. Hamburger also referred to "confusion" about price. The range she quoted was from $195 to $425 and she implied impropriety causes such a range. I believe the Committee knows the reasons for this kind of range—the type and quality of the instrument and the retailer's own pricing structure. The price variation is neither mysterious nor significant.

Similarly Mrs. Hamburger criticized variations in senior citizen discounts from 10% to 30% or a flat $100 at three different dealers. Those matters are up to the hearing aid dealer on an individually determined basis, just as doctors, pharmacists, medical laboratories or dentists have their varying pricing structures for their products and services.

3. Mrs. Hamburger's testimony implies that no dealer should discuss a hearing aid with a prospective user unless the person has seen a physician. It is further implied that if the prospect has not seen a physician, the dealer should recommend that before any discussion of the hearing problem which may result in the use of a hearing aid. Abundant subsequent testimony discredited that point of view concerning mandatory medical referral before consultation with a hearing aid dealer. HAIC recommends seeing a physician first, but if a hearing-handicapped person uses the dealer as the point of entry there is no harm done. The dealer knows when to make a medical referral.

4. Miss Griesel made a point for the record that the Nader Model Bill was presented "after several months of investigation," seemingly to establish the authoritativeness of the Nader legislative proposal. We should like to remind the Committee that a number of groups have been involved intensively in this kind of legislation every day for nearly ten years. These include seasoned, enlightened spokesmen for the physicians, dealers and manufacturers, as well as the legislatures in nearly all states. Being only human, the people in these various heavily involved organizations have not achieved perfection in their recommendations despite these many years of experience. We suggest to the Committee that credentials for expertise in this field might properly require more than a few months of theorizing and comparison of raw legislative content.

5. RPAG's report of hearing aid pricing is similarly errant. At one point in Miss Griesel's testimony she cites the price of $1,000 for two hearing aids. We believe documentation of that sale would be impossible.

Yet again, the RPAG coordinator's testimony suggests that a consumer who sees a physician before going to a hearing aid dealer is more likely to get the hearing aid "that is best suited for his needs" and that "he will be better off in the long run financially." We have to question that generalization. Miss Griesel acknowledged the subjective nature of that conclusion—"We thought about that a long time." HAIC never wishes to discourage any person from seeing a physician before going to the hearing aid dealer, but RPAG's reasons in these instances are both fallacious. Seeing a physician neither improves the fitting nor saves money. More importantly, the system simply will not work in a great many areas.

Senator Church recognized this fallacy immediately, when he interjected the observation, "That is an arguable position . . ."

6. There is RPAG testimony that suggests that there are "ways to handle the additional costs of the audiological evaluation" in the proposed Medicare hearing aid program. The uneconomic rationale is that, since there is a discount from the list price of hearing aids, that "saving" may as well be expended for the audiological examination. This is unsound economics, of course. The savings resulting from the discounted price should not be used for a service that is superfluous or unnecessary, as we believe the audiological clinic's role would be in the vast majority of cases. We propose that the responsible physician

who is managing the beneficiary's case for the taxpayers can and should decide whether there is need for audiological involvement. In nearly all cases, statistics will show, there is little need for clinical audiology in the routine testing, selecting, fitting, and dispensing process. In most programs in which clinical audiology is automatically included, that extra impediment, inconvenience and expense for the beneficiary and additional expense for the taxpayer is a bureaucratic concept. It adds nothing to the successful fitting of the hearing aid or use of the hearing aid by the beneficiary. The prime point in this segment of our additional statement, however, is that the government should not rationalize unnecessary expenditures of taxpayers' funds based on the concept that some discounts for retail will cover adequately some extravagant, needless costs based on bureaucratic or theoretical reasoning.

7. Mrs. Hamburger made reference to England's public hearing aid plan as if it were successful. The fact is that it has been a dismal and conspicuous failure in cost-effectiveness and from the public health point of view. Government distribution has failed, and now we are told that approximately half the persons who qualify for the unsatisfactory government program acquire their hearing aids at their own expense in the private sector. We question Mrs. Hamburger's credentials to discuss these matters in formal Senate hearings unless her testimony is merely that of an interested lay person who neither uses a hearing aid nor has any connection with the hearing aid field except the brief foray against Baltimore dealers. Her statistics and dollar figures also are highly erroneous and misleading.

8. We question Miss Griesel's statement that the so-called "alternative models" of hearing aid distribution "sell a lot of hearing aids." In some of the examples about which we have heard the operation is subsidized for whatever expenditures are not covered by revenues.

9. Perhaps the Committee would be as interested as the industry in documentation for Miss Griesel's statement that, "We have many consumers that have written us telling us they are now willing and would love to have larger hearing aids of better quality." We have heard of only one person who has made that contention, and he is a freelance writer whose only known article on the subject got headlines simply because of its unconventional approach. If there are others who feel this way, the industry would like to have access to this additional information apparently held by Miss Griesel. All industry experience and research tend to prove the statement is not valid.

10. The Hearing Aid Industry Conference has requested RPAG to correct errors in its testimony concerning the selection of respondents for the Market Facts, Inc., survey. You have a copy of our letter, in which we state that no person or organization in the hearing or hearing aid field had anything to do with the selection of respondents. That was done randomly through a long-standing consumer panel maintained for research purposes by Market Facts.

11. Another inaccuracy in Miss Griesel's testimony is whether Mr. Nader said long before the hearing disability study started that the hearing aid industry is a "fraud." We have provided her with the clippings on that. In her testimony on September 10, she said Mr. Nader was talking about only the cost of hearing aids as a fraud. That is simply a misrepresentation by Miss Griesel.

12. Miss Griesel has said in her testimony that hearing aids may be obtained through certain "alternative models" of distribution for $200. That statement cannot stand alone, for one must add the charges made for professional services, which in many cases exceed $100, bringing the total cost well within the retail range of hearing aids as provided by the commercial sector.

13. We recommend that the Committee obtain documentation for Miss Wilson's statement that a dealer in Houston charges only $7.00 for "a case history, test, and selection of the aid." Presumably this charge, plus the dealer's cost of the aid, is all that is paid for the products and services involved. That is simply not feasible. Also in this connection, Miss Wilson's range for the Master Plan hearing aids is inaccurate. While her testimony said specifically that the range is from $99 to $200, we suggest that the Committee may benefit from a review of the actual Master Plan price list, which goes beyond that range. To the Master Plan selling price must also be added the extra charge for outside professional services.

Kenneth O. Johnson, Ph. D.

We are concerned by the lack of depth and understanding reflected in the testimony of the American Speech and Hearing Association. Because we know that the membership of that distinguished organization is capable of far better analysis and presentation, we can only believe that the superficiality of the testimony on September 10 reflects principally a deliberate decision not to face the

facts. With its vested interest in the production of and employment of ever-increasing numbers of audiologists, dampened by a waning of demand in positions and geographical areas that are attractive to new audiologists, the professional association of audiologists faces a serious problem. We are gratified that the Committee and its staff recognized fatal flaws in the self-serving proposals of the ASHA executive secretary.

The surprising recommendations are such a distinct departure from what we understand ASHA policy to be that we have to question whether the executive secretary was testifying in behalf of his own concepts or in behalf of the Board and Membership of ASHA, a responsible organization.

The following points in the executive secretary's testimony are particularly disturbing and require either (a) clarification as to meaning or (b) confirmation that the points do, indeed, represent current official judgments of the audiologists' professional association:

1. As the Chairman pointed out, the elimination of hearing aid dealers from involvement in the proposed Medicare hearing aid program is simply not workable. It would not only be a cruel disservice to many older Americans who are either homebound or geographically isolated from sophisticated medical and clinical facilities. The ASHA idea is unworkable for Medicare beneficiaries in many sections of the nation. The elimination of some 5,000 qualified hearing aid dealers is simply not realistic. They are an immense public health resource. They are almost perfectly distributed geographically in a fashion that serves every community and every county in America in full-time retail establishments, regularly scheduled part-time service in the smaller communities, and home service anywhere it is desired or necessary.

The suggestion that there shortly will be specialized audiological and medical resources with adequate national distribution is absurd on the face of it. There clearly is no economic demand without massive additional government subsidy.

The suggestion of improved economy in the use of such facilities—if they could ever be brought into existence in the widespread fashion the ASHA executive secretary seems to imagine is possible—is similarly hypothetical. You have access to the testimony of expert witnesses whose testimony indicts either the validity or the integrity of the suggestion that the total cost to the government for a Medicare beneficiary's hearing aid would be under $200, as the ASHA executive secretary has specified.

2. The ASHA executive secretary's statement that the dealer distribution system is defective "and it will not change voluntarily" merits a closer, more objective look. Acknowledging that any system—whether it is in marketing or any other area of endeavor—must be improved constantly, particularly where service to handicapped older Americans is concerned, we wish to point to testimony by a number of non-industry witnesses which details remarkable "change" in the quality and quantity of hearing aid products and services in recent years. This recent progress is certainly the equal of any 40-year-old industry. The executive secretary's remarks reflect at least a willingness to "throw out the baby with the bath water."

Contrary to the testimony of the ASHA executive secretary, the U.S. hearing aid distribution system is a splendid example of the American enterprise system delivering needed products and services in the most convenient and economical fashion in a highly competitive atmosphere in both the manufacturing and distribution areas. As with other products and services in a competitive situation, there is constant refinement and improvement. In the distribution area, just during the years between your 1968 and 1973 Subcommittee Hearings concerning hearing aids, strong advances have been made in dealer competence and reliability, as delineated particularly in testimony presented by the two national associations of the hearing aid industry on September 10 and 11.

3. The ASHA executive secretary's comments about "very great problems relative to the sale of hearing aids to individuals who should not have received them" is inflated out of reasonable proportion. We question the over-selling bugaboo both in terms of magnitude and whether there is possibly a self-serving interest for those who perpetuate and exaggerate the problem.

4. The statements concerning conflict of interest in the distribution of hearing aids by the commercial community is also rather far-fetched, particularly when the ASHA executive secretary is proposing the building of an enormous audiological empire for provision of Medicare hearing aids nationally. This plan itself clearly represents an inherent conflict of interests and hardly lends credence or objectivity.

As to the conflict of interests in the commercial situation, the primary interest served must be that of the consumer, of course. With (a) virtually every consumer a repeat customer or prospective repeat customer of the hearing aid in-

dustry, (b) in a marketing situation in which it is difficult to even give away the product to a first-time user, the idea of conflict of interests would seem rather hypothetical. Explanation: The repeat customer knows perfectly well whether the product and services are useful. In both the first-time and repeat sales situations, the customer is in complete control, of course.

The suggestion that a prospective user can somehow be duped into purchase of a hearing aid is another myth that is perpetuated by people who wish to discredit or replace the competitive system. In every fitting, the customer tries the hearing aid to determine the quality of the amplification and thus is in a perfect position to judge whether he considers the purchase worthwhile. The isolated and uncommon examples of undue pressure or sales trickery are no more prevalent in the hearing aid field than in any other occupation. The idea that commerce and profit should be anathema in health and paramedical products and services should be laid to rest once and for all. Commerce and profit are positive features, which, if practiced in some other areas of the health-care and paramedical delivery systems could quite possibly bring better products and services to consumers at lower prices and less taxpayer subsidy. Here in Washington, we note that the only reduction in per-day hospital costs in recent years has been effected by a proprietary institution.

5. The suggestion that the Veterans Administration system of procuring and distributing hearing aids is "an excellent and successful example" is without foundation. If anything, it is an example of consumer inconvenience, extravagance in government funds, manpower and facilities and abuse of the cross-country network of hearing aid dealers as a proven and valuable public health resource.

6. We presume that the statement that there are 11,000 speech and hearing facilities in the country was a slip of the tongue. If not, the figure is in error by about 1,000%.

David Resnick, Ph. D.

1. We are obliged to question the validity and sincerity of Doctor Resnick's allegations concerning the "product-oriented profit-motivated sales person" and the adequacy of the dealer's training, equipment and skills. Dr. Resnick himself has written professionally testifying that the skills of the audiologists over the dealer are not particularly significant when it comes to fitting hearing aids. Indeed, Dr. Resnick's writings and speeches have questioned whether audiologists do a good job of handling the testing, selection, adapting and fitting of hearing aids. We have commented on the criticism of profit-motivation in the hearing aid field, leaving for comment now the allegation about deficient equipment. We doubt that Dr. Resnick believes that hearing aid dealers have generally unsatisfactory equipment for the tasks which the dealer undertakes—testing hearing on a "one-to-one" to determine whether a medical referral or the commercial fitting of a hearing aid (or neither) is in order. Properly calibrated equipment, as required by an increasing number of state dealer licensing laws and the rules and regulations implementing state laws, is by no means an exclusive asset of clinical audiology.

2. We fear that Dr. Resnick is quite like the testimony of the ASHA executive secretary in his unwillingness to be introspective about the question of conflict of interests. Assuming adequate competency, ethics and business reliability, we see little or no difference in the comparison of conflict of interests of persons in various hearing-field occupations. Because a retailer of products and services happens to have a cash register and actively invites persons to use his services is no reason to assume a selfish zeal to relieve his clients of their funds. We do not generalize this way with surgeons or, indeed, with audiologists. When a surgeon recommends a certain operation or when a physician or dentist advises one or more visits, or when an audiologist recommends a visit to his clinic, in one way or another, each is recommending a step which will cost the client some time and money. The money will redound to the benefit of the surgeon, physician, dentist or audiologist in one way or another. The hearing aid dealer simply rings it up in his cash register, while the others may see the money come in later as a result of a monthly statement for professional services or, in the case of the audiologist, in paychecks from the institution which employs him. The institution requires funds (sales) in order to keep open the doors of the institution in which the audiologist earns his paycheck. The funds in each case, to a large extent, will inexorably wind up as food on the person's table, clothes on his back, gasoline in his automobile, lighting for his office, tuition for his continuing education, or any of a thousand routine expenditures which one uses his income for.

Dr. Resnick demonstrated the alarming extent of his bias concerning dealers in his dialogue concerning optometry and optometrists with the Committee's Minority Staff Director, which is in the Hearings record.

3. We recommend that the Committee obtain a Master Plan price list for the purpose of accurate information. Dr. Resnick's testimony was inaccurate, erring on the low side.

Roy F. Sullivan, Ph.D.

Dr. Sullivan's comments about the paucity of manufacturers' contribution to advancing hearing aid technology represent a critically narrow point of view.

While manufacturers have developed with their own resources some of the most remarkable advances in technology, it is acknowledged that a number of outstanding developments have resulted from the initiative and the research and development investment of suppliers to the industry. The distinction itself is stretching quite far for a negative swipe at hearing aid manufacturers, and we trust that the Subcommittee will put the audiologist's comments in proper perspective.

Where, other than from the sales to manufacturers, would the component suppliers obtain the revenues to invest in research and development? How, additionally, can an industry be faulted when it thus makes a contribution to research and development and, in the last analysis, promotes the well being of the hearing-handicapped?

As you know, the hearing aid industry is small. Individually, the manufacturers cannot undertake massive R&D programs. Their component suppliers can, however, by pooling the revenues received from the group of manufacturers. The results of this system are outstanding, as Dr. Sullivan noted.

Perhaps the greatest product/marketing breakthrough in the past five years was actually the result of research and development funded and directed by an individual manufacturer of hearing aids. It is the "directional hearing" instrument.

Robert J. Ruben, M.D.

The Hearing Aid Industry Conference has initiated a meeting with Dr. Ruben. The goal is to exchange information and points of view concerning his testimony and subsequent charges of inaccuracy he has made about HAIC's testimony.

1. We do not know the source of the physician's information concerning the "cost of manufacturing hearing aids," but we are absolutely certain that his statement that the cost is "about $15 to $35 apiece" is gross error on the low side. We respectfully submit that the doctor may be confusing raw costs of component parts with the "cost of manufacturing." HAIC testimony detailed some of the many significant costs which must be added.

2. It is stated that most hearing aids are sold through franchised dealerships. While the definition of "franchised" may be the heart of this error, we believe that no hearing aid dealer selling the products of any HAIC member company is a franchisee of such a supplying company. Our estimate is that the great majority of hearing aid dealers are authorized outlets with regular purchases from at least three hearing aid manufacturers. In the course of a year, the typical dealer may fit and sell the products of a number of additional manufacturers.

3. As laymen with some knowledge of hearing ailments, some executives of HAIC member companies have respectfully questioned the purpose and emphasis placed by Dr. Ruben on "cancer of the ear." Under questioning by Mr. Oriol, Dr. Ruben acknowledged that the ailment he described "is a very rare type of disease."

Actually, it is probably even less prevalent than "very rare." It is so uncommon that the National Center for Health Statistics includes it as one element in a broader category. Combining acoustic neuroma with optic nerve neuroma, the National Center found that there were 19 deaths in the United States in 1968 from malignant neoplasms of either the optic or auditory cranial nerve. While one death from any disease is a tragedy, from the public health point of view these matters should be kept in perspective.

Actually, we are told that the case which Dr. Ruben reported is one that would not generally be of the type picked up by even the otologist in the hearing aid acquisition system described by Dr. Ruben. The subject gentleman in his 70s, according to Dr. Ruben's testimony, had his hearing aid for "some years" before he noticed some pain and discharge from his ear. Based on the interim time lapse as described by Dr. Ruben, we presume that a physician would have recommended a hearing aid at the outset, and there is no reason to conclude that his inoperable cancer would have been picked up earlier by the medical community. It appears to be an unfair and invalid example if its purpose was to put the hear-

ing aid industry in a bad light. From the facts given, the hearing aid dealer did not fail in any way.

HAIC has testified as to the competency and reliability of hearing aid dealers in making medical referrals based on the presence of a list of criteria developed for instructional and legislative purposes by the industry with the vital expert assistance of distinguished otolaryngologists and otologists.

4. We should appreciate an opportunity to review the data documenting Dr. Ruben's statement about "significant drop in the retail price of the aid" when "profit-making cooperatives have been established or when large retail companies have undertaken the sale of hearing aids."

5. The physician's statement that a hearing aid dealer "has no special electronic nor audiological training" is either untrue or out of perspective. For the purposes of knowing his product line and fitting and selling hearing aids, he typically has at least the training that is necessary and often a great deal more. Perhaps it has not come to Dr. Ruben's attention that hearing aid dealers in various parts of the country are called upon by the professionals—otolaryngologists, otologists and audiologists—to give instruction in the dealer's specialty. His statement that, "There are a few dealers who are quite ethical" is a disappointing understatement and a disservice to the entire hearing-health field. Surely the physician knows that thousands of dealers work intensively and effectively with professionals, being given wide and important responsibilities for insuring optimum hearing success for the professionals' patients. The statement concerning product quality, performance standards of hearing aids and the equipment used routinely by hearing aid dealers is unfortunately in error.

6. We eagerly await an opportunity to see the data concerning the hearing aid program in Toronto, Canada, using aids from England, which Dr. Ruben mentioned. He says they cost the patient or the hospital somewhere between $15 and $20 per aid. We cannot conceive that this is possible and would suggest that the Committee reserve judgments which are in any way related to this statement by Dr. Ruben until data have been received and interpreted.

ITEM 6. THE DISPENSING OF HEARING AIDS BY AUDIOLOGISTS, SUBMITTED BY JAMES P. INCE* EXECUTIVE SECRETARY, HEARING AID INDUSTRY CONFERENCE

[From Hearing Instruments, September 1973]

(By Barry S. Elpern, Ph. D.)

I consider the question of whether or not audiologists should dispense hearing aids to be only one aspect of a much more significant question—can the field of audiology survive? The answer to this question requires a realistic appraisal of what we're doing now so that we can intelligently determine what we should be doing.

It's probably unfair to take advantage of hindsight and criticize the individuals who set the early course for audiology—to point out the things they might have done to avoid some of the problems we are facing now and will have to face in the future. But, their decisions were shaped by the attitudes of another era, and they would have to have been psychics to foresee the political and technological events which have already begun to influence the fate of audiology. Audiology, as we know it, is unique to the United States and, more recently, Canada. The clinical functions performed by audiologists are carried out in every other part of the world by the equivalent of laboratory technicians. And it's a sobering thought that through the years health facilities in other countries have found no need to change their systems for acquiring hearing test data. This philosophy can't be dismissed simply by assuming that these are backward, underdeveloped countries, for we're talking about Germany, the Netherlands, the Scandinavian countries, Great Britain, France, etc. Furthermore, even in the United States, it's probable that 80 percent or more of all hearing testing is done by persons who are not explicitly trained as audiologists. These include industrial nurses and audiometric technicians in industry, nurses and aides in various federal and state health programs such as the Indian Service, ENT corpsmen in the armed services, hearing aid dispensers, nurses and speech therapists and even parents in the public schools and nurses or assistants in the offices of general medical practitioners, pediatricians and otolaryngologists. In this regard, the American

*See statement, p. 188.

Council of Otolaryngology will be distributing a training manual for assistants in ENT offices, the purpose being to provide easily understood instructions in all aspects of ENT practice, including hearing testing.

We, as audiologists, are inclined to react to such disclosures by assuming that the type of testing done by aides, etc., must necessarily be elementary in nature and that more complex test procedures require the skills of a trained audiologist. However, I recall reading within the last year or so, a survey which concluded that 85 percent of all testing done by audiologists could be done as well by technicians with relatively brief training. I don't recall the source of this survey, or any of the details, but on an intuitive basis, the general conclusion seems very reasonable to me. I can't think of one currently used clinical hearing test which is not teachable in a recipe format and which cannot be absorbed and applied by anyone of average motivation and capability. Furthermore, if the thought is distasteful that audiologic tests might be effectively administered in such rote fashion, I would go a step further and suggest that it is entirely within the capability of today's technology to automate all auditory test procedures so that they may be administered by machine. Moreover, I think there is more than a chance possibility that the demand for most diagnostic hearing tests will be decreased or eliminated by state-of-the-art visualization techniques, such as acoustic holography and thermography.

In rebuttal, it might be stated that it's not so much the administration of tests, but rather the interpretation of results which requires the skills and diagnostic insights of a trained audiologist. I would remind you that, regardless of what the audiology books say, conclusions reached on the basis of audiological tests do not constitute a diagnosis. Any senior medical student can differentiate between conductive and sensori-neural hearing loss within a few minutes with a tuning fork. The audiologist requires 20 minutes or more to do the same thing, adding only the dimension of quantification. Beyond this differentiation between conductive and sensori-neural hearing loss, none of the so-called "differential diagnostic" tests has proven reliable or valid enough to contribute materially to diagnosis. In other words, I believe that in the hierarchy of examination results which lead to a final diagnostic conclusion, the auditory tests results are of secondary importance, at best.

Possibly due to some of the factors I have mentioned, some audiologists have drifted away from clinical pursuits and have chosen to concentrate their efforts on "research". Some even go so far as to look with disdain or make deprecating remarks toward their colleagues in clinical practice, implying that clinical audiology is in some way a lower form of endeavor. In my opinion, virtually all audiologists who are engaged in investigative work are confused as to the difference between "research" and "development". Modification or refinement of existing ideas constitutes development, a task usually assigned in industry to engineering technicians. Over a considerable number of years of observation. I have concluded that research, in the strict sense of the term, doesn't occur in the field of audiology. Put another way, I believe that there never has been nor ever can be a discovery of fundamental importance by anyone whose primary field of training is audiology.

Conversely, it is supremely significant that the sum total of our current knowledge about acoustics, neurology and physiology of the auditory system, ear pathology and auditory phenomena is the product of investigation by individuals trained in physics, medicine, physiology, psychology and engineering. All of the clinical test techniques employed by audiologists today, as well as the instruments to implement them, have been developed within disciplines other than audiology. The reason for this is that the doors to places where truly significient independent research may be carried out are closed to the audiologist as a primary investigator and that, in turn, the reason for this is that the audiologist is inadequately trained to be a primary investigator on such projects. By virtue of the limitations imposed by his academic preparation, the audiologist's experimental ambitions are restricted to technical development of clinical examination procedures, as illustrated by the abundance of studies in areas such as speech audiometry, auditory evoked responses, electronystagmography and acoustic impedance. It turns out that most of these procedures were quite fully developed before they were ever adopted for use by audiologists, and that any further refinements which may be forthcoming are destined to be of minor importance.

The point of all this is that what we complacently refer to as our profession rests on an extremely weak foundation, because of the tremendous gap between the audiologist's apparent and real contribution in the study of or service to the hearing handicapped population. If the full force of the laws of supply and demand were ever brought to bear, I would speculate that half to two-thirds

of all audiologists could be replaced by technicians—with no loss of efficiency. Which brings me back to the original question. Can audiology survive? Despite the grim picture I have painted, I believe the answer to this question is yes, but not without some major changes in attitude.

I have presented the premise that the majority of audiologists are providing services which are neither unique nor significant, and that they are, therefore, subject to extinction. So the key to survival seems to be to shift our attention to unique and significant services, the most obvious of which may be found in the earliest concept of audiology—rehabilitation of the hearing impaired. In the mid-1940's, when the military general hospitals were bulging at the seams with men who had been deafened by war, no one was particularly concerned about testing their hearing. What was needed was some way to compensate for or minimize the effects of the handicap so that these patients could be returned to something resembling a normal, productive life. Hearing testing was merely an adjunct to this overall goal. But, somewhere between then and now, the goal became a little fuzzy and the emphasis changed. Audiologists became fascinated with measuring things, with inventing new things to measure and with new tests to measure them. They apparently found something inherently appealing about the concept and practice of hearing testing. It may be that a need for finiteness and concreteness is satisfied, or a fascination with fairly exotic electronic instruments, or the formalized test procedures, or the neat graphs and sets of numbers which ostensibly disclose something useful about the patient. Whatever the attraction might be, it has been persuasive enough to lure the interests of the majority of audiologists more toward machines than people, and resultantly, they have been moved more and more toward their present roles as technicians.

I don't know how many children and adults there are in the United States who have debilitating hearing loss and who are beyond medical or surgical help. Whatever their number, it's a safe bet that no amount of testing will change their lot. What will do some good is an effective rehabilitation effort, and, theoretically, no one is better equipped than a well-trained audiologist to guide the rehabilitation of a hard-of-hearing child or adult. I'm compelled to use the term theoretically because in all too many training centers, course work and facilities germane to auditory rehabilitation are virtually non-existent.

The best available talent in our field has not generally been applied to the problems of aural rehabilitation, although there are reports from time to time indicating that these problems have not been entirely forgotten and that some effort is being made to apply state-of-the-art technology in this area. By far the most promising facet of non-medical rehabilitation at this time is the electronic hearing aid. Intelligent selection and use of a hearing aid appears to provide the most immediate and positive means for directly coping with the effects of hearing loss. We've recognized this for a number of years and there has been a great deal of attention directed toward hearing aids and procedures for evaluating their effectiveness.

A survey of currently used clinical hearing aid evaluation procedures appearing in the September 1972 issue of ASHA, disclosed that the procedure most often used was first proposed more than 25 years ago. The author of this survey cited the continued progress in the manufacture of hearing aids over that period and concluded that, "This implies that either the conventional procedure is still adequtae, that the procedures are of little value, or that the procedures continue to be used as a matter of convention." These three alternatives are not exactly mutually exclusive, since the procedure can be used as a matter of convention whether or not it's still adequate. But the main point is that a fundamental audiologic procedure has persisted, essentially unchanged, for more than 25 years. This is a very sad commentary, especially so if we consider that there is no hearing aid evaluation procedure which even remotely approaches the efficiency or accuracy of analogous procedures employed in the correction of visual defects. Anyone with a vision problem can walk into any optometrist's office with confidence that he has an excellent chance of ultimately receiving glasses which are satisfactory from a performance and cosmetic standpoint. By far the great majority of patients literally see the improvement immediately. Aside from instructions in some cases, counseling is not necessary.

In audiologic practice, on the other hand, counseling seems to have become a major function. What it really is, is a copout. Counseling has become an euphemism for explaining to the patient that, due to flaws in audiologic test procedures and the performance of some hearing aids, dissatisfaction with his hearing aid is his fault because he hasn't "adjusted" to it.

News of this kind of service travels fast, so it's no wonder that, while virtually everyone with a visual defect seeks an examination by an optometrist or

ophthalmologist, there are reports which indicate that less than 30 percent of hard-of-hearing individuals voluntarily seek an audiolgic evaluation. The remainder go directly to a hearing aid dealer and although we all like to assume that the latter patients end up in a less satisfactory situation than the former, there is no convincing evidence that this is the case. Thus, we find today unmistakable signs that the hearing aid dealer's general position is becoming strengthened while the audiologist's position is weakening. This is not because the dealer is necessarily any more knowledgeable, but because he is supplying a unique and significant service. He may have competition from other dealers, but technicians, nurses, aides ,etc., are *not* dispensing hearing aids. As I pointed out earlier, it seems that audiologic services are being supplied by just about everyone but audiologists.

It's understandable that many audiologists share an uneasy feeling under such circumstances, and I believe that this unfortunate situation is the direct result of two ASHA policies. One is the opposition to state licensing through all the years when this could have been relatively easily accomplished. Now, of course, ASHA has reversed its position, but the opposing forces are mobilized and the going is much more difficult. The second is opposition to hearing aid dispensing by audiologists. There was a point in time. if we go back far enough, when selling hearing aids was something of a sordid business often characterized by questionable sales practices and exploitation of hearing aid users.

Predictably, ASHA was overcome with pious indignation. While ASHA's protests to the industry were necessarily polite, its action toward its own membership was, as usual, punitive. ASHA employed the Code of Ethics to assure that no respectable audiologist would get mixed up in such an ugly business. It would appear it never occurred to them that here was a golden opportunity to make a genuine contribution to the hearing handicapped, to really put into practice the very first statement of the Code of Ethics, which decrees that the welfare of the person served shall be considered paramount. If they genuinely considered the patient's welfare paramount and had confidence in the audiologist's training and skills and in his integrity, then this would have been the appropriate time to stop being shocked by the existing conditions and make a move toward improving them. Certainly, not all audiologists even wished to be involved in dispensing hearing aids, as they don't now, but it seems that it would have been completely appropriate to at least make that alternative available.

Such a move would have cleared the way for curriculum expansion, including business courses and additional courses related to hearing aids, so that audiologists could have a foundation for success in that field if they chose to enter it. But ASHA followed a negative, punitive course, ignoring a logical obligation to the hearing handicapped by guaranteeing them that an all important aspect of their rehabilitation would remain in the hands of the least qualified practitioners. By the same action, ASHA also guaranteed the hearing aid dealer that he would not be bothered by direct competition from audiologists, because this would be defined as unethical practice.

The leaders in the hearing aid industry were then, as they are now, unusually astute businessmen who had the foresight to look beyond the sale of a hearing aid to the commercial advantages of "professionalism." Accordingly, they launched a program to urge dealers to develop an awareness of the importance of their own role and to appreciate the position they were in. Here they were, by definition, non-professionals, performing a primary if not *the* primary role in the non-medical rehabilitation of the hearing handicapped. They were urged to realize that, although audiologists were prevented from dispensing hearing aids, there was nothing to prevent the dealer from practicing audiology. A little ASHA oversight. So that's exactly what many did. They picked up some academic background in audiology, either through industry sponsored workshops or at universities, and as might have been predicted acquired substantial competence. In the ensuing years, the new found self-image has led to acceleration and popularity of the upgrading program and along the way dealer licensing legislation at the time of revision of this article, in 36 states.

So, the net result of ASHA's policies has been complete loss of jurisdiction over an important phase of auditory rehabilitation and thereby, violation of the opening statement of its own Code of Ethics. And all because of a fear that commercialism might rear its ugly head, and we might not be able to maintain our objectivity or our image.

Let's talk about objectivity for a minute, particularly in the selection of a hearing aid, since that seems to be a central issue. I wonder if, in his most candid moments of introspection any audiologist actually believes he has the capability or even the wish to be objective? We'd have to be incredibly naive to believe that. I don't know how many hearing aid manufacturers there are in the world—I'd guess something over 70, and each produces more than one type of hearing aid.

So, I think it would be fair to assume that any one audiologist has not even *seen* most of the hearing aids available in the world. And of the ones we have seen, how many have we listened to, if only to get some idea of what the patient must live with or of the acoustic effects of all those adjustments? How many of us have a personal earmold and use it? How many of us believe that the information on a performance curve has any predictable relationship to what's happening acoustically in the patient's ear? Without belaboring the point, there are obviously a number of factors which restrict our impartiality in matching a hearing aid to a person. The fact is that no matter how we try to remain objective in the selection of a hearing aid, we are forced into a situation wherein we are not only not objective, but I submit to you, our judgments are based primarily on non-objective considerations. I further submit that all the clever systems we devise to "assure" objectivity serve only to reassure ourselves and not necessarily to help the patient.

Now, how about image—the way audiologists appear to the public. One indication that I've always been especially sensitive to is that when I tell someone I'm an audiologist, he takes a clumsy try at pronunciation and says, "What's that?" But cheer up, because I'm going to reveal for the first time anywhere. Doc Elpern's tried and proven method for assessing your image.

The first step in my method is to place your own hand in your own pocket and pull out lots of money. If your pocket happens to be empty, then go to a bank and take out a nice, healthy loan. There's probably nothing quite so motivating as a bank loan. Next, find an office space of your own, put your signature on a long term lease and then agonize over whether you've selected the right location. Pay an attorney to incorporate you. Purchase major equipment, office furniture, decoration, stationery and a hundred little items you never realized were so expensive. Pay for telephone installation and services and for utilities. Hire a receptionist. And finally, hang out your shingle, as it were, and wait for the telephone to ring.

One of the nifty aspects of the Elpern plan is the quick results, since it takes just a very short time to acquire a very realistic appreciation of the market value of your image. You start noticing certain changes in your perspective, for example, about the amount of space you need, or the number or secretaries or telephones, or how badly you need to go to a convention.

And there are other changes, like in that intense interest you used to have in basic research, or in your deep concern for consumer welfare, especially after some consumer leaves town owing you $500. It's nothing short of amazing how attitudes and behavior you never thought you were capable of emerge when you're paying the bills out of your own pocket and literally depending on your own ability.

Now, if you believe that this plan would place you at an unfair disadvantage, may I suggest it's not the plan, my friend, but ASHA which has placed you at a disadvantage. Through its restrictive policies, ASHA has seen to it that the only logical road to autonomy and independence is closed to you and that to survive, you are destined to be dependent for your livelihood not on your own image, but rather on the image of some university, some hospital, some speech and hearing center, some physician. In short, you depend on some agency which is offering a unique and significant service. As I said before, not all audiologists wish to be or should be independent practitioners, but provision for a realistic option to do so by choice, without being censured for it, could well have a sweeping, positive effect on the general status of all audiologists. Despite commendable progress in the hearing aid industry's upgrading program, they still have a long way to go, for it's a tremendously complex job for any manufacturer to monitor or control his hundreds of dealers and their salesmen spread all over the country. There are undoubtedly some exceptionally knowledgeable and well equipped dealers. But, in my opinion, on an industry-wide basis, they are exceptional rather than typical, and I believe it will continue to be true that the dealer who acquires the depth of information and clinical skill possessed by the average audiologist will remain a rarity.

I am convinced that any well-trained audiologist with the motivation to do so, can readily pick up any of the specific skills involved in fitting a hearing aid. More importantly, however, the audiologist may be expected to bring to the fitting situation a set of personal attitudes which, again would be found only among exceptional commercial vendors on an industry-wide basis. These attitudes, normally acquired as by-products in any worthwhile training program, effectively prevent the audiologist from exploiting the patient or from knowlingly doing anything which is not in the patient's best interest. With reference to the audiologist who chooses to dispense hearing aids, this may well be the single most valuable commodity he has to sell, even beyond training and experience pertinent to the problem.

Recently, after years of pressure from within the membership, ASHA is considering the dispensing of hearing aids by audiologists. The plan is relatively straightforward. Hearing aids and accessories are to be sold by the dispenser at no profit and all services attending the selection, fitting and follow-up care of the hearing aid and the user are to be charged on a fee-for-service basis. Thus, by failing to heed the lesson of history, ASHA is now destined to relive it. The plan won't work.

The ASHA plan is a joke, a cruel joke which is being played on the unsuspecting patient who is seduced by the promise of an inexpensive hearing aid. The very concept of "non-profit" is dishonesty in its most despicable form, the old con-game of something for nothing and the buyer is always the loser.

The outcome of the ASHA plan can take two forms. The first is that the dispenser can honestly attempt to adhere to the concept, in which case he will go bankrupt due to hidden costs which cannot be charged to the patient. The second is that the dispenser can adjust fees to realistically reflect all costs, in which case the non-profit hearing aid will, without fail, cost the patient more than it would from a commercial source. Once the word gets around, the result will be the same—bankruptcy.

There is one way in which the ASHA plan can work and that's if the dispenser cheats by defraying certain costs with tax dollars. Your tax dollars and my tax dollars. There may be many things wrong with our country, but the free enterprise system isn't one of them, and I would react 100 percent as a hearing aid dispenser and a taxpayer against any attempt by ASHA to enlist tax supported agencies to distribute hearing aids on a so-called "non-profit" basis. I think that by virtue of his training and experience, the audiologist has enough going for him to compete effectively in a free enterprise framework without resorting to the kind of irresponsible dishonesty ASHA is trying to perpetrate.

I've been following fairly carefully all the published material in professional and trade journals related to the question of hearing aid dispensing by audiologists and one of the pervasive themes among who are against the idea is that audiology is a service profession. They seem to have the idea that service is adversely affected by commercial interests, when nothing could be further from the truth. It can be shown by example that the cooperative combination of the two results in mutual improvement. There are teachers and psychologists associated with book and test publishers, physicians and dentists with drug and chemical companies, veterinarians with animal food companies and obvious commercial enterprises involving accountants, architects, nurses, geologists, engineers, physicists, etc. These individuals provide professional services, but they're not ostracized by their national organizations. Quite the opposite. Their national organizations constantly seek and encourage expansion into new applications of their particular skills as a means for enhancing the overall status of the profession. Yet, ASHA, naively persists in ignoring the possibilities of enrichment by cooperation and, in the process, incurs ill-will among other groups involved with the hearing handicapped.

ITEM 7. MEDICARE PROPOSAL OF THE HEARING AID INDUSTRY CONFERENCE, SUBMITTED BY JAMES P. INCE, EXECUTIVE SECRETARY, MARCH 4, 1974

INTRODUCTION

The Hearing Aid Industry Conference supports inclusion of hearing aids in the Medicare program. HAIC has reviewed most of the proposals now under consideration by the Senate Special Committee on Aging to accomplish that objective. From the study the Conference has prepared a proposal that it is confident would result in the maximum benefit for elderly Americans who suffer impaired hearing. The proposition is based principally upon a system that is operating successfully in California, thereby offering Congress the advantage of utilizing a proven, working model.

The Conference proposal will:

1. Offer convenient accessibility for the elderly through established geographical distribution of existing services.
2. Utilize efficiently the current supply of trained manpower in the hearing field—otolaryngologists, hearing aid specialists, and audiologists.
3. Involve lowest outlay of taxpayer dollars.
4. Require virtually no capital expenditure for facilities and equipment.
5. Minimize bureaucratic involvement.

6. Result in prompt implementation upon enactment by Congress.

It incorporates the desirable features of existing systems, utilizes attractive features of other program proposals. It is thus an efficient, economical model for the delivery of hearing services and hearing aids to the elderly.

DEFINITIONS

In the interest of clarity, the following terms are defined:

1. *Audiologist.*—an individual qualified by special nonmedical training in the field of hearing, the testing and evaluating of hearing and the counseling and rehabilitation of persons with hearing loss.

2. *Hearing Aid Specialist.*—an individual engaged in the practice of fitting and selling of hearing aids to individuals with impaired hearng.

3. *Otolaryngologst.*—a physician or surgeon qualified by special training in the prevention, diagnosis, medical and surgical management and rehabilitation of disorders of the head and neck and related structures.

4. *Otologist.*—a physician or surgeon qualified by special training in the prevention, diagnosis, medical and surgical management and rehablitation of disorders of the ear and related structures.

5. *The Practice of Fitting and Selling of Hearing Aids.*—the selection, adaptation and selling of hearing aids, including the testing of hearing for these purposes. The practice also includes the making of impressions for earmolds and counseling and instruction pertaining to the selection, adaptation and use of hearing aids.

6. *Hearing Aid.*—any wearable instrument(s) or device(s) designed for or offered for the purposes of aiding or compensating for impaired human hearing and any parts, attachments, of accessories, including earmold, but excluding batteries and cords.

TESTING REQUIREMENTS

Requests for authorization for hearing aids must include the results of the following tests:

1. Pure tone air and bone conduction threshold test of each ear at 500, 1000, 2000 and 4000 Hz with effective masking as indicated.

2. Speech tests shall include the fololwing:

(A) Speech Reception Threshold (SRT) using Spondee words.

(B) A Speech Discrimination Score (SDS) derived from testing at 40 decibels (dB) above the SRT or at the Most Comfortable Loudness (MCL) using standard discrimination word lists (such as PB or W22) utilizing either recorded or live voice.

(C) Aided speech tests (SRT and SDS) using, standards test materials and procedures utilizing either recorded or live voice.

ELIGIBILITY

It is recognized that the hearing losses of the elderly requiring assistance through amplification result generally from factors such as age, noise exposure, or toxic reaction from drugs, each of which affects hearing differently. Accordingly, it is necessary to establish certain minimum conditions for Medicare eligibility.

Authorization for hearing aids may be granted to those qualified for Medicare benefits only when:

1. Tests of the better ear, after treatment of any condition contributing to the hearing loss, reveal an average hearing loss level of 35 dB or greater [1964 International Standards Organization (ISO)], for 500, 1,000, and 2,000 Hertz (Hz) by pure tone air conduction, or;

2. The difference between the levels of 1,000 Hz and 2,000 Hz is 20 dB or more and the average hearing loss at 500 and 1,000 Hz is 30 dB or greater.

3. The difference between 1,000 Hz and 2,000 Hz is 40 dB or greater regardless of the hearing levels at 500 and 1,000 Hz.

Exceptions to these requirements shall be authorized only by a regional performance review board.

Binaural hearing aids may be authorized only under one or more of the following conditions:

1. The hearing loss is accompanied by legal blindness.

2. A hearing loss meeting any one of the eligibility criteria where the provision of binaural hearing aids is required for employment.

3. A hearing loss meeting any one of the eligibility criteria where the otolaryngologist determines that a monaural fitting is insufficient to restore adequate communicating ability and that such binaural fitting will restore adequate aural requirements for communicating ability.

THE DELIVERY SYSTEM

In the delivery of hearing services and hearing aids to Medicare beneficiaries, the three disciplines of the existing hearing health team shall be used. The otolaryngologist or, in the event such medical specialist is not readily accessible, any other doctor of medicine shall exercise management responsibility for the beneficiary. The involvement of the audiologist and hearing aid specialist shall be determined by the physician.

To increase the reasonable accessibility of Medicare benefits, a qualified beneficiary may initiate his entry by contacting any one of the three participating disciplines (physician, audiologist, hearing aid specialist) who is an approved Medicare provider.

The provider initially contacted shall prepare the appropriate forms and initiate the procedure necessary to apply for medical authorization as follows:

1. When the beneficiary makes the initial contact with an otolaryngologist or other doctor of medicine, the physician shall perform or arrange through other approved Medicare providers tests and consultations as he may deem necessary. If such need for hearing amplification and/or audiological evaluation is indicated, the physician shall complete the authorization directing the beneficiary to a hearing aid specialist or an audiologist. The beneficiary shall select such individual from a roster of approved providers of the services directed by the physician.

2. When the beneficiary makes the initial contact with an audiologist, the audiologist shall perform appropriate tests and evaluations. The audiologist shall initiate the request for medical authorization with required data and recommendation and shall be established as the audiologist provider in the case. The beneficiary is then directed to a doctor of medicine selected from a roster of approved Medicare providers.

3. When the beneficiary makes the initial contact with a hearing aid specialist, the hearing aid specialist shall perform appropriate tests and evaluations. The hearing aid specialist shall initiate the request for medical authorization with required data and recommendation and shall be established as the hearing aid specialist provider in the case. The beneficiary is then directed to a doctor of medicine selected from a roster of approved Medicare providers.

Upon referral of the beneficiary by an audiologist or hearing aid specialist to a doctor of medicine, the physician shall perform such examination as he deems necessary. The physician shall determine further disposition of the case.

In the event the need for audiological evaluation and/or hearing amplification is indicated, the physician shall complete an authorization and shall direct the beneficiary to an audiologist or hearing aid specialist.

Upon referral of the beneficiary to an audiologist, tests, evaluations, and other procedures directed by the physician shall be conducted.

If a hearing aid is authorized by the physician, the audiologist shall refer the beneficiary to the hearing aid specialist.

The audiologist shall provide results of tests and evaluations as required by the Department and shall maintain a copy of such data in his own files for a period of not less than five years.

Upon the physician's or audiologist's referral of the beneficiary to the hearing aid specialist, the specialist shall perform such tests and procedures in accordance with regulations of the Department. The hearing aid specialist shall make earmold impressions, procure an earmold and accomplish the final fitting of the aid and mold.

After selection, fitting, modification and delivery of the hearing aid, the hearing aid specialist shall counsel and instruct the beneficiary in the use and care of the instrument and, without further charge, shall provide additional servicing and counseling up to six visits during the first 12 months subsequent to delivery.

The hearing aid specialist shall submit information concerning tests and procedures required by the Department and results, type, make, model and serial number of the hearing aid furnished; type of earmold furnished; and any other pertinent data required by the Department upon delivery of the instrument.

The hearing aid specialist shall submit duplicate copies of the material to the physician managing the case and shall maintain the same records in his own files for period of not less than five years.

HEARING AID REPLACEMENT; REPAIRS; ACCESSORIES AND SUPPLIES

A hearing aid may not be replaced without authorization and only under the following conditions:

1. Upon presentation of the beneficiary's affidavit of total loss or destruction of the hearing aid. In the event such loss occurs within one year of delivery, no medical re-authorization shall be required.
2. Upon determination and certification by an otolaryngologist or other doctor of medicine that a change in the beneficiary's hearing impairment has occurred requiring a change in the characteristics of amplification beyond the capabilities of the beneficiary's present hearing aid. Such replacement may not occur within one year of the date of delivery.
3. Upon determination and certification of an otolaryngologist or other doctor of medicine that performance characteristics of the instrument have changed substantially, no longer providing the performance characteristics required by the beneficiary in normal use and is beyond repair. Such replacement may be authorized after expiration of manufacturer's warranty or one year, whichever is longer.

Exceptions to these provisions shall be at the discretion of a performance review board.

Hearing aid batteries, cords, receivers, earmolds and hearing aid garments are covered and may be issued by providers without prior authorization.

Prior authorization is required for hearing aid repairs which exceed a cost of $25 per repair service.

PROFESSIONAL STANDARDS REVIEW

Each case (including replacements) shall be reviewed by a performance review board consisting of equal representation of Otology, Audiology and Hearing Aid Specialists, who shall certify that the case has been appropriately handled, or shall recommend further action. Performance review boards shall be established regionally in a manner to be determined by the Department.

Members of the panels shall be appointed by the Department from the list of candidates submitted to the Department by their respective professional organizations.

PROVIDER CERTIFICATION

To assure that the highest quality of performance is available to the beneficiary all providers shall complete certification requirements established by the Department.

The Department shall maintain an accurate roster of the certified providers of Medicare services and shall promulgate such roster at regular intervals.

The otolaryngologist or other doctor of medicine shall be duly licensed by the state in which he practices.

The *audiologist* shall be duly licensed by the state in which he practices. If there is no state licensure, all applicants as audiologists in the Medicare program shall satisfactorily fulfill requirements established by the Department.

The *hearing aid specialist* shall be duly licensed by the state in which he practices. If there is no state licensure, all applicants as hearing aid specialists in the Medicare program must satisfactorily fulfill requirements established by the Department.

RENEWAL OF PROVIDER CERTIFICATION

Certification as providers shall be subject to periodic review as determined by the Department. Re-certification of each provider shall also be contingent upon evidence of completion of continuing education programs approved by the Department.

HEARING INSTRUMENT REVIEW

Technical standards of hearing aids provided in the Medicare program shall be promulgated by the Department in consultation with the Standards and Technical Committee of the Hearing Aid Industry Conference. The Department shall also establish appropriate responsibilities of the hearing aid specialist and manufacturer concerning service and maintenance of hearing aids provided.

PROGRAM COSTS AND REIMBURSEMENTS

A Schedule of Maximum Allowances shall be promulgated by the Department in consultation with an advisory panel composed of representatives of hearing

aid manufacturers, otolaryngologists, hearing aid specialists and audiologists. The advisory panel shall be appointed by the Department.

The Schedule of Maximum Allowances shall set forth the maximum allowable payments for instruments and fees for services rendered.

Determination of such payments shall afford full consideration to all costs associated with the delivery of instruments and services.

The Department shall review the Schedule of Maximum Allowances annually for the purposes of adjustments consistent with economic factors.

The Department shall maintain adequate records of each case and shall promulgate regulations regarding what records must be submitted by each provider in order that reimbursement be made.

PAYMENT FOR SERVICES AND PRODUCTS

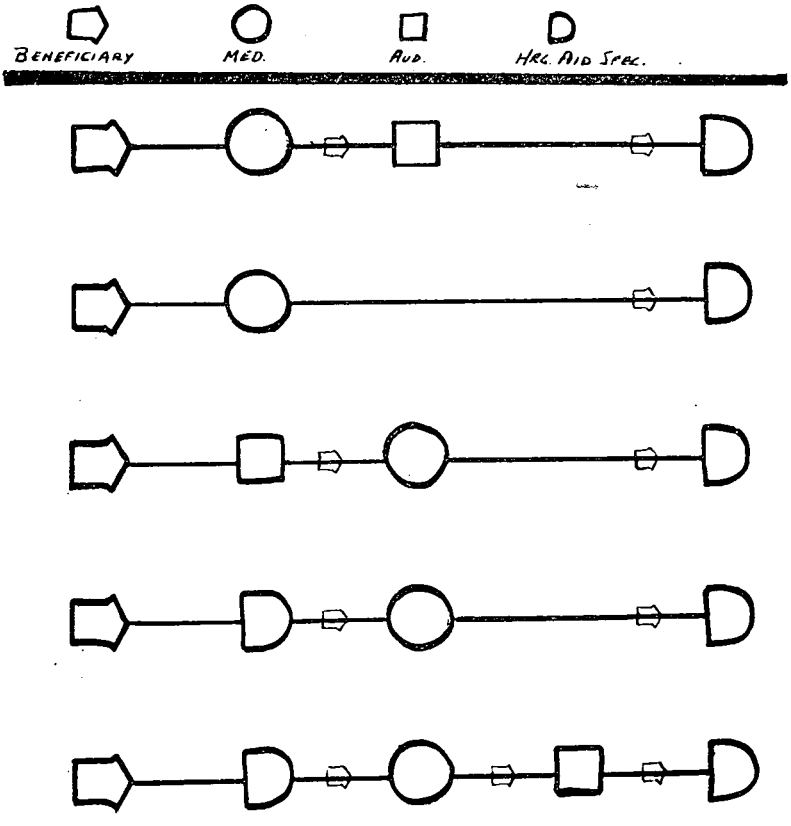
1. The initiating physician, hearing aid specialist, or audiologist shall submit to the Department with the original copies of case data and recommendations a Request for Payment for Authorized Medicare Services, based on the current Schedule of Allowances.

2. Subsequent Requests for Payment, when applicable, shall accompany the reports of services rendered and products delivered by their respective providers, including batteries, cords, receivers, earmolds and hearing garments, and services related thereto, and repairs.

3. Requests for Payment may be rendered at any time following delivery of services or products.

ME ICARE HEARING AID DELIVERY

FLOW CHART



Appendix 2

LETTERS AND MATERIAL SUBMITTED BY SENATOR JENNINGS RANDOLPH* (CHAIRMAN, SUBCOMMITTEE ON THE HANDICAPPED, COMMITTEE ON LABOR AND PUBLIC WELFARE)

ITEM 1. LETTER TO HON. VIRGINIA H. KNAUER,** WHITE HOUSE ADVISOR ON CONSUMER AFFAIRS, MARCH 1, 1973, AND REPLY OF APRIL 9, 1973

DEAR MRS. KNAUER: I read with genuine interest the news items which reported your activity in behalf of the three million hearing aid users in our country. It is my sincere hope that your efforts to assist the telephone and hearing aid industries in resolving this issue will be successful.

As Chairman of the Senate Subcommittee on the Handicapped, I commend your efforts to bring about a solution to the problem that exists for hearing aid users when trying to use the new telephone.

All of us are aware that communication is vital to a hearing-impaired person. As you stated, it would be a disaster if the use of the most common mode of communication, the telephone becomes a useless instrument to the one and one half million Americans who will no longer be able to take advantage of the new model telephone. I share your concern for these one and one half million persons, most of whom are senior citizens whose reliance on the telephone is a way of life. For these people the telephone is generally their only link to their doctor, pharmacist, hospital, and other vital services.

With very best wishes, I am

Truly,

JENNINGS RANDOLPH.

THE WHITE HOUSE.

DEAR SENATOR RANDOLPH: I was delighted to receive your recent letter expressing your interest in and support for efforts to resolve the problem of incompatibility between the new generation of telephones and existing hearing aid devices.

I certainly intend to look further into the efforts of the hearing aid industry and the telephone companies to bring to an equitable resolution this problem which has been developing for those with severe hearing problems over the course of years. I will be pleased to keep your staff further advised of our efforts.

Thank you again for your expression of interest and support.

Sincerely,

VIRGINIA H. KNAUER.

Special Assistant to the President for Consumer Affairs.

ITEM 2. LETTER TO MR. DEAN BURCH, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION, JUNE 18, 1973, AND REPLY OF JULY 9, 1973

DEAR MR. BURCH: The New York Times of May 28 (copy of Story enclosed) indicates that for the last seven years the Hearing Aid Industry Conference and A.T. & T. have known about and discussed in inter-industry sessions the problem of incompatibility between the new generation of telephones (which eliminate magnetic leakage) and existing hearing aids of the very hard of hearing which are equipped to pick up such leakage.

I understand that since Mrs. Virginia Knauer, Special Assistant to the President for Consumer Affairs first made public this problem of incompatibility, A.T. & T. has proposed a solution based on the marketing to the very hard of

*See statement, p. 186.
**See statement, p. 177.

hearing of an acoustic coupler (with an estimated cost of $5 apiece) which, when strapped to the new phones would again render them compatible. Because the new "solution" will apparently result in a further expense to the handicapped who did not create this problem, several questions have occurred to me which I believe the FCC should consider.

1. When the decision of the telephone industry to move forward with the new phones was apparent to both industries, what obligation to inform their customers was imposed on both industries, and how did they discharge this obligation? During the seven year period, were the purchasers of hearing aids and telephone services told about the inevitable problem?

2. Have both industries over this seven-year period expressly or impliedly guaranteed continued service from their respective pieces of equipment?

For example, if I buy a hearing aid with special (and no doubt more expensive) equipment to pick up magnetic leakage isn't there an implied representation that it will continue to be workable (compatible with telephones) if kept in good working order? Is the withholding of information about incompatibility (should such withholding be found to be the case) a fair trade practice?

3. What, in the opinion of the FCC, is an equitable solution to the problem of those hard of hearing who have purchased equipment and service over the last seven years with reasonable expectations of continued good service?

Your consideration of the above matters will be greatly appreciated by the Subcommittee on the Handicapped. A similar letter is being sent to the FTC.

Truly,

JENNINGS RANDOLPH,
Chairman, Subcommittee on the Handicapped.

FEDERAL COMMUNICATIONS COMMISSION,
Washington, D.C., July 11, 1973.

DEAR SENATOR RANDOLPH: This is in response to your letter of June 18, 1973, regarding compatibility of use of hearing aids in conjunction with telephones. You had enclosed a copy of a news article which appeared in the New York Times on May 28, 1973.

The thrust of the article in the New York Times would lead uninformed persons to believe that hearing aids will not function in conjunction with telephone instruments of newer design which do not have excess stray magnetic flux leakage. This simply is not wholly accurate.

If a hearing aid functioning in its normal acoustic pickup mode works satisfactorily for face to face conversations, it should work reasonably well with all telephone instruments. However, hearing aids using the acoustic pickup mode for telephone conversations will also acoustically pick up undesirable local ambient background sounds of the type which may annoy telephone users who have unimpaired hearing. Such undesirable background noise for hearing aid users can be eliminated through the substitution of an inductively coupled pickup mode for the normal acoustically coupled pickup mode in the hearing aid instrument. Thus, certain hearing aid instruments are capable of being selectively switched to either mode of pickup.

In the inductive coupling mode, it has been the hearing aid industry practice to electromagnetically (inductively) couple the hearing aid pickup to telephone instruments through the excess stray magnetic flux leakage surrounding the receiver element in the handpiece of the telephone instrument. The older types of receivers, which have excess stray flux leakage, are relatively inefficient and are being replaced by a more efficient type resulting in great savings in cost and conservation of materials which are in short supply. Unfortunately, such replacement receivers do not have a strong stray magnetic flux field sufficient to support their effective coupling to hearing aid instruments through the inductive mode, and therein lies the dissatisfaction to which you refer.

To the best of my knowledge, we were first alerted on this matter in August of 1969 when a person, who has a hearing impediment, moved to a General Telephone Company area from a Bell Telephone Company area where older telephone receivers were in use. He experienced difficulty in attempting to inductively couple his hearing aid to the General Telephone Company instruments.

The General Telephone Company for some twenty years has purchased or manufactured and installed telephone sets with receiver units which *do not* have an

excess magnetic flux leakage. This explains why the complainant could not utilize the inductive coupler in this hearing aid in the General Telephone Company territory. We understand that between 5 and 10 percent of the telephone instruments in the operating territories of the United Telephone Company do not contain an excess magnetic flux leakage and about 10 percent of the Bell Telephone System's telephone instruments do not. In Europe, most telephone instruments also *do not* have high magnetic flux leakage and thus the problem with inductive coupling appears to be quite universal. The present trend appears to be a phase-out of receivers with high magnetic flux leakage.

In reply to your question, we have not placed any obligation on the hearing aid industry, or the telephone industry with regard to requiring them to provide inductive coupling features in their instruments. We do not have regulatory jurisdiction over the hearing aid manufacturing industry and, similarly, lack primary jursdiction over telephone sets which are a primary part of the facilities used in providing exchange telephone service. As you may know, the Communications Act specifically excludes the Federal Communications Commission from any authority with respect to charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate and exchange telephone services of any telephone company; such local service matters are subject to the regulatory authority of State commissions in the various States.

At least as early as 1966, the telephone industry has been in touch with the Hearing Aid Industry Conference and the National Hearing Aid Society concerning telephone usage by persons with hearing impairment, and hearing aid suppliers such as Radioear have been instructing their customers regarding the best use of the telephone when using a hearing aid, including information regarding certain telephone instruments not being usable with inductive pickups.

In cooperating with the hearing aid industry to accommodate hearing aid users who wish to use the inductive coupling pickup mode when using a telephone without excess stray magnetic flux leakage, a number of years ago Bell Telephone Laboratories designed and manfactured a substantial number of prototype electromagnetic-acoustic coupler units which were turned over to the hearing aid industry for evaluation and manufacture on a royalty-free basis. This coupler is a small unit which the user places in contact with the receiver end of the telephone instrument; the coupler is activated by acoustic sound from the telephone earpiece and generates an electromagnetic field of flux for coupling the inductive pickup of the hearing aid. It is estimated that such couplers could be manufactured and sold for about $5.00 apiece. There is no dispute that the couplers work satisfactorily, but the hearing aid industry has shown little interest in manufacturing such units, which could be substantially reduced in size in comparison to the prototype units. However, based on recent discussions between telephone company spokesmen and the Hearing Aid Industry Conference, it appears that HAIC is going to give further consideration to the possibility of its members manufacturing the coupler. Representatives of the Bell Telephone System have indicated that they are inclined to manufacture the coupler and sell it without profit if the hearing aid industry does not undertake its manaufacture. Though we do not yet have a positive answer on this point, it appears that it is not unreasonable to expect that hearing aid users who insist on using inductive coupling to the telephone instrument be required to use their own couplers with telephones which do not have excess stray magnetic flux leakage. It is represented that the acoustic coupler will have a much longer life than a hearing aid which is said to have an average service life of 3.25 years.

Generally, the telephone industry has been cooperative in providing, upon request of persons having impaired hearing, for their home and offices the older types of telephone sets which have high magentic flux leakage. We believe that they intend to continue to do so.

I appreciate your giving me the opportunity of making our views known on this matter and trust that we have been of some assistance in that regard. Please be assured that we will continue our efforts to keep abreast of developments.

Sincerely,

DEAN BURCH, *Chairman.*

ITEM 3. LETTER TO MR. LEWIS ENGMAN, CHAIRMAN, FEDERAL TRADE COMMISSION, JUNE 18, 1973, AND REPLY OF SEPTEMBER 7, 1973

DEAR MR. ENGMAN: The New York Times of May 28 (copy of story enclosed) indicates that for the last seven years the Hearing Aid Industry Conference

and A. T. & T. have known about tue discussed in inter-industry sessions the problem of incompatibility between the new generation of telephones (which eliminate magnetic leakage) and existing hearing aids of the very hard of hearing which are equipped to pick up such leakage.

I understand that since Mrs. Virginia Knauer, Special Assistant to the President for Consumer Affairs first made public this problem of incompatibility, A. T. & T. has proposed a solution based on the marketing to the very hard of hearing of an acoustic coupler (with an estimated cost of $5 apiece) which, when strapped to the new phones would again render them compatible. Because the new "solution" will apparently result in a further expense to the handicapped who did not create this problem, several questions have occurred to me which I believe the FTC should consider.

1. When the decision of the telephone industry to move forward with the new phones was apparent to both industries, what obligation to inform their customers was imposed on both industries, and how did they discharge this obligation? During the seven year period, were the purchasers of hearing aids and telephone services told about the inevitable problem?

2. Have both industries over this seven-year period expressly or impliedly guaranteed continued service from their respective pieces of equipment?

For example, if I buy a hearing aid with special (and no doubt more expensive) equipment to pick up magnetic leakage isn't there an implied representation that it will continue to be workable (compatible with telephones) if kept in good working order? Is the withholding of information about incompatibility (should such withholding be found to be the case) a fair trade practice?

3. What, in the opinion of the FTC, is an equitable solution to the problem of those hard of hearing who have purchased equipment and service over the last seven years with reasonable expectations of continued good service?

Your consideration of the above matters will be greatly appreciated by the Subcommittee on the Handicapped. A similar letter is being sent to the FCC.

Truly,

JENNINGS RANDOLPH,
Chairman, Subcommittee on the Handicapped.

FEDERAL TRADE COMMISSION,
BUREAU OF CONSUMER PROTECTION,
Washington, D.C., September 7, 1973.

DEAR CHAIRMAN RANDOLPH: This is in further reply to your letter to Chairman Engman of June 18, 1973 concerning the problem of incompatibility between the new generation of telephones (which eliminate magnetic leakage) being installed by AT&T and hearing aids which have the capability of picking up magnetic leakage.

Your letter posed several questions which you felt should be considered by the Federal Trade Commission. At the outset, however, I should make it clear that the provisions of the Federal Trade Commission Act exclude common carriers such as AT&T from the jurisdiction of the Federal Trade Commission. The Federal Communications Commission has the basic regulatory function in the case of AT&T. Your first question dealt with the responsibility and efforts of both AT&T and the hearing aid industry to inform members of the handicapped public of the changes which were and are taking place in this area. While the Commission staff's investigation has not yet been completed. I understand that the efforts which have been made to inform members of the handicapped public have been minimal at best.

Your second question asked whether AT&T or the hearing aid industry have expressly or impliedly guaranteed continued service in the magnetic mode from their respective pieces of equipment. Again, my response is based on the interim report I have received from my staff. It seems to me that the potential limitations on its usefulness may be a material fact, the disclosure of which is mandated by Section 15 of the Federal Trade Commission Act.

Your third question asked the opinion of the Federal Trade Commission as to an equitable solution to the problems caused by AT&T's phasing out of the phones which produce magnetic leakage. At this stage in the Commission's investigation of this matter, it appears that this problem is capable of being satisfactorily addressed in two basic ways. The old style phones (with magnetic leakage) can be installed in the home or office upon request of the handicapped

customer. In instances in which this alternative is not feasible, an acoustic coupler can be installed (permanently or temporarily) on the non-magnetic leakage phones to convert the acoustic (sound) signal to a magnetic signal. AT&T has developed such an acoustic coupler and hopes to be able to supply it to the handicapped public at cost (between $5 and $15) sometime next spring. AT&T has provided twelve working copies of their latest model acoustic coupler to the hearing aid industry so that it can have the benefit of AT&T's research in further refining the acoustic coupler to the needs of their customers. One very important benefit of the acoustic coupler is that it will enable those wearing hearing aids with a magnetic mode capability to use that capability on all phones. As you may know, only AT&T phones emit the magnetic leakage upon which this mode relies. Thus, approximately 20% of all phones in the United States and almost all foreign telephones have never been compatible with the magnetic mode.

Unfortunately, it appears that the handicapped public is largely unaware of the potential of the magnetic mode of using the telephone or the limitations thereof. The education of the public seems to be the most important task at hand. I believe that it is the appropriate function of the regulatory agencies involved to do whatever they can to encourage this educational process.

Sincerely yours,

GERALD J. THAIN.
Assistant Director for National Advertising.

ITEM 4. HEARING AIDS, ARTICLE FROM "CONSUMER REPORTS", MAY 1973

I. WHAT THE BUYER SHOULD KNOW

(I am just as deaf as I am blind. The problems of deafness are deeper and more complex, if not more important, than those of blindness. Deafness is a much worse misfortune. For it means the loss of the most vital stimulus—the sound of the voice that brings language, sets thoughts astir, and keeps us in the intellectual company of man—Helen Keller)

Helen Keller was totally deaf from infancy; she could not be helped to hear. Most persons with impaired hearing are partially deaf; they often can be helped. Much of the time, however, partial deafness goes uncorrected.

A pity. Even partial deafness causes enormous problems. Children with that handicap are sometimes mistakenly marked down as slow-witted. Adults may suffer strained relations with those forced to shout or repeat themselves. People of any age risk physical danger from things that they can't hear.

Why does hearing loss so often go uncorrected? Partially deaf persons may try to conceal their condition for fear it will set them back professionally or socially, or to deny advancing years. Vanity may play a part, too, as may ignorance of the kind of help available. But certainly, one important reason many people remain unhelped is the high price of hearing aids. Those tested for the Veterans Administration by the National Bureau of Standards, and reported on in this issue, have an average list price of nearly $350. Their individual components are worth, on the average about $30. Later, we will discuss some of the forces that push up the price of hearing aids.

WHO CAN BE HELPED?

Loss of hearing may be caused by any number of things: too much earwax, an infection, certain diseases (such as measles or meningitis), a reaction to antibiotics, a head injury or a congenital defect. Perhaps the most common cause of all is a condition called presbycusis, a natural condition of aging. Almost nobody over 65 can hear as well as he did when he was 25.

Whatever the specific cause, there are two broad categories into which all hearing loss falls—"conductive" and "sensorineural." Conductive loss results from a failure in some part of the physical linkage of tissue and bones that conducts sound impulses to the nerve centers of the ear. A conductive hearing loss usually blocks and muffles sound uniformly, as you would by covering your ear with your hand. Sensorineural loss results from damage to the nerve centers in the ear, the nerve pathways to the brain or perhaps to that portion of the brain that receives and interprets audio nerve signals. It is characterized by the inability to hear particular sound frequences, or tones. That may lead to a great deal of difficulty

in understanding certain words and letters in normal speech. For example, "s" may be confused with "f" because the tones that differentiate them are suppressed. Sensorineural loss is also frequently accompanied by increased sensitivity to loud sound, giving discomfort or pain, and by rattling and buzzing sensations. It is not at all uncommon for a person hard of hearing to be suffering from both kinds of loss.

Most conductive losses can be corrected by surgery. But nearly all sensorineural losses cannot be corrected surgically or medically. People with sensorineural loss usually have no other recourse than to be fitted with a hearing aid, which will be helpful in many, but not all, cases.

If you have difficulty hearing, the first thing to do is to consult a medical doctor—preferably your family physician. He may decide that the problem is beyond his training and competence, in which case he'll probably refer you to an otolaryngologist or otologist. An otolaryngologist is a physician specializing in ear, nose and throat cases. An otologist is an otolaryngologist who further specializes in ear problems only. (For the sake of simplicity, we'll use the term otologist to describe both kinds of specialists.) It is possible, of course, to go directly to an otologist; you can find the names of those practicing nearest to you by calling your local medical society. The important point is to seek competent medical help.

(More is at stake than the loss of hearing. Occasionally, oncoming deafness is due to serious pathology close to the body's path of hearing—a tumor, for instance. A medical diagnosis could be of lifesaving importance.)

If the otologist determines that a hearing aid will help you, he will give you extensive hearing tests himself or refer you to an audiologist for further evaluation. Audiologists are nonmedical, university-trained specialists who are skilled in evaluative and rehabilitative services for people with speech and hearing problems. A reliable indicator of an audiologist's skill is his possession of a Certificate of Clinical Competence issued by the American Speech and Hearing Association, the professional body that governs the field of audiology. That certificate should not be confused with the designation of Certified Hearing Aid Audiologist displayed by many hearing-aid dealers and granted by the National Hearing Aid Society, the dealers' trade association. A certified member of the professional organization has had to comply with much sterner training requirements than a member of the trade association.

One hitch is that it may take time and effort to get professional help. There is a distinct shortage of otologists and certified clinical audiologists. A second hitch is that professional help may cost a sizable sum. Fees vary throughout the country, of course. In the New York City area, we were told, an otologist's examination, including hearing test, would cost from $25 to $40, with the fee on the lower side of that range if the doctor refers you to an audiologist for more testing (which probably means he does less testing himself). The audiologist's fee for tests and follow-up exam can be expected to be from $20 to $30. An otologist in a Los Angeles suburb told us that he charges $12 for an initial medical checkup and $16 for a hearing test on the second visit. (But in downtown Los Angeles, he said, otologists charge $25 for hearing tests.) The audiologist with whom he works closely then charges $30 for a hearing-aid evaluation. Although we can't claim that those examples are typical for all areas, they indicate that it's not unusual to pay $60 or more for a proper introduction to a hearing aid.

THE HEARING TEST

The battery of tests in an audiological examination are of two types. One type employs an electrical device called an audiometer to determine the patient's ability to detect pure tones of various pitches. The second type investigates his comprehension of certain spoken words.

Both the pure-tone and spoken-word tests are performed with varying degrees of sound intensity, usually measured in decibels (dB). The number of decibels of a sound is derived logarithmically from the number of times that sound is stronger than the weakest sound audible to the normal ear. The more decibels, the stronger the sound.

Among other things, the ear specialist tests for two important limits at frequencies deemed important for speech intelligibility: the "threshold of hearing" and the "threshold of discomfort." Your threshold of hearing is the weakest sound you can hear. Your threshold of discomfort is the loudest sound you can hear without distress. A sound slightly louder than your threshold of discomfort

marks your "threshold of pain," the point at which your ear will hurt. A person with normal hearing has a threshold of hearing of 0 dB and a threshold of discomfort of about 120 dB. In tests for loss of hearing, an elevation of the threshold of hearing is generally the most significant finding. The table below shows how, as the threshold rises in the general speech frequency range, the degree of impairment becomes more severe.

Threshold shift (decibel)	Characterization	Effect
0–15 (in the worse ear)	Normal	No difficulties.
15–30 (in the better ear)	Near normal	Difficulty with faint speech.
30–45 (in the better ear)	Mild impairment	Difficulty with normal speech.
45–60 (in the better ear)	Serious impairment	Difficulty with loud speech.
60–90 (in the better ear)	Severe impairment	Can hear only amplified speech.
90 or more (in the better ear)	Profound impairment	Cannot understand even amplified speech.

The range from the threshold of hearing to the threshold of discomfort is called the "dynamic range." With some conductive hearing losses, the threshold of hearing shifts upward by the same number of decibels in all frequencies, so that the dynamic range is uniformly compressed. With others, the threshold of discomfort also shifts upward, so that one can tolerate louder sounds than previously.

Sensorineural hearing losses can be more complicated. Often, the threshold of hearing shifts differently for different frequencies. Thus, you might be able to hear a bass tone normally, a mid-range tone starting at 30 dB and a high treble starting at 50 dB. To further complicate matters, the threshold of discomfort is apt to fall, narrowing the dynamic range. A person so afflicted may ask you to speak louder because he can't hear you; then when you raise your voice moderately, it seems to him you're shouting. There are still other variations in sensorineural loss—for example, "holes" or gaps in the audible frequency range that prevent certain isolated tones from being heard normally. Complex and patternless sensorineural losses make the audiological specification of a hearing aid extremely difficult.

Adding to the difficulty are as yet unresolved questions in hearing-aid technology: Should an aid be designed to give the wearer tonally even sound, by strongly amplifying only those tones heard most poorly? Or will an aid work just as well if it provides equal amplification of all frequencies or perhaps a moderate emphasis in the treble tones? On the answers to those questions, there is not complete agreement among hearing specialists.

THE HEARING AID

The important components of a hearing aid are a microphone to pick up sound, an amplifier to boost the loudness of the sound, a receiver (or earphone) to deliver the sound and a battery as a power source. Nearly all aids in use are air-conduction types, which put the sound directly into the ear canal through a molded ear piece. Bone conduction aids, which direct the sound against the skull, usually the mastoid bone behind the ear, have limited applications.

Four styles of air-conduction aids are in common use. The smallest is worn in the ear. Because it is so tiny, it can't provide powerful amplification and is used only in cases of mild hearing loss. The largest and most powerful aids are worn on the body, usually in a front pocket, with only the receiver extending by wire to the ear. Drawbacks of the body aid are that the microphone picks up rustling noises from the user's clothing and may be blocked by heavy overclothing.

But 80 per cent of the hearing aids in use are of moderate size and intermediate power. They fall into two types: behind-the-ear (or over-the-ear) aids, the familiar half-moon shaped apparatus worn between the ear and head; and eyeglass aids, contained in the temple of the eyeglass frame.

The useful amplification of a hearing aid is referred to as "average gain," measured in decibels over normal voice frequencies. An aid with an average gain of 50, which would put it in the moderate-power class, can amplify sound 50 dB. The VA classifies hearing aids in three overlapping power categories: strong (as high as 65 dB), moderate, and mild (as low as 30 dB). Because of the overlap, some aids appear twice—and are given different performance scores in each case—in the VA ratings.

To prevent pain and damage to the ear, aids have a limit to the loudness they can produce. That limit is called the "maximum power output," also measured in decibels. It's usually set around the threshold of discomfort. Thus, if an aid with an average gain of 60 dB and a maximum power output of 120 dB receives a sound of 80 dB, it won't boost that sound to 140 dB, but cut it off at 120 dB. The average gain and maximum power output needed by any one person is determined in the audiological evaluation, although even those averages will not fully describe a hearing loss that is different for different frequencies.

Even when an aid is well fitted and working properly, most first-time users go through a period of adjustment. The quality of the sound, especially non-speech sounds, is more "brassy" than would normally be experienced. That's due in part to the hearing aid's limited frequency range. It takes close to the full range of normal hearing, about 50 Hertz (Hz) to 10,000 Hz, to provide reasonably accurate timbre the quality given to a sound by its overtones. Most hearing aids work in a narrower range of about 500 to 4000 Hz. which is sufficient to make speech sound intelligible but not entirely natural. Then, too, hearing aids don't handle all tones evenly, further distorting sounds. Finally, many wearers of hearing aids find themselves unable to "tune out" distracting noises, as a person with normal hearing does; everything, from a slamming door to a jet flying overheard, sounds unnaturally loud and jarring. With patience, however, and perhaps rehabilitative therapy under the direction of a qualified audiologist, most people can adjust to the imperfections of hearing aids. Most often they're glad to in return for the simple blessing of being able to understand what other people say.

But the blessing of being able to communicate easily is not conferred on a lot of people who are hard of hearing. The reasons are various, and they build up in a progression of medical, technical and economic realities.

First, the degree and quality of hearing loss can be difficult to determine precisely, even by medical specialists or trained audiologists. Judgments based on responses from patients are more subjective than the experts would like.

Second, no single model of hearing aid can come close to compensating completely for any type of hearing loss.

Third, the hearing specialist is severely handicapped in referring patients to a hearing-aid dealer by the bewildering profusion of aids on the market (500 or more) and by the shortage of unbiased technical information about them.

Fourth, the hearing specialist lacks a reliable means of prescribing a hearing aid with performance characteristics similar to the ones he wants for his patient. He may specify the patient's needs in such characteristics as frequency-response curves, gain, maximum power output and freedom from distortion. But a hearing-aid dealer has little way of relating those specifications to his own wares. It is likely that if 10 people were sent to 10 different dealers with the same specifications, they would come back with 10 different hearing aids. CU wishes that there were a universal performance-specification prescription method, akin to the method used in prescribing eyeglasses. For the present, though, it seems that the most practical way for otologists and audiologists to prescribe hearing aids is to name them by *brand and model.* We don't presume that we can supply all the answers needed to prescribe directly by brand and model, but we do hope that the VA ratings and accompanying text will provide useful preliminary information for hearing experts.

Fifth, there's a seemingly insoluble economic problem.

In terms of technical complexity, a hearing aid is not much different from the audio-amplifier section of a transistor radio, with a microphone added. But the average price of the aids in the VA ratings is nearly $350. You could buy at least 10 complete transistor radios for that price. Why do hearing aids cost so much?

The very question was the subject of a 1962 investigation by the Senate Subcommittee on Antitrust and Monopoly. Testimony before the subcommittee brought out the fact that hearing aids are not particularly expensive to manufacture. To verify and update some of the Senate findings, CU asked a small manufacturer of hearing aids if he would be willing to tell us how much the parts cost to build his aid. The manufacturer wrote:

"Our cost for component parts in our . . . hearing aid is as follows:

One Knowles magnetic microphone at $6.10
One Knowles magnetic receiver at $6.10
Three Siemens transistors at 44¢ each
Seven Siegert resistors at 10¢ each
Six Component, Inc. capacitors at 35¢ each

We make the volume control, battery compartment and plastic shell. A few cents worth of wire, electrical and mechanical insulation goes into each hearing aid."

The itemized parts, the same parts widely used by other hearing-aid manufacturers—cost $16.32. The remaining parts cost perhaps $8 bringing the total for all parts to well under $30. Labor and all other costs, including substantial advertising and promotion, would bring the total manufacturing cost today, by generous estimate, to about $75 for the average hearing aid. The manufacturer sells the typical aid to the dealer—as near as can be reckoned from the information we have—for slightly less than twice his costs. That's about $140 for an aid retailing for $350.

It takes some agility of reasoning to justify a retail price of two and a half times the wholesale price. Dealers defend their disproportionately large markups by pointing to low-volume sales. And maybe they have a case—but only because the present marketing system has encouraged it. About 5000 dealers in the U.S. must divide up annual sales of about 500,000 hearing aids. That's an average of 100 sales apiece—not much to keep a business going unless one charges fancy prices. Perhaps one reason for the low sales is that dealers tend to push only one brand.

Fewer dealers carrying and promoting a wider variety of brands—running hearing-aid supermarkets, so to speak—would undoubtedly force prices down. How far down is hard to say. One New York City dealer who sells a multiple line of aids, without favoring a particular brand, estimates that high-volume sales would make a 30 per cent price reduction both possible and profitable. And there exists solid evidence that the price could be reduced much further than that. In fact, we report separately (above) on two models that list for no more than $90. Regrettably, neither would have scored very well in the VA tests, we think. But, then again, neither fell so far behind some of the VA test models in performance as to explain a price differential of $200.

Hearing-aid dealers contend that they have to devote an inordinately large amount of time to testing, fitting and following the progress of their customers. Maybe so, but except for repairs to defective models, CU believes, any unprofitable time expended is largely time wasted. Testing is a job for otologists and audiologists—not for a dealer with sales in mind. The patient's difficulties in adjusting to a hearing aid should be eased by *professional* advice, not advice from a dealer. As for fitting the earpiece, dealers customarily charge for that.

Dealers also argue that hearing aids would be cheaper if there weren't such widespread customer resistance. It's quite true that many who are hard of hearing—millions by almost any count—haven't availed themselves of an aid. Even an executive of the American Hearing and Speech Association, a group generally critical of dealers, has conceded, "The hearing aid industry is faced with the task of trying to sell hearing aids to individuals who need them but don't want them." But CU believes that at least some of the resistance would disappear if prices came down.

Finally, there is the common misconception that quality necessarily equates with price. Take, for example, the experience of a Salt Lake City dealer who tried to sell his hearing aids for nearly $100 less than competitors with the same brand and model. He said his potential customers told him, "Well, if you sell this for $210 and your competitor sells it for $309, there is something wrong with your product." His aids were identical, of course, to his competitors, but how were people to know?

WHEELING AND DEALING

Ignore wild advertising—ads promoting aids that operate on a new scientific principle, that can be worn invisibly, that can cure any hearing problem whatsoever. If such claims were valid, the medical fraternity would long since have beaten a path to the manufacturer's warehouse door. The Hearing Aid Industry Conference (the manufacturers' association), the National Hearing Aid Society (the dealers' association) and the Federal Trade Commission all prohibit unethical advertising. No reputable dealer will make promises of efficacy.

Actually, no one is in a position to promise you sure relief from a hearing loss. But you're best off seeking medical and audiological advice first. Yet 70 per cent of the 500,000 people who bought hearing aids last year went to a dealer. One of the many possible consequences of buying a hearing aid without proper medical consultation is related in a letter from a CU reader.

She writes: ". . . in February 1968, I had been pressured into buying a [hearing aid] directly from a . . . salesman. He tested my ears in a hotel room and made the suggestion that seeing an ear specialist would be a waste of money. The aid was then fitted to the wrong ear and proved totally confusing and ineffective. After a visit to an ear doctor, I found I had Ménière's disease. . . ." Ménière's disease is an affliction of the inner ear marked by intermittent episodes of vertigo, hearing loss and buzzing effects. In some instances, a hearing aid can aggravate the condition. In many instances, medical treatment can help.

Otologists with whom we consulted in preparing this report commented that gross misfittings by dealers occur regularly. One doctor recalls a lady who came to him four years after buying a hearing aid straight from a dealer. She at last realized that it wasn't helping her. The reason became apparent from the results of a hearing test. She was totally, irrevocably deaf in one ear, beyond the help of an aid. For four years, at the behest of a slick salesman, she had worn an expensive and entirely useless contraption. (When the patient confronted the dealer with the doctor's diagnosis, he refunded the money.)

Certainly, not all hearing-aid dealers are guilty of overstepping the bounds of their knowledge in the quest for a sale. Many, it should be acknowledged, have extensive practical experience with hearing problems. And many more are sincerely interested in helping people hear better for what it's worth, some deplorable practices ascribed to dealers in the past are said to have been curbed through efforts of the manufacturers and dealers' trade associations, as well as through licensing laws enacted by 24 states. CU believes that the prospective purchaser of a hearing aid would be wise to view dealers as tradesmen who can be helpful in explaining the workings of, and problems associated with hearing aids—but not as professionals competent to diagnose and solve a hearing difficulty).

So you walk into a hearing-aid dealer's store purely as a customer—not as a patient or an examiner. If you've followed the steps CU has outlined, you'll bring specific instructions from your otologist or audiologist (although, as we've explained, the instructions may not be readily interpretable into the name of a specific model). You don't need any further evaluations or a sales pitch. But you probably could use a price break. Larger dealers can sometimes be persuaded to give a discount, so ask for one. Also, some dealers give price reductions to retired persons.

The dealer will probably take an impression of your ear canal to make the earpiece; a charge of $10 or $15 extra is common for that. And he can be quite helpful in showing you how to operate and take care of the aid you order.

You should insist that the aid be bought on a trial basis only. Most reputable dealers will rent you the aid for $1 a day for a month. If you aren't satisfied, they'll take it back. If you buy the aid, they'll deduct the rental fee from the price. During the trial period, you should return to your otologist or audiologist so that he can check whether the aid is working properly. Unless something is obviously wrong, try a new aid the full month to give yourself a fair chance in getting accustomed to it. Failing that, you may decide that you need rehabilitative help.

LITTLE HELP WITH THE BILL

Financial assistance from the Government is limited. The Medicaid program in 19 states* and Guam offers assistance to certain categories of people who cannot afford to buy a hearing aid. The program covers diagnosis of the hearing problem and purchase of the aid. But the criteria for determining economic need are fairly restrictive.

The Medicare program for the elderly provides aid only for diagnosis leading to ear surgery—not for diagnosis calling for the purchase of an aid or for the aid itself.

The Federal Rehabilitation Services Administration, working through state departments of vocational rehabilitation, assists people whose hearing problems handicap employment. (Homemaking is often viewed as an eligible form of employment.) Information can be obtained from your state vocational rehabilitation agency. A pamphlet about the program, "Opportunties for the Hard of Hearing and the Deaf," which lists all the state agencies, can be obtained from the Community Disorders Branch, Rehabilitation Services Administration, Department of Health, Education and Welfare, Washington, D.C. 20201.

*California, Connecticut, Hawaii, Illinois, Kansas, Louisiana, Massachusetts, Minnesota, Nevada, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oregon, Rhode Island, Utah, Washington, and Wisconsin.

Help for children is provided through the Federal Maternal and Child Health Service. The program is administered through state health departments or state crippled children's services, which should be contacted for information. The children's service arranges for diagnostic work and hearing aids at no cost or at reduced prices, depending on family needs. A family need not be indigent to qualify.

Veterans can obtain free diagnostic services and hearing aids from the Veterans Administration. Assistance is usually limited to veterans whose hearing losses are service-connected or to patients in VA hospitals.

A national list of speech and hearing centers staffed by ASHA-certified audiologists, is contained in the National Bureau of Standards, Monograph 117, "Hearing Aids," available for 35 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The monograph, which is ordered by specifying SD Catalog No. 13.44:117, also contains an interesting and helpful discussion on hearing losses and their remedies.

TWO SPECIALTY AIDS

The VA did not test two kinds of hearing aids that may have special applications. One is a relatively new development, the CROS aid (the acronym stands for Contralateral Routing of Signals). The other is an older variant, the binaural fitting (one aid on each ear).

The CROS aid was originally deevloped for persons who are deaf in one ear but wo have normal or nearly normal hearing in the other ear. Such persons must continually swivel their heads in conversation to pick up sounds on the deaf side. To fill in the deaf-side gap, the CROS aid has the microphone positioned on the deaf ear and the receiver on the good ear. The sound is channeled through a wire around the head to the good ear.

The CROS ear mold is atypical in that it's vented, allowing air to pass through. (Conventional ear molds completely block the ear canal.) Some CROS aids don't even have an ear mold, but rather just a small plastic tube that rests loosely in the canal. One advantage of keeping the ear canal open to air, audiologists have discovered, is a marked reduction in low-frequency sound amplification. And since most background sounds are of a low frequency, the CROS aid diminishes extraneous noise that would otherwise interfere with the understanding of speech. Because it discriminate against low frequencies—which can be heard normally anyway in many cases of sensorineural loss—the CROS aid has proved beneficial to persons who have sensorineoural loss in *both* ears.

Why don't they just leave the ear canal open with conventional aids, where the microphone and receiver are on the same ear? Because, when the microphone and receiver are close together, the hearing aid produces feedback, a whistle caused by the microphone rechanneling noise from the receiver. With regular hearing aids, the feedback is blocked by a solid ear mold. With CROS aids, the bulk of the head blocks feedback. But even the barrier of the human head will not prevent feedback at gains of more than 45 dB. Thus, the helpfulness of CROS aids is limited to cases of mild or moderate hearing loss.

The benefits of binaural fittings are the subject of much debate. Some claim that have an aid on each ear greatly improves the ability to distinguish speech from surrounding noise, improves the naturalness of sound and reduces fatigue after long use. Objective tests have not as yet demonstrated a significant improvement in understanding speech when two aids are used instead of one. The benefits, if any, appear to be entirely subjective on the part of the user, not a factor to be summarily discounted. But since two hearing aids cost twice as much as one, CU advises that bineaural fittings should be considered cautiously—and only on the strength of professional opinion.

IN SEARCH OF A CHEAPER HEARING AID

The average list price of the hearing aids the VA tested last year was about $350. (The manufacturers choose which models to submit for VA testing; often, they're the more-expensive models.) But there are models on the market that sell for much, much less. And, as we note in the accompanying report, there's no reason in terms of manufacturing costs why all aids shouldn't cost much, much less. To find out how low-priced aids compare with the VA test field, CU independently tested the *Zenith Award* (Zenith Hearing Aid Sales Corp., Chicago), $85 and the *Sears Cat. No. 8015* (Sears, Roebuck), $90 plus shipping.

CU put both hearing aids through a test procedure closely paralleling that used by the VA. Although we were able to obtain all raw scores and measurements for each hearing aid, the only adjusted score we computed was the Index of Effec-

tiveness. For various technical and statistical reasons, it would have been extremely difficult for us to grade each aid according to the VA's overall performance scoring system. Nonetheless, we think we have a good idea where the *Zenith* and the *Sears* would have stood in the VA ratings.

The *Zenith*, a body type, had an adjusted Index of Effectiveness of 119 as a moderate-power aid, somewhat above average. Other statistics of interest to the hearing specialist: average gain 54 dB, average maximum power output 126 dB and signal-to-noise ratio 42 dB. But the *Zenith* showed rather high distortion of frequencies of 500 and 700 Hertz with an input sound-pressure level of 70 dB. Adherence to the VA specification of 6 dB per octave slope was fairly good. We judge that the *Zenith's* rank in the VA ratings would have been about average.

The *Sears*, an over-the-ear type, had an Index of Effectiveness of 69 as a mild-power aid. Average gain was 35.5 dB; average maximum power output was 113.5 dB; signal-to-noise ratio was 38.6 dB; and total harmonic distortion was low. Adherence to the VA's 6 dB per octave slope was poor. We judge that the *Sears* would have been near the bottom of the VA ratings.

All in all, not a spectacular performance by our inexpensive aids—but not a humiliating one, either, especially by the *Zenith*. Even if those aids weren't top contenders, they were at least in the same league. We just wonder how much more money it would take to turn a $90 hearing aid into a real winner. Certainly it would not take enough to justify a charge of a couple of hundred dollars more.

II. What Audiologists and Otologists Should Know

In our report on hearing aids five years ago, CU published Ratings based on our own tests. Here we're reporting the results of the Veterans Administration tests of hearing aids. The VA has far more brands and models tested every year than CU could afford to test even at long intervals.

The publication of the following ratings is a result of CU's lengthy battle to force the VA to disclose to the public data developed at public expenses. Regular readers of CONSUMER REPORTS are no doubt familiar with the CU–VA hearing-aid controversy, a summary of which we published last month. But although we believe that the public is well served by this adherence to the Freedom of Information Act, the information presented here is not primarily for general public consumption. It is meant for otologists and audiologists. CU endorses the VA's view that the selection of a hearing aid cannot be made solely by studying its ratings, but rather requires professional guidance. As the VA put it: "There is no 'best' hearing aid for all individuals. Aids that test well for one person may not test well for someone else . . . VA's general advice to a person with a hearing disability is to seek professional guidance in obtaining the aid best suited to his particular problem."

HOW THE VA SELECTS AIDS

The hearing aids in the VA ratings represent only 15 per cent to 20 per cent of the hearing aids commercially available. The VA first invites manufacturers to enter aids of their choice for the testing program. Last year, 19 manufacturers submitted names of 81 hearing aids. VA representatives randomly selected, from the manufacturer's stock, three samples of each model, which were subsequently tested by the Sound Section of the Institute of Basic Standards of the National Bureau of Standards. The raw data from those tests was turned over to the VA's Auditory Research Laboratory for evaluation and conversion into a performance score. Aids that scored lower than average were immediately excluded from the VA's purchasing plans. For the qualifying aids, a price factor was introduced by dividing the performance score into the quantity price quoted by the manufacturer. (The VA pays less than list, being such a good customer; it issues about 7000 hearing aids a year.) The resulting "cost-per-point-of-quality" was the basis for awarding contracts. Thus, the VA might not buy some aids with relatively high performance scores, because they cost too much.

CU is publishing the ratings for almost all of the hearing aids rated by the VA, not just for the models the VA bought. We have excluded only a few models—those that CU's market research has shown to be discontinued and those for which CU could not obtain current technical information.

HOW THE VA TESTS

Our discussion here is only a summary of the VA tests. Audiologists can obtain the complete report, "Hearing Aid Performance Measurement Data and Hearing Aid Selection Procedures, Contract Year 1971," from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for $2.50.

The VA scoring scheme is intended to provide a relative ranking of the hearing aids, not an absolute one. A hearing aid with a performance score of 100 is average within its power category. A higher score is proportionately better than average; a lower score is proportionately worse.

The National Bureau of Standards test methods are similar in substance to those of the Hearing Aid Industry Conference and American National Standards Institute, though the methods differ in some details. The tests include measurements of frequency response, absolute gain, harmonic distortion, maximum power output, signal-to-noise ratio and battery-current drain. The VA also checked to insure that the hearing aids were clinically acceptable—that they were not oddly shaped so as to be difficult to fit and that they would not require difficult maintenance or operational procedures.

The measurements of each electronic characteristic were converted into subscores weighted according to their relative importance by VA standards. Then the subscores were totalled to produce an overall performance score. Most of the test data can be read directly from the Government report. But the Index of Effectiveness, which received the highest weighting, cannot be read directly from the complete report. It must be extrapolated from various subdata, a job beyond the resources of most audiologists. Therefore, CU has computed the Index of Effectiveness and has presented it with the other measurements and scores in the VA ratings.

To arrive at the Index of Effectiveness—a concept developed by Dr. Raymond Carhart and the subject of a to-be-published paper—one assumes that the audio frequency spectrum can be divided into separate "critical" frequency bands, each of which contributes equally to speech intelligibility. In the middle of the audio spectrum, the bands are narrow, signifying that frequencies within those bands contribute importantly to speech intelligibility. At the ends of the audio spectrum, the bands are wide, signifying that the frequencies they encompass contribute little to speech intelligibility.

The Index of Effectiveness is derived by measuring the absolute gain of a hearing aid in each of 20 critical frequency bands and determining whether the absolute gain exceeds the minimum required gain set by the VA for each of three categories—strong, medium and mild amplification. The amount by which the absolute gain exceeds the minimum required gain in each band is recorded, and the sum of that desirable excess gain is the Index of Effectiveness. There are limits, however, to the amount of gain desired. The VA believes that no more than 30 dB excess gain per band is useful. Thus the highest Index of Effectiveness score possible is 30 (dB) times 20 (frequency bands), or 600. In our rendering of the VA ratings, the raw Index of Effectiveness score has been converted so that the average of the models tested is 100.

The VA further assumes that a hearing aid with a rising frequency response of 6 dB per octave (treble emphasized over bass) represents the best choice for the hard-of-hearing veterans population (which, as far as anyone knows, differs little from the hard-of-hearing general population). Not all audiologists agree that a rising frequency response is a satisfactory measure of effectiveness. Those who disagree argue that a uniform gain in all frequencies is just as effective as a rising response. They won't take much stock in the Index of Effectiveness figures but they should still be able to glean useful information from the VA ratings. The Index of Effectiveness is only one of 12 weighted scores. It's given a weight of 1.9. (By way of comparison, lack of harmonic distortion is weighted 1.2 for eight separate measurements; uniformity of slope is weighted 1.0)

Whatever the prevailing theories, the Index of Effectiveness does, in CU's opinion, provide a handy and reasonable first approximation to guide the trained audiologist in the choice of a hearing aid. The information therein contained can be adapted to suit other frequency-response slopes, yielding other indexes to effectiveness more in accord with a given audiologist's ideas.

VETERANS ADMINISTRATION RATINGS OF HEARING AIDS

Listed by power categories: strong, moderate and mild. Described by type: body, behind-the-ear (called over-the-ear by the VA), eyeglass and in-the-ear. Average gain is the amplification in decibels averaged over frequencies considered by the VA important to improved hearing. Maximum power output (the amplification cut-off point) is in decibels averaged over a similar frequency range. Performance score is the VA's overall evaluation, with 100 the average. Index of Effectiveness is a score computed by CU, again with 100 the

average, from selected VA subtests. Some aids are listed in more than one power category; their performance and Index of Effectiveness scores vary because VA standards concerning average gain and maximum power output vary from category to category. Performance and Index of Effectiveness are rounded to nearest whole numbers. Prices are list to the nearest dollar.

	Price	Type	Average gain	Average maximum power output	Performance	Index of effectiveness
Strong power:						
Telex 69 (Telex Communications Division, Minneapolis).	$342	Body	64	135	140	129
Norelco HP8122 (North American Philips Corp., New York City).	310	do	65	136	122	113
Fidelity F360 (Fidelity Electronics, Ltd., Chicago).	290	do	64	135	118	118
Lehr Omnitone 12 Power Chief (Lehr Instrument Corp., Huntington Station, N.Y.).	379	do	69	141	113	141
Accusticon A770G (Acousticon Systems Corp., Danbury, Conn.).	389	do	58	130	107	93
Oticon 370PP Super Power (Oticon Corp., Union, N.J.).	372	do	59	131	107	98
Sonotone 600 (Sonotone Corp., Elmsford, N.Y.).	375	do	63	133	107	100
Strong-power models, with below-average performance scores, not considered in the VA's purchasing plans:						
Lehr Omnitone 11F (Lehr Instrument Corp.).	350	do	61	132	97	98
Audiotone Kingman II C401 (Audiotone Division, Royal Ind., Phoenix, Ariz.).	395	do	58	129	87	79
Norelco HP3135 (North American Philips Corp.).	310	do	57	128	65	61
Audiovox 107 Powerhouse (Audiovox, Inc., Newton, Mass.).	356	do	59	129	36	71
Moderate power:						
Acousticon A770G (Acousticon Systems Corp.).	389	do	53	130	156	149
Audiotone Kingman II C401 (Audiotone Division, Royal, Ind.).	395	do	58	129	142	135
Oticon 370PP (Oticon Corp.)	372	do	59	131	142	142
Acousticon A770 Silver (Acousticon Systems Corp.)	359	do	51	123	129	113
Zenith Super Ext. Range II (Zenith Hearing Aid Sales Corp., Chicago).	250	do	52	126	125	118
Siemens Euroton Ultra 394 (Siemens Corp., Iselin, N.J.).	369	do	50	122	124	106
Siemens 384SL Auriculina (Siemens Corp.).	369	Over ear	55	127	115	114
Zenith Pacemaker XRT (Zenith Hearing Aid Sales Corp.).	325	do	49	124	113	103
Norelco KL6730 (North American Philips Corp.).	349	do	50	122	112	95
Telex 33 (Telex Communications Division).	380	do	49	126	110	107
Fidelity F362 (Fidelity Electronics, Ltd.)	290	Body	54	126	109	123
Norelco HP8130 (North American Philips Corp.).	310	do	57	128	108	121
Radioear 990 (Radioear Corp., Canonsburg, Pa.).	339	Over ear	50	124	105	108
Sonotone 35 (Sonotone Corp.)	299	Eyeglass	49	123	104	97
Fidelity F11 (Fidelity Electronics, Ltd.)	270	Over ear	48	121	104	99
Beltone Cantata White Dot (Beltone Electronics Corp., Chicago, Ill.).	360	do	53	124	104	101
Sonotone 72 (Sonotone Corp.)	365	do	52	124	101	101
Moderate-power models, with below-average performance scores, not considered in the VA's purchasing plans:						
Fidelity OF483 (Fidelity Electronics, Ltd.)	300	Eyeglass	52	124	99	101
Qualitone Super X (Qualitone Div., The Seeburg Corp., Minneapolis).	350	do	45	123	96	78
Oticon 370 Super Power (Oticon Corp.)	297	do	53	126	94	103
Audivox 107 Powerhouse (Audivox, Inc.)	356	Body	59	129	93	124
Vicon OE123 (The Vicon Instrument Co., Colorado Springs).	369	Over ear	47	120	93	84
Norelco KL6710 (North American Philips Corp.).	319	do	45	119	89	74
Qualitone Supreme Super X (Qualitone Div., The Seeburg Corp.).	350	do	44	122	82	75
Oticon 560PP Super Power (Oticon Corp.)	373	do	51	124	73	86
Norelco HP8220 (North American Philips Corp.).	289	do	45	120	69	67

	Price	Type	Average gain	Average maximum power output	Performance	Index of effectiveness
Moderate-power models—Continued						
Oticon 580S Power (Oticon Corp.)	339	Over ear	44	118	61	58
Deltone Rondo White Dot (Deltone Electronics Corp.).	360	Eyeglass	48	122	59	76
Telex 131 (Telex Communications Div.)	359	Over ear	43	119	55	43
Mild power:						
Audiotone A20 Inspiration (Audiotone Div., Royal Ind.).	380	do	43	117	155	139
Fidelity F11 (Fidelity Electronics, Ltd.)	270	do	48	121	144	144
Norelco KL6710 (North American Philips Corp.).	319	do	45	119	140	132
Audiotone Pride A12 (Audiotone Div., Royal Ind.).	365	do	41	116	137	120
Vicon OE124 (The Vicon Instrument Co.)	369	do	42	117	132	122
Vicon OE 123 (The Vicon Instrument Co.)	369	do	47	120	131	136
Siemens 389HF Auriculina (Siamens Corp.).	369	do	45	117	129	124
Oticon 835S Power (Opticon Corp.)	365	Eyeglass	45	116	128	121
Danavox 695S Supreme Deluxe (Danavox North America, Inc., Wayzata, Minn.).	360	Over ear	43	117	126	113
Danavox 690S Supreme DeLuxe (Danavox North America, Inc.)	370	Eyelgass	43	116	125	112
Otarion RX99 (Otarion Electronics, Inc., Ossining, N.Y.).	370	do	42	115	117	124
Sonotone 37 (Sonotone Corp.)	375	Over ear	44	116	112	108
Qualitone USF (Qualitone Div., The Seeburg Corp.).	345	do	39	113	111	92
Norelco HP8220 (North American Philips Corp.)	289	do	45	120	110	121
Audivox 110 Cutie (Audivox, Inc.)	349	do	42	114	107	117
Radioear 1000 (Radioear Corp.)	339	do	36	115	107	91
Beltone Andante Red Dot (Beltone Electronics Corp.).	355	do	42	113	107	98
Zenith Moderator A (Zenith Hearing Aid Sales Corp.).	325	do	34	108	104	76
Telex 131 (Telex Communications Division).	359	do	43	119	103	101
Audiotone Sedona A18SST (Audiotone Div., Royal Ind.).	380	do	39	115	102	116
Qualitone Hidden Ear III DeLuxe (Qualitone Division, The Seeburg Corp.,)	325	do	38	115	101	106
Danavox 685S Super Dynamic (Danavox North America, Inc.).	340	do	39	115	100	103
Oticon 580S Power (Opticon Corp.)	339	do	44	118	100	115
Mild-power models, with below-average performance scores, not considered in the VA's purchasing plans:						
Telex 25 Electron Ear III (Telex Communications Division.	359	In ear	43	115	99	105
Audivox 101 Cycloramic II (Audivox, Inc.).	341	Over ear	40	113	93	94
Beltone Prelude Green Dot (Beltone Electronics Corp.).	360	do	41	114	93	97
Otarion X101 (Otarion Electronics, Inc.)	360	Eyelgass	46	117	88	123
Beltone Andante Blue Dot (Beltone Electronics Corp.).	355	Over ear	37	107	88	90
Siemens 383CA Auriculina (Siemens Corp.).	359	do	38	115	88	93
Danavox 685U Universal (Danavox North America, Inc.).	350	do	36	111	86	79
Otarion X102 (Otarion Electronics, Inc.)	380	Eyeglass	45	116	85	98
Acousticon A545 HP (Acousticon Systems Corp.).	399	Over ear	36	113	85	83
Audivox 103 Riviera (Audiovox, Inc.)	349	Eyeglass	42	116	81	95
Otarion X103F (Otarion Electronics, Inc.)	380	do	46	117	81	96
Aqousticon A455SS (Acousticon Systems Corp.	399	In ear	29	110	68	57
Danavox 695U Universal (Danavox North America, Inc.).	370	Over ear	34	107	64	51
Sonotone 75-2 Thinline II (Sonotone Corp.).	359	Eyeglass	35	115	64	64
Otarion Listenette (Otarion Electronics, Inc.).	350	In ear	34	111	64	62
Goldentone C100 CA Computer (Goldentone Electronics Inc., Minneapolis).	388	Over ear	34	105	58	57
Lehr Top Star (Lehr Instrument Corp.)	350	In ear	38	113	51	83
Goldentone Montclair (Goldentone Electronics Inc.).	291	Eyeglass	37	116	36	57

Appendix 3

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG) REPORT

U.S. SENATE,
Washington, D.C., September 14, 1973.

DEAR MR. CHAIRMAN: The Minnesota Public Interest Research Group (MPIRG) has prepared an excellent report on "Hearing Aids and the Hearing Aid Industry in Minnesota," and has played a principal role in persuading the Minnesota Legislature to adopt an innovative statute regulating hearing aid sales.

I would appreciate it very much if portions of the MPIRG report, along with text of the new Minnesota law, could be reprinted in the record of the Subcommittee's September 10–11 hearings on "Hearing Aids and the Older American." Since I understand that the Subcommittee is limited in the volume of material that can be reprinted in the hearings, reprinting the Introduction and Chapters VII, VIII, and IX of the MPIRG report would be sufficient.

Thanks so much for your consideration.

With warm regards,

Sincerely,

WALTER F. MONDALE.

[Enclosures]

INTRODUCTION

A housewife, who has been experiencing mild headaches and blurred vision, wonders whether glasses might not help. She notices in her newspaper the following advertisement: "BETTER VISION ASSURED", accompanied by a coupon which, when clipped and mailed, will provide her with more information. Two weeks later, to her surprise, a salesman from the See-All Eyeglass Company comes to her home. Having been invited in, the salesman compliments the woman on her lovely home and cute dog and inquires meticulously as to whether there are other relatives who also have impaired vision. He then offers her the opportunity to take an eye test. Dimming the lights and drawing the blinds, he shows her an eye chart from some distance and asks her to read the letters. Unable to do this, the woman is then given a magnifying glass and is asked, when the chart is brought closer, if this does not help. She says that it does, and the salesmen's response is that he has just the pair of eyeglasses for her. The woman wonders whether she ought not see her eye doctor first. But the salesman merely tells her that he will only confuse her and that his glasses are just what she needs. He tells her they cost $350, but over the period of their usefulness will really cost only pennies a day. A contract is then signed, the woman is supplied the glasses, and the salesman leaves. In fact, the woman is experiencing the first symptoms of a serious eye disease which requires prompt medical attention.

In a related situation, an elderly gentleman, noting that he has had recent difficulty in reading the newspaper, drops into a retail oculist's store. Noting a framed diploma above the man's desk which reads "Certified Eye Glass Oculist", the gentleman reports his complaints and is quickly given a short eye examination. The salesman tells him that he is suffering from serious eye deterioration and definitely needs eyeglasses. No mention is made of the need to see a physician. He is told that he is lucky to have come when he did, and is promptly fitted with a strong pair of bifocal, costing $750. The man leaves with his glasses, continues to experience problems, and sees his doctor. He is informed the glasses have done nothing to correct his real problem.

Exaggerated tales? Sheer fantasy? In the nineteenth and early twentieth centuries, the selling of eye glasses was done by door to door salesmen and by "unprofessionals" who didn't know the difference between a retina and a cornea. Fortunately, for those with vision impairment, the government stepped in and began regulating the sales and distribution of glasses.

The twentieth century, however, has not yet come to the hearing aid industry, and as this report will demonstrate, there is ample evidence from which to conclude that the fantasy tales mentioned above are occurring daily, to thousands of

persons, the only modification being that it is persons with hearing impairments that are being taken advantage of by unscrupulous and unqualified salesmen.

Hearing loss is the most prevalent health handicap in America today, affecting approximately 15,000,000 Americans. And yet we have a situation where completely untrained non-medical personnel are, in effect, diagnosing complex medical problems, prescribing prosthetic devices, and charging outrageous prices for a device which the buyer many not even need.

Health care delivery is not being adequately delivered to the hearing impaired. According to studies by the U.S. Public Health Service more than 80 per cent of all Americans with various hearing impairments do not seek help for their handicap, and of those who do, 38 per cent are dissatisfied with their hearing aids. That so few of the hearing impaired seek help is in large part due to the inexcusably high prices of hearing aids, the stigma attached to the wearing of an aid, the almost complete lack of public education about hearing loss, the serious shortage of qualified hearing health professionals and efforts to reach the hard of hearing with what professionals there are, and stories related to the hearing impaired by friends or family about bad experiences with hearing aids or hearing aid dealers.

During the course of our study we found unnecessarily high prices, deceptive and misleading advertising, questionable sales practices, and dealers not competent to give hearing tests and evaluations who nevertheless failed to refer consumers to doctors. The result is that all too many hearing impaired persons who might have been helped by surgery or by a hearing aid had they been seen by a qualified professional are buying aids that they do not need or that are inappropriate to their type or degree of impairment. Unfortunately, nearly 70 per cent of all those who buy a hearing aid see only a hearing aid dealer.

The problems in the hearing aid industry are made even more tragic by the fact that more than 50 per cent of all hearing aid users are 65 years of age or over and living on marginal incomes. Another large percentage are young children with congential hearing defects. When an industry preys on the physical handicaps of a largely defenseless group of children and the aged, then it is time for reform.

HEARING AID DEALER COMPETENCE

> Don't go see a doctor about your hearing. He might operate on you and destroy your hearing entirely. I know what your problem is and what you need.

Statement by local hearing aid dealer to an elderly man who had come for a hearing evaluation.

A hearing impairment is a medical problem that may be complex in origin and hold serious implications for the overall health of the afflicted person. If not promptly treated by a qualified doctor some ear problems can lead to infection, serious illness, and even death. Some impairments to hearing can be very successfully treated in their earlier stages by drugs and/or surgery so that natural hearing can be greatly restored, but if untreated over a period of time, permanent loss can be sustained. Even when no medical or surgical solution to a hearing problem can be found and a hearing aid is deemed appropriate (not all hearing impaired persons can be benefited by an aid), complex and prolonged testing and evaluation by a qualified audiologist is necessary before an aid is prescribed for most hearing problems, particularly where children are involved. For many, rehabilitative help, such as lipreading, learning how to listen, etc., is an important factor in their adjustment to an aid and to the minimization of their handicap.

A hearing aid dealer who does not refer someone to a qualified otologist or otolaryngologist, and takes entirely upon him/herself the testing and evaluation of that individual's hearing problems and the prescription and fitting of an aid, is by implication saying that he is qualified to take the place of an otologist or otolaryngologist with at least five to seven years of medical training, an audiologist with at least 3 years of acdemic training, and a speech pathologist, or other trained rehabilitative worker, who likewise has spent many years in training. It is therefore of vital importance to examine and evaluate the quality and competence of hearing aid dealers, particularly since about 70 per cent of those who purchase hearing aids do not first consult an otologist or audiologist.

Under Minnesota law, hearing aid dealers are not required to possess any particular qualifications or training in order to evaluate hearing, prescribe and fit aids, and deal with the hearing impaired consumer. Of course many consumers entering a dealer's office may not be aware of this. Nearly half of the dealers

in the state possess a certificate reading "Certified Hearing Aid Audiologist". This further adds to the consumer's confusion as "certification" usually implies a significant amount of training and expertise in a given subject. The 1972 Directory of hearing aid "Dealer-Consultant", published by the National Hearing Aid Association (the dealer trade association) lists 49 dealers as selling hearing aids in Minnesota, 22 of which are "Certified Hearing Aid Audiologists", a title bestowed by the National Association. The 1972 Association Directory states that:

> "Certification" is granted only to those (dealers) who have taken advanced training for service to the hearing handicapped. The "Certified" member (of the Association) has successfully completed a prescribed course of study, passed a rigorous examination and met strict requirements of experience, competence and character.

The "rigorous . . . prescribed . . . advance training" to which this statement refers is a home correspondence course entitled "Basic Home-Study in Hearing Aid Audiology. Revised Edition." MPIRG has obtained a copy of this course for analysis. The instruction program costs approximately $175 and consists of twenty lessons, each containing one to four pages of text, which are mailed separately in sequence to the person taking the course. At the end of each lesson are one-half to two pages of questions which the student is to answer based on the text of the lesson. The student then mails the answered questions in and receives by return mail the next lesson. The series of twenty lessons is contained in 50½ pages of text (with many illustrations and large paragraph headings), while the remainder of the course consists of 16½ pages of questions on the text material. When all the lessons and questions have been completed, the person taking the course writes a "final exam" (also taken in the home and without supervision). If he or she "passes" that exam he or she becomes a "Certified Hearing Aid Audiologist" and receives an 18" x 18" diploma written in formal script which closely resembles an academic diploma.

We feel the use of this title to be deceptive. It implies a medical and professional competence in excess of what practically exists. Its employment of the term "audiologist" and "certified" is confusing, and we found that some consumers have difficulty in distinguishing between a dealer with this title and an actual audiologist with a Certificate of Clinical Competence from the American Speech and Hearing Association. They felt that they had, in fact, been examined by a doctor or audiologist when they had not.

Any notion that a course 50½ pages in length with an unsupervised, in-home exam constitutes "advanced training for service to the hearing handicapped" or "rigorous examination" in "basic sound physics, the functioning of the ear, the testing of human hearing, and the fitting of hearing aids" is patently absurd. It is illuminating to compare this course with the *two year* classroom program which comprises the University of Minnesota's *minimum* course requirements for receiving a Certificate of Clinical Competence in Audiology. In addition, candidates for certification must have at least nine months of experience under a certified audiologist and must pass an examination before certification is granted.

Almost uniformly, subjects which demand months of daily university study are treated in 2 to 3 pages of the dealer's correspondence course. One hearing aid dealer told MPIRG that it would take him, or someone familiar with the material the correspondence course covers, only a total of 2½ hours to work through the entire course. And, it must be remembered, only 22 of Minnesota's 49 dealers, or less than half, have this training! Given the scores of medical problems which can cause or complicate hearing loss, it seems difficult to believe that on the basis of this correspondence course alone (and often on the basis of less), many hearing aid dealers go through the motions of evaluating a person's hearing and recommend hearing aids sometimes selling in excess of $700 a pair without referral to either an otologist or audiologist. Every time a dealer sells an aid to a person who has not been examined by an ear doctor, that dealer, by the fact that he/she sells an aid to compensate for a hearing loss, is implying that he/she knows the *cause* of that loss.

Hearing aid dealers argue vocally that they possess "training by experience" and that they were evaluating hearing losses and selling aids long before the advent of professional clinical audiology. This argument justifies less than nothing. As one expert MPIRG consulted put it, it's like saying that because barbers were performing surgery long before surgeons—and without any formal training—we should continue to rely upon them. The analogy is apt. Only adequate training plus experience equals competence; years of experience without proper training equals only prolonged incompetence.

Regretfully, the unfortunate results of hearing aid dealers performing medical and audiological tasks are more than hypothetical, and extend to real human suffering. Following are examples of actual case histories obtained by MPIRG from professional oto-audiological clinics in Minnesota of people who were improperly fitted with aids by hearing aid dealers or who were fitted with aids when medical intervention would have been more appropriate.

A 64 year old woman with a bilateral sensori-neural hearing loss was fitted by a dealer with binaural hearing aids. Her speech discrimination (understanding) in one ear was so severe that no aid could have helped her and in fact it could have increased the distortion.

A 68 year old stroke victim with expressive aphasia (a loss or impairment of the capacity to use words as symbols of ideas affecting the ability to speak) was sold binaural hearing aids even though he had normal hearing and the aids could in no way have benefited his type of impairment.

A 44 year old man with bilateral otosclerosis (a hereditary disease which involves the restriction or immobilization of one of the bones in the middle ear whose vibrations normally transmit sound to the nerves of the inner ear) had worn two hearing aids for many years. When he finally did see a physician, surgery was performed which brought his hearing to within a normal range. (In a high percentage of cases, otosclerosis can be helped by surgery if diagnosed in time.)

A 68 year old man with a moderate sharply sloping sensori-neural loss was tested and fitted by a dealer with an all-in-the-ear aid that was not even reaching his loss (this type of aid can supply only mild amplification). An otological and audiological work-up found the aid to be completely inadequate and a different aid was prescribed.

The grandparents of a 10 year old boy suffering from external otitis media were sold a hearing aid for him. The boy had very little hearing loss—an aid was not necessary—and his condition was treated medically.

An 82 year old woman with severe bilateral sensori-neural loss and speech understanding, was sold two different types of aids by a dealer—both a body aid and an ear level aid. Both were inadequate and were not helping her, but were, in fact, increasing the distortion of the sounds that were reaching her.

These cases are by no means isolated examples. Dr. Craig Linnell of Otolaryngology Professional Associates, a St. Paul clinic of some national reputation among professionals, writes in Minnesota Medicine that his clinic sees:

". . . many hard-of-hearing patients [who] have worn hearing aids for several years when an operation could have alleviated their problem."

Dr. Linnell informs MPIRG that he and his colleagues at their clinic alone see 10 to 15 patients every month who have been victims of incompetent testing and fitting by hearing aid dealers. Lee Wilson and Dr. Linnell write in the May 1972, Journal of Speech and Hearing Disorders:

"We see patients with hearing aids who have hearing loss due to impacted cerument (ear wax), others whose remediable ear pathology went undiagnosed while they tried one hearing aid after another."

No one can estimate the human and monetary costs suffered by these innocently unknowing persons. Their loss and the loss suffered by their loved ones as a result, is all the more tragic because it was avoidable. If one metropolitan clinic sees these results of hearing aid dealer incompetence, one can only speculate as to how many thousands of unknowing Minnesotans are wearing hearing aids which do them no good, worsen their problem, or have played a role in detering them from seeking medical help. Neither can we but guess the number of people who actually needing an aid, are deterred from its purchase by learning the experience of those who have been sold an aid which does them no good.

MPIRG decided to find out for itself how competent dealers were to diagnose hearing problems, how often they would refer someone to a doctor, and what kinds of sales techniques they employed. We used three volunteers—a student with a severe sensori-neural loss in his right ear (resulting from a case of measles) and better than normal hearing in his left ear; a 72 year old woman with a mild sensori-neural loss in the higher frequencies; and a 67 year old women whose hearing fell within the normal range. The student had been tested by a Board Certified otolaryngologist and a Certified Audiologist at a well-known Minnesota clinic and was told that he did not have enough hearing in his right ear to make use of a conventional hearing aid. He was told that the only kind that he might consider was a cross-over aid which would place a microphone on the right side of his head to pick up sounds and route them over to his good ear on the left side. The 72 year old woman was also tested by a Board Certified otolaryngologist and a Certified Audiologist. She was advised that she might try

a hearing aid for a month or so and see whether it was of any help to her. However, it was not certain that it would be appropriate for the problems and she definitely should not purchase an aid without a trial period. The 67 year old woman was likewise tested by a Certified Audiologist and found to have good hearing and to definitely not be in need of a hearing aid. In addition, an elderly man visited some dealers for us, but as we were unable to have his hearing tested professionally, we will not mention the results of his visits except in cases where grossly deceptive comments were made to him.

Each of the volunteers visited several Minneapolis area hearing aid dealers and one visited a dealer in St. Cloud. A total of 25 visits were made to 12 different dealers. Following is a list of the dealers and how many times each was visited.

Audibel Minnesota Hearing Aid and Optical Center (43 South 9th St.)	2
Beltone Hearing Aid Center (512 Nicollet Mall)	4
Computer Hearing House (1604 West Lake St.)	1
Dahlberg Hearing Aids (831 Marquette Ave.)	3
Dayton's Optical and Hearing Aid Center (700 Nicolet Mall)	1
Goldentone Computer Hearing Aid Service (4020 West Lake St.)	2
Kleweno Hearing Aid Service Inc. (6490 Excelsior Blvd.)	1
Maico Hearing Aid Service (822 Marquette Ave.)	3
St. Cloud Hearing Aid Center (St. Cloud)	1
Sears Hearing Aids (900 East Lake)	2
Telex Hearing Aid Center (1127 Nicollet Ave.)	3
Twin City Precision Hearing Aid Co., Inc. (2533 East Lake St.)	2

All of the subjects mentioned that they were interested in finding out how their hearing was and whether they should have a hearing aid. They took whatever tests the dealer offered them, answered questions truthfully (except as to why they were there), and did their best on all of the hearing tests given to them.

One of our major concerns was whether or not the dealers would immediately suggest that the subjects see their doctor or an ear specialist before taking any other action. Even industry literature stresses the importance of seeing a doctor for any one who experiences difficulty with their hearing because there are numerous problems that the medically untrained dealer or salesperson would not be able to detect. The following quote is from an article printed in the Maico Audiological Library Series.

> The hearing aid consultant should be acutely aware of the danger of selecting a hearing aid for a person whose hearing disability must be treated only by medical or surgical means. For example, chronically draining ears, auditory nerve tumors and other otologic pathologies not only cause a hearing problem but, if left untreated, may constitute a grave threat to the general health and even life of the person involved. Thus, every patient being considered for hearing aid selection for the first time should have the benefit of a competent and thorough oto-audiological examination and diagnosis. This prior medical attention can establish the nature of the hearing problem by identifying the cause, extent and site of the otic pathology. Then, a final determination as to the most appropriate form of therapy—medical, surgical or audiological—can be made with precision and certainty. (R. A. Winchester, Ph. D., "When Is A Hearing Aid Needed?", Maico Audiological Library Series, Volume 1, page 36.)

Even an article by the president of the Hearing Aid Dealers' association in California, printed in the industry magazine *The Hearing Dealer*, stresses the importance of a medical examination.

> I firmly believe that every hearing loss deserves a thorough otologic examination. A hearing loss is a medical, as well as a social problem . . . Besides, one never knows what lies undiscovered that could save a life or prevent much suffering. (Cecil Brownstone, "Attitudes—1972: An Analysis of the Attitudes of the Hearing Health Team." *The Hearing Dealer*, April, 1972).

However, despite constant industry rhetoric on this point, we were dismayed to find that with one exception, in *no cases* were any of three elderly people told that they ought to see a doctor. In fact, one of the volunteers who mentioned that he might go to see his doctor was told by the salesperson at Telex that he shouldn't go because the doctor might operate on him and destroy his hearing altogether. He added, "I know what your problem is and you need a hearing aid." This statement can only be interpreted as intending to dissuade, if not frighten the subject from seeking needed medical attention. In any context it is deplorable.

The following is a list of the dealers who did not tell the elderly volunteers to go to a doctor and the number of people with whom they made their omission.

Telex	3
Dahlberg	2
Twin Cities Precision Hearing Aid	1
Beltone	3
Goldentone	1
Maico	1
Dayton's	1
Audibel Minnesota Hearing Aid Center	2
Computer Hearing House	1

However, eight of the ten dealers that the student visited suggested to him that he see a specialist or go to the University Health Clinic to have his hearing tested. We are not sure whether the dealers were suspicious of the student—we were told that they were aware that our study was taking place—or if hearing aid dealers generally tend to treat older people differently.

In the case of those dealers who did not recommend a doctor's examination, we were interested as to whether they would attempt to perform their own examination to take its place. While there is no substitute for seeing a doctor, we felt that if such referral was not made at least a few basic things should have been done to eliminate the more obvious cases of medical problems. We felt that an otoscope examination of each ear should have been made to eliminate wax as the source of a problem. During only a little more than half of the total visits did the dealer attempt such a procedure.

The salesman at the Sears hearing aid sales department told one of the women that she had "a big glob of wax" in one of her ears. That same woman had been examined less than 24 hours before by an otolaryngologist who had removed all of the wax from both of her ears.

In addition, we felt that the dealers should at least have asked each of the subjects whether they had ever experienced dizziness (which sometimes accompanies problems related to the inner ear), had ever had discharges from their ears, or had ever had ear infections. Most of the dealers did ask these questions, although a few did not and some seemed not to really be very interested in the answers. The salesperson at Audibel Minnesota Hearing and Optical Center asked one of the volunteers whether she had ever experienced ear infections, discharge, or dizziness and then went on to the next question before the woman had a chance to answer.

Now that most of the dealers had failed to refer any of the volunteers to doctors or audiologists, and had taken upon themselves the entire responsibility for their welfare, we were interested in how the dealers would go about evaluating the subjects' hearing and maximizing the chance of their success in determining who needed an aid and what kind. In this regard we were concerned about what audiological tests were done, how well they were done, and under what conditions. To begin with, it is of utmost important that the testing area be free of noise. Any background noise can cause a subject's hearing to appear much worse than it actually is. "In all audiometric work it is assumed that the tests are carried out in a room that is quiet enough so that the background noise does not interfere with the test." (Hallowell Davis, S. Richard Silverman, *Hearing and Deafness*, 1970, page 203)

We found noise conditions at most of the dealerships to be considerably less than optimum. On twelve separate occasions volunteers were bothered by background noises while being given hearing tests. At Telex, two of the volunteers reported hearing people talking even when they had the earphones on. While being tested at Maico, one of the women complained to the salesperson of hearing typewriters and noise from a drill, and was told "You have to get used to those sounds. Just pretend they're not there." One of the volunteers had to listen to a television set blaring 10–12 feet away from him across a hall (both doors were open) while he was being tested at Twin City Precision Hearing Service. At Dahlberg, background noise from typewriters and telephones was overheard. Street noise, noise from a radio, and noise from a fan or air conditioner were heard during a test at Computer Hearing House. The examiner eventually turned off the radio and shut the door, but the fan noise was still evident. The noise problems at the Beltone office, however, seemed to be the most serious. One subject could hear traffic noise and several people talking. Another had an almost unbelievable experience at Beltone—the salesperson attempted to give him a hearing test with six jackhammers being used simultaneously in the street below. The test finally had to be stopped because the subject could hear nothing over the din outside.

Assuming a quiet room, we considered the following audiological tests to be the minimum necessary before any hearing aid should have been recommended—pure tone air conduction, hearing threshold, loudness tolerance, speech discrimination, and bone conduction. The pure tone, bone conduction, speech threshold, and loudness tolerance tests all utilize an electrical device called an audiometer. The audiometer plays pure tones of various different frequencies or pitches, at different intensities of sound. The intensity, or loudness, of the sound is measured in decibels—the more the decibels, the stronger the sound. The tones are usually played through headphones worn by the person being examined. In the pure tone air conduction test various different tones, from a low pitch to a high pitch, are played at different sound intensities. Crudely put, a person's speech threshold is determined by the loudness of the sound necessary to enable him or her to hear a particular tone. It is essential to know this because it will enter into the decision of how much amplification a hearing aid will need at each frequency to enable that person to hear. The loudness tolerance test determines at what level sound becomes painful to the hearing impaired person. It is necessary to know this because an aid must be set to cut off sound, or modulate it, when it reaches this point.

A bone conduction test involves the application of sound either to the forehead or the bone just behind the ear. The vibrations set up by the sound will by-pass the middle ear and travel directly to the nerves of the inner ear. If the patient can hear better through bone conduction than was possible through the air conduction test, at least part of his/her hearing loss may be due to an inner ear problem such as fluid in the ear or otosclerosis. This can cause the sound to be muffled, or almost entirely blocked from reaching the nerves of the inner ear, from whence it travels to the brain and is transformed into understandable sounds. This test is very important because many middle ear problems can be significantly, if not completely, improved by medical attention or surgery, whereas nerve damage cannot.

A speech discrimination test evaluates the person's ability to understand the spoken word when it is loud enough for him/her to hear. This test involves the playing of phonetically balanced words that include a number of different frequencies. This will help to evaluate the effect of the hearing impairment on understanding everyday speech, can indicate the presence of some serious medical problems that are not necessarily apparent from the pure tone test alone, and will double check the accuracy of the pure tone test.

We found that all of the dealers performed the pure tone air conduction and the hearing threshold tests. Several employed a speech discrimination test and the loudness tolerance test while only a few gave bone conduction tests. Because of the results of their tests, we have grave questions about their competence to conduct hearing evaluations.

We were very disturbed to find that four of the five dealers who tested the woman with normal hearing tried to sell her a hearing aid. The Beltone salesperson gave her a pure tone air conduction test, some kind of speech test, and a bone conduction test. The subject could not remember being given a pain threshold test. He also gave her what Beltone calls the "circle of hearing test". He walked around the room with his back to her and asked her to repeat various words. This test is completely worthless from a diagnostic point of view. In a meaningful speech discrimination test the volume of the words must be monitored by a machine. On the basis of these tests the Beltone salesperson informed the subject that she needed a $379.00 behind the ear aid, and added, "It's lucky you came when you did. Otherwise your hearing would have gotten worse." He thereby implied that her hearing could be prevented from getting worse by the use of a Beltone aid. This is completely and totally untrue—a hearing aid can have no effect on slowing a progressive hearing loss—although we found that several dealers used this "line". The salesman then told the subject that she had a 30% hearing loss overall, and that her right ear was much worse than her left ear. We were disturbed by the fact that many of the dealers interpreted their test results in terms of percentage of loss, as it really means very little in terms of the actual disability experienced by a hearing impaired person. However, even disregarding that, the percentage he came up with is grossly in error. The index usually used when hearing loss is converted into a percentage figure is a formula outlined by the American Medical Association Committee on Medical Rating of Physical Impairment in 1961 (this was published in the *Journal of the American Medical Association*, Volume 177, 1961, under the title. "Guides to the Evaluation of Permanent Impairment: Ear, Nose, Throat, and Related Structures").

Under this system, the amount of loss in numbers of decibels that the patient has incurred at each of three frequencies—500 Hz, 1000 Hz, and 2000 Hz—is added together, averaged, 26 is subtracted from it (a 26 decibel loss is the lowest level of loss that is considered a disability in this index), and the remainder is multiplied by 1.5%. If this formula were used for this subject, she would come out with *no* percentage of hearing loss. In fact there was not even one frequency in which she had a hearing threshold of 20 decibels, let alone 26 decibels, when tested by an audiologist. There is one other index for establishing percentage of loss—the Social Adequacy Index—but it is rarely used and in any case is not very much different from this one.

In addition to telling this woman that she had a 30% loss in her ability to hear, the Beltone salesperson, incredibly enough told her that she had a 50% loss in her ability to understand speech. Such a loss would be an extremely serious disability and the impaired person would be having a great deal of trouble understanding any normal conversations. This woman certainly did not have a problem of this sort. We consider it to be unconscionable to frighten and alarm someone by telling them that half of his/her ability to understand speech is gone, when it is not.

This salesperson also pressured the subject when she evidenced reluctance to purchase the aid, immediately. He wanted to make an ear impression right away. He said "Why not do it now? It will only take about five minutes."

The subject was also told by the salesperson at the Dahlberg Hearing Aid Center that she needed a hearing aid—in this case a behind the ear aid for $365.00. He gave her a pure tone air conduction test, a speech discrimination test, and a loudness tolerance test, but no bone conduction test. He told her that her hearing was a little below normal, and that she was not hearing well in the low tones (he told her she had a hearing threshold of 40 decibels in the lower frequencies), but that she had only a threshold of 20 decibels in the higher tones. However, when tested by an audiologist her hearing threshold level had not been higher than 20 decibels at any frequency and was 10–15 decibels at the lower frequencies. The salesperson told her that a hearing aid would "help her considerably" and that he was sure that it would do her good although he felt that there were some people for whom an aid doesn't do much good. The salesperson did, however, offer her a 30 day trial period, which very few of the dealers offered to any of the volunteers.

At the Audibel Minnesota Hearing Aid Center the salesperson wanted to sell this subject two all-in-the-ear hearing aids which, she said, normally sold for $499.50 each, but would be discounted to $399.50 each, bringing the total cost to about $800. The salesperson at Audibel also told the woman that she had a 30% loss in both ears. She gave the woman subject only a pure tone test, and told her that the hearing in her left ear was a little worse than in her right ear, thus disagreeing with the Beltone dealer, who told her that her hearing was much better in her right ear. The salesperson wanted to take an impression of her ears right away and pressed the subject when she indicated that she would like to think it over.

The dealer at Telex tried to sell the subject an aid for $369.00 after only a pure tone test. He was somewhat better at giving the test than some of the others, however, and found her hearing to be only a little below normal. He even told her that she didn't have to have an aid if she didn't want one. But unfortunately he could not resist the urge to make a sale and told her that she would be able to hear a lot more clearly with an aid. He added that he could see that she was a person who wanted to hear. However, he did offer her a trial for a few days so that she could decide if she wanted an aid. He did not say whether or not there would be a charge, but few of the other dealers offered any of the subjects a trial period of any kind.

The only dealer who definitely told this subject that she did not need a hearing aid was the salesperson at Maico Hearing Aid Service. In addition, the salesperson there even suggested that the subject go see a doctor if she felt that she was having any problem. For some reason, however, Maico did not tell the other elderly woman she ought to see a doctor.

Although most of the dealers at some point during their examination suggested to the student that he go to see a doctor or have his hearing evaluated at the University Health Clinic, two of them did not, and all of them conducted hearing tests on him anyway. Almost without exception the dealers tested his hearing as being much better than it actually was. This was a result that we somewhat expected. When tested by an audiologist, he was found to have a hear-

ing threshold level of 80 decibels at 500 Hz, 85 decibels at 1000 Hz, and 95 decibels at 2000 Hz, in his right ear. The hearing in his left ear was found to be above normal (his threshold level was —5 decibels for all of the frequencies needed for speech). In a case like this it is very difficult to test accurately the degree of hearing impairment in the poorer ear. This is true because so great a sound pressure is needed to reach the hearing threshold in the poor ear that the sound may pass by bone conduction through the skull and be heard in the good ear as well. This situation necessitates the use of masking the good ear, which involves feeding certain frequencies of sound into it. Proper masking is a very complex and difficult process and requires a great deal of training. It is unlikely that even those dealers who attempted to use masking when testing the student were able to do it correctly. In fact, the results that they came up with indicate that they were not. Only two of the dealers that tested the student attempted to use masking. At the St. Cloud Hearing Aid Center, the student was told that his hearing threshold level was greater than 80 decibels. This analysis was very close to the results found by the audiological examination. At the Computer Hearing House, where masking was also used, the student was not told what his threshold level was, but the salesperson told him that he did not have enough hearing in his right ear to work with and suggested that he buy a $400.00 crossover unit. He also offered him a 30 day trial period. He said that the aid would have to be paid for in advance but that if he didn't like it he could get his money back—except $140.00, which represented the charge for the 30 day trial.

Those dealers who did not use masking while testing the student generally evaluated his hearing as being much better than it actually was. The salesperson at the Twin City Precision Hearing Aid Company told the student that the hearing threshold level in his right ear was between 65 and 70 decibels, and offered to sell him a crossover aid. However, he said that he preferred to act on referrals from clinics and that he gave a $100.00 discount to purchasers of aids who were referred. Sears, where masking was also not used, told the student that he had a threshold of 75 decibels and also suggested a crossover type of aid. The salesperson at Dahlberg, where masking was not used, told the student that the hearing threshold in his right ear was 70 decibels, again somewhat low, and added that the threshold in his right ear was 20 decibels, although all of the other dealers had told him that his hearing in that ear was much better than normal. This discrepancy could have been due to background noise from typewriters and telephones that made it more difficult for the subject to hear the test. At Dahlberg, not only was masking not used, but the subject complained that the earphones used for the testing fit loosely and did not block the sound from his left ear even when he held the earphones with considerable pressure. The subject said that he could not differentiate between the sound entering his right ear through the earphones and that which penetrated the covered and plugged left ear. The salesperson, however, assured him that he was unable to hear through the left ear when covered in such a manner. In addition, although the salesperson later suggested that the student see a particular doctor, he told him that he was presently "overworking" his left ear which could lead to problems later on in life. The implication was that usage of the right ear would halt deterioration and offer relief to his "overworked" left ear. Both of these statements, completely untrue, were further evidence of the kinds of deceptive and misleading statements used by many of the dealers to frighten the subjects into spending hundreds of dollars on an aid that in most cases they did not need or that would not help them.

At Goldentone, masking was again deleted when the student was tested. An open field audiogram was taken (the sound came from a speaker in front of the subject rather than being fed into his ears through earphones) and the subject was told to press a cup over whichever ear was not being tested. The subject, however, could still hear a lot of sound through the cup. This method apparently did not work too well as the salesperson concluded that the subject's hearing threshold level was only 40–50 decibels. He tried two hearing aids on the subject—both conventional models, and one an all-in-the-ear aid—neither of which could have been of any benefit for this kind of hearing loss. He said that they allowed a 30 day trial period on non-custom models; although he did not mention price, but strangely, did not mention this trial period to one of the elderly women who also visited Goldentone.

But perhaps the most incompetent or deceptive evaluation of this subject's hearing was made at the Audibel Minnesota Hearing Aid and Optical Center.

At no time was mention of seeing a doctor made. No masking was used during the tests and the salesperson concluded that the subject's hearing threshold was 45 decibels, almost 45 decibels less than it actually was. The subject was fairly certain that sound was being played into his good (left) ear when the salesperson claimed that it was his right ear that he was hearing out of. The dealer attempted to sell the subject an aid, and showed him a behind the ear model and an all-in-the-ear model, both selling for about $450.00. Neither of these aids would have been of any use to the subject, and to suggest that he buy an all-in-the-ear aid, which provides very little amplification and is suitable for only very mild losses was ridiculous. In addition, the subject was told by the Audibel salesperson that because he was not using his right (bad) ear, he was overworking his good ear, which would cause it to give him problems later in life. He was told that the longer he waited to use the right ear, the worse it would get because it was not being used. This is another example of untrue statements made in an attempt to frighten someone into buying an aid that was completely inappropriate to his problem.

The 72-year-old woman with the slight sensori-neural was also given conflicting opinions and evaluations by the different dealers she visited. It was suggested by none of the dealers that she see a doctor. She was told at Beltone that her left ear was worse than her right ear, in an in-home demonstration by Audibel that her right ear was worse than her left ear, and by several of the other hearing aid dealers that they were about the same. She was told by the Beltone dealer that she had a 38% hearing loss. Again, using the AMA's index for determing percentage of loss, this subject also comes out to having a 0% loss not 38% loss. The Beltone salesman also told her that she had a hearing threshold in her left ear of 70 decibels. When tested by an audiologist she had a threshold of 20 decibels at 500 Hz, 15 at 1000 Hz, and 35 at 2000 Hz. (These are the frequencies that are most important for understanding speech.) If he tested correctly, the only way that the dealer could have gotten a figure of 70 decibels was by *adding* these three figures *together!* Again the Beltone salesperson told the subject that she needed an aid to keep her damaged nerves alive. The dealer also wanted to sell her two hearing aids for $700.00, and told her that if she used only one aid she would lose her balance and experience vertigo! This is one of the most blatantly false and unconscionable statements made to any of the volunteers.

Similar statements were made to this woman by the salesperson at Maico. She was told that her hearing would get worse without the use of an aid, thus implying an aid would retard its degeneration, and that she ought to buy two aids because she would "lose her balance" otherwise. Two aids were suggested to her selling for $620 after only a pure tone test.

At Goldentone, after only a pure tone test, the salesperson wanted to sell the subject a $350.00 aid. When she told him that she would have to think it over he pressured her. She finally told him that she would have to talk to her son-in-law about helping her pay for the aid. The salesperson would not let it go at that and continued to press her and almost insisted that she allow him to drive her out to her son-in-law's house, several miles away, so that they could speak to him immediately about how she could pay for the aid. We consider high pressure tactics like this deplorable where sale of any product is involved. But when a complicated medical problem is involved, and a person's physical well-being and ability to communicate is at stake, we consider such sales tactics to be unthinkable. This illustrates the attitude we found generally among hearing aid dealers—they were out to make a sale, not to deal with the welfare of a hearing impaired person in the best way possible. It is impossible for someone who stands to make a substantial profit on the outcome to evaluate a potential "prospect's" hearing in an unbiased manner.

At Twin Cities Precision Hearing Aids the subject was told that she had a threshold of 20 decibels at 4000 Hz (she actually had a threshold that was much higher than this), but that she needed a hearing aid because her hearing threshold rose to 65 decibels at 6000 Hz. This was a clearly deceptive means of trying to sell her an aid. Frequencies above 4000 Hz, or even 3000 Hz, are not very important for the hearing and understanding speech and since he thought that she had a 20 decibel threshold (which is within the normal range) at 4000 Hz he should have determined that she did *not* need a hearing aid. A 65 decibel

threshold at 6000 Hz would not have much, if any, effect on her ability to hear speech.

At Telex, after a pure tone test only, the subject was told that she had a 40–50% loss in the 3000–4000 Hz frequencies, and on this basis recommended an in-the-ear aid for $369.00. We have no idea how the salesperson reached this percentage figure as the AMA index is based on averaging the three frequencies of 500 Hz, 1000 Hz, and 2000 Hz. He must have felt that the AMA standard was not good enough, and substituted his own. It is a highly incompetent and questionable practice to throw around seemingly baseless figures like this. In addition, this salesperson made deceptive representations to the subject that a hearing aid might help the nerves in her ear from getting worse, and added that if her hearing got worse she might get noises in her head.

Beyond the deceptive and false statements made to this woman, the insufficient and incompetent testing performed on her, and the overeagerness of the dealers to sell her an aid no matter what, were most disturbed by the fact that none of them really explained to her the source of her problem, if indeed they all understood it, what it meant to her ability to understand speech, what an aid would do (in cases of nerve damage, there will usually still be some distortion of speech even when an aid is used), and the reasons why an aid might or might not help her. It is vitally important that before purchasing an aid a hearing impaired person understand all of these things.

It was particularly significant in her case that none of the dealers offered to allow her a trial period for determining if the aid helped her in any way. She had a borderline type of hearing problem and it was questionable whether an aid would be of much help to her. She was advised by the audiologist who tested her that she should definitely not purchase an aid without trying it out for about a month. This type of trial period is important for anyone who purchases an aid. Some people are not able to adjust to the use of such a device and in many cases there is a question about whether an aid will be helpful and which aid will provide the maximum assistance. Most of the clinics and individually practicing otolaryngologists that we talked to had been able to obtain agreements from the dealers they referred to for free two to three day trial periods or 30 day trial periods after which the patient pays for the mold and a minimal fee if he/she returns the aid. These professionals have been able to obtain trials for their patients because they have the leverage of deciding whether or not to refer future patients to the dealers, but the average consumer is not so lucky. If he does not go through a doctor or a clinic, he must usually sign a contract for the aid and keep it whether it works for him or not. Unfortunately, there are all too many hearing aids in stored dresser drawers because a hearing impaired person was sold the wrong aid and was not allowed to return it.

MPIRG would be less than candid if it were reported that we did not expect slight discrepancies among the same tests given by the various hearing aid dealers. Where subjectivity on the part of the examiner plays a role, differences must be anticipated. What, in fact, was experienced, however, was not discrepancy but distortion, not innocent "puffing" of a product, but misrepresentation, negligence and incompetence on a wide scale. It is apparent to us, on even a limited sampling, that each individual who entered a dealer's store was considered a "prospect," a potential statistic and sale to augment a dealer's monthly income. If medical services were rendered according to the same philosophy, the revolt by the consumer would be mammouth indeed. The irony here is that the bait offered the consumer—better hearing—is so attractive as to lull him into a false sense of security; and what normal defense mechanism that might normally resist what, in other sales arenas, would be obvious to the consumer is weakened. It is no wonder that once a dealer has convinced someone that his hearing is impaired, the war is almost won.

Perhaps it is too strong to write that many dealers prey on the hearing impaired; but it is too weak to report that advantage is merely taken of human frailty. The hearing aid dealer, wrapped as he is in the cloak of professional image, has merited little public attention. The image in fact portrayed gives pause for concern. When poor quality testing, misrepresentation, deception, unqualified personnel, and gross sales techniques appear as appropriate means to an end, then the sounds of reform must not likewise be turned down. It is time the wax be taken out of the public's ears.

"Physician, heal thyself"

Given the situation in the hearing aid industry described above, one would think that this would be a natural area for government to act to advance the public interest. Indeed government has acted but unfortunately, with little result.

The worst popular form of government intervention in the hearing aid industry has been through the passage of state laws which require that hearing aid dealers be licensed before selling or fitting hearing aids. On January 15, 1960, Oregon became the first state to require dealer licensure. At that time the hearing aid industry was a solid front against licensing. No other state licensing laws went into effect until 1967, but by this time the position of the industry reversed and dealers associations become the foremost lobbyists for their licensure. At this writing, 30 states require dealer licensure, accounting for over half of all dealers in the nation. In 1970 the Hearing Aid Industry Conference spent 80% of its considerable budget on licensing activities. The Minnesota Hearing Aid Dealers Association has attempted to push dealer licensing through the last two legislative sessions and is preparing now for an attempt in 1973. This sudden reversal in attitude can be partially explained by two things: 1) the realization by those in the hearing aid industry that licensure would lend an aura of professionalism to hearing aid dealers and 2) that dealers in states where licensure has taken place have more of a chance of cashing in on medicaid funds and being designated as qualified parties to test hearing for other government programs.

In light of both the timeliness of the licensing to Minnesotans and the number of dealer practices which do not serve the public interest, MPIRG feels that a crucial part of its study of the hearing aid industry is a study of state dealer licensure laws.

The specific provisions of state licensing laws vary from state to state. Generally, these laws require that any one fitting and/or dispensing hearing aids (other than a doctor) must first obtain a license from a state examining board. This board is usually appointed by the state governor subject to the board membership criteria established in the laws. These criteria generally specify a board of 5–7 members, with one member an otolaryngologist, another an audiologist, and the majority hearing aid dealers. The board is empowered to administer examinations to prospective licensee and award licenses subject to the licensing laws' requirements regarding minimum age, residency, high school education, etc. Virtually all of the state laws have "grandfather clauses" to grant "licenses by experience" without examination to those already in business when the licensing law intially took effect.

In evaluating these state licensing laws this report considers, first, the working effectiveness of dealer licensure laws in those states which have them, and, second, the broader rationale behind these statutes. To gain information on the effectiveness of existing licensure laws, MPIRG conducted a survey of the 25 states who have had licensure laws for one year or longer. The state office responsible for the enforcement and administration of the licensure law in each of the 25 states was sent a questionnaire explaining MPIRG's organization and goals and asking for information on the following points:

1. When the office charged with enforcing the licensure law began actual operation.
2. The actual, or best estimate of, the number of complaints, if any, received monthly or yearly (whichever is the more appropriate breakdown).
3. The number of times, if any, during each year of operation notices have been issued for hearings for possible suspension, warnings issued about possible suspensions, etc.
4. The number of licenses, if any, actually suspended or revoked in each year since licensing began.
5. The number of persons each year since licensing began who have applied to take the examination for license.
6. The number of permanent licenses issued in each year since licensing began (excluding licenses by experience).
7. The number of licenses by experience issued when the law took effect.
8. General comments as to the effectiveness of the licensing law of your state and any other comments you feel might be helpful to us.

The responses received in reply are outlined in the following table:

HEARING AID DEALER LICENSURE

	Began operations	Complaints	Warnings or hearings	Suspensions	Licenses issued by exam	Licenses issued by grandfather clause
Arizona	August 1970	5 per year	2 total	None	55	80
Arkansas	August 1969	15 per year	4 total	4 total	38	84
California	January 1971	60 per year	None	None	912 (temporary) none permanent.	0
Idaho	January 1972	6 total	2 total	None	30 total	56
Indiana	January 1968	24 per year	3 total	1 total	228 total	0
Maine	January 1970	No response	None	None	8–9 per year	53
Maryland	July 1969	6 per year	1 total	do	20 per year	125
Montana	August 1969	No response	None	do	60–70 total	60
North Carolina	September 1969	30 per year	3 total	do	24 total	180
North Dakota	July 1969	4 per year	None	do	4 total	32
South Dakota	July 1968	10–12 per year.	2 total	do	1–2 per year	28
Tennessee	August 1967	6 per year	3 per year	2 per year	12 per year	90
Wisconsin	January 1970	57 total	3 total	2 total	203 total	0

Note: Not responding—Florida, Georgia, Hawaii, Kansas, Louisiana, Michigan, Nebraska, New Mexico, Ohio, Oregon, Texas.

An obvious problem with generalizing to other states on the basis of the information above is the number of states not responding to MPIRG's inquiry. Another is the reliability of the information which was obtained. More than one state board responded only to the point of refusing to cooperate; several seemed extremely defensive (as perhaps they should well be). Several tentative conclusions, however, seem to emerge from the data above regarding the effectiveness of these laws. The first is the large number of licenses issued without an examination under the grandfather clause. In the neighboring states of North and South Dakota it will take over fifteen years from the date licensing began for the number of dealers which are licensed by exam to just *equal* the number of dealers with licenses under the grandfather clause, based on the statistics reported. Though two states of those responding required all dealers to eventually take the examination, in most others dealers will be doing business for years to come without examination. Based on projections of the reported data, it will be 22 years in North Carolina, 7 years in Tennessee, 6 years in Maine, and 5 years in Maryland from the time licensing took effect until the time dealers who took the examination will equal the numbers of those who received licenses without examination. More importantly, because the older, larger dealers who account for most sales will be those under grandfather clause, it will be many more years until even half of all aids sold pass through examined dealers. It might be argued that even though many dealers have obtained licenses without taking examinations, the board still has power to revoke those licenses for misbehavior and thus put the offender out of business. A glance to the reports on the numbers of those who have licenses suspended (virtually none) should dispel any such blissful notions. It is clear that the presence of grandfather clauses in most state laws significantly reduces their impact.

MPIRG was not able to obtain copies of the various state examinations for analysis as to their thoroughness and difficulty, although it is reported that they are at approximately the level of the National Hearing Aid Society correspondence course discussed above. This fact in a sense renders academic the concern voiced above for unexamined dealers under the grandfather clause. As argued above, professional training is required for competence in evaluating hearing loss and recommending a consequent course of action. MPIRG believes, based on consultation with experts, that the consumer can put little, if any, more confidence in the holder of a state license than in the bearer of a title of "Certified Hearing Aid Audiologist".

A second general conclusion can be drawn about the availability of state boards for consumer complaints and their rigor in policing their fellow dealers. Based on the reports tabled above of relatively few complaints, very few warnings or hearings by the boards, and virtually no license suspensions. This conclusion would be supported by evidence that most hearing aid consumers are satisfied.

and that the practices of dealers are above reproach. The other possible conclusion is that these boards charged by the state to protect the hearing aid customer are neither visible for consumer complaint, nor vigorous in their regulation of dealers. We feel that it is pointless to continue speculation as to which case is the more accurate. The evidence is clear: first, the significance of the problems of hearing loss and the literally tens of thousands in every state who suffer this condition; second, the large numbers of those with hearing losses who do not have an aid, and third, the over one third of those having an aid who are unsatisfied with it. These facts clearly argue of consumer dissatisfaction of far greater magnitude than is measured by the survey responses of state licensing boards. These bodies do not receive, much less deal with, the complaints and problems of consumers.

More important is the effectiveness of these state controls in the regulation of hearing aid dealers. It is true, indeed, that the shocking examples of dealer incompetence reported by doctors and audiologists and experienced by MPIRG personnel take place in Minnesota, a state with unlicensed dealers. But where is the indication from the experience of those states with licensing laws that passage of those laws precipitated massive crackdowns. On the contrary, the effect of passage of these laws is to enhance the dealer's image and confer upon him an aura of state approval. In states where dealers are licensed this fact assumes a prominent place in their advertising. In return, these laws do little to warrant an increase in conferred status. The bills introduced in the 1971 Minnesota Legislature to license hearing aid dealers (S.F. 316 and H.F. 297) are typical of those on the books in many states. As they were presented in Minnesota, these bills lacked a number of important provisions:

(1) A prohibition against mail order sales

(2) A prohibition against door to door sales

(3) A prohibition against selling to the enfeebled or to mental or social incompetents, without guardian's consent, e.g., in a nursing home

(4) A requirement that a dealer disclose he is not a doctor or a clinical audiologist (dealers wear white coats and their receptionists white uniforms in some Twin Cities retail offices)

(5) A provision requiring referral of children 16 or under to an otologist and a signed statement by an otologist in advance of a sale of an aid for use by such a person

(6) A provision requiring referral of persons with obvious medical problems

(7) A provision requiring a minimum guarantee and the option of a paid trial period)

(8) A prohibition against deception to induce sale

On the basis of these many, most fundamental, inadequacies it is not difficult to understand the zeal with which the dealers' association sponsored these bills, and the vigor with which they were opposed by doctors, audiologists, educators, and parents.

The basic ineffectiveness of these licensure laws in curbing the abuses of the status quo would seem to spring from an inadequacy in the theory of self-policing. Though this system might well work in other areas, here it appears to fail. As we have seen in the discussion of pricing and industry structure, dealers have a vested interest in the status quo and are not unwilling to apply pressure—even to the point of restraining competition—in an effort to perpetuate the existing system. In this system the bodies charged with administering and enforcing even inadequate licensure laws seem to take the attitude of parents toward their children: perhaps censuring them in private, but never reprimanding them in public.

The record shows MPIRG does not shy from advocacy of proper governmental intervention or calls for progressive new laws. In this case, however, existing dealer licensing laws offer only pseudo protection for the consumer. Of course any definite evaluation of a proposed law must be based on the particulars of that legislation. It is readily possible to conceive of forms of dealer licensure which would make a great contribution to the public interest. But halfway measures which deal only with symptoms and not causal antecedents only serve to diffuse legitimate public concern for finding solutions to problems.

RECOMMENDATIONS: HEALTH CARE DELIVERY TO HEARING IMPAIRED

Based on the evidence documented in this report, we feel that the hearing impaired citizens of Minnesota would be better protected and better served if the hearing health industry entered the 20th century and recognized that untrained individuals whose main concern is the selling of a product ought not to be allowed to tamper with what is essentially a medical problem. There is no conceivable parallel to the hearing aid dealer's practice of making medical diagnoses and prescribing prosthetic devices.

Licensing is not the answer. There is no test that anyone but a doctor who has specialized in ear problems could pass that would insure the proper qualifications for diagnosing the sources of hearing impairment. Similarly, it takes someone with proper training, such as an audiologist to evaluate hearing and make recommendations for hearing aids. The place of the hearing aid dealer is the sales and servicing of hearing aid equipment and any other role is beyond the scope of their present expertise. Hearing aids should be sold only on the recommendation of an ear specialist or a qualified audiologist.

At the same time, we must make a commitment to provide qualified hearing health care to all Minnesota citizens who need it. We are faced in Minnesota with a shortage of hearing health professionals. The Report of the 1969 Inter Committee on Medical Education to the Minnesota Senate estimated that there is a total shortage of 62 otolaryngologists in the state over what would be necessary to provide adequate service to all who need it. This shortage is particularly severe in the outstate areas of Minnesota. For this reason we recommend that those hospitals in the state that have otolaryngologist training programs enlarge the size of their residency programs. The University of Minnesota Hospital at present plans to increase its residency program by 25% which is less than the average by which they are increasing many other specialties. We recommend that the otolaryngology program be increased by a greater percentage.

We recommend that more federal funds be made available for the training of health care medical personnel. In recent years funds for advanced training have been cut back and this has particularly effected the training of audiological personnel.

We further believe that the state of Minnesota ought to insure that an effort is made to reach the thousands of Minnesota hearing impaired citizens with qualified personnel. For this purpose we recommend the funding of three to four mobile units under the direction of either the State Board of Health or appropriate private agencies and employing full-time audiologists and trained para-professionals. The units should travel throughout the state utilizing advanced publicity and screen individuals for hearing impairment who can then be referred to ear specialists. An effort to establish one such mobile unit is now being undertaken by the Minnesota Easter Seal Society. We recommend that the State Department of Public Health seek funds from the state legislature for additional units.

At present few such screening programs exist in Minnesota. The Crippled Children's Service utilizes para-professionals to screen primary school children but it is able to reach only a small percentage. Scattered volunteer efforts to screen residents of homes for the aged, nursing homes, and senior citizen high rise apartment buildings have likewise reached only a very few of those who are in need of help.

To insure that cost does not become a deciding factor in an individual's ability to reestablish his/her hearing through seeking qualified help, we recommend that Medicare be extended to cover the cost of hearing aids, and that both Medicare and Medicaid provide coverage for audiological exams that are not based on direct referrals from doctors.

We further recommend that a full-scale educational program be established statewide, the purpose of which is to better inform hearing impaired persons about their hearing problems, and where to seek help. In addition, better information ought help dispel some of the stigma that seems to be attached to the wearing of a hearing aid. We believe that the ignorance of the general public about hearing impairment is responsible, in equal proportion to the lack of qualified hearing health personnel, for the reluctance of such a high proportion of the hearing impaired to seek help.

This report has attempted to focus on what MPIRG believes are the outstanding inadequacies within the hearing aid industry, and our recommendations for improvement which we believe mandatory if that industry is to retain any credibility in the public eye. Had our investigation revealed little, if any, malfeasance we could have so reported. Unfortunately, for those children and adults who have hearing problems that cause them to inquire about the need of a hearing aid, this was not the case.

The interest in this report, we trust, will not be limited to those persons alone. When any group of individuals combine in such a fashion as to seriously believe that a medical service can be marketed like a television set, a reaction from the entire consuming community is needed. The suggestions made herein are designed to put the hearing aid industry in its literal and figurative place. By focusing on what prices have been used by the industry, we have commented on what it ought not be doing, and thereby, and inferentially, on its real importance to the hearing impaired: as an adjunct, but not a competitor, to the medical profession. The goal is attainable, but not without change from without, and reform from within.

Appendix 4

LETTERS AND STATEMENTS FROM INDIVIDUALS AND ORGANIZATIONS

ITEM 1. LETTER FROM MICHAEL A. NERBONNE, PH. D., ASSISTANT PROFESSOR OF AUDIOLOGY, IDAHO STATE UNIVERSITY, POCATELLO, IDAHO, TO SENATOR FRANK CHURCH, DATED SEPTEMBER 11, 1973

DEAR SIR: Because you are a member of the Elderly Consumer Subcommittee of the Senate's Special Committee on Aging, I am writing to you to convey my concern regarding the provision of hearing aids and related services through Medicare coverage.

As an audiologist I am constantly confronted by hard-of-hearing individuals who have received inappropriate and/or unethical services and advice. Most of these cases have had prior contact with hearing aid dealers and fitters, the majority of whom have had little, if any, professional training in factors related to assisting the hard-of-hearing. I could elaborate on this forever, but my basic concern is with conveying to you the notion that only audiologists and/or physicians specializing in diseases of the ear should be permitted to prescribe hearing aids for the hard-of-hearing. I say this because of the greatly improved services the hard-of-hearing would receive and the protection they would also have from the unethical practices they are currently being subjected to. It is therefore my hope that Medicare coverage will include the utilization of the audiologist in matters pertaining to the fitting of hearing aids.

If you should desire further information concerning this please feel free to contact either the American Speech & Hearing Association (ASHA) National Office in Washington, D.C., or me here at Idaho State University in Pocatello.

In addition, I would appreciate receiving any press releases or statements which you or the Committee may make in the near future on the provision of hearing aids under Medicare.

Thank you for your concern in this matter.

Yours truly,

MICHAEL A. NERBONNE, Ph. D.,
Assistant Professor of Audiology.

ITEM 2. LETTER FROM MICHAEL A. NERBONNE, PH. D., ASSISTANT PROFESSOR OF AUDIOLOGY, IDAHO STATE UNIVERSITY, POCATELLO, IDAHO, TO SENATOR FRANK CHURCH, DATED SEPTEMBER 17, 1973

DEAR SENATOR CHURCH: I have recently received information regarding the content of a number of the views presented to you and your subcommittee during the September 10–11 hearings on hearing loss, hearing aids, and the elderly. Of particular concern to me were the comments made about the feasibility of the proposed Medicare coverage for hearing aids (involving only physicians and/or audiologists) in states such as Idaho. Representatives of the hearing aid manufacturers apparently attempted to present information that would lead the committee into thinking that the proposed program would not be possible because of a lack of sufficient professionals and facilities to handle the large number of Medicare recipients. They singled out states such as Idaho as examples of this.

My main purpose in writing you is to give you some information about the services available for the hard-of-hearing in Idaho so that you will have a more accurate notion about what really exists in our state. To the best of my knowledge there currently are approximately twelve physicians specializing in diseases of the ear who are practicing in Idaho. Most of the larger cities, such as Idaho Falls, Pocatello, Twin Falls, Boise, and Coeur d'Alene have at least one or more such physicians. Geographically they are also well dispersed throughout the

state. It should also be noted that other ear specialist are located in cities just outside of Idaho, such as Logan, Utah; Missoula, Montana; and Pullman, Washington. These, combined with those practicing in the state, make up a relatively large number of physicians who could be tapped for the Medicare program.

In the profession of audiology three individuals in Idaho currently possess certification from the American Speech and Hearing Association (ASHA). One is in Pocatello (ISU) while the other two are located in the Boise area. At least three other audiologists are nearing the completion of the requirements for certification from ASHA and are now working in speech and hearing facilities in the state. Idaho State University has awarded Masters degrees in the field of Audiology to eight individuals in the past two years and it is felt that in the near future the number of certified professionals in audiology working in Idaho will increase significantly.

The clinical facilities in audiology are expanding rapidly as well. Advanced audiometric evaluations are being done by audiologists in a number of locations, including Pocatello, Twin Falls, Boise, and Coeur d'Alene, as well as Pullman, Missoula, and Logan. In addition, recent discussion in Idaho has centered around the hiring of a State Audiologist, who would coordinate and develop new programs for the hard-of-hearing. One such endeavor involves providing mobile hearing services for the remote areas of the state. All of this indicates that a significant number of professionals in the area of audiology are currently working in Idaho, with an indicated increase in the near future.

It is my opinion that with the available professionals and facilities that now exist in Idaho the use of physicians and audiologists in the Medicare program is both feasible and essential to its success. I feel that the Medicare recipients in the state could be easily handled by the ear specialists and audiologists, and the services provided would be far more satisfactory and ethical than those currently being provided by most hearing aid dealers in Idaho.

In conclusion, I wish to thank you for your continued interest in the elderly hard-of-hearing. If you should desire any information regarding the profession of audiology please feel free to contact me at any time. In addition, I would like to offer to you a standing invitation to visit our speech and hearing facilities here at Idaho State University at any time that would be convenient for you. The faculty and staff would be most interested in chatting with you.

Sincerely,

MICHAEL A. NERBONNE, Ph. D.,
Assistant Professor of Audiology.

ITEM 3. LETTER FROM ROBERT O. GRANGE, PH. D., CHAIRMAN, DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY, IDAHO STATE UNIVERSITY, POCATELLO, IDAHO, TO SENATOR FRANK CHURCH, DATED SEPTEMBER 24, 1973

DEAR SENATOR CHURCH: It has come to my attention that on September 10–11, the Senate Subcommittee on Consumer Interests of the Elderly, of which you are chairman, held hearings regarding hearing loss, hearing aids, and the elderly.

I am concerned about the elderly in that they are provided with the adequate and appropriate assistance for their needs. In Idaho, the profession of audiology is doing its utmost to provide services to the elderly with regard to hearing loss. At the present time, there are three audiologists certified by the American Speech and Hearing Association. In addition, there are four other people trained in audiology who qualify to render Medicare reimbursable audiology services.

Audiological services are available in Idaho at Pocatello, Boise, Nampa, Gooding, and at the various Child and Human Development Centers. In addition, services can be obtained in Pullman, Washington; Missoula, Montana; and Logan, Utah. Any of these facilities is within reasonable communting distance of Idaho towns and cities.

The Department of Speech Pathology and Audiology at Idaho State University has an excellent educational program which provides training for audiologists. The graduate program has been in existence since 1970, and within the last two years, for example, has produced eight students prepared to perform services for people suffering from hearing impairments. The I.S.U. Dept. of Speech Pathology and Audiology provides regular service programs for people of all ages regardless of ability to pay.

Over two years, I proposed the employment of a state audiologist to promote, provide, and integrate audiologist services. As a member of the Governor's Advising Council on Comprehensive Health Planning and Chairman of the Subcommittee on Perceptual Screening, I have continued to support the State Audiological concept and recently the committee formulated a recommendation to that effect which will be forwarded to the Governor.

Discussions have been held regarding expansion of the availability of hearing testing and diagnostic services through the use of mobile clinics, and/or teams. I am sure that mobile facilities can be available at this time, providing funding could be obtained.

I sincerely appreciate your interest in the elderly and the problems which they incur because of defective hearing.

When you are in Pocatello, my staff and I would be most happy to meet with you and to show you our facilities at I.S.U., and to assist you in any way that we can.

If I can be of assistance to you, please feel free to contact me at any time.

Very truly yours,

ROBERT O. GRANGE, Ph. D., *Chairman,*
Department of Speech Pathology and Audiology.

ITEM 4. LETTER FROM EARL R. OWENS, ED. D., HEAD, SPEECH DEPARTMENT, NORTHWEST NAZARENE COLLEGE, NAMPA, IDAHO, TO SENATOR FRANK CHURCH, DATED OCTOBER 8, 1973

DEAR SENATOR CHURCH: As a speech and hearing therapist I very much appreciate the work of you and the subcommittee on behalf of the elderly, especially as it pertains to hearing loss and hearing aids. My own training has had a strong emphasis in audiology and we test hearing here at Northwest Nazarine College via a certified audiologist. By the way, should you have need of my services I will be happy to assist you in any way I can with regard to the functions of audiology and audiologists.

We provide speech and hearing services at N.N.C. through our clinic besides the hearing testing I mentioned. Other similar services are offered around the state in cities such as Pocatello, Moscow, and Boise.

I believe strongly that hearing aids should be prescribed and fitted by medical doctors specializing in the ear or by an audiologist. I believe this because it is in the best interests of the elderly to have well-trained, professional, unbiased individuals test their hearing and prescribe hearing aids only when they will be of value to the hard-of-hearing person. I do not question the integrity of hearing aid dealers. I believe, rather, that the more highly trained and objective M.D. or audiologist is better qualified to truly help the hard-of-hearing elderly person. Persons and facilities available for professional hearing aid fitting are growing in Idaho. (Our hearing facility was established only six months ago.) The benefit to the elderly in money saved and professional care out-weigh the easy accessibility of some hearing aid dealers who are sometimes more anxious to sell aids than to help the person with a hearing problem.

Sincerely,

EARL R. OWENS, Ed. D.,
Head, Speech Department.

ITEM 5. LETTER AND ENCLOSURES FROM RAYMOND H. HULL, PH. D., CHAIRMAN, DEPARTMENT OF COMMUNICATION DISORDERS, UNIVERSITY OF NORTHERN COLORADO, GREELEY, COLO., TO SENATOR FRANK CHURCH, DATED NOVEMBER 9, 1973

DEAR SENATOR CHURCH: I have been following with interest your subcommittee's hearings dealing with hearing aids and the elderly individual. I am sending you bits of information concerning a program that we have in Northeastern Colorado for hearing impairment among the elderly. It is called a Community-Wide Program for Geriatric Aural Rehabilitation, "aural" referring to hearing. The information that I am sending you describes a working community-wide program conducted by the Department of Communication Disorders, Area of Rehabilitative Audiology of the University of Northern Colorado in Greeley, Colorado. This Program has been in existence for four years in all Greeley Colo-

rado nursing/retirement homes. It is staffed by individuals in the following positions: (1) Director of Audiology, U.N.C. (2) Clinical Coordinator of Adult and Geriatric Aural Rehabilitation, U.N.C. (3) Graduate Clinicians in Rehabilitative Audiology, U.N.C. (4) The Directors of all Greeley, Colorado Nursing Homes, (5) Activity Directors of all Greeley, Colorado Nursing Homes, (6) The Nursing Home Nurses, (7) Nursing Home Aides, and (8) Family Members of the Nursing Home Residents. Although these homes consist of proprietary, county, and religiously financed, the program has been successful in each setting, i.e. with modifications relative to individual needs within the various retirement homes. The basic philosophy of the endeavor is not new to our field of Speech Pathology and Audiology as various individuals have recognized or implied for some time that any program providing hearing rehabilitation to the geriatric client must be as comprehensive as the hearing impairment itself. Most habilitative or rehabilitative services concerning hearing or speech and language disorders are concentrated toward the child or young adult. Certainly they deserve much attention because of the life they have yet to lead, but the elderly individual who still has years to live and much to offer others deserves our diagnostic and most importantly, our rehabilitative efforts. Presently there are few centers in the United States who are concerned with the rehabilitation of the hearing impaired client. We feel that our Program concerning (1) the diagnosis of hearing impairment among the aged in our nursing homes in Greeley, Colorado, and (2) the rehabilitation of these hearing impaired individuals which includes careful consideration regarding fitting of hearing aids on these individuals is unique. Since there are over 20 million individuals in the United States over age 65 and of those 20 million 6% or 1.2 million live in nursing/retirement home environment, and of those 1.2 million who do live in the nursing/retirement home environment 90% are significantly hearing handicapped, it is of essence that we work with these individuals and attempt to rehabilitate them to the point that they can either re-enter their community to function effectively once again or at least to the point of being able to live more comfortably with their families. The information that I am sending you includes the following: (1) A description of one aspect of our Program entitled "A Community-Wide Program for Hearing Aid Evaluation and Rehabilitation for the Geriatric Client". (2) An article that is being submitted for publication entitled "A Community-Wide Program in Geriatric Aural Rehabilitation", which describes our entire community-wide program, and (3) Brochures concerning a series of Workshops on Geriatric Aural Rehabilitation that are being held here at the University of Northern Colorado through our department, funded by Grant # HSM 110-73-415, Health Services and Mental Health Administration, Department of Health, Education and Welfare to present six workshops for Federal Region VIII. The purpose of these workshops is for an awareness of problems surrounding hearing impairment of the aged and to instruct others regarding the establishment of geriatric hearing rehabilitation within retirement homes within this region. The workshops are entitled "Workshops in Geriatric Aural Rehabilitation". One of the most important aspects of these workshops is concerned with the difficulties of fitting the elderly individual with hearing aids, and the difficulty of finding finances to purchase hearing aids for these individuals.

I hope this information will be of interest to you. Our Program here is a vital program and it is working well. We are proud of the fact that we have been able to gather individuals together who are working with the elderly individual to become concerned with the identification and rehabilitation of hearing impairment among the aged. If you would desire further information concerning our program, since I feel that it is one that could work in other areas of this country as well as it does here, I would be very happy to communicate with you.

Best wishes in your work.

Sincerely,

RAYMOND H. HULL, Ph. D., *Chairman,*
Department of Communication Disorders.

Enclosures.

A Communitywide Program for Hearing Aid Evaluation and Rehabilitation for the Geriatric Client: A Working Model

(By Raymond H. Hull, Ph. D.)

INTRODUCTION

The hearing aid evaluation may become routine for many audiologists. The "routine" stops, however, when the hearing aid evaluation of the elderly begins. When evaluating the hearing of the aged person, the audiologist is dealing with a person who has probably heard and understood well at one time. For reasons unknown to him, however, his hearing has gradually decreased, until through concern, he has sought the aid of those who he feels should be able to help him or at least give him counsel.

According to Alpiner (1965) and the personal experience of this writer, "when an older client comes to the clinic for evaluation, his audiologic complaints may fall into a general pattern." His primary complaint may be that he has noticed that he cannot "understand" people as well as he used to. Or, he might state that he feels that his family and friends are mumbling lately, but that he is afraid that it might be because he is not hearing as well as he should. He might say that he feels that he is able to hear all right, but that he had difficulty "making out" what people say. One frequent comment is that he can hear well when he is talking to one or two persons, but just as soon as he gets into a group of people, he has difficulty "hearing" of understanding what is being said to him. Because he does have difficulty understanding what people say, he still often confuses the content of messages. If he also has typical hearing configuration of loss in the high frequencies, the difficulty in understanding speech is compounded. He may hear messages as having different meaning than what was actually spoken, and thus answer inappropriately. Some family members, friends, and especially those unfamiliar to the individual, may then diagnose senility in the geriatric. This diagnosis is inaccurate since senility has been confused with inability to understand auditory messages. The case history may reveal nothing except the fact that the person being evaluated has grown older.

PURPOSE

(Because of the increased number of persons above age 65 in the world, then, those involved in all areas of rehabilitation are becoming aware that whether they want to or not, the geriatric patient is, or will be, a part of their case load. Furthermore, since one of the most significant effects of aging is the general loss of auditory perception called presbycusis, along with the withdrawal and other symptoms associated with it, the rehabilitative audiologist and hearing aid dealer is faced with the realization that he must become concerned with these clients. To be able to work with these most difficult clients, one needs to be aware of specific techniques that work reliably well with many within the same general classification or presbycusis).

The purpose of this paper, then, is the presentation of a working Program for the Geriatric Hearing Impaired currently being provided to five nursing homes in Greeley, Colorado through the University of Northern Colorado Program in Rehabilitative Audiology.

THE APPROACH

The following approach has been utilized for the past four years within several different types of retirement homes and with varying types of geriatric clients. Types of homes varied from County financed retirement centers, to Community homes to more exclusive corporation sponsored homes. Clients consisted of ambulatory, non-ambulatory, visually handicapped, non-visually handicapped, and ones with psychological problems, all with varying degree of auditory impairment.

The Program at each home is consistent among the following outlined essential components:

A. Intensive In-Service Training of nurses, nurses' aides, administrators, volunteer help, physicians and others who are associated with the clients regarding geriatric hearing impairment, hearing aids and effective communication with the hearing impaired geriatric client.

B. In-Service Training with family members stressing the handicap of hearing impairment among the aged along with information relative to more effective communication and hearing aids (their benefits, limitations and effective utilization).

C. Complete audiometric evaluations
   1. Pure-tone testing by Clinician at the Home.
   2. Full evaluations as a cooperative effort with the U.N.C. Audiology Clinic.

D. Counseling with the geriatric client re: his hearing impairment and ways to improve communication with and/or without the use of a hearing aid.

E. Hearing Aid Evaluation (if warranted) at U.N.C. Audiology Clinic or in nursing home. Hearing aid fitting is completed by local hearing aid dealers through a cooperative program with them.

F. Hearing aid counseling with the geriatric client and trial use of aid in the nursing home environment.

G. Speechreading instruction
   1. Utilize the Linguistic Approach (Hull, 1969)
      a. No phoneme analysis
      b. Consists of recognizing clues for speech understanding
   2. Emphasis group work
      a. Group participation
      b. Individual participation within groups
   3. Speechreading groups divided according to
      a. General state of health
      b. Alertness of client
      c. Visual acuity
      d. Degree of auditory handicap
   4. No discrimination relative to age of client within groups

H. Captioned films for the deaf.

I. Teaching of sign language to geriatrics who cannot communicate otherwise.

FOLLOWUP EVALUATION OF EFFECTIVENESS

A before-and-after evaluation of effectiveness of this Program per individual is presented and discussed in terms of

A. Client's evaluation of himself

B. Clinician's evaluation of client

C. Nursing staff evaluation of client

D. Families' evaluation of client, i.e., husband, wife or children, re:
   1. General state of health and alertness
   2. Degree of auditory handicap
   3. Ability to communicate with others
   4. Effective or ineffective use of a hearing aid

The pre and post evaluation consisted of a modified semantic differential by personal interview.

SUMMARY

This paper, then, is concerned with the presentation of a Community-wide Program of Geriatric Aural Rehabilitation in which the pre-hearing aid counseling, the hearing aid evaluation, the individual's aural rehabilitation with his hearing aid, family counseling and in-service training with nursing home personnel takes on a new meaning of effectiveness. This Community-wide Program with the elderly individual in the nursing home in regards to hearing aid fitting and aural rehabilitation is unique in the United States not only because it involves all nursing homes working together in a large community, but because it is extremely effective in rehabilitating the hearing impaired geriatric client. The United States Public Health Service and Mental Health Administration has funded this writer to present Workshops on this Working Program for Region 8 (North Dakota, South Dakota, Wyoming, Montana, Utah and Colorado).

AUTHOR IDENTIFICATION

Raymond H. Hull, Ph.D., Chairman, Department of Communication Disorders, Director of Audiology, Department of Communication Disorders, School of Special Education and Rehabilitation, University of Northern Colorado, Greeley, Colorado and

Robert M. Traynor, M.A., Clinical Co-ordinator, Adult and Geriatric Aural Rehabilitation, Department of Communication Disorders, School of Special Education and Rehabilitation, University of Northern Colorado, Greeley, Colorado.

This paper is based upon four years of work and observation by the authors in developing and maintaining a community-wide geriatric aural rehabilitation program in all nursing homes in Greeley, Colorado in association with the Speech Pathology and Audiology Clinics at the University of Northern Colorado.

This report is adapted from a paper by Raymond H. Hull, presented at the Annual Convention of the American Speech and Hearing Association, San Francisco, 1972.

This Program is presently funded by Grant No. HSM 110–73–415, Health Services and Mental Health Administration, Department of Health, Education and Welfare to present six Workshops for Federal Region VIII. The purpose of these Workshops is for awareness of problems surrounding hearing impairment of the aged and to instruct others regarding the establishment of geriatric aural rehabilitation programs in retirement homes within this Region. The Workshops are entitled, "Workshops in Geriatric Aural Rehabilitation." The working aspect of this Program is funded by the retirement homes involved.

A Communitywide Program in Geriatric Aural Rehabilitation

(By Raymond H. Hull and Robert M. Traynor, Area of Rehabilitative Audiology, Department of Communication Disorders, University of Northern Colorado)

INTRODUCTION

There are an estimated 3.3 million elderly individuals in the United States with some degree of hearing impairment. Although some procedures for the aural rehabilitation of these hearing impaired patients have been previously outlined, in general, they appear to be involved with those geriatric clients who are ambulatory enough to visit an outpatient clinic. A survey conducted by Leutenegger and Stovall (7) indicated, however that of the 20 million individuals over 65, 6% or 1.2 million live in the nursing/retirement home environment. According to Chaffee (3) 90% of this confined population are significantly hearing handicapped. In essence then, statistics indicate that at least one third of all the geriatric hearing impaired population live in the nursing/retirement home. These facts demonstrate that if a comprehensive program in geriatiric aural rehabilitation is to exist, the confined population must be included.

The purpose of this paper, therefore, is to describe a working communitywide program in Geriatiric Aural Rehabilitation conducted by the Department of Communication Disorders, Area of Rehabilitative Audiology, University of Northern Colorado, Greeley, Colorado. This program has been in existence for four years in all Greeley nursing/retirement homes and is staffed by individuals in the following positions:

1. Director of Audiology, U.N.C.
2. Clinical Coordinator of Adult and Geriatric Aural Rehabilitation, U.N.C.
3. Graduate Clinicians in Rehabilitation Audiology, U.N.C.
4. The Directors of all Greeley, Colorado Nursing Homes.
5. Activity Directors of all Greeley, Colorado Nursing Homes.
6. Nursing Homes Nurses.
7. Nursing Home Aids.
8. Family Members of the Nursing Home Residents.

Although these homes consist of proprietary, county, and religiously financed, the program has been successful in each setting, i.e. with modifications relative to individual needs within the various retirement homes. Clients include the ambulatory, non-ambulatory, visually handicapped, psychologically impaired. All possess various degrees of hearing impairment, either congenital and adventitious. Numbers of residents within these nursing/retirement homes range from 78 in the smallest center to over 500 in the largest.

The basic philosophy of this endeavor is not new to our field, as various individuals have recognized or implied for some time that any program providing aural rehabilitation to the geriatric client must be as comprehensive as the hearing impairment itself (Alpiner, 1), (Barr, 2), (Pang and Fujikawa, 9), (Parker, 10), and (Willeford, 12, Chapter 9). This community-wide effort encompasses the areas of motivation-counseling, audiometric evaluation, amplification, speechreading-auditory training, speech and language therapy, in-service training for the nursing/retirement home staff including administrators, nurses, aides and other staff members, and counseling the family members of the nursing home resident.

THE PROGRAM

Administrative and Financial Support.—The Program is funded by the individual nursing homes on a pro-rated basis depending upon their population size. These monies are channeled into a Fellowship in Geriatric Aural Rehabilitation, a Fellowship originated between the nursing home administrators and the Rehabilitative Audiology Area, Department of Communication Disorders, at the University of Northern Colorado. Recipients of the Fellowship are graduate clinicians in Rehabilitative Audiology. Each works at least ten hours per week in his assigned retirement home under the supervision of the University of Northern Colorado staff. Among the retirement homes, the largest receives services thirty hours per week.

The Program is co-directed by the Director of Audiology and the Clinical Coordinator of Adult and Geriatric Audiology of the University of Northern Colorado and the directors of the five nursing homes. Administrative coordination is maintained by periodic meetings of the aural rehabilitation clinicians receiving monies through the fellowship, the Director of Audiology and Clinical Coordinator of Adult and Geriatric Aural Rehabilitation of the University of Northern Colorado, the directors of the five retirement homes, their activity directors and heads of nursing to discuss matters relating to this Program, i.e. maintainances and improvement. A yearly meeting is held each fall to determine continuance of the Program in individual retirement homes.

Motivation-Counseling.—As Willeford (12) suggests, the success of aural rehabilitation among the geriatric population is highly dependent upon the rapport established with the client. Many of these patients are 40 to 70 years our senior and it is difficult for them to understand how someone that has lived for such a short time could possibly know more than they. Although the expression "honor your elders" applies to the clinician working with this population, a polite, forceful manner is sometimes necessary. However, as Alpiner (1) has indicated, the therapist must never lose sight that he is working with many physiological and psychological problems first, and hearing impairment second . . . "we are working with people, not ears". Therefore, if the clinician establishes the proper rapport, counseling may be enough to motivate the resident toward participation. If this is not the case. it takes a skillful clinician to manipulate such factors as peer group pressure, the family, the patient's own ego, and the nursing/retirement home staff to inspire their participation in the aural rehabilitation program. To illustrate this type of needed support, the following cases are presented:

Case I

A 92-year-old woman demonstrated a profound bilateral sensorineural element. The patient's attitude was that she would die "any day now", so why purchase a hearing aid. The audiologist counseled her regarding amplification and appeared to be making no progress. Two of her friends had worn hearing aids for over five years and they suggested that she try a hearing aid for one week. Two weeks later she purchased a body type aid and is progressing well. Her two friends, along with the audiologist, are presently helping in the adjustment process on a cooperative basis.

Case II

An 85-year-old woman demonstrated a severe bilateral sensori-neural element. The aural rehabilitation clinician had presented amplification many times and each time it was refused. It was found that the client's mother had purchased a hearing aid at one time and had not been able to utilize it effectively, so this client felt that trying amplification would not be worth her time. The client's roommate was approached and it was suggested that if this individual had a hearing aid she would be able to communicate better with her. The client's roommate did discuss this with her, and the following week the client consented to a hearing aid evaluation, and then finally to being fitted with amplification.

She lived approximately a year after the hearing aid was initially fit and was progressing in her adjustment very well until her death.

Case III

A 93-year-old male demonstrated a moderate to severe bilateral sensorineural hearing loss. Until recently the client would attend the speech-reading classes regularly in his nursing home, however, never responding to the class materials or to the clinician. During one session a question was presented as the client was about to light a cigarette. The clinician took the client's matches and held them until a minimal response was obtained. This response was immediately rewarded by lighting the client's cigarette. This method has been very effective in obtaining responses from this client. The client has now found that he, indeed, can participate well in speech-reading class, and is advancing well without the reinforcer described above. Even though many counseling sessions had been held with this client, responses in speechreading class were not noted until an alert clinician began the reinforcement process.

Audiometric Evaluation.—The audiometric procedures utilized in this program consist initially of pure-tone screening and a short interview. Complete evaluations after screening include pure-tone air conduction testing, tuning fork tests, hearing aid evaluations, and acoustic impedence measurement for clients with lack of response to traditional types of assessment and for assessment of middle ear function. Screening for the speech frequencies of 500, 1000, and 4000 Hz at 35–40 dB and a short interview with the patient enables the clinician to find those people with decreased hearing acquity and disorders of auditory discrimination. All patients who fail the hearing screen are then given a pure-tone air conduction threshold evaluation with a portable diagnostic audiometer. Clients are then evaluated through the use of tuning forks to establish information regarding the type of loss. A traditional hearing aid evaluation is performed at the University of Northern Colorado Audiology Clinic for ambulatory residents. Those patients unable to travel to the clinic are given a more subjective hearing aid evaluation. This method consists of trying several hearing aids in everyday environmental conditions under close supervision and counseling by the audiologist.

Impedence measurements have been extremely valuable in the assessment of those non-cooperative/non-alert individuals. These measurements are presently being conducted on a more routine basis in all retirement homes involved in this Program. This audiologic information is utilized as a part of the hearing aid evaluation in regard to recruitment and/or to determine type of loss in this population.

All new incoming nursing home residents are evaluated for hearing function within two weeks after arrival. In this way participation in the Aural Rehabilitation Program can be initiated early if it is deemed necessary.

Amplication.—Bringing representative hearing aids from the clinic for home trial and keeping the existing aids operational are the aural rehabilitation audiologist's responsibility. Hearing aids are consigned to the U.N.C. Audiology Clinic for this Project by various manufacturers and hearing aid dealers, and are brought to the home for specific patients by the clinician assigned to that home. Each aid evaluated on nursing home residents is selected on the basis of the audiometric evaluation, the physical capabilities of the patient, his communication needs, and financial status. After an aid is seleced that appears to benefit the patient, it is given to him for a trial period of one to two weeks. During this time, the resident is closely supervised by the audiologist and the nursing/retirement home staff regarding his use and adjustment to the hearing aid. If the patient purchases a hearing aid after this period and is fitted by the dealer representing the model of aid selected, he then undergoes carefully planned hearing aid orientation (Traynor and Peterson, 11). If financial assistance is necessary for purchase of the hearing aid, there are many charitable organizations available so the patient may forego much of the expense. Unfortunately, many residents are dissatisfied with amplification. In these cases, the alternatives of speechreading/auditory training are employed without the aid of amplification.

The aural rehabilitation clinician also insures that all of the hearing aids operating within the home are functioning properly. This is enhanced by demonstrating simple trouble-shooting techniques to the nursing/retirement home staff. If a serious malfunction occurs, the aid is either sent to Colorado Public Health Service, Department of Hearing and Speech for frequency-distortion analysis, or to the appropriate hearing aid dealer for repairs. The procedure described above has virtually eliminated the problem of the numbers of unwanted hearing aid dealers who have in the past used nursing homes in this community to simply

sell hearing aids. The residents are thus protected from this type of pressure by being evaluated and counseled by the clinicians within this Program and then fitted by reputable dealers through this Program's recommendation and the client's consent.

Speechreading/Auditory Training.—The speechreading approach utilized in this program is a modified version of the Linguistic Approach to Speechreading Instruction (Hull, 6) which incorporates the predictability and structure of language with the use of visual and auditory clues. This method is easily adapted to auditory training to provide an interesting and effective approach to this age group. Each class is approximately 45 to 60 minutes in duration, once or twice per week, and is usually limited to 8 to 10 residents per class. At times, the speeching/auditory training classes are used for socialization purposes to promote a better atmosphere conducive to communication between residents within the retirement home. Another successful variation of the classes are Caption Films for the Deaf that are either presented once each week or once each month, depending upon the desire for these movies. These provide a break from the normal routine and can be an extremely valuable speechreading and auditory training exercise. Most homes have both an advanced and a beginning speechreading/auditory training class. In some homes, manual communication has been taught on an experimental basis. These classes are now a part of the normal week's activities and are extremely successful in helping the resident's communication problems by not only providing a means of communication for the profoundly hearing impaired client, but also another avenue for language stimulation for all clients. The nursing home staff is also being taught American Sign Language so that communication can exist with patients who are without useable hearing.

Speech and Language Therapy.—The services of a speech pathologist have been initiated this year, primarily to provide therapy for stroke victims (aphasia). However, the speech clinicians have seen all types of clients with neurologically based communication disorders on a regular basis at the Greeley, Colorado nursing homes.

In-Service Training.—As nursing/retirement homes traditionally have a fast turnover in personnel, in-service training sessions are routinely conducted once or twice each month. These sessions are usually one hour in duration and topics consist of (1) the impact of presbycusis, (2) hearing aids, (3) how the ear functions, (4) what is speechreading, (5) how to best communicate with the aged, (6) how to trouble shoot for hearing aid malfunction, and (7) provide staff discussion regarding individual hearing impaired residents. In essence, the in-service training provides the staff with insight to hearing disorders, their complications and information about the progress of certain patients participating in the program. All nursing homes require new staff and previously employed staff members who have questions regarding clients to attend in-service training.

Case studies

All of the following cases have been participating in the Aural Rehabilitation Program since its conception and are documented at Birch Avenue Manor Nursing Home, Greeley, Colorado through Social Progress Records kept for each resident by the Nurse, Activity Director and the Audiologist. These clients and their progress, or lack of it, are illustrative of these found in this Program:

Case IV

Female, 59 years of age, profound sensorineural element, monaurally aided.

April 1971_____ Patient sits in her room and does not respond to communication. It appears that reading is her only recreation. This resident has extremely poor hygiene habits.

January 1972_____ After participating in the aural rehabilitation program for seven months she still enjoys reading but also regulary attends speechreading class, and helps in the dining room during meal time. She now styles her hair, bathes regularly, tries to communicate with other residents and is much more sociable. Communication and socialization has been significantly improved.

June 1972_____ Still active in aural rehabilitation program although the hearing impairment is progressing. Utilizing visaul clues and amplification very effectively. Uses manual communication to supplement speechreading and amplification.

January 1973_____ Not as active due to further progression of hearing impairment. Hearing is now totally non-functional. Amplification has been discontinued and replaced with singing and

speechreading. Still communicates well considering degree of impairment and health. Client understands signs for "to go, eat, sleep, time". Manual communication is utilized by staff to communicate with the client. She responds to and understands signs well.

July 1973_____ Patient has become extremely incoherent and does not participate in the aural rehabilitation program at this time. The nursing home personnel indicate, however, that communication with this patient would almost be impossible if no aural rehabilitation had been conducted.

Case V

Female, 82 years of age, profound sensorineural element, monaurally aided (aid not worn).

April 1971_____ This patient is bedridden by choice most of the time. Is noncooperative with others as communication is extremely difficult. When counseled regarding the hearing impairment, the clinician was informed that the hearing aid produced so much noise that it was impossible to understand speech. The aid was immediately sent to Colorado Public Health Service for a distortion analysis. A loan aid has been provided until the return of her own. She has been approached many times to attend speechreading class, and has now consented to attend. She was placed in a beginning class with some of her aquaintances. The Linguistic Approach is being utilized and is slowly beginning to participate in class.

January 1972_____ Patient progressing very well in ability to communicate utilizing amplification. She now participates in many activities within the home such as bingo, cards, church, and rhythm band. Her roommate believes she is much easier to tolerate at this time. Visual communication appears to be improving as nursing home personnel indicate conversation is much easier now than in the past.

February 1972_____ Patient is deceased.

Case VI

Male, 78 years of age, moderate to severe sensorineural hearing impairment in left ear, severe to profound in the right ear.

April 1971_____ Client sits in his room and stares out of the window throughout the day. Sometimes this client will come to the lobby and demonstrate the same behavior. There is no communication with others.

January 1972_____ Following 8 months of aural rehabilitation in this program, this client is beginning to respond as evidenced by participation in morning coffee hour and voluntary attendance at speechreading class.

July 1972_____ Client not staying in his room as much and is attending more activities such as church and rhythm band. The use of visual clues in communication does not appear to have improved since participation in the speechreading class.

January 1973_____ Attends all types of activities now, however, still does not respond well to other residents. Visual communication progressing well as most generally will speak and respond correctly when spoken to. From no verbal response to others to this type of communication demonstrates an awakening of response to this environment. Non-required attendance at social functions within the nursing home demonstrates a desire to associate with his environment. For an indication as to the lack of outgoing verbal communication with others, one must look back at his personality prior to being committed to the nursing home environment. According to his family, he has always been a quiet individual. One must question an attempt at changing this long since established behavior by forcing him into communication situations. One must look at the geriatric clients' former behavior before attempting to make changes in him in this new environment.

SUMMARY

During the past four years, clinicians in the University of Northern Colorado Community-Wide Program in Geriatric Aural Rehabilitation have observed success with regard to hearing aid evaluation procedures, speechreading activities and motivation in individuals who formerly had isolated themselves within the confines of their retirement home. Many of these individuals are now communicating with others within their retirement home when previously they did not know each other's name. Many who had given up attempting to communicate with their families are now willing to attempt that association once again due to a combination of intensive hearing aid orientation, speechreading instruction and family counseling. Others are once again venturing out into the community to rebuild old acquaintances.

Many other retirement homes within this geographic area have requested participation in this Program. Due to lack of personnel in this existing Program, they have been encouraged to contact other University clinics or other audiologists for their help.

If we as professionals do not expand our services into the nursing/retirement home, we will continue to neglect the 1.2 million aged individuals confined to the limits of that environment, isolated from reality by the barrier of hearing impairment.

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Preface To The Workshops

(By R. H. Hull)

Communication is the most complex aspect of human behavior. Impairments in the processes of communication—speech, language and hearing—leave myriad problems in their wake. The child with a communication disorder may encounter overwhelming obstacles to learning and may find it difficult to establish the relationships with other children which are essential to growing up to healthy stable adulthood. The adult who acquires a speech or hearing disorder may experience a variety of social and economic problems. His livelihood may be endangered; he may withdraw from his friends and cease to be a participating member of his community.

The adult over 65 years of age faces a greater variety of speech and/or hearing problems. It has been found that at least 88% of adults over age 65 demonstrate some degree of hearing loss. They also stand a greater risk of

speech and language impairment through cerebral vascular accident and other related vascular and neurological diseases. Without specific speech therapy, the stroke victim will usually not regain sufficient use of expressive speech and language and/or auditory perception for adequate communication. The tendency, then, is for the patient to withdraw from communicating with family or friends.

In terms of hearing problems, Rossenwasser (1964) explains that the resulting handicap of a hearing impairment in older persons is greater because of the complex psychological problems to the aged and adjustment problems which are frequently necessary. According to Myklebust (1964) and Alpiner (1965), the effect of hearing impairment among the aged should be viewed more in terms of withdrawal and isolation, increased insecurity and emotional stress. Because the elderly threatened with problems such as mandatory retirement, lack of employment, needs for assistance and self-care they often feel useless and unwanted. A hearing loss often precipitates or increases feelings of anxiety and depression. It has found that many persons use their hearing impairment as an excuse for withdrawal and non-participation in social activities. Many even begin to reject visits with their families when they know that they will be expected to communicate with them.

The devastation of hearing impairment among the aged is greatly increased because they often times cannot use a hearing aid effectively. The site of lesion for presbycusis (old-age hearing loss) has been found to predominate centrally, rather than in the receptive mechanism (the ear). The aging process does not damage the receptive mechanism as much as the central nervous system. So the elderly person who says, "I can hear you, but I cannot understand you," is probably speaking the truth. The receptive hearing mechanism may be working fairly well, but the central auditory mechanism does not allow him to "understand" what is being said.

Hearing impairment as seen by the "lay person" is often mislabeled as senility because the elderly person will often times respond to questions or statements with wrong or inappropriate answers. Senility is without question seen among the geriatric patient, but non-senile hearing impaired patients often seem to demonstrate similar symptoms with inappropriate responses to questions, depression, anxiety, suspiciousness and withdrawal. They withdrew and reject communication situations with their families and friends.

Both the stroke patient, or patients with other related speech and/or language disorders and the hearing impaired patient can be helped with proper individual and group therapy procedures conducted by a trained hearing therapist.

The field of Aural Rehabilitation is concerned specifically with the diagnosis and rehabilitation of the hearing impaired child, adult and geriatric. The purpose of these Workshops is to acquaint the nursing administrator, the nurse, the activity director and other nursing home personnel, along with the professional audiologist, speech pathologist or the physician with the impact of hearing impairment on the aged person and their rehabilitation.

THE UNIVERSITY OF NORTHERN COLORADO, GREELEY

DEPARTMENT OF COMMUNICATIONS DISORDERS WORKSHOPS

Geriatric Aural Rehabilitation

Choice of 6 Three Day Sessions—Limited Enrollment—25 per Workshop

PURPOSE

As nearly one-half of all the American hearing impaired are age sixty-five and older, the field of Audiology is expanding to meet the aural rehabilitation needs of these individuals. These workshops are the product of a three-year pilot study among the geriatric population in Greeley, Colorado. Their purpose is expanded awareness of Geriatric Aural Rehabilitation. Within the program, experts in the areas of Otolaryngology, Psychology, Speech Pathology, and Audiology have combined to present the problems encountered in this endeavor, and why and how this type of rehabilitation is conducted.

Dates: December 3, 4, 5; November 12, 13, 14; October 8, 9, 10.

ADMINISTRATOR CERTIFICATION

These sessions have been granted 12 hours toward the yearly certification of nursing home administrators by the Colorado and North Dakota State Board of Examiners for Nursing Home Administrators. Credit has been applied for in the states of Montana, South Dakota, Utah, and Wyoming.

Worksop Topics—
Medical Aspects of Presbycusis
Keith E. Peterson, M.D., Otolaryngologist

Audiological Problems Resulting From Presbycusis
Raymond H. Hull, Ph.D., Audiologist

Social-Psychological Impact of Sensory Deprivation
Eugene Koplitz, Ph.D., Psychologist
Mary Louise Burum, Ed.D., Gerontologist

The Need for Hearing
Rehabilitation of the Aged
Jerome G. Alpiner, Ph.D., Audiologist

The Use of Hearing Aids
Among the Aged
Robert M. Traynor, M.A., Audiologist

Speech Communication Problems Of the Elderly Individual
Robert F. Campain, Ph.D., Speech Pathologist

Direct problem solving sessions

Demonstration of a working program

Panel discussion with Nursing home officials

Enrollement—
Limit: 25 Participants per workshop.
Priority consideration shall be given to the following: Nursing Home Administrators, Nurses, Nursing Home Inservice Trainers, Activity Directors, and Speech Pathologists and/or Audiologists actively working in nursing homes.

There is NO registration fee. Please indicate 1st, 2nd and 3rd choice of attendance dates.

The project which the workshops are based is performed pursuant to Contract HSM 110–CHS–141(3), Health Services and Mental Health Administration, Department of Health, Education, and Welfare.

Project Director:
Raymond H. Hull, Ph.D.
Department of Communication Disorders
School of Special Education and Rehabilitation
University of Northern Colorado, Greeley

Stipends:
A small number of travel stipends are available. Please indicate on the enrollment form whether you would like to be considered.

TRAINING PROGRAM FOR GERIATRIC AURAL REHABILITATION
PROPOSED SCHEDULE

Monday

8:30 Coffee
9:00 Welcome—Raymond H. Hull, Ph.D., Audiologist, Chairman, Department of Communication Disorders, University of Northern Colorado, Greeley.
9:30 Medical Aspects of Presbycusis
Keith E. Peterson, M.D., Otolaryngologist, Greeley.
10:30 Coffee
10:45 Audiological Problems Resulting from Presbycusis
Raymond H. Hull, Ph.D., Audiologist, Chairman, Department of Communication Disorders, University of Northern Colorado, Greeley.
11:45 Lunch
1:30 Social-Psychological Impact of Geriatric Sensory Deprivation
Eugene Koplitz, Ph.D., Psychologist, Associate Dean, University of Northern Colorado, Greeley.
Mary Louise Burum, Ed.D., Gerontologist, Greeley.
2:30 Coffee
2:45 The Need for Hearing, Rehabilitation Among the Aged
Jerome G. Alpiner, Ph.D., Audiologist, Director of Speech Pathology and Audiology, University of Denver, Denver.
3:45 Questions and Answers
5:00 First Day Adjournment

26-064—74——9

Tuesday

8:30 Coffee
9:00 The Use of Hearing Aids Among the Aged
Robert M. Traynor, M.A., Audiologist, Coordinator—Adult and Geriatric Aural Rehabilitation, University of Northern Colorado, Greeley.
10:00 Coffee
10:15 Speech Communication Problems of the Elderly Individual
Robert F. Campaign, Ph.D., Speech Pathologist, Director of Speech Pathology, University of Northern Colorado, Greeley.
11:30 Lunch
1:30 to 5:00 What is Geriatric Aural Rehabilitation?
Robert M. Traynor, M.A., Audiologist, Coordinator—Adult and Geriatric Aural Rehabilitation, University of Northern Colorado, Greeley. (Observation of Lipreading Classes in session at Nursing Homes by all Workshop participants).
7:00 Banquet—Ramada Inn

Wednesday

8:30 Coffee
9:00 Discussion of Observations in Nursing Homes
Robert M. Traynor, M.A., Audiologist, Coordinator—Adult and Geriatric Aural Rehabilitation, University of Northern Colorado, Greeley.
10:45 Coffee
11:00 Direct problem solving sessions
Problem solving regarding information derived from the Workshop. Each group (4 groups of 5 participants) will be given several written questions to discuss and present solutions or answers.
12:00 Lunch
1:30 Panel Discussion of Nursing Home officials
Ms. Zephye Cummings, B.A., Activity Director, Birch Avenue Manor Nursing Home, Greeley, Colorado.
Tim Swedlund, B.A., Recreation Director, Bonnell Good Samaritan Retirement Community, Greeley, Colorado.
Ms. Louise Warner, N.H.A., Administrator, Birch Avenue Manor Nursing Home, Greeley, Colorado.
Ms. Ivol A. Putnam, R.N., M.A., Director of Nurses, Birch Avenue Manor Nursing Home, Greeley, Colorado.
Chairman, Robert M. Traynor, M.A., Audiologist, Coordinator—Adult and Geriatric Aural Rehabilitation, University of Northern Colorado, Greeley.
2:30 Work Session—Participants in groups discussing how this program could be initiated in their individual homes.
3:30 Workshop Adjourned

ITEM 6. LETTER FROM RAYMOND H. HULL, PH. D., CHAIRMAN, DEPARTMENT OF COMMUNICATION DISORDERS, UNIVERSITY OF NORTHERN COLORADO, GREELEY, COLO., TO SENATOR FRANK CHURCH, DATED JANUARY 9, 1974

DEAR SENATOR CHURCH: Thank you so much for your letter regarding your interest in our Community-Wide Program for Geriatric Aural Rehabilitation. . . .

The field of audiology is entirely concerned with the diagnosis and rehabilitation of the hearing impaired individual. It is with regret I say that only a few professionals in our field are primarily interested in the rehabilitation of the hearing impaired geriatric patient. When we consider the fact that there are now over 20 million individuals age 65 and over and that between 85 and 90% of those have some degree of either peripheral or central hearing impairment, and many millions of them have other organically based communication problems that hinder them in their ability to function in society and with their family, it is sad to say that there are not more of our professionals in the field of communication disorders who are willing to work with the aged individual. We are proud of our program for geriatric aural rehabilitation and related communication disorders and feel that it is a model that others in this country could follow. We in the department of communication disorders school of special education and rehabilitation, of the University of Northern Colorado are in the

process of searching for funds to develop a regional diagnostic rehabilitation center for hearing and related communication disorders among the aged to be located here north of Denver at Greeley, Colo. We feel that this could not only be of vital assistance to the many thousands of aged individuals in this Rocky Mountain area but would also bring to the attention of others across the United States that these individuals can be rehabilitated and that there is a need for such work with the aged in this country.

I would like to make myself available to be of any assistance that you feel that I could be to your Special Committee on Aging in a consulting capacity or any other capacity relative to communication disorders among the aged whether it be hearing or other organically based communication disorders. Since the loss of ability to hear and understand speech is one of the most devastating aspects of growing older in regards to the care and/or rehabilitation of the aged individual this is one area that should be stressed when considering the general problems of aging. We cannot continue to place these people in the hands of hearing aid salesmen, when we in our program have found so many individuals who can be rehabilitated without the use of a hearing aid or can be rehabilitated to once again find their place in society. We must, somehow, interest more of our professionals in the field of communication disorders to work with the aged individual. We all know that working with children and young adults is perhaps more glamoruos because of their capabilities in being habilitated or rehabilitated, but we also must show our professionals that the aged person needs our help. The rehabilitation process with these individuals is much slower and in many cases is unrewarding because of lack of progress, but through our program here at the University of Northern Colorado we have demonstrated that many individuals over age 65 can be rehabilitated at least to the point of being able to function more effectively with their families, and many have been able to go back out into the community to function as effective citizens once again. Through your special committee this potential could be shown to other professionals across this country.

Thank you again for including our program description in your hearing record. I will be anxious to receive a copy when it has been published. I will continue to look forward to hearing what your committee is doing relative to the needs of the elderly individual.

Best wishes.

Sincerely,

RAYMOND H. HULL, Ph. D.,
Chairman, Department of Communication Disorders.

ITEM 7. LETTER AND STATEMENT FROM CYRIL F. BRICKFIELD, LEGISLATIVE COUNSEL, AMERICAN ASSOCIATION OF RETIRED PERSONS AND NATIONAL RETIRED TEACHERS ASSOCIATION, WASHINGTON, D.C. TO SENATOR FRANK CHURCH, DATED OCTOBER 1, 1973

DEAR SENATOR CHURCH: On behalf of the members of the National Retired Teachers Association and the American Association of Retired Persons, I would like to submit the following statement of our position with regard to the coverage of hearing aids and audiological services under Medicare.

This is an area of much concern to our members and we appreciate this opportunity to express our views on the issue. I respectfully request that this statement be made part of the final record of the Subcommittee's hearings.

With best wishes,

Sincerely,

CYRIL F. BRICKFIELD, *Legislative Counsel.*

Enclosure.

STATEMENT OF CYRIL F. BRICKFIELD, LEGISLATIVE COUNSEL, NATIONAL RETIRED TEACHERS ASSOCIATION AND AMERICAN ASSOCIATION OF RETIRED PERSONS

The National Retired Teachers Association and the American Association of Retired Persons strongly endorse coverage of audiological services under Medicare.

The large volume of mail we have received from our members describing their problems and experiences with hearing aids indicates that this is an area of

great concern to older persons with hearing difficulties. Complaints from our membership fall into three major categories: First, hearing aids are being sold to individuals who do not need them, or cannot be helped by them. Second, the cost of purchasing and maintaining a hearing aid is prohibitively high for older persons with limited incomes. Third, many older persons are led to expect too much from their hearing aids and are not instructed as to their proper use.

The difficulties experienced by some of our members indicate the need for testing and evaluation by a disinterested professional prior to the purchase of a hearing aid. For this reason, our Associations support the immediate coverage under Medicare of audiological testing and evaluation by a certified clinical audiologist. While the majority of hearing aid dealers are undoubtedly honest and well-intentioned businessmen, their primary interest is naturally the selling of a product. Therefore, we feel that the testing and evaluation of hearing difficulties should be separated from the business of selling hearing aids.

In addition, recent studies by various public interest research organizations indicate that dealers are not always able to detect conditions which should be examined by a physician and do not always make appropriate referrals. Clinical audiologists on the other hand, are professionally competent to detect these conditions and, when necessary, to refer patients to an otologist for medical evaluation.

The National Hearing Aid Society has suggested that the present supply of certified clinical audiologists is not adequate to serve all the individuals over 65 with hearing problems. The American Speech and Hearing Association asserts otherwise. Our Associations are not in a position to determine which contention is correct. Since hearing aid industry figures show that only 15 percent of all persons purchasing hearing aids in 1972 consulted a clinical audiologist before buying their aid, however, we do not feel that coverage of audiological services under Medicare will place an undue burden on existing audiological testing facilities and personnel. Since the general public is apparently unaware of the availability of audiological services, it seems unlikely to us that such coverage would result in a sudden and dramatic upsurge in demand for these services. We feel that coverage of audiological services under Medicare will result in a gradually increasing awareness of the availability of and need for audiological testing and evaluation, and that sufficient additional personnel will enter the field of audiology to meet this gradually increasing demand.

If, indeed, there are not enough certified clinical audiologists to meet the demand generated by coverage of audiological services under Medicare, a phase-in of coverage could be institution, with 50 percent of the cost covered the first year, 75 percent the next year, and so forth. In addition, training funds could be made available to encourage more people to enter the field of clinical audiology.

Standards for certification of clinical audiologists should be similar to those set by the American Speech and Hearing Association, but greater emphasis should be placed on the use of para-professionals wherever possible in order to reduce the cost of providing audiological services. The services to be offered Medicare patients should be clearly specified, with emphasis on followup and rehabilitation, and covered audiological services should be strictly separated from the business of selling hearing aids. In addition, strict criteria for the referral of patients to physicians for medical evaluation should be established.

Our Associations feel that the coverage of audiological services may lead to the eventual coverage of hearing aids under Medicare. Coverage of audiological testing and evaluation will result in greater utilization of audiological services. As more people make use of these services and obtain a clinical recommendation for a specific type or brand of hearing aid, hearing aid dealers will be encouraged to carry a variety of brands and models in order to satisfy these better-informed customers. The development of a high volume, low cost, retail market selling hearing aids only on referral from a clinical audiologist wil also be encouraged.

Because of the present structure of the retail hearing aid market, our Associations feel that immediate coverage of hearing aids would result simply in a windfall for hearing aid dealers and a heavy financial burden on taxpayers. At the same time, we do not feel that the recommendation made by the American speech and Hearing Association to establish a federal purchasing program is politically feasible because of the many thousands of retail dealers who would be put out of business by such a program.

We suggest that after audiological services have been fully covered for several years and audiological testing and evaluation have become accepted as the natural prerequisite to the purchase of a hearing aid, Medicare coverage of

hearing aids should be instituted. Strict controls should be established at that time in order to restrict the cost of the program.

First, eligibility for reimbursement should depend upon a specific level of hearing loss;

Second, audiological testing and evaluation should be a prerequisite for the purchase of a hearing aid reimbursed under the Medicare program;

Third, prices of hearing aids reimbursed under Medicare should be strictly limited, as has been done under the Medicaid program in New York; and

Fourth, dealers should be required to offer a trial period of at least 30 days at reasonable rental cost; this cost to be covered under Medicare.

Our Associations also urge the estabilshment of certain consumer safeguards in the retail sale of hearing aids. In particular, we favor a ban on the door-to-door sale of hearing aids. Furthermore, we favor the elimination of brand-name advertising of hearing aids to the general public. However, some of these consumer safeguards may be more suited to legislation and regulation at the state rather than federal level.

Based upon the letters we have received from our members on the subject of hearing aids and hearing problems, our Associations believe that there is a great need for better public education in this area. People should be encouraged to seek help promptly, should know whom to consult for testing and evaluation, and should know what to expect when they purchase a hearing aid.

Our Associations are playing an active role in the area of public education; efforts in this direction have already been made through articles in our various publications and through hearing screening tests conducted in sessions of our Vigor in Maturity (VIM) program. We plan to expand these efforts in order to provide our members with the information they need on hearing problems.

We are convinced, however, that the most serious difficulties experienced by our members with regard to hearing aids would be solved by the coverage of audiological services and hearing aids under Medicare.

ITEM 8. LETTER AND ENCLOSURES FROM RAYMOND E. JORDAN, M.D., EXECUTIVE DIRECTOR, THE AMERICAN COUNCIL OF OTOLARYNGOLOGY, WASHINGTON, D.C., TO SENATOR FRANK CHURCH, DATED OCTOBER 5, 1973

DEAR SENATOR CHURCH: In response to your letter of September 14, 1973, enclosed you will find the statement of the American Council of Otolaryngology for your hearing record on "Hearing Aids and the Older American."

We appericate your kind invitation to submit this statement. If the American Council may provide you with any further information, please do not hesitate to contact this office.

Sincerely,

RAYMOND E. JORDAN, M.D.,
Executive Director.

Enclosures.

POSITION REPORT OF THE HEARING COMMITTEE OF THE AMERICAN COUNCIL OF OTOLARYNGOLOGY ON HEARING AIDS AND THE ELDERLY CONSUMER

The Subcommittee on Consumer Interests of the Elderly should consider carefully the cost and experiences of other countries and United States, State and Federal agencies in the difficult area of medical appliance third-party coverage. The initial experiences of Medicaid as implemented in a number of states in the vending of aids posed many problems in terms of the consumer and third-party costs.

If hearing aids are to be offered as a service of Medicare the experience of State and Federal agencies with programs in third-party coverage of hearing aids should be utilized in the implementation of this proposed service.

For example, in California two public service State agencies with Federal support, the Crippled Children's Services and the State Department of Vocational Rehabilitation, have gradually evolved a system for hearing aid services that safeguard the consumer and effectively and fairly control the vendor. The essentials of this existing and proposed plan for implementation of hearing aid services under Medicare are:

The individual 65 years of age or older suspected of having a hearing loss would be evaluated by a board certified or board eligible otolaryngologist of his choice. If a hearing loss is detected that is potentially rehabilitated with amplification the patient would, on the recommendation of the otolaryngologist, be evaluated by a certified audiologist who would make specific recommendations concerning amplification. The patient would then be referred to a licensed hearing aid dealer who fits the aid according to the instructions given by the audiologist or professional equivalent. A mold is made for the appropriate ear or ears. There is a 30-day adjustment period during which only the fee for the mold or molds, and a fee for handling and bookkeeping are charged. At the end of the 30-day adjustment period the patients performance with the hearing aid is evaluated by the audiologist or professional equivalent and a determination is made concerning the objective performance of the aid. At this point the audiologist either authorizes purchase of the aid or makes further recommendations as to the fitting or type of aid.

There has always been concern by some members of the three groups and by administrators that such a medical, audiological and hearing aid dispenser referral system is laborious and costly. The experience of the California State Crippled Children's Service and State Department of Vocational Rehabilitation have indicated that this system is the most financially efficient and provides the greatest reward for the consumer. The elderly hard-of-hearing are insured a professional medical and audiological evaluation with full consideration of all areas of hearing rehabilitation, one of which is amplification. The majority of hearing defects of the elderly cannot be assisted by amplification.

There has been some objection by the hearing aid dispenser community to the idea of an adjustment period preceeding authorization of purchase.

The objections have been that they cannot sell second-hand aids, that the 30-day adjustment period is not necessary, and that the financial hardships for the hearing aid dispenser are too great. The experience of the California State Crippled Children's Services and State Department of Vocational Rehabilitation has been that hard-of-hearing individuals who have had professional hearing aid evaluations by physicians and audiologists, and who are subsequently sent to a hearing aid dealer have been screened and judged to need an aid, and also, have been largely sold on the concept of an aid. Thus, this system is of practical assistance to the hearing aid dealer. This system of hearing aid referral with the adjustment period has evolved in a number of areas of the United States and has been nicely coordinated so that there is a very satisfactory working relationship among the otolaryngologists, audiologists, hearing aid dispensers, and most importantly, hearing aid users.

This system of hearing aid referral has proven to be economically sound with emphasis on evaluation and objective fitting.

Attached are the professional definitions of the "otolaryngologist", "otologist", "practice of audiology", and "hearing aid dispenser". Also enclosed are the essential guidelines for the wording of a Medicare Bill as it relates to the physician, audiologist and the hearing aid dispenser. These guidelines are the basic ingredients of effective, current legislation as it exists in the United States today.

The manpower needs are sufficient throughout the United States to effect such a program for orderly professional management of the elderly hard-of-hearing under Medicare. According to figures supplied by the American Council of Otolaryngology there are 6,285 board certified or qualified otolaryngologists in the United States as of September 24, 1973 (see the attached listing which shows the numbers by each state); there are 2,668 certified or qualified audiologists as of July 1, 1973 according to the American Speech and Hearing Association; and there are 5,500 hearing aid dispenser dealerships in the United States according to the records of the Hearing Aid Industry Conference as of September 10, 1973.

The fitting of a hearing aid is not an emergency procedure and the fact that the hard-of-hearing individual is in a remote or rural area should not preclude against a professional and orderly sequence in the management of auditory amplification. Mobile facilities have and can be established to render service to hard-of-hearing individuals in remote areas, also transportation could be provided under the Medicare program for these individuals to go where the appropriate services are available.

Some audiologists are interested in being involved in the sale of hearing aids. The suggested rationale for the vending of aids by audiologists is very much

like the reasoning in the past about similar types of vending by physicians. A few audiologists have suggested that there would be better control over fitting of the aid, that there would be reduced cost to the consumer, and that there are not now enough qualified people to dispense aids in the community. These arguments are no more valid for the audiologist than they were for the physician. The physician, audiologist and hearing centers should under no circumstance be involved in the direct or indirect sale of hearing aids because of conflict of interest.

SUMMARY

Recommendations for implementation of an effective hearing aid Medicare service are outlined. These recommendations are not new. They have been in effect in a number of State and Federal supported agencies, community sponsored hearing centers and private oto-audiologic clinics. They have proven effective in providing consistently reliable service to the hard-of-hearing individual, and further, are economically sound.

The outlined medical, audiological and hearing aid dispenser referral system has and will be effective in providing an efficient reliable service to the elderly hard-of-hearing on a proven third-party economical basis.

Respectfully submitted,

MANSFIELD F. W. SMITH. M.D.,
Chairman, Hearing Committee.

HEARING AID DISPENSER GUIDELINES

1. Definition

A hearing aid dispenser is a person engaged in the fitting and selling of hearing aids to an individual with impaired hearing.

2. Committee Makeup

The Hearing Aid Dispensers Examining Committee shall consist of seven members. Four members shall be public members, one of whom shall be a licensed physician and surgeon specializing in treatment of the diseases of the ear and certified by the American Board of Otolaryngology, and another public member shall be an audiologist who holds a certificate of clinical competency issued by the American Speech and Hearing Association. The remaining three members shall be, and shall have been for at least five years immediately preceding their appointment, engaged exclusively in this state in the practice of fitting and selling hearing aids to persons with impaired hearing. The term of office shall be four years.

3. Physician's Exclusion

The licensing of hearing aid dispensers does not apply nor affect any physician and surgeon who does not directly or indirectly engage in the sale or offering for sale of hearing aids, nor to any audiologist with a valid and current certificate of clinical competency in audiology issued by the American Speech and Hearing Association, or to an individual supervised by such certificated audiologist in conducting fitting procedures, and who does not directly or indirectly engage in the sale or offering for sale of hearing aids.

4. Examination

A written examination compiled at the discretion of the committee covering the following areas as they pertain to the fitting and selling of hearing aids:

(1) Basic physics of sound
(2) The anatomy and physiology of the ear
(3) The function of hearing aids

A demonstration of proficiency compiled at the discretion of the committee, including but not limited to the following:

(1) The procedures and use of equipment established by the committee for the fitting and selling of hearing aids.
(2) Taking earmold impressions
(3) Measurement of hearing as pertains to the fitting and selling of hearing aids

5. Receipt Requirement

A licensee shall, upon the consummation of a sale of a hearing aid, deliver to the purchaser a written receipt, signed by or on behalf of the licensee, containing all of the following:

(1) The date of consummation of the sale
(2) Specifications as to the make, serial number, and model number of the hearing aid or aids sold.

(3) The address of the principal place of business of the licensee

(4) A statement to the effect that the aid or aids delivered to the purchaser are used or reconditioned, as the case may be, if that is the fact

(5) The number of the licensee's license.

(6) The terms of any guarantee or expressed warranty, if any, made to the purchaser with respect to such hearing aid or hearing aids.

(7) Such receipt shall bear, or have attached to it in no smaller type than the largest used in the body copy portion, the following:

"The purchaser has been advised at the outset of his relationship with the hearing aid dealer that any examination or representation made by a licensed hearing aid dealer and fitter in connection with the practice of fitting and selling of his hearing aid, or hearing aids, is not an examination, diagnosis, or prescription by a person licensed to practice medicine in this state, or by certified audiologists and therefore must not be regarded as medical opinion or professional advice."

6. Route of referral

Whenever any of the following conditions are found to exist either from observations by the licensee or on the basis of information furnished by the prospective hearing aid user, a licensee shall, prior to fitting and selling a hearing aid to any individual, suggest to that individual in writing that his best interests would be served if he would consult a licensed physician specializing in diseases of the ear or if no such licensed physician is available in the community then to a duly licensed physician:

(1) Visible congenital or traumatic deformity of the ear

(2) History of, or active drainage from the ear within the previous 90 days

(3) History of sudden or rapidly progressive hearing loss within the previous 90 days

(4) Acute or chronic dizziness

(5) Unilateral hearing loss of sudden or recent onset within the previous 90 days

(6) Significant air-borne gap (15 dB ANSI 500, 1000 and 2000 average)

No such referral for medical opinion need by made by any licensee in the instance of replacement only of a hearing aid which has been lost or damaged beyond repair within one year of the date of purchase. A copy of the written recommendation shall be retained by the licensee for the period of seven years. A person receiving the written recommendation who elects to purchase a hearing aid shall sign a receipt for the same, and the receipt shall be kept with the other papers retained by the licensee for the period of seven years. Nothing in this section required to be performed by a licensee shall mean that the licensee is engaged in the diagnosis of illness or the practice of medicine or any other activity prohibited by this Act.

No hearing aid shall be sold by an individual licensed under this Act to a person 16 years of age or younger, or 65 years of age or older, unless within the preceding six months a recommendation for a hearing aid has been made by both a board-certified, or a board-eligible physician specializing in otolaryngology or equivalent, and by an audiologist certified by the American Speech and Hearing Association or equivalent. A replacement of an identical hearing aid within one year shall be an exception to this requirement.

7. Maintaining Records

A licensee shall, upon the consummation of a sale of a hearing aid, keep and maintain records in his office or place of business at all times and each such record shall be kept and maintained for a seven-year period. These records shall include:

(1) Results of test techniques as they pertain to fitting of the hearing aids.

(2) A copy of the written receipt and the written recommendation.

PROFESSIONAL DEFINITIONS

*a. "Otolaryngologist"**

"An otolaryngologist is a physician and surgeon qualified by special training in the prevention, diagnosis, medical and surgical management and rehabilitation of disorders of the head and neck and related structures."

*Definition as submitted by the Hearing and Equilibrium Committee of the American Academy of Ophthalmology and Otolaryngology, July, 1973.

*b. "Otologist"**

"An otologist is a physician and surgeon qualified by special training in the prevention, diagnosis, medical and surgical management and rehabilitation of disorders of the ear and related structures."

*c. "Hearing Aid Dispenser"***

"A hearing aid dispenser is a person engaged in the fitting and selling of hearing aids to an individual with impaired hearing."

*d. Audiology"****

"The practice of audiology means the application of principles, methods, and procedures of measurement, testing, appraisal, prediction, consultation, counseling, instruction and research related to hearing and disorders of hearing for the purpose of modifying communicative disorders involving speech, language, auditory behavior or other aberrant behavior related to hearing loss; and the planning, directing, conducting or participating in programs of identification, hearing conservation, recommendation and evaluation procedures, auditory training, and speech reading."

Number of otolaryngologists in United States by State according to records of American Council of Otolaryngology Sept. 24, 1973

Alabama	85	Nevada	12
Alaska	9	New Hampshire	18
Arizona	60	New Jersey	245
Arkansas	34	New Mexico	32
California	752	New York	779
Colorado	86	North Carolina	149
Connecticut	102	North Dakota	18
Delaware	13	Ohio	273
District of Columbia	38	Oklahoma	64
Florida	280	Oregon	65
Georgia	99	Pennsylvania	367
Hawaii	27	Rhode Island	32
Idaho	13	South Carolina	61
Illinois	290	South Dakota	7
Indiana	119	Tennessee	119
Iowa	71	Texas	314
Kansas	51	Utah	37
Kentucky	62	Vermont	15
Louisiana	126	Virginia	129
Maine	23	Washington	127
Maryland	138	West Virginia	57
Massachusetts	202	Wisconsin	125
Michigan	189	Wyoming	6
Minnesota	89	Puerto Rico, Virgin Islands, and Canal Zone	47
Mississippi	46		
Missouri	130	Total	6,285
Montana	24		
Nebraska	29		

ITEM 9. LETTER FROM WALLACE A. GOATES, PH. D., PRESIDENT, AMERICAN ACADEMY OF PRIVATE PRACTICE IN SPEECH PATHOLOGY AND AUDIOLOGY, SALT LAKE CITY, UTAH, TO SENATOR FRANK CHURCH, DATED SEPTEMBER 12, 1973

DEAR SENATOR CHURCH: We appreciate your invitation to seat an observer in the hearings of the Subcommittee on Consumer Interests of the Elderly on September 10 and 11, 1973, and also to submit this statement for that hearing's records. The issues which you indicate in your letter of August 31, 1973, are well known to us and of considerable professional concern. They are important to us, to persons having hearing impairment, especially to those who are elderly.

*Definition as submitted by the Hearing and Equilibrium Committee of the American Academy of Ophthalmology and Otolaryngology, July 1973.

**Definition as stated in the Hearing Aid Dispenser Bill enacted by the State of California September 1970.

***Definition as stated in the California Speech and Hearing Licensure Bill enacted by the State of California November 1972.

Our concern for possible inclusion of hearing aids under the Medicare programs recognizes the inextricable involvement of this issue with the second one you have mentioned, namely that of current hearing aid consumer service and marketing practices.

It needs to be pointed out that throughout all desirable arguments for including hearing aids under Medicare, there exists the very high risk of potential abuse, error, expense and misuse. For Medicare to move in this direction (notwithstanding other benefits to the hearing impaired) would be to move into an area where there already is, and has been for years, a detrimental, unresolved tension, abuse, misunderstanding, and controversy. In a Medicare plan, we believe it would be mandatory that there be designed into it more than the usual safeguards to protect the participants, the program and the public supporting it.

We could concur in and could support such a program if it were designed and executed so as to truly help those for whom it was addressed; if it did not waste public funds; and if it did in fact achieve in procedure and performance the separation of commercial effort from professional services, direction and responsibility. May we define this viewpoint further:

The hearing aid industry which today dominates the determination and prescription of hearing aids in this country, has made a magnificent contribution in the development and manufacture of hearing aid instruments. On the other hand, the emphasis, the method of sale and distribution, and the performance of the industry has been, and is now, so commercially oriented and controlled that it has created and continues to foment misapplication, confusion and abuse. Studies and evidence of these facts are assumedly before your committee.

It is our belief that in a health field, the proper health care and direction for it should be in the hands of those professions characteristically prepared to provide their services and to maintain responsibility for their services. It should not be in the hands of a commerce responsible for selling instruments to their customers. In order to be the most reliable and the most free of abusive bias, the diagnosis, evaluation and prescription resulting in use of a prosthesis (the hearing aid) and followup care should be provided by highly trained, responsible, professional scientists. Their interests and therefore their decisions should be free of commercial influence and commercial advantage.

Thus, we believe it is the *personal and undelegated* professional responsibility of the medical doctor specializing in diseases of the ear and the *personal and undelegated* professional responsibility of the nationally certified or state licensed clinical audiologist specializing in the science of hearing to perform the diagnostic, evaluative, and formal prescription functions prerequisite to the dispensing (the sale) of any hearing aid. Furthermore, we believe these things, which necessarily are preliminary to the acquisition of a hearing aid, should also be performed completely independent of, separated from, uninfluenced by and entirely free of any connection with the commerce and the persons and interests selling hearing aids. For a Medicare patient, one who is usually elderly and naive in matters of ear health and hearing, this is minimum assurance of proper care, and that his credulity and trust are not imposed upon through ignorance, inability, or with motives of personal profit or gain.

We believe these performances and decisions should not be the province of the hearing aid industry through the dispensor (salesman), although that is the dominant method of hearing aid distribution today. By reason of his circumstance and employment he must unavoidably be addressed primarily to the commerce in the patient's need of a prosthetic instrument and his own eagerness to sell it. The requirement described here can safeguard and help the patient and the public purse. It cannot hurt the industry. Selling hearing aids is its function and no sales can be lost to it for only it (its hearing aid distributors or salesmen) sells hearing aids regardless of how or who prescribes them. The hearing aid industry avows that its salesman not only are properly qualified to compile lists of prospects, seek out and solicit these customers, persuade them to submit to elementary and poorly controlled tests, but also to diagnose an ear health condition, prescribe the remedy for the condition they have diagnosed, then to sell their remedy (the hearing aid) at substantial profit, employing all manner of commercial sales methods, and thereafter to keep their customers on the prospect list to resell if possible, each new model of instrument manufactured. Seriously concerned, informed persons, trained and skilled in the health care of the hearing impaired are troubled by the existence and the results of such a condition.

A separation is crucially needed everywhere, Medicare programs and others notwithstanding, between (a) the manufacturing of the hearing aid product and the ultimate availability to a highly selected and mainly naive population

and (b) the very serious, scientific determination of who should or could benefit from the employing of such a product and (c) by whose decision this should be determined with eventual prescribing the directing of the hearing aid's utilization. The pattern mainly followed throughout the country today is a remnant of the long past beginnings of hearing aid sales, reminiscent of the sale of patent medicine a century ago.

Understandably the hearing aid industry argues in defense of its methods. Its voice echoes loudly through its widespread sales organization. It has considerable financial gain at stake if it can augment the number and the ease of selling its products. To control even a part of a Medicare program as it now dominates the public program, surely must invite its efforts in spite of the hazard to patients, program and public. There is no issue when the hearing aid distributors perform strictly as salesmen for their product and thereby enjoy the legitimate profit of that enterprise. It is when they leave that identity, as they do today and attempt to perform in roles for which there is ample evidence of inadequate qualification, (that of diagnosing, testing, evaluating and prescribing) that there descends on them and the industry the heat of criticism for conflict of interest, misuse of public trust, misrepresentation, assumption and mishandling of inappropriate roles and highly questionable service to the hearing impaired public. Despite all claims made to the contrary with their protests, lay testimonials, rationalizations, protestations of a pseudo-professional interest and performance, the fact remains that the hearing aid distributors or salesmen are not professionally trained for that role they assume and that they do and must conduct a commercial sales-oriented product-for-sale business in a health field. This denies the safeguarding of the patient with the more objective non-commercial services of the scientists/specialists in ear diseases and in hearing.

There is no justification today for the hearing aid distributors continuing the position they have taken with making health determinations and decisions. The patient and the public suffers the ills of such performance. That record is there to be examined. To transfer this condition to a Medicare program without firm assurance of the assigned responsibilities cited here, impresses us as invitation to failure through misuse of the program's intent, wasteful expenditure of the public funds concerned, and is of potential harm to the patients.

It is with these things before us that we reiterate that *we can support hearing aids under the Medicare program only when the high risk possibilities are recognized by functional safeguards* providing that (a) a hearing aid may be paid for by Medicare only after determination of its efficacy has been established by a physician specializing in diseases of the ear or by a certified or licensed clinical audiologist specializing in the functional science of hearing and that they do themselves perform the undelegated functions of examination, diagnosis, evaluation and specific prescription for the hearing aid; (b) it is required that the physician and the audiologist each (not one or the other) have equal and not subservient responsibility for the performance of the functions of their own specialty in the providing of the determination of and prescription for a hearing aid; (c) the recipient of the hearing aids always have the freedom of choice of persons or services which serve him and are professionally qualified to function according to the provisions here enumerated; (d) the Medicare inclusion of hearing aids not be centered exclusively in single agencies, hospitals, clinics, universities, either locally or nationally, but may occur where the standards of qualification are met by persons independently or institutionally centered; (e) and that these things here enumerated are made so very clear in the law that they are not watered down or changed by interpretation, guidelines, directives which act to negate, alter or reduce the intent, the function or the performance of the program.

There is the question of how hearing aids prescribed under the Medicare program would be delivered to the recipient. It is our feeling that these should be delivered into the hands of the patient through the existing private enterprise system represented by the hearing aid dealers on an outright purchase basis. It is true that arguments for government agency distribution centers, university clinics, Veterans Administration, Hill-Burton financed and Public Health Hospitals have been advocated. It is argument for centering hearing aid services where qualified personnel and equipment are located. This appears to be reasonable provided however, that it does not make such places the exclusive points of such services. There are many excellently qualified noninstitutional services available which also must be entered into the qualified and accepted availability category. Special care should be taken that qualifications are never written in

such manner as to exclude this latter noninstitutional or public or private clinic or the independent practitioner.

Another argument for concentrated settings is that of savings through government purchase of hearing aids at a favored price. A favored price can be negotiated without the government becoming the bulk purchaser and distribution depot. It appears to us impossible to justify a government intervention designed to take over a function such as hearing aid delivery when a private enterprise system for it already exists, especially when it could critically hurt such a large section.

Furthermore, there exists the fact of hearing aid maintenance. Needs for batteries, cords, minor repairs are constant. Repairs and adjustments are not infrequent. These must be cared for or the hearing aid is nonfunctional. Here again, the existing hearing aid dealer and delivery system can perform these functions as they perform them now. There is no need for government intervention or costly programs (and they would be costly) when facilities to carry them out already exist. Cost accounting of the two systems has, to our knowledge, not been made. We speculate no savings in the long run for government depots functioning in place of the already better experienced private quarter. The carriers for Medicare are quite capable of following the directions which include issuing purchasing orders for hearing aid products as well as they are for other Medicare services.

This suggestion should clearly be understood to identify only the mechanical delivery of the already prescribed hearing aid and the supply of batteries and cords with possible minor repair accompanying it. It should in no wise be interpreted to advocate or imply that the hearing aid dealer or industry participate in any way whatsoever in the determination of hearing aid efficacy or prescription for Medicare recipients. Furthermore, it may be found desirable and necessary to place such penalties as may be found appropriate for any direct or indirect interference or noncompliance with the professional direction and prescription attendant to the delivery and maintenance of the hearing aid.

There is reason to believe that some may advocate that hearing aid services and delivery should be performed in existing university clinics, public clinics, and Veterans Administration hospitals where some medical and audiologic staffs now exist. It is our strong advocacy that the personal right of the patient to choose the qualified one who serves him should be protected absolutely in any Medicare program. To this end no single person, type or means of this service should be authorized to the exclusion of another so long as facilities or persons meet the professional criteria advocated in this discussion. This does intentionally and with meaning eliminate from these prerequisite services the hearing aid distributor or salesman.

As to the matter of the potential incompatability of the new telephone receivers with hearing aids: Understandably such an incompatability is a serious fracture of the hearing impaired person's communication and reduction of the usefulness of his hearing aid. Certainly there can be remedies for it. However we cannot subscribe to such proposals as have come to our attention that include the requirement of all new telephones having to be equipped with a device to overcome the incompatability. We are aware that separate supplemental devices are and can be made available where needed. It impresses us that this becomes the responsibility of the hearing impaired person or his sponsor (who may be Medicare) the same as with the hearing aid itself. To require all telephones to be equipped to overcome this break seems unrealistic and costly in view of the far greater number of telephones which will be in service and never need or use it and that another answer is available to the problem and can be made individually for those who need or desire it.

We do feel that no manufacturer or distributor should take advantage of the critical position in which the hearing impaired are placed by extracting an unreasonable and inconsiderate price for any device required by them. We also feel that any supplementary device such as mentioned should be made well known, reliable in performance and readily available.

We shall follow the results of your committee's efforts with great interest and concern. Where we can be of service we offer our best most serious efforts. Please call on us and we shall respond.

We thank you for the privilege you have granted us to be heard seriously on a matter of conscientious concern.

Respectfully yours,

WALLACE A. GOATES, Ph. D.,
President.

ITEM 10. LETTER FROM JON K. SHALLOP, PH. D., ASSOCIATE PROFESSOR, COLLEGE OF COMMUNICATION, OHIO UNIVERSITY, ATHENS, OHIO, TO SENATOR FRANK CHURCH, DATED NOVEMBER 2, 1973

DEAR SENATOR CHURCH: My letter concerns the hearings of the SENATE SUBCOMMITTEE ON CONSUMER INTEREST OF THE ELDERLY, September 10–11, 1973. At the present time I have not read the transcript of the hearings but I have read reports of the hearings in *Asha* which is a magazine of an association that I belong to, the American Speech and Hearing Association and *Hearing Instruments*, October, 1973. For the past eight years I have been at my present teaching position here at Ohio University. On many occasions I have had the opportunity to think about the distribution systems in this country for hearing aids. During the 1971–1972 academic year I was fortunate to be on sabbatical leave which enabled me to spend five months in Europe and study the hearing aid delivery systems of England and Denmark directly. I was located at the Regional Audiology Research Unit, Royal Buckshire Hospital, Redding, England and the State Hearing Center, Copenhagen, Denmark. In both instances these countries have a national health service as you probably know and hearing aids are provided under these systems. I have tried to study the American system from several points of view in comparison to some of the European methodologies as well as looking at the methods employed by our own Veterans' Administrations. The purpose of my letter is to simply relate to you some of the facts which I was able to gather from England and Denmark.

In England, hearing aids are distributed through the National Health Service and in addition hearing aids are made available privately through dealers much in the same manner as in this country. The hearing aids provided by the National Health Service are manufactured under the direction of the Medical Research Council and are very limited both in terms of their technical variations and their application to the hearing impaired. While I was there, there were only four body type hearing aids available and one ear level hearing aid. There were no eyeglass models available through the National Health Service. In addition it was rather striking to note that the single ear level model was not available to adults but was specifically for use with children. I am sure you know it is often not necessary to provide a body hearing aid. In many instances individuals will reject the use of the hearing aid for cosmetic reasons when it is a body aid. Hearing aids are provided at clinics which are a part of or in association with the National Hearing Service free of charge upon the direction of an ear specialist. There is a minimum amount of testing conducted and the average cost of the hearing aid provided under this system including overhead at the clinic I visited was about thirty dollars. This clinic was in Manchester, England and was one of the larger clinics that I came in contact with in England. I felt that the service provided in England had many drawbacks but it was of interest to note how inexpensively a hearing aid could be provided under those circumstances. It was estimated that about 50% of the hearing aids provided in England were provided by this means through the National Health Service. The remaining individuals would buy their hearing aids privately through a hearing aid dealer, and from what I could determine the costs were comparable if not slightly less than the average cost of buying a hearing aid privately in this country.

In Denmark the system was again administered through the National Health Service but the hearing aids provided were manufactured by a Danish hearing aid manufacturer. The inventory of hearing aids available to recipients was very versatile and binaural fittings were quite common. In contrast to England, there were no restrictions as to the type of hearing aid to be provided as to the age of the recipient. All of the hearing aids were distributed through state hearing centers which were attached to the National Health Service Hospitals. I was located at the largest state hearing aid center in Copenhagen, Denmark which distributes about 23,000 hearing aids annually. The cost per hearing aid including all professional services and overhead was about $125.00 for one hearing aid and $150.00 for binaural hearing aids. The actual cost of the hearing aid to the National Health Service was about $25.00 on the average. In comparison to the English system, I found that the Danish system was better in many respects, in terms of follow-up especially. They required each recipient of a hearing aid to take a course of instruction which they called their "adaptation course". This course dealt with the problems that the hearing handicapped person would encounter and how to deal with these problems in a practical way. This figured into the cost of providing the hearing aid.

I don't know that either of these systems would prove satisfactory here in the United States. As Dr. Donald Krebs pointed out in the hearings, it would be difficult to provide the delivery of hearing aids through a clinical distribution system. However, I think what we don't normally conceive of in this regard is that hearing aids would be distributed through existing speech and hearing centers as they now operate. In comparison with the Danish system I found that our American audiologists spend far too much time in the testing situation whereas in the Danish system the audiologists were responsible for the direction of testing services which were handled in a very efficient manner. I take issue with Dr. Krebs' point that it would cost "up to $432.00 for an aid". I think that we could work out a system of delivering hearing aids that would cost far less than $432.00 and in all likelihood the cost could be closer to $200.00 per aid.

It was interesting for me to learn while I was in Denmark that the Danish system is patterned after a system developed by the U.S. Veterans' Administration. During the 1950's when the Danish government passed legislation establishing state hearing centers seminars were conducted by the organizing committee to help develop a system. The primary visitors to those seminars came from the United States and when the Danish system was organized its pattern was much like the V.A. program. Their program is now over 20 years old and from their point of view it has been quite successful.

Perhaps your committee has already received information regarding delivery systems in other countries. But in the event that you did not I would like to offer additional information to your committee at your request. I hope that some of this information will be of use to you and the committee members.

Sincerely yours,

JON K. SHALLOP, Ph.D.,
Associate Professor.

ITEM 11. LETTER FROM RICHARD E. CASWELL, SILVER SPRING, MD., SECRETARY-TREASURER, AMERICAN ATHLETIC ASSOCIATION OF THE DEAF, AKRON, OHIO, TO SENATOR FRANK CHURCH, DATED SEPTEMBER 10, 1973

DEAR SENATOR CHURCH: The American Athletic Association of the Deaf strongly favors the inclusion of hearing aids under the Medicare program and also the inclusion of telephone receivers with hearing aids.

There are a great many individuals that have for years been wage earners and tax-paying citizens and who are now retired. Many are suffering from a hearing loss due to old age or other reasons. These aids will bring great satisfaction and comfort to many who would otherwise be deprived of such due to the outrageous prices that hearing aids cost today.

I am one of the many individuals with a hearing problem, but I am much more fortunate than others because I do have some hearing. I would benefit a great deal from a hearing aid but the cost of such a luxury forbids me to get one. This should not be the case because a hearing aid is as much a necessity as are eye glasses and false teeth.

As is the case where eye glasses as well as false teeth are a necessity and within reasonable cost to the elderly and the wage earner alike, the cost of a hearing aid is out of reach of a great majority. Therefore, whatever can be done by your committee to alleviate this problem by adding the hearing aid to the Medicare program will be of great benefit to many.

Sincerely yours,

RICHARD E. CASWELL,
Secretary-Treasurer.

ITEM 12. LETTER FROM ANTHONY L. ROTOLO, PH. D., PRESIDENT, SOCIETY OF MEDICAL AUDIOLOGY, WARREN OTOLOGIC GROUP, INC., WARREN, OHIO, TO SENATOR FRANK CHURCH, DATED OCTOBER 3, 1973

DEAR SENATOR CHURCH: Thank you for your letter of August 31, 1973, inviting a member of the Society of Medical Audiology to attend the Senate Hearings on Hearing Aids and Medicare on September 10th and 11th. I was very happy to be able to personally attend the hearings.

I have great concern regarding the input of information to your committee during the hearings. To date it has been impossible to obtain copies of the written testimony submitted by various groups to your committee.

A critical question of who shall accept responsibility for the patient and how the physician, audiologist and hearing aid dealer will work together in the management of this problem. This is by far the most important question at hand. This was not very well presented or detailed during the verbal testimony which I heard.

The Society of Medical Audiology is in the process of polling its members regarding the specific aspects of how this problem can best be handled. The information and opinions received from this group of professionals should provide very constructive information for the use of your committee members.

My twenty years of work with this problem leaves me less than happy with the present situation regarding hearing aids. I am very fearful of what might be proposed in terms of a Federal Program regarding the elderly patient who has a hearing loss and is in need of help, professional and financial, when it comes to hearing aids. I am sure sufficient time will be extended to develop an adequate program rather than simply giving financial assistance, but making no effort to improve the present situation.

We were told that although the October 5th deadline is the closing for certain information, our poll would still be considered in the record. I would appreciate hearing from you regarding specific questions and comments. The Society of Medical Audiology appreciated the effort you and your committee are putting forth to improve the area of health care and hearing for the aged.

Sincerely yours,

ANTHONY L. ROTOLO, Ph. D.,
President, Society of Medical Audiology.

ITEM 13. LETTER FROM CLAUDE S. HAYES, PH. D., PRESIDENT, AND JOHN J. O'NEILL, PH. D., CHAIRMAN, ARA TASK FORCE, ACADEMY OF REHABILITATIVE AUDIOLOGY, TO SENATOR FRANK CHURCH, DATED OCTOBER 5, 1973

DEAR SENATOR CHURCH: I wish to express the appreciation of members of the Academy of Rehabilitative Audiology for your invitation to the organization to provide a statement in regard to Hearing Aids and the Older American. Before presenting the statement it might be of value to present a brief description of the Academy. The Academy was founded in 1966 with the purpose of providing a forum for the exchange of ideas, knowledge, and experience in the areas of habilitative and rehabilitative audiology, to foster and stimulate professional education and research in habilitative programs for hearing handicapped persons and to correlate these endeavors for the welfare of the hearing handicapped.

The members are individuals who have graduate degrees in audiology and education of the deaf and who have a background of at least five years of experience in habilitative and rehabilitative audiology or educational programs for the acoustically impaired.

This group with a specialized focus on the rehabilitation of the hearing impaired held a meeting this summer at which time it considered the reports of fourteen task force committees. Four of the reports were in areas that are under consideration by your committee. These reports were: Standards for Hearing Aids, Dispensing of Aids by Audiologists, Plans for Expenditure of Public Funds for Rehabilitative Services in Audiology, and Aural Rehabilitation for Adults. Some excerpts from the reports of these committees may help to indicate some of the concerns and interests of the Academy.

1. Efforts should be made to develop a set of guidelines for the purchase of services for the hearing handicapped on a national level.

2. Develop a better understanding of what a hearing aid really does for the hard of hearing.

3. Develop a good working relationship with hearing aid dealers to help them feel more confident that cooperation with rehabilitative audiologists will ultimately lead to more satisfied customers. As a result the dealers may be more agreeable to making needed changes in aids already purchased and be willing to deduct the cost of aural rehabilitation from the price of the hearing aid.

4. Attempt to make service available for hearing impaired senior citizens residing in nursing or residential homes or their own homes.

5. Convince physicians and hearing aid dealers of the need for rehabilitation services for the elderly.

6. Short and long range goals for community programs should focus on the preservation of human resources so that all citizens with hearing impairment may be productive. Communication is the link by which people survive in this society and we would agree that we must work toward improving communication as best as possible for each hearing impaired person.

7. A way must be provided to make rehabilitative services accessible to the elderly client.

8. Survey the memberships of such organizations as the National Association of Retired Persons to determine the services needed by the elderly.

If the above goals are to be considered and met it will be necessary for the eldery to receive financial assistance, especially in reference to the purchase of hearing aids. As a result the Academy of Rehabilitative Audiology strongly recommends that Medicare coverage be provided for hearing aid evaluations, the purchase of hearing aids and the provision of rehabilitative services as prescribed by a physician specializing in diseases of the ear or by a certified audiologist.

I hope this information will be of help to your committee. Also, we stand ready to provide any further assistance your committee may need.

Sincerely,

CLAUDE S. HAYES, Ph. D.,
President, ARA.
JOHN J. O'NEILL, Ph. D.,
Chairman, ARA Task Force.

ITEM 14. LETTER FROM GOTTLIEB BIERI, PRESIDENT, MICHIGAN HEARING AID SOCIETY, TO PATRICIA CALLAHAN, SPECIAL COMMITTEE ON AGING, DATED SEPTEMBER 7, 1973

DEAR MS. CALLAHAN: This letter is to introduce Mr. Robert Hughes, Secretary of the Board of Directors of the Michigan Hearing Aid Society.

By approval of our board of directors last Thursday, Mr. Hughes was delegated to represent the Society in any way related to the Public Hearing of your committee scheduled for September 10th and 11th, 1973.

To assist you and other staff members working with Senator Church's committee we have prepared a collection of materials from our files that may be useful in better understanding services to the hearing impaired.

One booklet entitled "Analysis of Cost Providing Hearing Aid Services"* was prepared by the CPA firm Dupuis & Ryden, P.C. This report shows that services to the hearing impaired is costly in order to provide effective use of a hearing aid by a hearing impaired person.

Understanding the distinction between the net cost of a hearing aid and the selection, fitting and post fitting services is crucial in meeting the socio-economic needs of our aged for meaningful hearing.

The second compilation* of information is organized to give the reader at least a "feel" for some of the issues and answers that have been proposed in the areas of 1) Delivery of Services, 2) Licensure of Services to the hearing impaired, and 3) Competency of Qualified Hearing Aid Dealers to Screen for Medical Referral.

All four topics are receiving much attention not only at the federal level but at the state and industry level as we attempt to better meet the needs of our people throughout the nation.

Sincerely,

GOTTLIEB BIERI, *President.*

ITEM 15. LETTER FROM DOROTHY E. DREYER, PH. D., VICE PRESIDENT FOR LEGISLATION, MICHIGAN SPEECH AND HEARING ASSOCIATION, LANSING, MICH., TO WILLIAM E. ORIOL, STAFF DIRECTOR, COMMITTEE ON AGING, DATED OCTOBER 10, 1973

DEAR MR. ORIOL: I just received a copy of some of the testimony presented to the U.S. Senate's Subcommittee on Consumer Interest of the Elderly by members of the National Hearing Aid Society (NHAS) and feel that I must comment and clarify.

*Retained in committee files.

I speak specifically to the testimony contained on pages 9–10 of the NHAS statement—such statements as: "The Detroit Free Press has said of the Michigan Public Research Group, 'Critics charge that (their report) was weak in research and was a personal vendetta. . . . The report cited specific but uncorroborated instances of violations and used anonymous quotes . . . County and state health departments said the report was misleading and statistically inaccurate. . . . Few in the media will (now) print PIRG reports without checking them completely first. . . .'"

I should like to point out to you that the PIRG report they refer to was relative to the Fast Food Industry in Michigan. Actually, when one reads the entire report, it becomes evident that it is *not* as bad a piece of research as the media led one to believe. There were problems in obtaining information and citing sources as many informants were currently employed in the industry and therefore had to be protected. Additionally, the statistics were those of the Michigan Department of Public Health and the only statistics available, and while they covered aspects not covered in the report, they certainly spoke to the fact that there are problems. I, and I hasten to add others, feel that the report was unfairly treated by the media, perhaps by design and/or pressure.

However the point I wish to make is this. The report to which they refer was in no way concerned with the hearing aid industry. Public Interest Research Group in Michigan (PIRGIM) will, however, shortly release a report here in Michigan which deals directly with the hearing aid industry. This testimony, then, appears to me to be an attempt on the part of that industry to discredit PIRGIM's report in advance on the release date, and to influence and prejudice those who would have an interest in that report before the fact. I would hope that this would not be the case, and the forthcoming PIRGIM report would be allowed to stand on its own merits, and that it would be read objectively by all who have an interest in the matters to which it addresses itself.

I should be delighted to send you a copy of that report as soon as it is available if you so indicate. I would also be willing to send you a copy of the Fast Food Report if it is of any interest to you.

If there is any other information I can provide to you to assist you and the committee in your deliberations of this important matter as it concerns our senior citizens, I would be delighted to do so.

Very truly yours,

DOROTHY E. DREYER, Ph. D.,
Vice President for Legislation.

ITEM 16. STATEMENT OF RICHARD CONLIN, HEARING AID PROJECT DIRECTOR, PUBLIC INTEREST RESEARCH GROUP IN MICHIGAN, LANSING, MICH.

The Public Interest Research Group in Michigan (PIRGIM) is a non-profit organization funded through voluntary donations by students at Michigan colleges and universities. PIRGIM was organized to work for political changes to help create a better society. One of our prime areas of concern has been health care. As one aspect of this concern, we have conducted a study of the delivery of hearing aids in Michigan. The project was carried out by myself, as a staff member, and Mark Goldstein, a summer student intern. A full report on the project is now in preparation.

The study involved an analysis of the hearing aid situation in Michigan: what people are receiving aids and what people are not, how aids are being prescribed and delivered, what economic problems the present system poses for those who are in need of hearing assistance, and where the money paid for hearing-assistance services goes. The study included surveys of hearing aid users and physicians, research into hearing problems, and numerous interviews of people associated with hearing services.

As a result of doing this study, we are convinced that it would be useful and, in fact, it is of considerable importance, that hearing aids be provided through Medicare. There are two reasons for this: the need of people for hearing services, and the high cost of providing such services.

The need is clear. A large number of elderly people have severe hearing problems; this is one of the major problems isolating them from society and increasing the pain of growing old. Communication has always been man's most precious tool, and in our society, with its long distances and heavy dependence upon electronic communication as a means of reaching other people and of entertainment

(i.e., telephone, television, radio, records, etc.), the problem of losing communication is even more crucial. The ability to partially compensate for such loss through the use of the amplification power of a hearing aid is of great importance.

Yet, many older Americans do not have access to these valuable tools for helping to maintain their participation in society. A major reason for this is the high cost of hearing aids. A typical hearing aid will cost from $300 to $450. The aid itself has a limited lifetime; it must be replaced every few years, either with a different aid (if the pattern of hearing loss changes) or with a replacement for normal wear-and-tear. In addition, there are fixed costs of up to $100 a year for accessories, including batteries, harnesses, ear molds, receivers and cords. It would not be an excessive estimate to suggest that a hearing aid will cost $200 each year, counting both supplies and capital expenditures.

Add another $100 per year for a binaural fitting (both ears) or double it for a couple, and you have priced the hearing aid out of reach for the average elderly American. Even $200 a year is a considerable investment, amounting to ten percent of the average annual income of elderly Americans—simply for one prosthetic device which helps (but does not eliminate) hearing loss.

Clearly there is a need for assistance to bring older Americans better hearing. However, we feel equally strongly that such assistance will be of little value unless subject to strict controls. Hearing aids are not a device which can be casually dispensed to any person with a hearing loss; they are complex electronic instruments which affect delicate areas of personal life. It is imperative that the provision of hearing aids be considered not as an isolated action, but as part of the overall delivery of services to the hearing impaired.

All too often in our study, we have encountered people who needed medical treatment or surgery who were sold hearing aids, people who had no need of assistance who were sold hearing aids, people who needed one kind of aid who were sold the wrong kind. If the federal government permits hearing aids to be considered as separate from other services to those with impaired hearing it will be wasting money in a haphazard operation of unknown benefits and of significant potential harm. We would strongly recommend that a total system approach be utilized, employing the services of physicians, audiologists (Professionals with two or more years of graduate study in diagnosing and treating hearing problems), and paraprofessionals of various kinds, organized to deliver patient, careful services to the hearing impaired. Such organization should be mandated in whatever bill implements the use of Medicare moneys to purchase hearing aids.

In addition to this, the federal government should also mandate purchasing and servicing price guidelines, as is done by the Veteran's Administration, which will provide significant cost savings over open market purchases. If wholesale purchase is infeasible, a dealer cost plus fixed amount formula should be employed, as is done by many state Crippled Children's Services.

Examples of problems that can be caused by the dispensing of hearing aids solely upon the recommendation of a dealer are numerous; here are some of the ones we have gathered:

—a 70 year old woman in Baldwin, Michigan, was recommended for a $360 hearing aid by a hearing aid salesman. Subsequent testing by an audiologist whom she consulted indicated that her hearing loss was very slight, and an aid would be of little use.

—a 50 year old Detroit man was sold a hearing aid 20 years ago to correct a hearing loss. Twenty years and several aids later, he began suffering increasing discomfort and consulted a physician. The physician immediately discovered that his problem was surgically correctable by a simple operation, and that for 20 years he had been suffering an unnecessary hearing loss.

—a Detroit man went to a hearing aid dealer and asked him if he should see a doctor about his hearing loss. The dealer said no and sold the man two hearing aids, for $700. Subsequently, a friend persuaded him to see a doctor; the doctor operated on him and restored near-normal hearing. The deposit which the dealer received was never returned.

We sent people to several hearing aid dealers to see whether they would recommend hearing aids even when it was unjustified. While all of the people we sent have had extensive examinations recommending that they not purchase aids, and one was actually awaiting surgery, in approximately one-third of the cases the dealers attempted to sell them aids. Our surveys of hearing aid users and otologists (doctors specializing in hearing problems) found both groups strongly in agreement (better than 90%) that the hearing aid dealer should be

restricted to selling and servicing aids, and that physicians and audiologists should diagnose and prescribe for hearing problems.

The system which we are recommending for adoption in the state of Michigan mandates that all hearing impaired persons be seen by physicians who are ear specialists and by audiologists prior to purchasing hearing aids, and that an aid be purchased only on prescription. We feel that this system is essential to protect the hearing impaired; if the federal government is to purchase hearing aids through Medicare, we feel that the same safeguards are imperative, both to protect the consumer and to eliminate excessive costs. The federal government has the obligation to use the power of Medicare payments to ensure that proper care is provided, and proper systems of health care delivery adopted.

With the above provisions in mind, we support the inclusion, not just of hearing aids, but of a mandated process for providing services to the hearing impaired, under Medicare. We feel it would be a significant benefit to the elderly, and to all the people of this country.

ITEM 17. LETTER FROM DARRELL E. ROSE, PH. D., WAYNE O. OLSEN, PH. D., AND D. THANE R. CODY, M.D., MAYO CLINIC, ROCHESTER, MINN., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 4, 1973

DEAR SENATOR CHURCH: Thank you very much for your letter of August 31, 1973, indicating that we would be welcome as observers at the hearings September 10–11, 1973, regarding "Hearing Aids and the Older American."

We are indeed very interested and concerned about this issue. Unfortunately we have seen far too many of our elderly citizens who have spent a considerable amount of money on hearing devices that are essentially of no benefit to the purchaser.

It is our opinion that we could do no poorer service for hearing impaired individuals than to allow the distribution of hearing aids without otologic/audiologic recommendation. Although the newly enacted Minnesota law on hearing aids does not resolve all problems encumbent in this issue, we are of the opinion that it is the best attempt in the nation thus far at obtaining useful hearing aids on those who need them. There is no substitute for proper medical and audiological evaluation to determine the need for amplification.

We strongly urge you and your committee to insist that hearing aids which, if purchased by the Medicare program, be strongly tied to otological/audiological recommendation. We will be most happy to assist your group in any way which will be to the best interest of the hearing impaired.

Sincerely,

DARRELL E. ROSE, PH.D.
WAYNE O. OLSEN, PH.D.
D. THANE R. CODY, M.D.

ITEM 18. LETTER FROM JAMES McMAHON, ADMINISTRATIVE DIRECTOR, NEW YORK LEAGUE FOR THE HARD OF HEARING, NEW YORK, N.Y., TO SENATOR FRANK CHURCH, DATED OCTOBER 4, 1973

DEAR SENATOR CHURCH: Please excuse the delay in answering your letter of August 31, 1973, but I did want to give a response to your kind offer before the closeout date of October 5th.

After evaluating the present system of distribution, after reading the plan suggested by the National Hearing Aid Society and the Hearing Aid Industry Conference, after reading the testimony given by representatives of the American Speech & Hearing Association, after listening to the proposals put forth by those associated with Ralph Nader, and after looking at the situation in Northern Europe (drawing from the conclusions similar to those of Dr. Ruben), I would suggest that none of those plans ought to be included under Medicare. All are inadequate.

Over the next few months, this writer and some of his colleagues will be studying a system for the distribution of hearing aid prostheses which makes such distribution contingent upon medical coverage. There is no plan, to my knowledge, that meets the general criteria of lowered cost with quality care and good organization that might appeal to those of you responsible for Medicare legislation, yet allowing for the *status quo* and choice.

I do thank you for the privilege and opportunity of submitting a statement, and I would like the opportunity to resubmit a more complete statement to you somewhere around February 1st, 1974, after we have obtained substantially more data and have dry-run a few ideas.

Yours most sincerely,

JAMES MCMAHON,
Administrative Director.

ITEM 19. STATEMENT OF ALICE O. BERKOWITZ, PH. D., DIRECTOR, AUDIOLOGICAL AND SPEECH SERVICES, MANHATTAN EYE, EAR, AND THROAT HOSPITAL, NEW YORK, N.Y.

My comments are directed primarily towards two important areas: 1) Quality medical and health care. 2) Protection of hearing handicapped individuals. In this regard, it should be remembered that the handicapped individual is one whose needs are different and unique as compared with those of the general public. This is particularly true of the aged individual who is adjusting to many other changes in lifestyle and health with the superimposition of a hearing problem.

In order to solve the problems of these two areas several questions arise, particularly regarding hearing aids and the present methods of sales and selection.

Hearing loss is a symptom of a disease. Therefore, the evaluation of the hearing loss should be made by an otolaryngologist who is able to differentiate and diagnose the ear disorder and make the appropriate recommendation for medical treatment of this problem. To assist the otolaryngologist in this evaluation process, a trained audiologist can perform various tests which measure the degree and type of hearing loss.

Since, at the present time, no prior diagnosis is required to get a hearing aid, hearing disorders requiring medical treatment may go undiscovered. This is particularly serious in situations where the undiagnosed disorder could result in permanent damage to the individual, if not treated. Some examples of this type are acoustic tumors and middle ear disease. In addition, many hearing disorders can be corrected by proper medical treatment if these disorders are diagnosed promptly.

The appropriate procedure would be for the hearing impaired individual to be examined by an otolaryngologist and tested by an audiologist. The audiologist is specially trained to administer and interpret a wide variety of auditory tests which define and describe the hearing loss.

In this way accurate and meaningful diagnoses could be determined by skilled professionals. A hearing aid is a prosthetic device which is used as part of a total therapy program. Just as an individual would not obtain an artificial limb without medical evaluation and training regarding the use of it, a hearing aid should not be dispensed without the same type of program. It is unfair to place the aged individual in the position of obtaining only one element of a total rehabilitation program because his illness was not reviewed by a properly trained individual. The hearing aid dealer, at the present time, is not required to have any specialized training which would equip him with the knowledge necessary to select an appropriate hearing aid for an individual and provide him with the appropriate treatment program.

Experience has taught us that one who wears a hearing aid must receive a certain amount of training in the use of the hearing aid in order to obtain the maximum benefits that a hearing aid can provide. A trained audiologist is able to determine the benefits which may or may not be derived from amplification, and the educational and rehabilitative services essential to the hearing handicapped. This may include the provision of services beyond the selection of a hearing aid itself, such as speechreading and auditory training, which may be requisite to the special needs of the growing geriatric population.

In order to provide quality care for the aged it should be required that a complete diagnostic evaluation be performed by an otolaryngologist and an audiologist who are specialists in this area. It is not sufficient to merely provide this individual with a hearing aid on the basis of a general practitioner's recommendations. Because of the many complexities of hearing disorders, particularly in the case of the geriatric, a complete evaluation and follow-up, including a hearing evaluation by an audiologist, are necessary in order to provide the standard of care which the aged hearing handicapped deserve.

The following recommendations are made for purposes of providing superior medical care and protecting the hearing handicapped population: (1) A program should be established whereby the hearing aid is considered part of a total rehabilitative procedure. This may be accomplished by requiring evaluations by an otolaryngologist and audiologist prior to the recommendation of a hearing aid. These professionals can then recommend the most appropriate hearing aid for the individual as based on their examinations and recommend appropriate rehabilitation procedures. In addition, appropriate medical treatment would be provided. The hearing aid could, of course, be fitted, serviced and sold by the hearing aid dealer. (2) Medicare should include some provision or coverage for the total rehabilitation program including the purchase of the hearing aid.

ITEM 20. LETTER FROM MRS. EDWARD McSWEENEY, CHAIRMAN, THE DEAFNESS RESEARCH FOUNDATION, NEW YORK, N.Y., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 11, 1973

DEAR SENATOR CHURCH: Thank you very much for your letter of August 31 in which you informed us about hearings on "Hearing Aids and the Older Americans."

The Deafness Research Foundation is concerned with medical research, as opposed to services such as the distribution and care of hearing aids, and will therefore be unable to send an observer to the hearings. We will, however, follow them closely from New York. We are also grateful for your interest in the subject. As you know, the problems of the hearing impaired have not received the attention they have deserved in the past, so the hearings are a welcome sign to all who have first-hand knowledge of the difficulties that accompany the handicap.

I am enclosing, for your information, a brochure* about The Deafness Research Foundation, an issue of our newsletter* and a list of our 1973 research grants.* You may be interested to note that the investigation by Drs. Crowley and Linthicum deal with hearing loss among the elderly. The investigations by Drs. Walloch, Fredrickson and Dobelle may also be of interest to your subcommittee in that they deal with electronic implants which, like hearing aids, bring more sound to the brain.

Please do not hesitate to call or write if you think I can be of further assistance.

Sincerely,

MRS. EDWARD MCSWEENEY,
Chairman.

ITEM 21. LETTER AND ENCLOSURE FROM RICHARD ROSENTHAL, EDITORIAL DIRECTOR, NEWSAGE EDITORIAL AND WRITING SERVICE, INC., NEW YORK, N.Y., TO WILLIAM E. ORIOL, STAFF DIRECTOR, COMMITTEE ON AGING

DEAR MR. ORIOL: Enclosed please find, with reference to your hearings on hearing aids, an article I wrote for the New York Times of January 30, 1973 and a speech* I made to the New York Academy of Medicine on October 17.

The Times article elicited some 300 responses, the great majority from people who shared my views on the deficiencies of hearing aids as sound reproduction systems.

Hearings such as those held by your committee in 1968 and Senator Kefauver's committee in 1962 and efforts such as the recent Ralph Nader report are most valuable, but too often skim over the most important question, which is not why many people who cannot benefit from aids are sold them but why so few people who need them get them. I am convinced the main reason is poor quality which is traceable to the emphasis on smallness and concealment, which in turn is traceable to the assumption, by both merchants and hearing professions, that we should rather conceal than conquer our handicap. This is a convenient canard, not validated truth.

Since my article appeared in the Times, I have assembled my own aid. It provides superb range and fidelity and weighs about 4 pounds. It cost me no

*Retained in committtee files.

more than a conventional aid and can be duplicated in 15 minutes in any good electronics store.

Please feel free to call on me or use this material as you wish.

Sincerely,

RICHARD ROSENTHAL,
Editorial Director.

[Enclosure].

[From the New York Times, Jan. 30, 1973]

THE BETTER TO HEAR

By Richard Rosenthal*

Incredible as it may seem, in a day when electronic miracles have become commonplace—when man can eavesdrop on outer space and ocean bottoms—the design, marketing and discussion of hearing aids is more superstition-ridden than in the days of ancient Greece when slaves and citizens went about with punctured seashells strapped over their ears.

What kind of service would you expect from a stove, cigarette, contraceptive, telephone, typewriter, tractor or any other appliance that was made first to be tiny and hidden and only then to serve its stated purpose?

That's how hearing aids are made—to be hidden! That's why 15 million Americans with impaired hearing can hear astronauts broadcasting from the moon better than a spouse talking from across a breakfast table. Despite the skills of American technology, hearing aids are feeble, frustrating implements, with the small quality of a cheap loudspeaker and the endurance of a child's gimcrack.

Hearing aids are inadequate because concealment, more than better hearing, is the goal of their design. Hearing aids are not thought out to aid hearing but to cower surreptitiously—secreted and unknown—in or behind an ear or pair of glasses or under clothes. Key components aren't big enough to perform well. Tone quality is poor. Sounds are raspy and muddled. And the constricted space precludes reliable quality control and servicing.

No other type of hearing aid exists, unless it is a medical or military secret. I am eager and ready to wear an effective, manageable hearing aid, however conspicuous. I will gladly go about with an aid of about three pound on my head, eight pounds on my chest or fifteen pounds on my back to approximate the sound quality of my $30 transistor radio.

I have told this to executives of hearing aid companies. They smile benignly and reply that I wouldn't really wear it. No one would, they say.

I have also told this to audiologists and otolaryngologists (ear, nose and throat specialists). They smile earnestly and say the same thing. People won't wear a hearing aid that looks like a hearing aid, no matter what it might do for their hearing.

Nonsense! Large hearing aids are now in fashion. Astronauts, radar operators, television personalities, models in cigarette commercials, beachcombers and teenagers all enhance their images with conspicuous headsets—with hearing aids. Why not the hard-of-hearing? Smallness and concealment are a recent idea. For thousands of years, until the transistor appeared in the 1950's, people used large, ornate hearing aids—ear trumpets, tubes, horns, metal discs, brass resonators.

I do not suggest that the hearing-aid industry produce appliances as cumbersome as brass resonators. I am suggesting what many hearing-aid engineers and designers concede privately, that were it not for current proscriptions of smallness, aids with much better fidelity, range and lifespan could be designed in comfortable, attractive packages that the hard of hearing would love to wear.

The fount of resistance, I am convinced, is less with us than with the professional and business people that serve us. Almost all I have met unquestioningly accept the canard that we would rather conceal than conquer our disability. Manufacturers in this small industry (some forty companies with annual hearing-aid sales of about $70 million) are keyed to making small aids for a small market, dealers to selling concealment more than hearing. Agencies and audiologists are preoccupied with succoring and processing the downtrodden. Otolaryngologists concentrate on treating afflictions that lend themselves to medical or

*Richard Rosenthal, a writer and an Oxford graduate, suffered damage to his hearing in military service in World War II. He is working on a consumer book for the hard-of-hearing.

surgical intervention, while blinking at patients whose only recourse is electronic amplification.

Small wonder hearing aids aren't what they could be. Small wonder we are "embarrassed" by them.

It is time America devoted common sense and genius to producing, marketing and fitting hearing aids for the millions who need and want them. Scientists, electronics engineers, politicians, component makers and the prestigious names in computers and consumer electronics can all profit from such an undertaking, as can the deafness professionals and merchants who question the conventional wisdom of their field.

The technological know-how exists. The fashion climate is right. And I want to hear.

ITEM 22. LETTER FROM JOHN S. SHIPMAN, BOARD MEMBER, REGISTRY OF INTERPRETERS FOR THE DEAF, SILVER SPRING, MD., TO SENATOR FRANK CHURCH, DATED OCTOBER 2, 1973

DEAR SENATOR CHURCH: The Registry of Interpreters for the Deaf regret that we were unable to have an observer present for your hearing on September 10–11, 1973. However, we wish to submit a statement in writing for your hearing record which we understand is open until October 5, 1973.

Regarding *"the potential incompatibility of new telephone receivers with hearing aids"*, we strongly urge your committee to utilize every avenue of effort to prevent such an incompatibility from developing further and also suggest that any action which can be taken to remedy this situation where it now exists, General Telephone of Southern California, etc., will be most welcome by the millions of hearing impaired citizens both young and old who depend upon hearing aids and/or telecommunications devices such as teletypewriters.

The psychological trauna alone which a hearing aid or telecommunications user encounters when he/she discovers that their expensive but highly cherished aid is rendered useless by the thoughtless planning of people oriented service companies is sufficient cause for your committee's positive involvement. In addition, the elderly especially place more and more dependence upon the use of telephones due to infirmities, etc., and they as a group represent a large percentage of hearing aid users in America. At a time when their mobility is decreasing, we must insure that their use of telephones are maintained at a useable level.

Under present practice, given phone companies provide complete service within a given area. Some of these phone companies who use a type of receiver which is incompatible with hearing aids and other devices will replace a receiver for the hearing impaired person once the individual discovers it is the phone rather than the aid that is at fault and contacts his phone company with a demand for rectification. However it is imperative to note that most people will probably be unaware of any possible remedy.

The Hearing Aid Industry Conference has reported that there are 2½–3 million users of hearing aids and another 11 million people who have untreated hearing problems. The needs of 14 million consumers are too large for service oriented companies to ignore.

The Federal Trade Commission indicated in its releases that there were 400,000 hearing aids delivered in 1968 and 600,000 delivered in 1972. These statistics clearly indicate that untreated individuals are being reached. They further indicate that over 50% of the hearing aid purchasers were over age 65, plus they are as a group, new to the problems associated with hearing impairment/aids and telephone receivers.

On the other hand, the number of profoundly deafened individuals who have recently discovered they too can use the telephone through the use of telecommunications devices is growing rapidly. To deny this basic benefit or even burden the process is unthinkable.

The Registry of Interpreters for the Deaf strongly urges your committee to take necessary action to prevent and remedy the problem of potential incompatibility of new telephone receivers with hearing aids.

Sincerely,

JOHN S. SHIPMAN,
Board Member.

ITEM 23. LETTER FROM HARRY L. BAER, MANAGER, SONOTONE OF WEST PALM BEACH, FLA., TO SENATOR FRANK CHURCH, DATED OCTOBER 4, 1973

DEAR SENATOR CHURCH: As a hearing aid dealer in this area for 23 years, I wish to thank you for your careful scrutiny and thoughtful questions relative to the September 10 and 11 attacks against our industry's dealer distribution system before the Subcommittee on the Consumer Interests of the Elderly.

We strongly feel that the more than 5,000 established dealers throughout our country are most capable to care for the hearing aid problems of those who need such help. As Senator Charles Percy so frankly pointed out, we, the dealers, provide the stimulus and incentive for the hearing-impaired to do something about their problem. We, the dealers, are most experienced in the art of selecting and fitting hearing aids and providing the services necessary through the years.

We sincerely feel that the distribution of hearing aids through independent dealers is absolutely vital to care for the needs of our citizens who are hearing-handicapped.

Sincerely,

HARRY L. BAER,
Manager.

ITEM 24. LETTER FROM CHARLES L. HUTTON, JR., PH. D., AUDIOLOGIST AND SPEECH PATHOLOGIST, ATLANTA, GA., TO SENATOR FRANK CHURCH, DATED OCTOBER 29, 1973

DEAR SENATOR CHURCH: As a professionally trained person who has been wrestling with the problems associated with aids for the hard of hearing for more than 20 years, I would like to offer the following opinions:

1. As regulated public utilities, the telephone companies should be required to find viable solutions to problems generated by technological advances. Further, such solutions must be made known to each subscriber far enough in advance so that the subscriber can take the steps necessary to cope with the impeding problems. That it is their responsibility to find and disseminate solutions to problems they generate should be made clear to companies like AT & T and General Telephone.

2. Recommendations for prosthetic appliances such as hearing aids, artificial larynges, etc., should be made by persons who have adequate training and who are not financially dependent on self-serving recommendations.

3. A hearing aid delivery system based on low volume, high overhead retailing is not an appropriate delivery system where cost is an important factor, e.g. in large scale, tax supported, health care programs.

4. Professional associations and manufacturers were aware of essentially the same set of hearing aid related problems at the time of the Kefauver Report. While their intentions and interest may be applauded, ten years of snail-like progress is long enough; the solutions lie elsewhere.

5. At least several types of hearing aid delivery systems, e.g. Medi-Cal; Professional prescription-Master Plan; dispensing by non-profit audiology clinics a la VA; New York Medicare; Sweden; etc., should be given formal trial and evaluation. State government should be encouraged to develop innovative programs which emphasize determination of need by trained persons (however defined) and provision of the various services within reasonable proximity of the home of the recipient. Cost analysis of each state program and evaluation of the quality of services and appliances should be carried out by an independent, consumer oriented agency.

Sincerely yours,

CHARLES L. HUTTON, Jr., Ph. D.

ITEM 25. LETTER FROM M. JANE COLLINS, PH. D., NASHVILLE, TENN., TO SPECIAL COMMITTEE ON AGING, DATED OCTOBER 5, 1973

THE SPECIAL COMMITTEE ON AGING: It has come to my attention that your committee is considering the feasibility of providing federally purchased hearing aids to Medicare recipients. I have also been informed that testimony was presented at the committee hearings on September 10 and 11, 1973 that hearing aid dealers could determine the need for medical referral through the use of a

check-list. I take issue with this position and would like to enter, as testimony, a counter-position.

I have been in the field of audiology for 12 years and, with the exception of my present position, have held professional positions exclusively in hospitals or other medically related speech and hearing clinics. My master's degree is in speech pathology and audiology from Vanderbilt University, and my doctoral degree is in hearing sciences from the University of Iowa. Hearing aid evaluation and selection procedures have constituted much of my professional experience, and I have had exposure to various systems of procurement and distribution of hearing aids. I have taught in residency programs for otolaryngologists at two medical schools, as well as having taught persons seeking graduate degrees in speech pathology and audiology. I hold the Certificate of Clinical Competency in Audiology from the American Speech and Hearing Association.

Diagnosis of hearing loss and determination of the need for and feasibility of medical and/or surgical treatment for hearing loss lies strictly within the province of the physician. The training received by audiologists (which is in far more depth than that of the hearing aid dealer and which usually includes some exposure to medical/surgical management) is not sufficient to reliably make the determination of whether or not medical and/or surgical treatment is needed and feasible. Obviously, the training received by hearing aid dealers is even less adequate for making such decisions. Any check-list used by hearing aid dealers would be limited to items about symptoms as related by the patient and to items about the hearing aid dealer's observation. In determining the diagnosis and treatment for hearing loss, the physician often requires much more information, some of which may be from X-rays, family history, non-auditory symptoms, metabolic studies, drug history, etc. Such information cannot be obtained in complete form and interpreted by anyone except the physician.

The need for medical management of hearing impairment, in addition to audiological management, is reflected in many speech and hearing clinics through (1) requirements for medical referral to the clinic and (2) requirements for otologic examinations prior to any recommendations for amplification. Some persons may state that the population under consideration, the elderly, most often have an irreversible type of hearing loss that is associated with the aging process and therefore have no need to see a physician since he would not be able to "help." My main objection to such thinking is that although the hearing loss of the elderly may be irreversible, the ailments of these people are not limited to those related to aging. The determination that an irreversible, benign, untreatable condition is the only basis for the hearing problem must be left in the hands of the qualified physician, not the audiologist or the hearing aid dealer. Another objection to not routinely referring to the physician is that research has shown there are a variety of basic causes of hearing loss in the elderly, and as more is learned about the pathological processes of each, it may also be learned that some of these are not irreversible. The physician is in the best position to be apprised of advances made in treating hearing loss medically or surgically.

To summarize, I would like to describe the roles of the physician, the audiologist and the hearing aid dealer, as I see them, on the basis of 12 years' working experience with all three:

1. Physician. Medical rehabilitation of the hard of hearing patient is the province of the physician. As I use the word rehabilitation it is inclusive of diagnosis and treatment, as well as the determination that *no* beneficial treatment is available through medication and/or surgery. No one other than the physician (usually with specific training in the area of otolaryngology) is qualified to do this.

2. Audiologist. Non-medical rehabilitation of the hard of hearing patient is the responsibility of the audiologist. Determination of the need for a hearing aid and selection of an appropriate instrument is one part of the non-medical rehabilitation process. The process also includes assessment of the loss, determination of the degree of the handicap of such a loss, training in use of a hearing aid, and training or retraining of speech and language as they are affected by hearing loss. Our professional code of ethics has prevented audiologists in the past from selling hearing aids. The reason for this was to prevent the profit motive from influencing any recommendations for use of hearing aids. Currently, consideration is being given to changing the code of ethics so that audiologists can dispense hearing aids. Through non-profit dispensing procedures, the spirit of the code of ethics can be preserved and followed while providing patients with better services. Audiologists' training more than qualifies them to meet state licensure requirements for

hearing aid dealers, so there would be no problems related to licensing audiologists as hearing aid dealers.

3. Hearing aid dealers. The province of the hearing aid dealer is the commercial sale of and repair to hearing aids and their accessories.

Any procedures decided upon for procurement and dispensing of hearing aids to Medicare recipients should be based on concepts of the roles of the involved persons as described above. The Veterans Administration system for issuing hearing aids follows this philosophy and has long been considered by professional personnel working with the hard of hearing as a nearly ideal system: physical examination by a physician is required before issuance of any hearing aid; and assessment of hearing, determination of need for amplification and selection of appropriate aids is done by an audiologist. In this manner the quality of service to the veteran is maximized. The quality of service to Medicare recipients should be equally high.

M. JANE COLLINS, Ph. D.

ITEM 26. LETTER FROM MICHAEL E. GLASSCOCK III, M.D., THE OTOLOGY GROUP, NASHVILLE, TENN., TO COMMITTEE ON AGING, DATED OCTOBER 15, 1973

GENTLEMEN: As a physician who limits his practices to diseases of the ear, I am quite interested in the problem of hearing aids for elderly individuals. Too often, in my own practice, I see older patients who have severe nerve deafness and they have been sold a hearing aid which does them no good. Therefore, instead of wearing it they keep it at home in a dresser. Many of these individuals could successfully wear a hearing aid with the proper medical and audiological counseling. For this reason, I question the ability of the average hearing aid salesman to render the same service that a physician and a well trained audiologist could.

I would implore you to search for the truth and to hear all sides of the question concerning the ability of hearing aid dealers to directly fit hearing aids to elderly patients.

Sincerely,

MICHAEL E. GLASSCOCK III, M.D.

ITEM 27. LETTER FROM F. J. KEMKER, PH. D., CHAIRMAN, LEGISLATIVE COMMITTEE, TENNESSEE SPEECH AND HEARING ASSOCIATION, TO COMMITTEE ON AGING, DATED OCTOBER 3, 1973

GENTLEMEN: The Tennessee Speech and Hearing Association recently learned of the feasibility of providing hearing aids to hearing handicapped elderly through Medicare. On behalf of audiologists and speech pathologists in the State of Tennessee, the Association would like to express its vital interest in this matter and to outline a position to be entered as formal written testimony in the Subcommittee Record.

The position of the Tennessee Speech and Hearing Association is as follows:

1. The Association voices its strongest support for the provision of hearing aids by Medicare.

2. Only professional audiologists are fully qualified to prescribe a hearing aid, and this should be done after an otolaryngologist or otologist has determined that the hearing loss is not medically or surgically remediable. Very few physicians would presume to do hearing aid fittings in their office, and those who do normally employ audiologists to perform this nonmedical service. This is in harmony with the VA proposal and only slightly different from the position of the American Speech and Hearing Association. An exception would be where the patient is an experienced hearing aid user, an appropriate medical consultation was obtained on at least one previous occasion to obtain a hearing aid, and the results of the medical consultation suggested that such medical consultation would be in order for future hearing aid purchases, *e.g.*, a diagnosis of presbycusis. Even when these criteria for exception are met, large additional deterioration in hearing function might still warrant a new medical consultation.

3. The Association commends the VA proposal for its emphasis on quality professional care, and recommends its adoption as only one avenue of providing hearing aids to the elderly.

4. In addition to federal and federally supported hospitals, Medicare should use the audiologists in public and private speech and hearing centers and in private speech and hearing centers and in private practice. In partnership with local medical specialists, these professionals can maintain the quality of professional help prescribed by the VA proposal. Utilizing all these existing avenues has several secondary advantages. It takes advantage of resources already paid for by the government, as many of these personnel were trained with federal funds, and many of the public facilities have been financed wholly or in part by federal and state governments. It provides a greater number of facilities for greater convenience to Medicare recipients. It broadens the base of financial support to existing public and private facilities which serve all hearing impaired citizens. It encourages new facilities in smaller communities and outlying areas. It is in harmony with private enterprise.

5. Actual dispensing of aids might be done from government stock directly to the recipient either through hearing and speech centers or private practising audiologists with appropriate contracts to act as agents, or they may be obtained by the recipient from a dealer under appropriate contract after medical and audiologic evaluation.

The Association believes that this position will best serve the interests of hearing impaired elderly persons in the State of Tennessee.

Sincerely,

F. J. KEMKER, Ph. D.,
Chairman, Legislative Committee, TSHA.

ITEM 28. STATEMENT OF THE NATIONAL ASSOCIATION OF HEARING AND SPEECH AGENCIES, SUBMITTED BY TOM COLEMAN, EXECUTIVE DIRECTOR

Mr. Church and members of the committee: We should like to express our deep appreciation for this opportunity to communicate with you during your deliberations on the delivery of hearing health services to older Americans. For too many years our national leadership has been unaware of the nature and extent of hearing handicaps within our total population. It is our hope that hearings such as this will result in full Congressional recognition of the situation and ultimate enactment of practical, meaningful legislation to assist those who are the victims of hearing loss.

THE PROBLEM

Similar to other service-to-people movements in this nation, the hearing health field has been inhibited in its activities and progress by such problems as extremely high incidence of this handicap within the population, severe manpower shortages and maldistribution, a need for quality controls on the services rendered by all sectors of the field, lack of recognition of the problem by those in power, an inadequate delivery system, and the absence of reasonable financial support for the services and prosthetic devices required to provide decent hearing health for our citizens.

A. Incidence

More than 20 million people in this nation have communicative handicaps (hearing and speech disorders) which are worthy of our concern and which create an annual deficit in the collective earning power of these individuals approximating $1,750,000,000.*

The greatest incidence of hearing loss appears to occur among older Americans, those 65 years of age and above. A 1971 publication of the Bureau of Vital Statistics stated that 5,696,000 persons were hearing impaired in an over-65 population of 20,065,502. This is an incidence of more than 28% in this special age group of Americans. According to the Social Security Administration, there were 21,154,000 persons receiving Medicare benefits as of January 1, 1973; 1,700,000 additional individuals are expected to swell these ranks in 1973; projections indicate that 400,000 persons will be added annually to the Medicare roles. Assuming that the same incidence of hearing loss is present, nearly 6,000,000 older Americans are hearing imparied at this time and in need of assistance for diagnostic, remedial, and rehabilitation services.

*Human Communications and Its Disorders, NIH, 1969.

B. Manpower Availability

Though the hearing handicapped population is numerically one of the largest disadvantaged groups in the nation, we have probably the most severe professional shortages of any field attempting to serve people. A count of the certified otolaryngologists listed in the 1973 Directory of the American Academy of Ophthalmology and Otolaryngology shows approximately 3850 individuals available to serve the total population of this country and its possessions. Two thousand two hundred ninety-three (2,293) of these specialists (59%) reside in and thus practice in only 10 states. Many areas of our nation are without adequate medical hearing health services.

Similar shortages exist in the specialty of audiology. A review of the 1973 Membership Directory of the American Speech and Hearing Association shows fewer than 2000 people certified in audiology alone or holding dual audiology/speech pathology certificates. Many of these individuals are not available in clinical audiology for they work full time as speech pathologists, researchers, administrators or teachers. Others are restricted to serving a special clientele by working in closed systems such as the Veterans Administration, the military, or schools for the deaf. All in all, it is estimated that only 65% of the certified audiologists are providing direct services to people. Many communities are without these specialists who play a vital role in delivering hearing health services.

In Idaho, for instance, where the total population is listed around 713,000 and the Medicare eligibles at 72,000, there are only 12 otolaryngologists and one ophthalmologist/otolaryngologist to serve the hearing needs of the state as well as all of the other ear, nose, and throat problems usually handled by such specialists. Three certified audiologists are residing in the State; one serves as a speech clinician in a public school setting; one is an audiologist/speech pathologist in another public school system; one is working in a university setting.

Numerically, the largest manpower pool available to the hearing health field are an estimated 5500–6000 hearing aid dealers scattered throughout the nation. Collectively they constitute a sizeable operation which, in varying degrees and quality, is serving hundreds of thousands of hearing handicapped persons. Because most of them join the dealer ranks from fields rarely associated with health practices or knowledge, there is a great need for most dealers to upgrade their knowledge and skills if they are to continue handling patients/clients with hearing probelms.

Family type medical practitioners (generalists, pediatricians, and internists) also provide a large manpower pool for the care of hearing problems. For many of these we must provide continuing education in order that they can do a better job of managing patients with hearing disorders in those geographic areas void of otolaryngologists and audiologists.

Some extension of the expertise of audiology has been made possible during the past two years through development of a new career . . . the audiometric assistant. Through a joint HEW/Labor contract, the National Association of Hearing and Speech Agencies (NAHSA) has been able to develop a standardized curriculum and training program for selected individuals with an education level of high school equivalency. Following six months of didactic and practicum training by audiologists, these individuals are able to operate as supportive personnel for the field and thus enable an audiologist to extend his professional services to a far greater number of patients. Similar types of training have been provided industrial nurses and hygienists who work in settings where audiometric testing of employees has become important to the observances of OSHA regulations.

All in all, we must develop a delivery system in the hearing health field which makes use of all of these manpower resources if we are to accomplish the difficult task of providing services to all who need them, including 6,000,000 older Americans with hearing disorders.

C. Quality Control

One of the greatest concerns of those responsible for the provision of hearing health services in past years has been the absence of quality controls in some sectors of the field. This problem, however, has received considerable attention since we last appeared before your Committee in 1968.

In terms of the specialties of otolaryngology and audiology, both professions for many years have had excellent certification programs from their specialty boards which require reasonable demonstration of education, expertise, and knowledge requisite to the practice of each specialty. Otolaryngologists are licensed physicians and must adhere to the medical licensing laws of the states in

which they practice. Audiologists are licensed in only a few states but are moving toward the development of licensing laws in many other states. Both professions subscribe to codes of ethics.

Hearing aid dealers are now licensed in 38 states by laws which not only spell out the requirements and conduct for continuing licensing but which also provide reasonable recourse for the public. In addition, 3400 of the estimated 5500 hearing aid dealers in the country are members of the National Hearing Aid Society, which requires adherence to a code of ethics. In addition, the NHAS has been developing an educational program for dealers which in the future should progress to development of a new career in the hearing field which is similar to optometry in the vision field.

NAHSA has developed a stringent accreditation program for hearing and speech centers, the non-profit service agencies providing a variety of diagnostic, clinical, and rehabilitation services to those with hearing/speech/language handicaps, including the deaf, across the nation. Following careful study of accepted accreditation programs (such as the Joint Commission on Accreditation of Hospitals), NAHSA decided to endorse and participate through corporate membership in CARF, the Commission on Accreditation of Rehabilitation Facilities. Now, for the first time in its history, the hearing field has in effect a quality control program which combines the essence of peer review with the experience of accreditation professionalism. No controls can be exercised by any single organization or individual profession over the accreditation process. Rather, the structure and operation of CARF have been so designed as to provide a non-parochial, non-proprietary approach to quality control of various rehabilitation services, including hearing. Service programs are accredited according to their adherence to more than 600 standards in eight major areas: purposes; organization and administration; services; personnel; records and reports; fiscal management; physical facilities; and community involvement and relations.

Other controls currently are being developed by both the professional and business sectors of the hearing field, all with the purpose of making those involved in the provision of hearing services more accountable to those they serve.

D. Lack of Recognition of the Problem/Finance

Historically the cause of hearing disorders, including deafness, has not been a popular one with the citizens of this nation. As one man put it . . . "as long as the ear was not usually the site of something that killed people, no attention was paid to hearing in healthful living." Thus, unlike heart, cancer, polio, and other crippling or terminal conditions, too little financial support has been made available from usual funding sources, such as government programs, for the provision of services and prosthetic devices to hearing impaired persons. In recent years, however, as this nation has begun to recognize the interrelatedness of disease and disability with other social welfare systems requiring concern and care for the whole man, the importance of good hearing health has become recognized by many segments of the public, including the older group of Americans. But as they search for financial assistance necessary for the maintenance of a decent hearing status on a fixed income, they find that only token thought has been given to making such services available through Medicare and other third-party programs directly beneficial to their health needs.

It is time that the Congress and President of the United States recognize the need for providing greater assistance to the hearing impaired population in all third-party legislation such as Medicare. But in doing so, the legislators must recognize that the average of $300 per Medicare hearing patient for professional services and a prosthetic device, which has been advocated in some testimony, may be the proverbial straw that would break the camel's back. For instance, in 1972 Medicare payments for hospitals (Part A) amounted to 6.3 billion dollars; payments for all other medical aid (Part B) amounted to 2.3 billion. If 5 million Medicare hearing patients had participated at an average cost of $300 each, 1.5 billion dollars would have been added to that total.

Thus, when advocating the inclusion of hearing health services, including hearing aids, in Medicare. . . . a move that would receive full support of NAHSA and its membership. . . . we must recommend that this be done through a carefully developed formula with built-in protection against overuse or misuse by any participant in the ultimate delivery system.

E. Delivery Systems

The problem of delivering services becomes increasingly complicated when one realizes (1) that the aim of health, rehabilitation, and education in the United

States today is to provide each individual with as little or as much care as he or she may need, and (2) that the interrelatedness of disease and disability with other social welfare systems requires concern and care for the whole man. This, then, requires a great deal more than token consideration of the concept of planning for comprehensive delivery systems.

Comprehensive health care has been variously defined as closed panel systems, health maintenance organizations, group medical practices, hospital programs which include in-patient and out-patient and outreach programs, the Veterans Administration's hospital system, and more. But during the past few years, NAHSA has defined a comprehensive care concept as bringing together all of the manpower, facilities, and programs of a "market area" in a coordinated system for delivering services to those who need them. Through careful planning, the capability and time of the various professionals, supportive personnel, commercial interests, and volunteers at all levels will be utilized efficiently and economically to provide each individual with the right kinds and amount of care. In-patient, out-patient, home, and extended care will all be provided by the system. Private health practice, group practice, closed panel systems, health maintenance organizations, hospital programs, and other forms of practice would be integral parts of a total comprehensive system rather than being recognized as systems themselves.

Traditionally, hearing services have been provided in a variety of settings: free-standing non-profit clinics; clinics within hospitals or rehabilitation centers; university clinics associated with training programs; Easter Seal centers; public school systems; physicians' offices; business establishments, such as hearing aid dealerships; and other settings. Unfortunately, many programs have been isolated from the major health delivery systems. Other services have been provided without professional guidance, particularly in those areas of the nation without hearing specialists such as otolaryngologists and audiologists. Also, in many localities there has been little team relationship between all of the manpower categories now available to serve hearing handicapped individuals, including the older American.

NAHSA at the present time is attempting to play the role of a catalyst in bringing together (through its training programs) the various manpower elements needed to serve the hearing handicapped population, including 6,000,000 potential Medicare hearing cases. It is our hope that we can work out a better delivery system by developing a team approach which would include the otolaryngologist, audiologist, hearing aid dealer, family physician, administrators, and new types of supportive personnel. Planning will have to deal with such matters as: methodology for eliminating or tempering the parochial and proprietary elements involved in each field; developing a pilot system which would increase services in the major urban areas where representatives of all fields are available to work daily as a team; developing a pilot system for delivery of services in those rural and urban settings where the team, because of professional shortages and maldistribution, might have to be represented by a single well-trained representative of the team; developing the format of a delivery system which would permit extension of services through proper utilization of all the manpower and "mindpower" available to us at the present time; training new careers at various educational levels which could effectively be used in delivery systems of the future; and providing a program of continuing education for the ultimate hearing health team. Only through accomplishment of such a team effort will we be able to provide adequate hearing health services to older Americans, or any other needy group across the nation.

Summary

Just as any other responsible movement within health and related fields, we in the hearing and speech field have begun to identify and evaluate what we believe to be the vital issues affecting the delivery of services to those who need them. Among these considerations presented here are the problems of incidence, manpower, finance, and delivery systems.

However, it should be noted that we also are pursuing other subject areas not only pertinent but similarly critical to improving and increasing services for those with disorders of human communication: continuing education; quality control; concepts of comprehensive care; accountability; and other timely considerations such as how this field can find the balance between maintaining the initiative to grow and develop on the one hand and, on the other, avoid isolating itself from the total health care systems currently developing in the nation.

As the health system progresses and becomes increasingly refined, we would like to see an extension of interest from the mere treatment and prevention of disease or disability to interest and activity in the promotion and maintenance of health. Like disease, health has its causes, and we are rapidly reaching the time when health will be subject to deliberate evaluation and management.

Recommendations

In view of (1) indicated need for providing reasonable care for the millions of individuals with hearing and speech disorders, and (2) the alternative negative impact on the individual as well as the nation when needed services are unavailable, the following recommendations are offered to the Committee as it considers the need for inclusion of hearing health services and prosthetic devices in Medicare or any other national health legislation:

1. That any proposed national health legislation (including changes in Medicare) should provide equitable payment for services and prosthetic devices required to improve the hearing health of those covered under benefits of the law.
2. That those who are appointed to write specific recommendations for such national health benefits be required to consult with a committee representing *all* segments of the hearing health team (otolaryngology, audiology, hearing aid dealers and manufacturers, general medicine, and hearing health services administration) as designated by their appropriate national organizations (AAOO, ASHA, NHAS, HAIC, AAGP, and NAHSA).
3. That consideration also be given to recommending appropriate legislation for financing programs through HEW: to alleviate the manpower shortages; to develop adequate delivery systems; to provide continuing education; to assure quality control; and to provide for miscellaneous research and studies necessary for proper and adequate development of the field as a part of the total comprehensive health delivery system.

ITEM 29. LETTER FROM OJUS MALPHURS, JR., PH. D., DIRECTOR, COMMUNICATIVE DISORDERS LABORATORY, UNIVERSITY OF MISSISSIPPI MEDICAL CENTER, JACKSON, MISS., TO SENATOR FRANK CHURCH, DATED OCTOBER 2, 1973

DEAR SENATOR CHURCH: With regard to the hearings on the purchase of hearing aids by Medicare, I would like to advocate the inclusion of audiological services in the selection and recommendation of all hearing aids. My opinion is based on several years of clinical experience, my role as an examiner for licensing hearing aid dealers in Mississippi, and my position as an assistant professor of otolaryngology.

Though I would not be so naive as to say that the inclusion of audiologists in all aspects of the hearing aid distribution system, would solve all the current problems, I do feel that their exclusion in a dealer-physician system or just a dealer system would be greatly detrimental to the hearing impaired patient. It has been my experience that most hearing aid dealers are insufficiently trained in the medical aspects of hearing loss, so that besides the patients with medically correctable hearing losses who are fitted with hearing aids, I have also witnessed the autopsy of a patient with a tumor on the auditory nerve who came to our hospital wearing a hearing aid. Needless to say the patient would have benefitted more from neurosurgery than from the hearing aid.

In the case of otolaryngologist, their training is mostly concerned with diseases of the ear with relative limited exposure to hearing evaluations and the non-medical aspects of aural rehabilitation. Here at the University of Mississippi Medical Center, we feel that we are correcting some of these deficiencies by having our otolaryngology residents train for two months in the Communicative Disorders Laboratory under an audiologist; however, a large majority of the otolaryngologists in our state have had virtually no training in audiology and many of the older physicians actually received their formal training prior to the inception of the profession of audiology.

In summary, therefore, I feel that the adequately trained audiologist is uniquely qualified in his ability to recognize medical problems in hearing loss for proper medical referral and in his ability to provide non-medical aural

rehabilitation services. The decision to fit a hearing aid and the selection of an appropriate instrument should, in my opinion, be the decision of an audiologist.

Sincerely yours,

OJUS MALPHURS, Jr., Ph. D.,
Assistant Professor and Director,
Communicative Disorders Laboratory.

ITEM 30. LETTER FROM CLIFTON F. LAWRENCE, PH. D., PRESIDENT, OHIO COUNCIL OF SPEECH AND HEARING EXECUTIVES, CINCINNATI, OHIO, TO SENATOR FRANK CHURCH, DATED OCTOBER 1, 1973

DEAR SENATOR CHURCH: I appreciate your invitation to submit a statement to the Special Committee on Aging concerning the possible inclusion of hearing aids under the Medicare program, and concerning current hearing aid consumer service and market practices. The Ohio Council of Speech and Hearing Executives, which I represent, is comprised of administrators of speech and hearing agencies throughout the State of Ohio. We are all engaged, on a day to day basis, in providing help to speech and hearing handicapped persons. Our agencies provide these services through qualified professional audiologists and speech pathologists.

We have long been concerned with the difficulty—and most often the impossibility—of securing hearing aids for many of the older hearing handicapped persons we see. As your committee knows, the price of a hearing aid is usually beyond the reach of the individual whose only income is through Social Security. Some speech and hearing centers are able to obtain through private sources, funds to help in purchasing aids for older persons, but these funds are usually quite limited. Even when the loss of hearing is severe—when communication may be literally impossible between the older person and his family and those in contact with him—there is often no way the desperately needed hearing aid can be purchased.

Most professional audiologists are distressed when they are called upon to try to deal with these problems. They understand that the hearing aid industry is not a social service organization—that hearing aid manufacturers and hearing aid dealers are in business to make the maximum profit from their product. While we understand the profit motivation, we are often dismayed by the advertising and the sales tactics employed by hearing aid salesmen, and we are particularly concerned that so often it is the elderly person who must suffer the most from the present profit-oriented system.

We certainly have no wish to interfere unnecessarily with hearing aid manufacturers or dealers, insofar as the manufacture and sale of hearing aids are concerned. However, we do feel that laws and regulations that have been proposed which would help to insure that the professional decisions leading to the purchase of a hearing aid would be made by a qualified professional are highly desirable. We believe that the hearing aid dealer should continue to function as a sales agent, and with proper training, as a technician involved in the fitting and dispensing of a hearing aid. We strongly believe, however, that the hearing aid dealer who is not a professional audiologist or otolaryngologist should not be permitted to continue to make professional decisions affecting the health and well-being of the patient.

Recent months have seen an apparent intensification of the campaign by hearing aid dealers and their organizations to acquire a kind of pseudo-professional status, through licensure, through heavily financed advertising and public relations activities, and through lobbying activities at the federal and state levels. These efforts are directed solely toward preserving the autonomous role of the hearing aid dealer, and toward insuring that the present high profit margin will be maintained. Despite loud disclaimers from the hearing aid industry, professional audiologists see little evidence that the present hearing aid delivery system operates in any way that would minimize profit to the industry, or that would maximize benefit to the hard of hearing individual. In excluding the professionally trained audiologists or otolaryngologist from responsibility for the final phase of hearing aid delivery, it is the elderly Social Security recipient, the poor, and the financially limited parents of hearing handicapped children who have been the primary victims.

Those of us who have worked for many years providing audiological services to older persons would strongly support a well-planned amendment to the Medicare law which would authorize provision of hearing aids to eligible recipients. We would also support legislation, both in relation to Medicare and in general, which would place reasonable controls on the sale of hearing aids by requiring that such aids be prescribed by a qualified professional audiologist or otolaryngologist on the basis of established tests and evaluation procedures.

The hearing aid industry several years ago countered proposals along the above lines with the argument that, even though such professional supervision and responsibility might be desirable, there were not enough qualified audiologists available to meet the needs. We do not believe that this argument would be valid today. I am sure the American Speech and Hearing Association can present evidence that the number of certified audiologists has increased greatly in the past several years, on a national basis. Certainly this is true in Ohio, where a statewide network of speech and hearing agencies now exists that is presently capable of delivering services to every area of the state. Not only are the audiologists and the agencies available, they are in almost all cases responsible to Boards of Directors or are parts of larger community service programs which insure responsible, continuing, patient-oriented service to the hard of hearing individual and to the community at large.

In summary, we feel that there is a definite and urgent need to amend the Social Security Act to provide for hearing aids for eligible Medicare recipients. We strongly recommend that such an amendment should authorize hearing aid evaluations provided by qualified audiologists or otolaryngologists, and that the provision of a hearing aid without such evaluation and prescription should be prohibited. We believe that legislation along these lines would provide great benefits for elderly hard of hearing persons, without at the same time allowing an uncontrolled escalation of expenditures under Medicare. We feel that such legislation would be of great significance as a positive step toward controlling abuses under the present hearing aid delivery system.

I would again like to express our appreciation for the opportunity to present these brief comments. Our members, along with thousands of concerned speech pathologists and audiologists throughout the country, are cognizant of the interest and informed concern of your committee. We will be most happy to work with you in any way possible to improve and expand services available to speech and hearing handicapped older people.

Sincerely yours,

CLIFTON F. LAWRENCE, Ph. D., *President.*

ITEM 31. LETTER FROM EARL R. HARFORD, PH. D., PROFESSOR, NORTHWESTERN UNIVERSITY, EVANSTON, ILL., TO SENATOR FRANK CHURCH, DATED OCTOBER 3, 1973

DEAR SENATOR CHURCH: I welcome the opportunity to reply to your letter of 14 September concerning the question of the inclusion of hearing aids under the Medicare program. Also, you asked for our reactions to the effect of modern telephone technical developments on the hearing impaired.

I would like to report for your record that we are strongly in favor of including hearing aids under provisions of the Medicare program. However, in our considered judgment, provision of a hearing aid under a national health program such as Medicare should be authorized by both medical *and* audiological consultation. That is, before a hearing aid is dispensed to a recipient, the recipient should have authorized medical clearance for the use of such a device *and* the recipient should have a thorough audiological evaluation by a certified (American Speech and Hearing Association) audiologist.

From more than 20 years of experience with hearing problems of the elderly, we are convinced that the provision I have stated above is the only method presently available that would offer maximum assurance that the most appropriate hearing aid is provided an individual. Moreover, the qualification of medical and audiological clearance is the best assurance that hearing aids will be provided to only those persons in need of amplification who can, in fact, derive sufficient benefit from such devices to warrant purchase. Professional objectivity is of paramount importance in this issue of providing hearing aids under the Medicare program.

We regret that new developments in the telephone communication system create a hardship for many hearing impaired persons. This development places an increased handicap on many of the 7–8 million hearing aid users in this country. We would hope that provisions can be made in the telephone industry to accommodate the special needs of the hearing impaired.

I hope the statements in this letter are of some use to your Subcommittee on Consumer Interests of the Elderly.

Sincerely yours,

EARL R. HARFORD, Ph. D.,
Professor.

ITEM 32. LETTER FROM STEPHEN D. KASDEN, M.S., AUDIOLOGY, PROVIDENCE, R.I., TO WILLIAM E. ORIOL, COMMITTEE ON AGING, DATED AUGUST 31, 1973

DEAR MR. ORIOL: I have been informed that the Senate Special Committee on Aging will begin hearings on September 10, 1973 to determine if the cost of hearing aids should be included under medicare coverage. I would like to state my strong support for the inclusion of hearing aids under medicare coverage. We see many patients each year whose only source of income is Social Security and therefore cannot afford a hearing aid when otological and audiological examinations indicate that one is needed. In most cases these patients receive a used or reconditioned hearing aid that has been donated by a previous user. I believe that every American Citizen should have the best possible medical care. This will not be possible until prosthetic devices are included under medicare coverage.

I also feel that it is extremely important that any program designed to purchase hearing aids have strict rules to govern the procurement of the hearing aid. If proper rules and methods are not established the United States Government will face the same problems that many of the states, such as Minnesota, have had in persons not needing hearing aids being sold them. For example, at the present time we are conducting a study to determine how many people with surgically confirmed otosclerosis and have been sold hearing aids. The limited statistics at this time point to over 60% of those persons with surgically confirmed otosclerosis being sold hearing aids. The sale of the hearing aid in these cases delayed the proper treatment of the hearing loss for several years.

I would like to recommend that the purchase of hearing aids under medicare be conducted in a manner similar to that now being used by the Department of Vocational Rehabilitation. Under the program of the Department of Vocational Rehabilitation each person with a hearing loss receives a complete otological evaluation by an otologist certified by the American Academy of Ophthalmology and Otolaryngology and then audiological evaluation by an audiologist certified by the American Speech and Hearing Association.

If these examinations indicate that the treatment of choice is a hearing aid then the patient undergoes a hearing aid evaluation. The purpose of the hearing aid evaluation is to determine the best type of hearing aid for the patient's individual problem. This evaluation is performed on an objective basis. The patient's needs are considered first. In this way a hearing aid can be recommended which will benefit the patient the most. In addition to the type and make of hearing aid, the evaluation is also useful to determine on which ear the hearing aid should be worn, whether binaural hearing aids may be more helpful, and what type of hearing result may be expected from the use of the recommended aids. The advantages and disadvantages of a hearing aid are explained, and other auditory rehabilitative methods will be recommended if necessary.

The cost of the above mentioned program will be minimal because otological and audiological examinations are presently covered under medicare. The only additional charges will be for the hearing aid, the ear mold, and the testing with the hearing aids. At the present time most State Divisions of Vocational Rehabilitation are paying far below the suggested retail price for the hearing aid, therefore, the complete Hearing Aid Evaluation Program actually costs the patient less than if he had gone to a hearing aid dealer by himself and purchased a hearing aid. For example, most hearing aids have a suggested retail price of from $350.00 to $400.00, however, our private patients pay only $195.00 for the hearing aid.

For your information I am enclosing a reprint* of an article written by Dr. Robinson and myself "Otological-Audiological Hearing Aid Evaluation" which

*Retained in committee files.

appeared in the Archives of Otolaryngology in 1971. In a program of this type the Otologist diagnosis and treats disorders of the human ear. The Audiologist evaluates human hearing and when indicated determines the proper prosthesis for correction. The hearing aid dealer supplies the proper working order.

I hope that this information is helpful to you and I would be most happy to answer any questions that you may have.

Sincerely yours,

STEPHEN D. KASDEN,
C.C.C. Audiology and Speech Pathology.

ITEM 33. LETTER AND ENCLOSURE FROM JOHN L. DARBY, EXECUTIVE DIRECTOR, SAN FRANCISCO BAY AREA HEARING SOCIETY, INC., SAN FRANCISCO, CALIF., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 12, 1973

DEAR SENATOR CHURCH: Thank you for your courtesy in inviting us to present testimony at the hearings being held by the Subcommittee on Consumer Interests of the Elderly. We regret that time and distance preclude our acceptance.

Our agency has been dedicated to the provision of services to hard of hearing and deaf people since its founding in 1915. Throughout these many years, we have held to the philosophy that hearing loss is first of all a health problem which should be medically diagnosed and/or treated. We also hold that it is the responsibility of the non-medical specialists, audiologists, to provide hearing evaluation services (i.e., testing) and to supervise rehabilitative procedures. We believe the responsibility of the commercial "partner" in the hearing services team is to dispense hearing aids and to provide for continuing maintenance of the instruments. Inherent in such a system are the checks and balances necessary to assure complete and appropriate patient care.

California's Medicaid program ("Medi-Cal") provides for just such a system and we have actively supported the continuation of these inter-related services. We believe it would be to the best interests of the millions of our citizens presently receiving Medicare benefits if a similar system were instituted on a national basis. In undesirable hearing aid sales we have found the most preyed-upon group to consist primarily of retired people living on Social Security. It is for them that we desperately need a national program as described above.

We have also been concerned over changes in telephone design and the role of the Hearing Aid Industry Conference in this regard. We have had considerable discussion with representatives of Pacific Telephone Company. Despite its local emphasis, we take the liberty of enclosing a copy of a letter recently received concerning this problem. As you see from the letter, the HAIC has apparently taken no interest in this problem although aware of it since 1966. For that reason, HAIC's recent statement;

"HAIC, which has been the primary spokesman for the interests of hearing aid users in a growing problem concerning telephone use with built-in hearing aid phone pickups, represented the industry at the largest of several meetings on the subject . . ."

appears somewhat contradictory. Perhaps you would want to be aware of this inconsistency if they present testimony to you.

Thank you for providing us with this opportunity to make comments. We wish you every success in your hearings and look forward eagerly to learning of your recommendations for future programming and legislation.

Yours sincerely,

JOHN L. DARBY,
Executive Director.

[Enclosure].

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY,
San Francisco, Calif., July 27, 1973.

MARGARET J. MILLER, M.D.,
San Francisco Hearing Society, Inc.,
San Francisco, Calif.

DEAR DR. MILLER: Thank you for your letter of April 4, 1973 to Mr. Jerome W. Hull. He has asked me to reply because the problems you describe affecting hearing-impaired people involve technical matters which are among my responsibilities.

I have purposely delayed my reply because two significant meetings were scheduled to take place in Washington on April 29 and May 16, to deal with the incompatibility of hearing aid pick-ups and certain telephones.

The meeting on April 29 was with the Federal Communications Commission; that of May 16, which was called by the American Telephone and Telegraph Company, was attended by representatives of the FCC, the President's Office of Consumer Affairs, The Hearing Aid Industry Conference (HAIC), and United States Independent Telephone Association (USITA).

At the May 16 meeting, the Bell System announced its intention to make an adapter available if the hearing aid industry did not do so, and to offer it at cost.

We can now state that the Bell System is preparing to manufacture this adapter. Manufacturing specifications are under development and product availability in early 1974 is anticipated.

A few words about the adapter. Invented and patented by our Bell Telephone Laboratories, it will make it possible for hearing-impaired people to use a hearing aid pick-up with *any* telephone *anywhere* in the country or abroad. Incidentally, the design specifications for this same adapter were gratuitously turned over to the hearing aid industry as a public service in May, 1969. However, there was no response from them.

The Bell System, traditionally, has helped people with hearing handicaps. The first audiometer for accurate measurement of hearing acuity was developed in our Bell Telephone Laboratories. And out of those laboratories came the transistor which made possible the modern miniaturized hearing aid with its very low battery drain. You may not have been aware that back in 1954, the Bell System made its patented inventions, including the transistor, available to all domestic hearing aid manufacturers under royalty-free patent licenses, as a public service. As long ago as 1966, we alerted the hearing aid industry to the fact that their customers might experience difficulties in trying to use inductive pick-ups with the new TRIMLINE telephone. Our thought was that the manufacturers might wish to develop new pick-up designs compatible with the new generation of telephones. Unfortunately for the hearing-impaired people, the industry, to our knowledge, did not respond and this fact prompted the Bell System decision to manufacture the adapter.

We appreciate your letter on behalf of the San Francisco Bay Area Hearing Society. Please feel free to contact me if you have any further questions.

Sincerely,

L. P. CORNELL, Jr.

ITEM 34. LETTER FROM CHARLES S. GIFFIN, M.D., EAR, NOSE AND THROAT ASSOCIATES, INC., FORT WAYNE, IND., TO SENATOR FRANK CHURCH, DATED SEPTEMBER 4, 1973

DEAR SENATOR CHURCH: Our practice of Otolaryngology and Audiology demands an intensive program of rehabilitative therapy for hearing impaired citizens. As a group of professionals, concerned with the daily welfare of the hearing handicapped, we wish to express some of our experiences and opinions regarding the dispensing of hearing aids.

The present method of dispensing hearing aids allows for the poorly educated, misinformed, non-professional salesman to "diagnose" a hearing loss, and fit and sell his hearing aids to anyone who will buy them. This system has given rise to inappropriate and unethical practices and has caused many people with both mild and severe medical and surgical problems to go untreated.

1. Recently, in Indianapolis, a hearing aid dealer was found to have sold thousands of dollars worth of aids to the elderly, who sometimes never received them, and often times did not want nor could use them.

2. Children with medically correctable hearing losses have been educationally, psychologically, or socially retarded through improper handling by a hearing aid dealer.

These are typical examples of the problems we encounter daily.

Most of our colleagues agree that the following program (see attached guidelines) provides for a more professional solution to hearing aid dispensing. This program was developed in 1972 by representatives of Otolaryngology, Audiology, and Hearing Aid Dealers for Indiana Medicaid recipients. Under these guidelines, a potential hearing aid user must obtain: (a) medical clearance from a licensed physician; (b) a complete audiological evaluation by an Otolaryngolo-

gist or certified Audiologist; (c) an aid fitted by a licensed hearing aid dealer for a trial period; and (d) an evaluation and acceptance of his performance with the hearing aid by the Otolaryngologist or Audiologist. When these four steps are satisfactorily completed, the recipient may be issued the hearing aid. The initiation and maintenance of this program presented very few problems, all of which were easily rectified. All concerned have been very pleased with this multi-discipline program.

State registration or licensing of hearing aid dealers to dispense aids is a *must* if programs like the above are to be successful, without which it would be almost impossible to identify reputable dealers for referral.

We hope that the information herein will prove useful to you and your committee, as you consider the needs of this ever-growing segment of our population.

Respectfully yours,

CHARLES S. GIFFIN, M.D.

ITEM 35. LETTER AND ENCLOSURE FROM MICHAEL B. HENNING, DIRECTOR, MEDICAID CLAIMS DEPARTMENT, MUTUAL MEDICAL INSURANCE, INC., INDIANAPOLIS, IND.

DEAR SIR: Enclosed please find the manual for the *new* procedure to obtain hearing aids and hearing evaluations under the Indiana Medicaid Program. The audiological evaluation and recommendation forms necessary for this procedure can be obtained from the county department of public welfare.

These guidelines have been approved by the Indiana State Department of Public Welfare and will be in effect for services rendered on or after January 1, 1973.

If you have any questions concerning this manual, please feel free to contact our office.

Sincerely,

MICHAEL B. HENNING,
Director, Medicaid Claims Department.

[Enclosure].

GUIDELINES FOR THE EXAMINATION AND FITTING OF HEARING AIDS UNDER THE INDIANA MEDICAID PROGRAM

Payment will be approved for a hearing aid provided the need for such a device is established and the hearing aid is obtained in accordance with the procedures outlined below. Payment will also be approved for the examination to establish the need for a hearing aid.

I. MEDICAL CLEARANCE

A hearing aid shall not be approved for a patient prior to that patient's having had a medical examination by a licensed physician. This examination should be accomplished by an otolaryngologist, if available and accessible, but certainly a basic medical survey can be given by a licensed general practitioner. All children under 15 years of age must be examined by an otolaryngologist before a hearing aid is fitted under the Medicaid Program.

The examining physician will complete Part I of the Medical Clearance and Audiometric Test Form (BS 2099–0672). This form is to be supplied to the physician either directly by the County Department of Public Welfare, or is to be brought by the recipient to the physician at the time of the examination. After completion of the Medical Clearance by the examining physician, the audiological evaluation must be completed. If a person is not designated to perform audiological tests, the form should be returned to the caseworker at the County Department of Public Welfare.

II. AUDIOLOGICAL EVALUATION

Upon completion of the medical clearance examination, an audiological evaluation must be completed and the test results indicated by the examiner in Part II of the Medical Clearance and Audiometric Test Form (BS 2099–0672). The audiological evaluation must be conducted by an otolaryngologist or certified audiologist.

In order to participate in the Indiana Medicaid Title XIX Program, the audiologist must have been granted the Certificate of Clinical Competence in Audiology by the American Speech and Hearing Association, or have completed the

academic and practicum requirements for certification and be in the process of accumulating the necessary supervised work experience required to qualify for such a certificate. A list of all audiologists eligible to participate in the Indiana Medicaid Program can be found in this manual.

The audiological evaluation has three components: (1) screening test indicating the need for additional medical examination; (2) the determination of suitability of amplification and recommendation regarding a hearing aid; and (3) functional benefit from use of the hearing aid.

1. If the audiological evaluation reveals one or more of the following conditions, the patient must be referred to an otolaryngologist for further examination, providing the patient has not already been examined by an otolaryngologist or that the examining otolaryngologist has not already considered these conditions:

(*a*) Speech discrimination testing indicates a score of less than 60 percent in either ear.

(*b*) Pure tone testing indicates a bone-air gap of 15 dB or more for two adjacent frequencies in the same ear.

(*c*) Hearing loss in one ear is greater than the other ear by 20 decibels in the pure tone average or 20 percent in the discrimination score.

2. The audiological examiner will determine the patient's suitability as a hearing aid user through the use of pure tone and speech audiometry and consideration of communication handicap factors. Conclusions regarding selection of a hearing aid may be determined as part of the procedure. He will note his results and recommendations on Part II of the Medical Clearance and Audiometric Test Form (BS 2099–0672).

3. After the patient has obtained the hearing aid from the dealer, he will return to the audiological examiner to determine that the aid is functioning correctly, and that he is receiving adequate benefit from its use.

If a binaural hearing aid is recommended, prior approval is required. The audiologist should submit all binaural cases to Indiana Blue Cross-Blue Shield for evaluation. The completed test form (BS 2099–0672), along with a letter describing, in detail, the recipient's hearing condition and outlining why a binaural aid is clinically necessary or desirable, should be enclosed in the request for prior approval. All binaural cases will be reviewed by audiological consultants. The Fiscal Agent will render a decision on the advice of its consultants and advise the audiologist if payment will be made for a binaural aid.

When replacing a hearing aid, the procedure outlined in this section entitled Audiological Evaluation will be initiated. Under ordinary circumstances, no replacement will be made for hearing aids less than five years of age.

After the evaluation, the audiological examiner will forward the test form to the County Department of Public Welfare or to the hearing aid dealer who will provide the aid.

III. Purchase of Hearing Aids

The patient will be referred by the audiologic examiner or by the County Department of Public Welfare to an Indiana State Registered Hearing Aid Dealer for the fitting of a hearing aid in accordance with the recommendation on the previous examination. The patient must have freedom of choice in the selection of the dealer. A list of all hearing aid dealers eligible to participate in the Indiana Medicaid Program can be found in this manual.

The dealer will be responsible for fitting the recipient with the most appropriate hearing aid to adequately correct the hearing loss of the recipient as recommended on the audiological evaluation form. The Hearing Aid Dealer may communicate with the audiological examiner if he is of the opinion that a more appropriate recommendation for a specific hearing aid is indicated.

To insure maximum adaptation to a hearing instrument, the Indiana State Registered Hearing Aid Dealer may evaluate the recipient's ability to use a particular type or style of hearing aid during the post-fitting period.

No binaural fitting of hearing aid instrumentation shall be made for Medicaid cases without prior approval by Indiana Blue Cross-Blue Shield. Complete audiometric data and a written report by the audiologist explaining justification for the fitting, will be required for the fiscal agent to render its decision.

When replacing a hearing aid, the procedure outlined in the Audiological Evaluation section will be initiated. Under ordinary circumstances, no replacement will be made for hearing aids less than five years old.

Should there be complaints from a recipient, and/or other responsible persons directly interested in the recipient, as to the user's failure to receive satisfactory

benefits from the instrument, the Indiana State Registered Hearing Aid Dealer must attempt to make a satisfactory adjustment, or follow the recommendation as deemed advisable by a committee of peers.

Failure to achieve satisfactory adjustment between user and Indiana State Registered Hearing Aid Dealer may cause payment to be withheld. If payment has been received by the Indiana State Registered Hearing Aid Dealer then a full refund must be made to the fiscal agent. Violations of the above guidelines by physicians, audiologists, or hearing aid dealers may be cause for removal of their names from the Medicaid provider list.

As regards solicitation, there is to be no solicitation of Medicaid patients for the purpose of fitting hearing aids.

A committee of peers will be available to review all cases which are not covered in the above guidelines.

PART I

A hearing aid will not be approved for a patient prior to that patient's having had a medical examination. Preferably, this examination should be accomplished by an otolaryngologist, if available and accessible, but certainly a basic medical survey can be given by a general practitioner, licensed to practice medicine in the State. All children under 15 years of age must be seen by an otolaryngologist before the hearing aid is fitted.

The following minimal medical assessment is required before the fitting of any hearing aid:

1. Is there any evidence of infection or drainage from either ear?

Remarks:

2. Is there any significant headache, vertigo, or dizziness, nausea, or vomiting?

Remarks:

3. Please make a statement, indicating whether the hearing loss has been gradual or sudden in onset.

Remarks:

4. Is the patient able to hear and understand amplified sound either through a speaking tube or a loud voice at the ear?

Remarks:

Minimal physical examination should be sufficient to rule out:

1. Presence of pus in the ear canal.
2. Perforation of the ear drum.
3. Impacted cerumen.
4. Presence of external ear canal infection.
5. The possibility of the complete closure of the ear canal.

Additional physical examination which is desirable but not obligatory:

1. Presence of recorded tuning fork examination—indicating the results of Rinne, Schwaback and Weber tests.
2. A brief note is desirable on the neuro-otological examintion, including the presence or absence of nystagmus, reaction of pupils to light and in accomodation, and presence of corneal reflexes.

I certify that I have examined the patient _____, and to my knowledge there is no medical or surgical contraindication to wearing a hearing aid.

Otologic Diagnosis_____

_____

_____

____I recommend the patient be fitted for a hearing aid.

——I recommend the patient be referred for further medical attention.

Recipient's Name_____ Age_____ Medicaid No._____

re ANS I 1969 ____Other_____

_____M.D.

Frequency	250	500	1,000	2,000	4,000	8,000
Left—air						
Left—bone						XXX
Right—air						
Right—bone						XXX

	Speech		Sound field
	Left	Right	
SRT			
Discrim			
Tolerance			

Special Tests_____

_____

____Hearing aid recommended for (left—right) ear ____Hearing aid *NOT* recommended.

Recommendation information_____

_____

_____

_____

Signature of Examiner (audiologist or otolaryngologist) Title Date

If pure tone testing indicates a bone-air gap of 15 dB or more for two adjacent frequencies in the same ear, or if speech discrimination tests indicate a score of less than 60 per cent in either ear, or if the hearing loss in one ear is greater than the other ear by 20 decibels in the pure tone average or 20 per cent in the discrimination score, the patient must be referred for further examination by an otolaryngologist, providing the patient has not already received this examination, or that the examining otolaryngologist has not already considered these conditions.

After the patient has obtained the hearing aid from the dealer, he will return to the audiological examiner to determine that the aid is functioning correctly and that he is receiving adequate benefit from its use.

PART III—To be completed by the Indiana State Registered Hearing Aid Dealer.

The Medical Clearance and Audiometric Test Form must be used for all hearing aid fittings under the Indiana Medicaid Program. This form must carry the proper signature where indicated, before any claims will be reviewed for payment.

Should there be complaints from a recipient, and/or other responsible persons directly interested in the recipient, as to the user's failure to receive satisfactory benefits from the instrument, the Indiana State Registered Hearing Aid Dealer must attempt to make a satisfactory adjustment or follow the recommendation as deemed advisable by a committee of peers. Failure to achieve satisfactory adjustment between user and Indiana State Registered Hearing Aid Dealer may cause payment to be withheld. If payment has been received by the Indiana State Registered Hearing Aid Dealer, then a full refund must be made to the fiscal agent.

There is to be no solicitation of Medicaid patients, for the purpose of fitting hearing aids. As a general policy, there are to be no replacement hearing aid fittings for Medicaid patients where the hearing aid in use is less than five years old.

"I have read the regulations and standards adopted and approved by the Indiana Department of Public Welfare, for the fitting and dispensing of hearing aids for Medicaid cases, and I have followed the procedures provided therein."

Signature of Indiana Registered Hearing Aid Dealer_____.

Indiana Registration Number_____.

ITEM 36. LETTER FROM W. O. AKIN, M.D., HOWARD A. TOBIN, M.D., AND C. D. CARTER, PH. D., OTOLARYNGOLOGY ASSOCIATES, ABILENE, TEX., TO SENATOR FRANK CHURCH, DATED OCTOBER 29, 1973

DEAR SENATOR CHURCH: I would like to offer my views, based on considerable experience, concerning assistance for the hearing handicapped person.

For many years the medical profession has totally ignored the elderly patient with sensorineural (nerve) deafness. When these people do consult their physician they are usually told to "get a hearing aid". And, they then either see a hearing

aid dealer or consult an otologist. The majority, but not all otologists, are in a position to make specific recommendations which generally provide the patient with the best available assistance.

Over the years we have made attempts to refer our patients with nerve deafness to hearing aid dealers with recommendations for the type of aid and the specific parameters necessary to provide them with the best hearing instrument available. All too often the recommendations are completely ignored and the hearing aid dealer embarks upon a course of fitting the patient with the aid which provides him with the widest margin of profit.

Because of unhappy past experiences, we are currently providing an auditory rehabilitation program for our patients with sensorineural (nerve) deafness. For too long these people have been left to their own devices and the mercy of the hearing aid dealers. Basically, our program consists of testing with a sound pressure device to determine the type of hearing aid that will best correct the hearing loss, procuring an aid corresponding to this prescription, fitting the aid to the individual and testing it to be sure it is functioning properly on the patient, counseling the patient in the use and care of the instrument, and giving the patient 5 hours of instruction in speech reading and hearing aid use.

We are able to obtain these hearing aids at cost, averaging approximately $160 for aids that retail at approximately $400. The patient pays *this* cost, saving them approximately $200–$300. We, naturally, charge for the professional services involved which averages approximately $190. I am including a breakdown of the professional services rendered and the charges. The overall savings to the patient is significant, approximately $50–$100, and more importantly, they receive the professional guidance they deserve.

At the present time, under the provisions of the Medicare Act, we are not allowed reimbursement for the professional services involved in providing auditory rehabilitation with the use of a hearing aid. This does create an additional burden on the elderly person, and would seem to be rather unfair when these services are provided by an otologist.

Theoretically, the hearing aid dealer, or hearing aid specialist as they now prefer to call themselves, are justifying the huge margin of profit on hearing aids on the basis of the "PROFESSIONAL" service they render their clients. I am sure you are aware that most of the hearing aid dealers are extremely limited in knowledge and training. They actually perform, as part of their "examination", quasi medical (otologic) examination of the ears and make recommendations on the basis of this. At this point, let me emphasize, that hearing loss is a symptom of a pathologic process, and not a disease in itself. Granted most often this due to the aging process, but frequently we do find a disease that is amenable to medical treatment. If this type of patient were seen by the hearing aid dealer, he might well be deprived of the needed treatment.

In summary, let me emphasize the fact that most, if not all, hearing aid dealers are lacking in knowledge and training. The majority of their knowledge is confirmed to the business aspects of retailing. I am afraid that if hearing aids are provided by the Medicare Act with no restrictions, this will allow the unscruplous hearing aid dealer to take further advantage of hearing and handicapped persons over the age of 65. Also, let me add that I feel it woefully inadequate to allow the Medicare patient to be provided an aid on the recommendation of an M.D. who is not an Otogologist. The majority are, unfortunately, either not interested, not knowledgeable, or not inclined to pursue the matter as they should.

I am including our patient information booklets* so your staff may acquaint themselves with this information if they so desire. I am in hopes that your committee will find a solution to this most difficult problem.

Sincerely,

W. O. AKIN, M.D.
HOWARD A. TOBIN, M.D.
C. D. CARTER, Ph. D.

*Retained in committee files.

ITEM 37. PREPARED STATEMENT OF THE ALEXANDER GRAHAM BELL ASSOCIATION FOR THE DEAF, INC., PRESENTED BY GEORGE W. FELLENDORF, EXECUTIVE DIRECTOR, AND RICHARD H. ISRAEL, PH. D., DIRECTOR, PROFESSIONAL PROGRAMS AND SERVICES

ABSTRACT

The Alexander Graham Bell Association for the Deaf makes two recommendations:

(1) Initial national legislation that would require hearing aid dealers and salesmen to inform the public of the existence of otologic and audiologic practices and their potential value to consumers, by issuing a standard statement before a sale is closed and indicating the nearest agencies where such services can be obtained; and,

(2) Inclusion of reimbursement to parents of hearing aid and related expenses for young children as well as for the elderly in any forthcoming legislation.

The Alexander Graham Bell Association for the Deaf has been distressed for many years over the debate of issues focused on providing hearing aids to hearing impaired persons. Now, with these most current congressional hearings, the same issues are again receiving public airing, and the several factions have again bared their teeth to each other. Each time this exercise is enacted, a shock wave ripples through the national community of individuals and organizations whose stated purpose is to provide hearing health care and services to those in need; and each time, the lines of communication between these "communication experts" become more frayed. As a non-profit organization that truly represents the best interests of hearing aid users, we can only trust that in the meantime, before issues are resolved, existing services to hearing impaired children and adults will not be adversely affected.

The Bell Association's purposes and activities over the past 83 years have been identified primarily with the education and welfare of hearing impaired children and adults. (There is a distressing irony with regard to the age of onset of hearing losses: it tends to strike most often in infancy, when parents are young and not at their peak earning power; or in old age, when most of our citizens are living on limited incomes.) Our major impact is made through publications, auditory approach conferences, public information campaigns, and other programs. Hearing Alert! is our current national public information program, now focused on the importance of early detection of hearing loss in babies, early educational intervention, and early amplification.

The Association is internationally known for and clearly linked with the promotion of the teaching of speech, speechreading, and the *exploitation of residual hearing*. In short, especially with respect to the latter item, our organization is actively involved in promoting the use of hearing aids, and has been so engaged for many years. We know that the development of speech in hearing impaired children is intimately tied to hearing function: the more that hearing function can be maximized in these children, the better will be their speech communication. We advocate special training and full-time use of and reliance on hearing aids, even among babies. Hearing impaired babies, however, grow up and ultimately become among this country's elderly. Thus, our organization has a direct interest in the well-being of persons who are hearing impaired regardless of their age.

Contrary to popular opinion, most profoundly "deaf" people, numbering around 400,000 in the United States, have considerable usable residual hearing. However, we would estimate that the vast majority of these deaf people over the age of 35 years are not users of hearing aids, never have been, and never will be. On the other hand, almost all deaf children of today, and many, many deaf young adults, are using hearing aids, and will probably be committed to them for the rest of their lives. This change in trends can be attributed mainly to the emergence of the field of clinical audiology in the mid-1940's; followed by audiologists' expanding efforts at early identification of hearing loss in infants; their knowledgeability about hearing aids and the early use of amplification

with children; the application by teachers of the hearing impaired of newly acquired information on the usefulness of auditory devices; and greater public awareness that such things are possible.

The primary role of the hearing aid manufacturing industry in this revolution has been that of effectively applying research findings of audiologists and electroacoustic engineers from outside the hearing aid industry to the production of improved models.

The role of hearing aid dealers in bringing about this change for deaf children has been to supply the product when recommended by the speech and hearing clinic. Most dealers have shown excellent cooperation with audiology clinics and parents of very young children, by providing trial aids, loaner aids, earmold adjustments, etc. The nature and spirit of this cooperation is infrequently extended to clients above the age of 16 years. It is as if the young client were a "special case" and the older client not. In fact, every hearing impaired person is a "special case," the basis for exceptionality being different for youngsters than for adults.

The dealer's role has been limited essentially to selling and servicing wearable hearing aids. His role has not included providing, at his place of business, special products for the hearing impaired in addition to hearing aids. For example, dealers are not prepared to advise on or sell acoustical materials (or catalogues thereof) for use in home or office that, in some cases, could improve the sound environment to the extent that an aid might not be necessary; information on available telecommunication equipment (i.e., teletypewriters for the deaf); special accessories such as alarm clocks, door bells, and emergency warning systems; and telephone listening devices that would obviate the need for the built-in telephone amplifiers for which telephone companies make monthly charges. In some nations such as Sweden these additional and necessary services are provided by those dispensing hearing aids as a regular part of their overall service to their clients.

There are far too few examples of evidence that dealers are indeed service oriented in their relationships with hearing aid buyers. This comment extends to discounting practices, as well. On the whole, decisions on percentage discount, to whom, and when are quite different from dealer to dealer, and the national picture is noticeably uneven. In general, however, elderly people can get discounts and parents of deaf babies can't.

The Bell Association recognizes that, in making these statements, it may appear to be disparaging the efforts of many men and women of good will and with a positive inclination to serve their fellow men; yet it is not our intention to indict the field of hearing aid sales and service in its entirety. Dealers have carried out the necessary function of supplying aids and arranging for repairs where no one else took the initiative. They have made well-intentioned attempts to raise their standards of competence, and this has no doubt benefitted a number of their clients. The fact remains, however, that in general their knowledge and skills are limited with respect to testing procedures, recognizing diagnostic signs, and rehabilitative protocols. Many dealers are even distressingly uninformed in the area of hearing aids themselves—their functions and applications.

For these reasons, the Association cannot endorse the National Hearing Aid Society proposal of essentially eliminating the audiologist from routine involvement in the rehabilitative programming for hearing impaired persons. We view the audiologist as *the* essential ingredient in any formula for better serving the public, whether such service is provided under Medicare or any other program.

By the same token, the Bell Association cannot endorse the virtual elimination of dealers as proposed by ASHA as a realistic alternative. Rather we can visualize *initial* national legislation that would not substantially alter the role of dealers, but would capitalize upon their high visibility in the public eye and their availability to inform the public of the existence of otologic and audiologic practices and their potential value to consumers. For example, it might be made mandatory that persons presenting themselves to dealers be issued a standard written statement before a sale is closed informing him of the functions of otologists and audiologists, and naming nearby agencies where such services are obtainable, if a client so desires. There are precedents for this approach, notably under the Massachusetts law on infant hearing screening, whereby hospitals and attending physicians must give new parents of "at risk" babies written information on the possibility of hearing loss and what to do.

Most of all, we are concerned that, while measures may be adopted to relieve the financial pressure on older people in obtaining medical, audiological, and

hearing aid services, such federal legislation may not reflect awareness of a similar plight faced by parents of young hearing impaired children. In fact, their plight can be even more pressing that that of the hearing impaired adult: hearing loss is the most frequently seen handicap that accompanies other major handicaps, such as mental retardation, blindness, heart disease, etc. Thus, parents are often faced wtih enormous medical bills along with hearing aid costs. In addition, it is a rare family that can claim that there have been no unusual extra expenses related to the special education that the child needs. In short, the Bell Association would advocate the inclusion of reimbursement of hearing aid expenses for young children as well as for the elderly in any forthcoming legislation.

ITEM 38. PREPARED STATEMENT OF AMERICAN TELEPHONE AND TELEGRAPH CO.

This statement is submitted by the American Telephone and Telegraph Company, on behalf of the Bell System, in connection with recent hearings of the Senate Subcommittee on Consumer Interests of the Elderly of the Special Committee on Aging into the general subject of consumer problems of the hard of hearing in the United States. It is submitted in an effort to place in perspective the situation today and in the expected future, as well as the recent history, relating to telephones and the hard of hearing. To this end, it is hoped that any misunderstanding about this situation can in large part be cleared up, that the problem can be better identified and defined, and that the solution proposed by the Bell System can be better understood.

At the outset, the Bell System wishes to assure this Committee that it shares with it its concern about any problems encountered by the hard of hearing in the use of the telephone, and that the System is fully committed to solving such problems in the best possible way as expeditiously as possible.

THE PROBLEM AS DISCUSSED IN THE HEARINGS

The problem discussed in the hearings indicates that people in the United States with hearing aids equipped with inductive telephone pickups cannot use the new generation telephones; that there is anxiety on the part of the hard of hearing that such telephones, developed in the late 1960's by the Bell System, are being installed wholesale throughout the country; and that, in short time, these people will not be able to use any telephone with their present hearing aids.

THE SITUATION AS IT EXISTS

The telephone in the Bell System, totaling approximately 108 million, are not being changed wholesale from those with U-type receiver units that have electromagnetic leakage, to those with new L-type receiver units that have little or no electromagnetic leakage.

At this point, it should be noted that all hearing aids work by picking up sounds and amplifying them for the hard of hearing. Some are designed with a feature which permits them to work inductively with telephones which have a sufficient amount of electromagnetic leakage. When this feature is activated, the hearing aid cuts out the sound input from the surrounding area and picks up the electromagnetic leakage from such telephones. No more than half of the hearing aids now in use in this country have this optional feature.

The new L-type receiver units, at the present time, are being installed only in those sets known as Trimline* telephones, in new coin telephones and as replacements for inoperative coin telephones. (These constitute about 10% of the Bell System telephones in service.) However, it should be pointed out that while the changeover to L-type receiver units will be a very gradual process, taking place over many years, virtually all telephones at some point in the future will have L-type units or units of even more advanced design which will not have any electromagnetic leakage at all.

THE REASONS FOR INTRODUCING L-TYPE RECEIVER UNITS

The gradual change from U-type to L-type receiver units is not only being made to achieve cost reductions. Physical size and weight are also important considera-

*Registered Service Mark.

tions. The L-type unit is small enough to fit in the Trimline set, whereas the U-type receiver unit would be both too large and too heavy. In addition, the L-type unit is more rugged, more resistant to mechanical shock. Its use in coin telephones is, therefore, expected to result in a significant reduction in the number of out-of-order telephones due to abused receivers. A further advantage of the L-type receiver unit is that its design requires less use of critical materials such as cobalt, nickel and copper (up to 200 tons per year).

All of the above are major considerations. But equally important is that technological innovation not be hindered by retaining U-type receiver units for all time. It is technological innovation which has been a strong contributing factor in giving the United States the finest telephone service in the world. Further, in this era of rising costs, it has helped to prevent telephone rates from rising nearly as fast as the costs of other goods and services. It would seem neither equitable nor appropriate to arrest progress for everyone, when other alternatives are available for helping those who use hearing aids with inductive telephone pickups.

THE INCOMPATABILITY PROBLEM

Current hearing aids equipped with the inductive telephone pickup option appear to have been designed specifically and exclusively for operation (i.e., compatibility) with the Bell System's U-type receiver unit. This unit has a ring armature magnetic structure from which there is sufficient electromagnetic leakage or external magnetic field to be detected and amplified by a hearing aid with a pickup coil. The L-type receiver unit introduced with the Trimline telephone has a center armature design with a very efficient magnetic structure and consequently insufficient external electromagnetic field for operation of a hearing aid with inductive pickup.

The incompatibility situation is not a new one, however, nor does it exist solely in the Bell System. Incompatibility has in fact always been a potential problem for people who purchase hearing aids with the inductive telephone pickup option and who elect to use the pickup when telephoning. There have been only specific periods of time and specific operating areas where compatibility existed between telephone handsets and hearing aids equipped with inductive pickups. It has never prevailed universally. On the other hand, incompatibility has not been, and is not now, a problem for those who acoustically couple their hearing aids to telephones.

Electromagnetic leakage was not a part of the design of the U-type unit introduced in the early 1950's, and the Bell System in no way encouraged hearing aid manufacturers to take advantage of the leakage in their production of hearing aids. The reason we did not was our knowledge that subsequent technological advancement could and very likely would eliminate the leakage.

Millions of telephones used today by the independent (non-Bell) telephone industry in the United States have receiver units with a very weak external magnetic field, comparable to the field from the L-type receiver unit. Only those relatively few independent telephone company instruments which have receiver units identical with our U-type units are compatible with hearing aid pickups.

The largest of the independents, the General Telephone System, has 12 million telephones in service. These telephones have a closed magnetic loop and will not function satisfactorily with hearing aids equipped with inductive pickups.

Moreover, it is understood that hearing aid users who travel to Europe will find scarcely any compatible telephones there, except possibly a few in Italy.

THE BELL SYSTEM'S PROPOSED SOLUTION

The Bell System's proposed solution to the incompatibility problem involves the use of acoustic coupling rather than inductive coupling to the telephone instrument, since an acoustically coupled device depends only on the voice signals generated by the telephone receiver.

Acoustic coupling will work with any design hearing aid, and is today being employed by choice by many hearing aid users. In its most common form, acoustic coupling requires placing the receiving end of the telephone handset against the microphone of the hearing aid.

The Bell System was aware that many hearing aids featured an option which depended for telephone usage on the electromagnetic leakage from U-type receiver units. As early as the start of 1966, we informed the Hearing Aid Industry Conference (HAIC)—an organization of hearing aid manufacturers—of our plans to introduce the L-type receiver unit, described its characteristics, and cautioned

that future receiver units might have even less leakage. We pointed out that this would probably necessitate design changes in hearing aids with inductive telephone pickups.

Sometime later, Bell Telephone Laboratories engineers designed an acoustically coupled field generating device or adapter. The design information was offered to HAIC for manufacture by any interested member firms. This unit can be acoustically coupled to the teelphone with a proper seal to prevent frequency distortion and to exclude room noise. The output would be a magnetic field of sufficient strength to be picked up and amplified by a hearing aid with inductive pickup.

This adapter unit can be carried in pocket or purse, and held in place on a telephone receiver by means of an elastic strap. The adapter would not only be beneficial when using a hearing aid in conjunction with the TRIMLINE telephone or some other telephone equipped with the L-type receiver unit, but it would also permit use of a hearing aid with foreign telephones or telephones of independent telephone companies in the United States. Moreover, the adapter would prevent obsolescence of hearing aids because it could be used with future types of telephones as well as with current models.

Since, to the best of our knowledge, there has been no expression of interest from HAIC member firms on either the redesign of hearing aids or manufacture of the adapter, the Bell System has decided to move ahead with the production of the adapter. It is to be manufactured by Western Electric, and will be offered to hearing aid users at cost. Availability is expected early in 1974.

The adapter may not be the final answer to the incompatibility problem between telephones with L-type receiver units and hearing aids with inductive pickups. But, the Bell System views it as one very good and practical solution.

THE BELL SYSTEM AND THE PHYSICALLY HANDICAPPED

The Bell System's concern and interest in the problems of the hard of hearing have been long standing. For example, research done by the Bell Telephone Laboratories led to the development of the audiometer, the first mechanical device capable of measuring the acuity of hearing. Perhaps the most significant contribution, however, involved the transistor. The Bell Telephone Laboratories made its transistor patents available, on a royalty-free basis, to all domestic hearing aid manufacturers. This made the miniaturization of hearing aids a reality.

The Bell System has also helped to support the work of a number of organizations concerned with the problems of those with hearing impairments. One example is the support given the Alexander Graham Bell Association for the Deaf in Washington, D.C. From the time of its establishment by members of the Bell family, AT&T has helped the Association in its efforts to make people aware of the problems faced by those who are unable to hear.

In other areas, the Bell System's concerns have extended beyond the needs of the hard of hearing to include the totally deaf, the blind and visually handicapped, those with weak speech or no speech capability, and the motion handicapped. For several years there has been an Assistant Engineering Manager at AT&T headquarters assigned full time to telephone services for the handicapped, and knowledgeable people are involved in each of the Bell System operating telephone companies.

The Bell System financed perhaps the only research project ever undertaken on telephone services for the motion handicapped. This project, lasting nearly two years, was under the general direction of Dr. Howard Rusk of the Institute of Rehabilitation Medicine at New York University Medical Center. The System also supported the publication of two books containing the findings and recommendations of Dr. Rusk's investigators. The first, *Rehabilitation Monograph XXXVII*, is intended for use by therapists and others who work with the physcially disabled. The second version is intended for the guidance of Bell System employees who have the responsibility for arranging appropriate installations for the handicapped customers. Copies of this latter version were also made available to the independent telephone industry.

Many telephone installations for the handicapped are, of course, made on a custom-tailored or "special assembly" basis because of the customer's unique requirements. However, over the years, the Bell System has maintained a standard line of telephone instruments and other equipment for customers with the more common types of disabilities. These standard items are listed in a booklet entitled "Services for Special Needs".

SUMMARY

The Bell System is accutely aware of the need to serve hearing-handicapped persons. It has done much research and development work which has ultimately benefited the hard of hearing.

The Bell System has, among its services for those with hearing impairments, volume control or amplifying handsets, plug-in headset amplifiers for switchboard operators or PBX attendants, a bone conduction receiver, a tone ringer, and various loud gongs.

A new receiver unit has been developed and installed in a small percentage of total Bell System telephones. (Only TRIMLINE and some coin telephones.). HAIC was made aware of the incompatibility of this receiver unit with hearing aids using the inductive option.

The Bell System has developed and will manufacture and sell at cost an easily portable coupling device or adapter which is compatible with *any* telephone anywhere in the world. While the adapter may not be the final answer to the incompatibility problem, it is, in our judgment, one very good and practical solution.

The Bell System does not feel that a satisfactory solution will be to modify every telephone in the Bell System. This could retard technological advances, adversely affect the quality of service and increase the cost of service for the general body of customers. However, the Bell System is and always has been willing to counsel with the hearing aid industry regarding alternative long-range solutions.

ITEM. 39. ARTICLE FROM THE OREGON PIONEER, NEWSLETTER OF THE OREGON STATE PROGRAM ON AGING, NOVEMBER 1973

HEARING CLINIC ON WHEELS; DR. FLEMMING TO ATTEND DEDICATION

Project ARM (Auditory Rehabilitation Mobile), a unique hearing clinic on wheels for low income older adults in the metropolitan Portland area, will be officially dedicated in ceremonies at Portland State University at 10 a.m. Thursday, December 6.

Dr. Arthur Flemming, Commissioner on Aging for the Administration on Aging, and Marion Hughes, Coordinator of the Oregon State Program on Aging, will be featured speakers at the dedication.

Anyone interested in Project ARM is invited to attend the ceremonies which will be held in the foyer of the Health and Physical Education Building, 950 S.W. Hall.

The special green and white van, which contains a four-ton double acoustical suite, a differential diagnostic research audiometer, provisions for impedance measurement of the middle ear and an environment for social communication skills interviewing, will be open for inspection.

Dr. James Maurer, director of ARM and coordinator of PSU's audiology program in speech and hearing sciences, explained the Project provides training experiences for students in audiology, speech pathology and gerontology.

Financial support for the project, now in its second year, has totaled over $235,000 from the Kresge Foundation, the Oregon State Program on Aging and Portland State University.

Until construction of the van was completed this fall, Project ARM staffers serviced older adults in the Speech and Hearing Clinic in the department of speech in the basement of Neuberger Hall.

Under staff supervision, students service older adults with free hearing tests, hearing aid evaluations, rehabilitative counseling and training and medical and agency referral.

At the same time research is being conducted to investigate lifestyle problems associated with hearing loss among the elderly.

The parttime and fulltime staff includes two audiologists, a human resource specialist, a sociologist and clinical psychologist.

The concept of a mobile auditory laboratory for providing services to senior adults emerged in 1971 as a direct result of audiology clinic activities at the University. The Speech and Hearing Clinic had been performing some diagnostic and rehabilitative services for communicatively handicapped aging adults since 1965.

In 1971, a local senior adult center made a request for hearing testing services at the center. This pilot program served to underscore several prob-

lems facing low income older adults: 1) a high incidence of hearing handicaps; 2) inadequate financial resources to obtain assistance for their problems; 3) reticence to travel to clinics where services are available; 4) lack of knowledge about causes and problems associated with hearing handicaps; and 5) the inadequacy of proper acoustic conditions within various nursing homes and adult centers for on-site testing.

Over one million people reside in the metropolitan Portland area. It is estimated over 100,000 are senior citizens. Of these, Project ARM staffers estimate 40,000 fall in the low income category and may need the services provided by the mobile auditory van.

Project staffers also believe the Kresge Hearing Van is the only one in the country designed specifically to serve the elderly. Other vans in operation focus on school children or, industrial workers.

Eventually Project ARM does anticipate serving unmet needs of communicatively handicapped children as well as low income older adults.

MICHELE WILEY.
Information Representative,
Portland State University.

ITEM 40. THE HEARING AID INDUSTRY, A SURVEY OF THE HARD OF HEARING: A REPORT TO THE NATIONAL HEARING AID SOCIETY AND THE HEARING AID INDUSTRY CONFERENCE; PREPARED BY MARKET FACTS, INC., CHICAGO, ILL., APRIL 1971

ATTITUDE OF USERS AND PROSPECTIVE USERS TOWARD HEARING AIDS, HEARING AID DEALERS AND HEARING PROFESSIONALS

BACKGROUND AND OBJECTIVES

One of the stated purposes of the National Hearing Aid Society and the Hearing Aid Industry Conference is the rehabilitation of the hard of hearing. The two organizations, acting through a special joint committee, requested Market Facts, Incorporated, to propose a program of research to evaluate how well this purpose is being achieved.

A pilot study to evaluate data collection techniques and the feasibility of obtaining such information was conducted in September and October 1970. After establishing an appropriate data collection methodology, Market Facts was authorized by the joint committee to proceed with the full scale study.

The objectives of the study were:

1. To determine the overall level of satisfaction expressed by hearing aid wearers in terms of the service they have received.
2. To determine the specific causes for any dissatisfaction among current wearers of hearing aids.
3. To relate the satisfaction levels of hearing aid wearers to their specific experience in terms of testing, fitting and other forms of service. Included would be a determination of whether satisfaction levels vary or differ substantially among those who were tested and fitted by dealers, medical doctors, clinics and audiologists, or a combination of these people.
4. To determine the experiences and attitude of people who acknowledge that they are hard of hearing but do not wear a hearing aid.
   a. Whom have they consulted?
   b. What actions have they taken?
   c. What is their behavior likely to be if they decide to explore purchasing a hearing aid? Whom would they consult?

HOW THE STUDY WAS CONDUCTED

This report is based upon data obtained by mail from a panel of respondents who are members of Consumer Mail Panels, a division of Market Facts. Consumer Mail Panels is comprised of a total of 70,000 households who have agreed to cooperate by responding to surveys conducted by the company. From these households, 45 panels of 1,000 households each have been formed. Each of these 45 panels has been balanced on four demographic variables—age of panel member, income, population density and geographic region—to match U.S. census information and thus represent as closely as possible a representative sample of U.S. households.

A special screening was made to 28,000 households to locate two types of people—those who wear hearing aids and those who are hard of hearing yet do not wear a hearing aid. From this screening 717 hearing aid wearers and 2,511 persons who are hard of hearing agreed to cooperate by answering a questionnaire that would investigate their attitudes.

All hearing aid wearers were mailed a questionnaire and a sub-sample of 700 persons with a hearing problem who do not wear a hearing aid were randomly selected and mailed questionnaires. A total of 646 questionnaires were returned by hearing aid wearers and 593 were returned by hard of hearing non-wearers.

To insure some degree of representativeness in the sample of all age groups, the age of respondents to the mail survey was compared to statistics published by the Department of Health Education and Welfare in *Characteristics of Persons with Impaired Hearing, United States,* July 1962–June 1963.

The accompanying table shows that the distribution of respondents in both samples is closely matched to government statistics. The only disparity is in the hard of hearing non-wearer panel in the 45 to 64 and the 65 and over age group. This difference was corrected by weighting respondents in these age groups to reflect their true proportion in the population of the hard of hearing non-wearers.

In this report the number of respondents shown in the bases are the actual number in the sample but the percentages reported will reflect these weighting factors.

This study was conducted in February 1971. Copies of the questionnaires mailed to the hearing aid wearer panel and the hard of hearing non-wearer panel are appended to this report.*

AGE OF PERSONS WITH IMPAIRED HEARING

[In percent]

	Hearing aid users		Hard of hearing nonusers		Weighted sample [2]
	Population [1]	Sample	Population [1]	Sample	
Under 17	5	4	9	9	9
17 to 44	10	7	20	21	21
45 to 64	29	31	30	38	30
65 and over	56	58	42	32	40
(Number of respondents)		(646)		(593)	

[1] Source: "Characteristics of Persons With Impaired Hearing, United States—July 1962–June 1963" U.S. Department of Health, Education, and Welfare.

[2] Weighted sample reflects adjustment in sample to reflect incidence in the population.

SUMMARY OF FINDINGS

The findings of this study are presented in two parts. Part 1 discusses the survey among hearing aid wearers and Part 2 is concerned with the survey among the hard of hearing who do not wear hearing aids.

PART 1—HEARING AID WEARERS

A. First Consultation

Following preliminary questions, respondents were asked to name the person they first consulted about the need for a hearing aid. Over one-third, or 36 percent of the respondents first consulted a hearing aid dealer or salesman—fewer than those who first consulted a medical doctor (45 percent). One out of seven respondents first consulted a hearing and speech clinic or audiologist.

It appears that those with lower incomes are more likely to see a hearing aid dealer first rather than a medical doctor. Whereas 42 percent of those respondents with income under $4,000 first consulted a hearing aid dealer, only 31 percent of the $4,000 to $7,999 group and 34 percent of the $8,000 and over group first consulted a dealer.

Consultation with the family doctor is the same by all income groups. Higher income respondents appear more likely to consult with medical specialists than those with lower income.

*Retained in committee files.

HEARING AID WEARERS FIRST CONSULTATION (BY INCOME)

[In percent]

	Total	This percent of respondents in these income categories: Under $4,000	$4,000 to $7,999	$8,000 and up
First consulted a—				
Hearing aid dealer or salesman	36	42	31	34
Medical doctor	45	40	47	47
Family doctor	12	12	12	14
Eye, ear, nose, and throat	28	25	31	30
Otologist	3	1	3	1
Other doctor	1	2	1	1
Hearing and sight clinic	6	4	8	6
Audiologist	8	8	8	9
Family, friends, and others	3	5	2	2
No answer	2	1	4	2
Number of respondents	646	224	208	213

B. Referral Process

Respondents were asked to whom they were referred by the first person consulted. Nearly one out of four respondents who saw a medical doctor first were referred directly to a hearing aid dealer; nearly one-third were referred to a clinic or audiologist; and one out of seven were referred to a medical specialist.

Of those who first consulted a cilnic or audiologist, one out of seven, were referred to a dealer and one out of nine were referred to a medical doctor.

Generally, those who saw hearing aid dealers were not referred elsewhere. Dealers, however, did refer six percent of those who consulted with them to medical doctors or audiologists.

REFERRAL PROCESS

	This percent of those who first consulted— Hearing aid dealer	Medical doctor	H. & S. Clinic or audiologist
Were referred to:			
Hearing aid dealer		23	14
Medical doctor	3	15	11
Family doctor			1
Eye, ear, nose, and throat	2	9	7
Otologist	1	5	2
Other doctor		1	1
Audiologist	3	16	5
H. & S. Clinic		14	
No referral	94	39	70
(Number of respondents)	(232)	(288)	(88)

C. Persons Consulted Prior to Buying a Hearing Aid

From the questions concerning first consultation and referral, it is possible to group respondents into five distinct groups based upon whom they saw and consulted with prior to the actual purchase of a hearing aid or prior to actually approaching a dealer or clinic with intention to buy. The five groups are:

1. Hearing aid dealers only.
2. Medical doctors only.
3. Clinics or audiologists only.
4. Hearing aid dealers *and* a medical doctor or clinic or audiologist.
5. Medical doctor *and* clinic or audiologist only.

Over one third of the respondents had consulted with only a hearing aid dealer prior to making the purchase decision. One fourth had seen a medical doctor only, and one out of nine had seen only a clinic or audiologist.

One fourth of the respondents had consulted with two or more types of people concerned with hearing problems. Thirteen percent of the respondents had consulted with a hearing aid dealer *and* either a medical doctor or a clinic/audiologist or both. Twelve percent said they had not seen a hearing aid dealer but had consulted with a medical doctor and clinic/audiologist.

Income does not appear to be a factor in the consultation process although there is some indication that a proportionately higher percent of the respondents in the under $4,000 income level are more likely to see only a hearing aid dealer than are those above this income level.

PERSONS CONSULTED PRIOR TO BUYING A HEARING AID—BY INCOME

	This percent of the respondents in these income categories			
	Total	Under $4,000	$4,000 to $7,999	$8,000 and up
Consulted with these people prior to buying a hearing aid:				
Hearing aid dealer only	36	42	29	35
Medical doctor only	25	22	27	25
Hearing and sight clinic or audiologist only	11	10	13	11
Hearing aid dealer and medical doctor or clinic or audiologist	13	13	13	14
Medical doctor and hearing and sight clinic, clinic or audiologist	12	9	15	12
No answer	3	4	3	3
(Number of respondents)	(646)	(224)	(208)	(214)

D. Relationship of Satisfaction and Persons Consulted Prior To Purchasing a Hearing Aid

One of the main objectives of this study was to determine the satisfaction levels of hearing aid wearers and relate this to their experience in terms of whom they consulted.

This study explored three areas that are chronological in nature in which levels of satisfaction could be measured. The areas are:

1. Service and treatment *while being tested* for a hearing aid.
2. Service *at time of purchase.*
3. Service *since the initial fitting.*

In addition, a fourth area, the respondent's level of satisfaction with his ability to hear with his present hearing aid was also explored.

Respondents were asked to rate their experiences in each of these areas on a five point satisfaction scale ranging from "very satisfied" to "very dissatisfied."

The accompanying table combines the "very satisfactory" rating with the "somewhat satisfactory" rating to obtain an overall positive satisfaction level. (A table showing the complete distribution of respondents in each rating category by type of person consulted, is appended to this report.)

Regardless of who was consulted, more than nine out of ten hearing aid wearers are satisfied with the service they received *while being tested.* This high level of satisfaction prevails at all income levels, all ages, and for both sexes.

Regarding the service received at the *time of purchasing* their hearing aid, again, nine out of ten respondents expressed satisfaction in this area. This high level of satisfaction holds regardless of the persons consulted, the income of the respondents, their age or sex.

The level of satisfaction with service *since fitting* is somewhat lower than in the previous two categories, but is, nevertheless, quite high. Nearly nine out of ten respondents are satisfied with the service they have had after fitting and, again, this level of satisfaction is maintained at all age levels, income groups, by sex and by persons consulted.

Overall, seven out of ten respondents said they were satisfied with their ability to hear. A higher ratio, nearly eight out of ten respondents, who saw only a hearing aid dealer or who saw only a clinic expressed satisfaction in this area. Satisfaction with ability to hear is similar in all age and income groups and by sex.

It is clear that those who are handicapped by having to wear a hearing aid are generally quite satisfied with the service and treatment they have received in all stages of their hearing aid purchase experience. There do not appear to

be any differences in the satisfaction levels of those who consulted with different groups. Those who consulted with hearing aid dealers believe they have received as satisfactory treatment as those who consulted one or more other groups of persons concerned with hearing problems.

SUMMARY LEVEL OF SATISFACTION—BY PERSON CONSULTED

	This percent of the respondents who consulted—					
	Total	Dealer only	Medical doctor only	Clinic only [1]	Dealer and medical doctor or clinic	Medical doctor and clinic
Said they were either very satisfied or somewhat satisfied with:						
The service they received while being tested	94	95	94	96	91	94
The service they received at the time of purchase	91	90	91	97	86	95
The service since the fitting of their present hearing aid [2]	87	86	85	82	94	85
Their ability to hear	71	77	65	76	71	67
(Number of respondents)	(646)	(230)	(159)	(71)	(86)	(77)

[1] Clinic includes audiologists for purposes of this report.
[2] Includes those who have not required service.

SUMMARY LEVEL OF SATISFACTION—BY AGE AND SEX

	This percent of the respondents in these groups					
	Age				Sex	
	Under 17	17 to 44	45 to 64	65 and up	Male	Female
Said they were either very satisfied or somewhat satisfied with:						
The service they received while being tested	91	95	95	92	94	92
The service they received at the time of purchase	91	90	94	89	91	91
The service since the fitting of their present hearing aid [1]	83	93	86	87	90	87
Their ability to hear	69	71	75	71	72	70
(Number of respondents)	(23)	(41)	(204)	(376)	(326)	(319)

[1] Includes those who have not required service.

SUMMARY LEVELS OF SATISFACTION—BY INCOME

	This percent of the respondents in these income categories		
	Under $4,000	$4,000 to $7,999	$8,000 and over
Said they were either very satisfied or somewhat satisfied with:			
The service they received while being tested	92	94	94
The service they received at the time of purchase	89	91	93
The service since the fitting of their present hearing aid [1]	85	88	88
Their ability to hear	74	70	70
(Number of respondents)	(224)	(208)	(233)

[1] Includes those who have not required service.

E. Rating of the Quality of the Hearing Aid

Respondents were asked to rate their hearing aid on a five point scale ranging from "very good" to "very poor". Nearly one-half of the respondents rated their hearing aid as "very good", one-third rated it "good" and one out of six rated it as "fair". Only 3 percent rated their hearing aid "poor" or worse.

Generally, younger respondents gave higher ratings than older respondents.

RATING OF QUALITY OF HEARING AID

	Total percent	This percent of the respondents by age			
		Under 17	17 to 44	45 to 64	65 and up
Rated their hearing aid as:					
Very good	47	57	54	51	44
Good	33	35	29	31	34
Fair	16	----------	15	15	18
Poor	1	----------	2	1	1
Very poor	2	4	----------	2	2
No answer	1	4	----------	----------	1
(Number of respondents)	(646)	(23)	(41)	(204)	(376)

F. General Complaints

Respondents were given the opportunity to mention any problems they might have had in their experiences with buying a hearing aid. Approximately two out of five, or 42 percent of the respondents, either said they had no problems or did not answer the question.

There is no complaint or problem that stands out from the rest. Improper fitting and poor service are the two most frequently mentioned problems but they each account for only 9 percent of the problems.

GENERAL COMPLAINTS ABOUT HEARING AID EXPERIENCES

	Total percent	This percent of the respondents who consulted				
		Dealer only	Medical doctor only	Clinic only [1]	Dealer and Medical doctor or clinic [1]	Medical doctor and clinic [1]
Improper fitting	9	9	11	10	11	8
Poor service	9	11	9	6	7	7
Aids are too expensive	7	6	10	9	8	7
Getting used to wearing an aid	6	7	4	6	6	8
Discomfort caused by ear molds	5	3	6	6	6	7
Excess background noise	5	5	4	3	7	4
Need more complete tests	5	4	8	7	2	4
Need more complete diagnosis	3	2	3	3	5	4
Batteries do not last	3	3	4	3	6	3
Need better trained people	3	3	2	----------	2	7
Pressure from salesmen	2	1	3	3	2	3
Need better quality aids	2	2	----------	1	1	----------
All other complaints	9	9	7	9	8	9
No complaints	29	30	26	24	34	26
No answer	13	12	11	14	13	13
(Number of respondents)	(645)	(230)	(159)	(71)	(86)	(77)

[1] Clinic includes audiologists for purposes of this report.

G. Persons Who Will be Consulted for Another Hearing Aid

Slightly more than two out of five respondents said they would see a hearing aid dealer first if they thought they needed another hearing aid.

More than half of those respondents who consulted dealers only for their present hearing aid said they would again go to a dealer first. A similar ratio exists for those who saw dealers *and* a medical doctor or clinic or audiologist.

PERSON WHO WILL BE CONSULTED IF ANOTHER HEARING AID IS NEEDED

	This percent of the respondents who consulted					
	Total	Dealer only	Medical doctor only	Clinic only [1]	Dealer and medical doctor or clinic [1]	Medical doctor and clinic [1]
Said if they were to buy another hearing aid they would first see:						
Hearing aid dealer	44	56	44	20	56	18
Medical doctor	18	11	29	16	18	19
H. & S. Clinic	9	5	5	21	6	23
Audiologist	12	7	9	32	6	25
All other	7	4	7	6	8	9
Don't know	5	7	3	4	4	3
No answer	5	10	3	1	2	3
(Number of respondents)	(646)	(230)	(159)	(71)	(86)	(77)

[1] Clinic includes audiologists for purposes of this report.

PART 2—HARD OF HEARING—NON-WEARERS

A. Persons Consulted

Overall, 20 percent of those people with a hearing loss but who do not wear a hearing aid, have talked with a hearing aid dealer. The incidence is only 6 percent for the under 17 age group and increases to 27 percent in the 65 and over age group.

Four out of five respondents have talked to a medical doctor about their hearing loss. All respondents under the age of 17 have talked to a medical doctor about their hearing; nearly nine out of ten in the 17 to 44 age group have; and approximately four out of five respondents above the age of 45 have seen a doctor.

POTENTIAL USERS—PERSONS CONSULTED ABOUT HEARING LOSS

	Total percent	This percent of the respondents in these age groups			
		Under 17	17 to 44	45 to 64	65 and up
Said they had talked to these people about their hearing problem:					
Family members	61	61	60	61	61
Friends	40	28	42	48	36
Other hard of hearing people	22	7	20	23	26
Hearing aid dealer	20	6	11	26	27
Medical doctor	83	100	88	82	76
Family doctor	53	74	62	52	44
Eye, ear, nose, and throat	55	76	55	57	47
Otologist	14	15	15	14	12
Other doctor	3	6	5	4	1
H. & S. clinic	10	41	10	9	2
Audiologists	16	26	15	20	11
(Number of respondents)	(593)	(55)	(127)	(227)	(184)

B. Hearing Evaluation

Slightly more than one third of the respondents who are hard of hearing non-wearers have had a hearing test.

A hearing aid was recommended to slightly less than one-third of all respondents who are non-wearers.

As might be expected, a hearing aid was recommended to older respondents more often than to younger ones. Only 7 percent of the under 17 respondents had been advised to get a hearing aid while 46 percent of the over 65 group had been so advised.

POTENTIAL USERS—HEARING EVALUATION

	Total percent	This percent of the respondents in these age groups			
		Under 17	17 to 44	45 to 64	65 and up
Regarding hearing tests said they:					
Have had a hearing test	34	32	40	37	30
Have not had a hearing test	66	68	60	63	70
Regarding hearing aid recommendation, said:					
A hearing aid was recommended	32	7	16	33	46
A hearing aid was not recommended	68	93	84	67	54
(Number of respondents)	(593)	(55)	(127)	(277)	(184)

Reasons for not buying a hearing aid

	Percent
Do not need one badly enough	27
Cannot afford one	25
Tried a hearing aid in the past and did not like it	15
Would not help hearing problem	13
Too self-conscious, embarrassed to wear	6
Need further tests, undecided	4
Was not recommended by other person	4
No special reason	3
All other reasons	5
No answer	3

(Number of respondents advised to get a hearing aid, 190.)

ITEM 41. LETTER AND ENCLOSURES FROM ROBERT M. McLAUCHLIN, PH. D., ASSOCIATE SECRETARY FOR AUDIOLOGY AFFAIRS, AMERICAN SPEECH AND HEARING ASSOCIATION, WASHINGTON, D.C., TO WILLIAM E. ORIOL, STAFF DIRECTOR, SENATE SPECIAL COMMITTEE ON AGING, DATED NOVEMBER 29, 1973

DEAR MR. ORIOL: I am sending you some additional information per our discussion on October 19, 1973.

The Legislative Council, which is the policymaking body of the American Speech and Hearing Association, deliberated for the entire morning of October 15, 1973, on the following Resolution 42:

> "RESOLVED, That the Code of Ethics of the American Speech and Hearing Association be modified to permit the commercial dispensing of hearing aids directly from ASHA-Certified audiologists to those needing them."

The Legislative Council overwhelmingly defeated Resolution 42 by a vote of 98 to 11, with one abstention.

Subsequently, Resolution 58 was introduced to the legislative council and was passed by the overwhelming vote of 90 to 3, with no abstentions. Resolution 58 reads as follows:

> "RESOLVED, That the Legislative Council reaffirms its endorsement of the concept that audiologists may dispense hearing aids under conditions which are considered ethical by the Ethical Practice Board and endorsed by the Executive Board; and further
>
> "RESOLVED, That the Executive Board disseminate in writing, as soon as possible to the membership, descriptions of procedures that audiologists may follow to be able to dispense hearing aids without being in violation of the present Code of Ethics; and further

"RESOLVED, That the Executive Board continue urgently to study and develop procedures to implement the dispensing of hearing aids by audiologists."

Stated simply, the actions of the Legislative Council reaffirms ASHA policy that audiologists may dispense hearing aids but only under conditions which are considered ethical by the Association. The defeat of Resolution 42 combined with statements by the Ethical Practice Board clearly indicate audiologists who are members of ASHA may not gain profit from the decision to dispense versus not to dispense hearting aids. Attached is a copy of a statement by the Ethical Pracice Board which appeared in the September, 1973 issue of *Asha.*

Attached also find copies of two additional pertinent documents. The first is an ASHA position paper entitled, The Audiologist: Responsibilities in the Habilitation of the Auditorily Handicapped. The Legislative Council of ASHA approved this paper at their meeting in October, 1973. The second is a booklet entitled Guidelines for the Purchase of Services and the Procurement of Hearing Aids for Children with Communicative Disorders. This booklet was prepared under a grant from the Maternal and Child Health Service of Health Services and Mental Health Administration, U.S. Public Health Service, Department of Health, Education, and Welfare.

We hope that you find this additional informational beneficial.

Cordially,

ROBERT M. MCLAUCHLIN, Ph. D.,
Associate Secretary for Audiology Affairs.

Enclosures.

ISSUES IN ETHICS

HEARING AID DISPENSING

In 1971, the Legislative Council passed Resolution 19 supporting the general intent that certified audiologists may, under certain conditions, be involved in the dispensing of hearing aids as a part of a complete program of auditory rehabilitation. In fact, the Ethical Practice Board has evaluated clinical hearing aid dispensing programs in the past and found two of these programs to be within the limits defined by the Code of Ethics.

A task force authorized by the Executive Board prepared a draft of "Guidelines for Audiologists and Centers Engaged in the Dispensing of Hearing Aids" during 1971. The task force requested the Ethical Practice Board to review a suggested revision in the Code of Ethics that would accommodate the proposed "Guidelines." The Ethical Practice Board, recognizing its previous precedent of permitting clinical hearing aid dispensing under certain conditions, agreed that the Code of Ethics could be modified in accordance with the proposed dispensing Guidelines.

As a result of thorough review, the Ethical Practice Board prepared the following resolution to revise the ASHA Code of Ethics. The resolution is contingent upon approval of the Guidelines by the Legislative Council:

(A) Section C.1 (c) will include an exception such that it will read as follows:

> (c) He must not engage in commercial activities that conflict with his responsibilities to the persons he serves professionally or to his colleagues. He must not permit his professional titles or accomplishments to be used in the sale or promotion of any product related to his professional field, except as noted in (d) below. He must not perform clinical services or promotional activity for any profit-making organization that is engaged in the retail sales of equipment, publications, or other materials. He may be employed by a manufacturer or publisher, provided that his duties are consultative, scientific, or educational in nature.

(B) Section C.1 (d) will be added and will read as follows:

> (d) He may dispense or have the responsibility for dispensing hearings aids, or be employed by an organization which dispenses hearing aids as a part of a comprehensive audiological program, providing he and the organization employing him abide by the ASHA Guidelines for Audiologists and Centers Engaged in the Dispensing of Hearing Aids and the spirit and intent of ASHA's Code of Ethics.

However, during the 1972 session of the Legislative Council, the proposed Guidelines were referred back to the Task Force on Hearing Aid Dispensing for revision, and the resolution to modify the Code of Ethics was tabled.

The task force recently completed a proposed revision of the Guidelines. The Ethical Practice Board was then asked by the Executive Secretary, who serves as coordinator of the task force, to review the revision for objectivity as embodied in the Code of Ethics of our profession. Based on its initial review, the Ethical Practice Board offered the opinion that if, as we believe it to be, the fundamental principle of our Code of Ethics is to insure objectivity in our profession, then the adoption of the revision of the proposed Guidelines in its present form would make the Code of Ethics unenforceable.

The basic issue, as the Ethical Practice Board sees it, is the dispensing fee. The dispensing fee in the presently proposed Revised Guidelines provides for the recovery of overhead expenses incurred in the dispensing process. However, the Guidelines do not clearly restrict the dispensing fee to overhead expenses only, nor do the Guidelines provide a means by which dispensing fees may be objectively evaluated.

The Ethical Practice Board does not consider itself to have the prerogative to recommend specific changes in the proposed Guidelines. Nor will the EPB recommend changes in the Code of Ethics that would accommodate professional activities inconsistent with the fundamental principle of objectivity inherent in the Code of Ethics. It is the Ethical Practice Board's opinion that adherence to this principle is necessary in order to avoid conflicts of interest. Therefore, the Ethical Practice Board can only suggest that some mechanism be included in the Guidelines to provide objective criteria for defining and evaluating dispensing fees. A mechanism that will do this is needed to retain the enforceability to the Code of Ethics.

In regard to the basic issue of clinical hearing aid dispensing by certified ASHA members, the Ethical Practice Board will continue to evaluate cases and render decisions to assure the continuing objectivity of individuals and of the profession. As cases are brought to the attention of the Board, we will evaluate the facts against the following principles in the Code of Ethics: (1) avoiding conflict of interest or appearance thereof, (2) insuring objectivity of professional judgment by eliminating profit-making as a factor in the decision to dispense or not to dispense, (3) insuring lack of profit from the dispensing of any aid or other prosthetic device.

If these principles are met, then in specific cases we will continue to acknowledge the validity of this activity. These principles are embodied either specifically in or in the spirit of our Code of Ethics, and the Ethical Practice Board feels it fundamental that adherence to these principles is necessary to preserve the integrity of the profession and make paramount the welfare of persons served professionally.

The Ethical Practice Board encourages the readers of this column to respond to this issue and others involving the Code of Ethics of the American Speech and Hearing Association. Inquiries and comments should be directed to the Chairman of the Ethical Practices Board, Charles D. Parker, American Speech and Hearing Association, 9030 Old Georgetown Road, Washington, D.C. 20041. Comments may also be addressed to the Forum Editor for possible publication.

GUIDELINES FOR THE PURCHASE OF SERVICES AND THE PROCUREMENT OF HEARING AIDS FOR CHILDREN WITH COMMUNICATIVE DISORDERS

Introduction

In April 1971, the Institute on Services for the Hearing-Handicapped Child was held at the University of Maryland, financed by a grant from the Maternal and Child Health Services of the Health Services and Mental Health Administration, U.S. Public Health Service, Department of Health, Education, and Welfare. The Institute was planned by a committee consisting of: Donald J. Baker, Richard F. Dixon, Allan C. Goodman, James T. Graham, William A. Grimm, William G. Hardy, Don A. Harrington, Gilbert R. Herer, Hayes A. Newby, John C. Shwab, Laszlo K. Stein, and Beth J. Urban.

One of the objectives of the Institute was to generate guidelines for the purchase of speech and hearing services and hearing aids for children by state and local governmental agencies. Two committees worked in advance of the Institute to prepare drafts of guidelines as a basis for discussion by the participants in the Institute, and one full day of the Institute program was devoted to this discussion. Following the Institute, the two committees rewrote the guidelines, incorporating the ideas that resulted from the discussion. The Committee on

Guidelines for the Purchase of Speech and Hearing Services consisted of Roy C. Rowland, William A. Grimm, and Clifton F. Lawrence, Chairman. The Committee on Guidelines for the Purchase of Hearing Aids consisted of James Yonts, Raymond Rich, and G. Donald Causey and Sylvia O. Stecher, Co-Chairmen.

In May, 1972, the committee chairmen met with the project director, the speech and hearing consultants from the sponsoring federal agency, and a speech consultant from a state health agency for the purpose of coordinating and editing the two guidelines. The guidelines that follow represent a distillation of the products of many hours of thought and effort by a number of individuals before, during, and after the Institute. Also, they represent the culmination of many years of effort on the parts of Don Harrington and John Shwab of the Maternal and Child Health Service to obtain from the profession of speech pathology and audiology a statement of principles for the guidance of governmental agencies in purchasing services and hearings aids.

While these guidelines are directed to agencies providing services to children, it is hoped that they will be useful as well for agencies serving adults. To those who contributed their thought and energies to the planning and execution of the Institute, to the Institute participants, and most especially to the two guideline committees, the project director expresses his appreciation.

HAYES A. NEWBY,

Project Director, Division of Speech and Hearing Science, University of Maryland, College Park.

WORKING DEFINITIONS

Communicative Disorder: Any disorder of hearing, speech, voice, or language.

Provider of Speech and Hearing Services: Any agency, facility, center, or clinic providing services to communicatively impaired children; and which has on its staff personnel who hold appropriate certification by the American Speech and Hearing Association or the equivalent, or who are appropriately licensed by the state in which they practice; and where the responsibility for provision and management of services to communicatively impaired children is held by such certificated or licensed personnel. A provider may also be an individual who meets the appropriate certification and/or license provision referred to above.

Services: All procedures used by speech pathologists and audiologists in the identigcation, diagnosis, and treatment of children with communicative disorders.

Identification: A screening or case-finding procedure used to detect children with a speech, hearing, voice, or language disorder.

Diagnosis: Procedures used to determine the nature and extent of the communicative disorder, as carried out by the speech pathologist and/or audiologist. Encompasses such terms as assessment and evaluation.

Treatment: Refers exclusively to the remedial and habilitative procedures used by the speech pathologist and/or audiologist.

Speech Pathologist: An individual holding the ASHA Certificate of Clinical Competence in Speech Pathology, or who is equivalently qualified or who holds a license to practice as a speech pathologist in a given state.

Audiologist: An individual holding the ASHA Certificate of Clinical Competence in Audiology, or who is equivalently qualified, or who holds a license to practice as an audiologist in a given state.

Supervision: May be direct or indirect in nature, depending on the relative ability of the non-certified or supportive staff member to carry out assignments. Where technicians carry out prescribed and strictly defined tasks relatively independently (as in identification audiometry programs) the supervision is more accurately defined as *direction.*

GUIDELINES FOR THE PURCHASE OF SERVICES FOR THE CHILD WITH A COMMUNICATIVE DISORDER

1. *Entry into System.* Speech pathology/audiology services should be available to all communicatively impaired children through a multiple entry system.

The entry system established for delivery of care to children with communicative disorders should permit referrals through physicians, speech pathologists/audiologists, and other professionals. *Once referral is made, determination of the procedures needed for diagnosis and treatment of the communicative disorders should be the responsibility of the speech pathologist/audiologist.*

2. *Qualifications of Personnel.* All personnel providing or supervising services in speech pathology/audiology should be appropriately certified or licensed.

Appropriate certification is considered to be the Certificate of Clinical Competence issued by the American Speech and Hearing Association or its equivalent. Appropriate licensure is considered to be a license to practice as a speech pathologist or audiologist in a given state where such legal provisions may exist.

3. *Supervision.* The purchaser should require that appropriate supervision be provided in all instances in which the provider utilizes non-certified, non-licensed or supportive personnel.

The amount and type of supervision provided should be reviewed by a speech pathologist/audiologist employed by or serving as a consultant to the purchaser. Supportive personnel may appropriately carry out some tasks under general direction, while others may require close supervision.

4. *Equipment and Materials.* Equipment, materials, and physical facilities used by the provider should meet accepted standards.

a. Screening audiometers, threshold audiometers, and clinical (speech) audiometers should meet standards established for such devices by the American National Standards Institute.

b. Electro-acoustic devices for providing special audiological diagnostic tests, as well as sound field equipment, should be adequate for intended purposes as demonstrated or otherwise justified by the provider.

c. Evidence of adequate periodic calibration of electro-acoustic devices should be available to the purchaser.

d. The test environment for audiometric tests should be demonstrated as adequate for performance of appropriate evaluations in accordance with the contract or agreement.

e. Other equipment and material beneficial in the diagnosis and treatment of children with disorders of speech, hearing, voice, and language should be considered by the purchaser in electing to contract with a given provider for such services.

5. *Procedures.* Speech pathology/audiology services should be coordinated with other services to ensure maximum effectiveness of interdisciplinary efforts.

Services in speech pathology/audiology may form but one component of a complete habilitative or educational plan for a given child. Where other components are involved, it is essential that the purchaser arrange for or provide proper management of the total plan for the child. Purchase arrangements for speech pathology/audiology services may involve identification, diagnosis, and/or treatment services, and may range from limited fees for specific tests or procedures through contractual agreements for total program services. The provider has the responsibility of informing the purchaser of all additional sevices he feels are needed.

6. *Reporting.* Arrangements for services should include adequate provision for submission of records and reports to the purchaser.

Inherent in this statement is the concept that details of service (whether identification, diagnosis, or treatment) need to be documented and recorded as part of a system that will aid in ensuring continuity of treatment, and will be useful in evaluating cost and effectiveness of the program.

7. *Accreditation.* Where the provider is an agency, program, center, clinic, or similar organization, evidence of accreditation by a nationally recognized accrediting agency should be taken into account by the purchaser.

Accreditation of speech pathology/audiology programs by the Professional Services Board of the American Speech and Hearing Association is an example of an accrediting procedure that provides evidence the program has met acceptable standards for provision of services.

8. *Consultation Services.* The purchaser should have available consultation services by a qualified speech pathologist/audiologist.

Professional services by a speech pathologist/audiologist should be an integral part of the purchaser's programming. These services should include the development of policies for contracts and agreements involving the delivery of services once established. The professional adviser may be a full-time staff member of the agency (purchaser), or may participate as a part-time consultant or member of an advisory board.

9. *Scope of Contract, Agreement, or Policy.* Arrangements for purchase of services should be in the form of a written contract or agreement, and should include all pertinent considerations relating to the provision of specific services.

A contract or agreement should consider such items as the range of services, qualifications of personnel and supervisory arrangements, specific pro-

cedures or services to be provided, referral arrangements, method of reporting, schedule of fees, and provision for evaluation and review of contract. Contracts or agreements which consider only services to be provided and related fees are limited in scope, and reduce the responsibility of both purchaser and provider in arranging for completeness of service and continuity of care.

10. *Continuity of Treatment.* The provider and purchaser should arrange programs which emphasize continuity of treatment, and should avoid policies which interfere with such continuity.

Some communication disorders require long term treatment. Purchasers may have established policies for eligibility which require extensive review and re-determination of eligibility on a frequently recurring basis. Such policies may tend to interrupt treatment for the child. A policy for periodic review by the speech pathologist/audiologist consultant to determine the appropriateness of continuing treatment would be advisable.

Similarly, a provider may have treatment designed to complement a training program (e.g., a schedule formulated by quarters or semesters without appropriate safeguards to ensure maximum continuity of care). Such policies, regardless of importance to the provider), reduce the value of treatment. Any long term treatment plan should ensure that the quality of services is maintained as the responsibility for the child's care shifts from one agency to another, or from one discipline to another within an agency.

11. *Basis for Fees.* Fees for service should be based on all relevant factors, including the time involved, the level of training and experience required, overhead costs for special equipment and facilities, and the requirements for reporting and followup.

A relative value scale may be used to determine the value of a given unit of service. The dollar value attached to each unit of service should be determined by taking into account the above factors and including known deviations above or below average health care costs that may exist in a given community or geographical area.

Fees for service, of whatever nature, should take into account administrative and other costs that contribute to program stability and quality. Thus a higher dollar value might be warranted for a service provided through a well-established, accredited program utilizing adequate supportive and administrative staff, and assuring continuity of service and maintenance of established standards of care.

12. *Periodic Review.* Periodic review of standards, services, and fees should be conducted.

Periodic review can be conducted most appropriately by a board composed of speech pathologists and audiologists. In instances where costs appear to be excessive, this peer review board may be asked to review cost analysis data and to recommend appropriate fees and procedures to the purchaser. Where cost analysis is required, the purchaser should specify the items to be included in the analysis.

13. *Statement of Prognosis.* Diagnostic and/or treatment plans for the child with a communicative disorder should include a statement by the provider relative to prognosis and estimated period of treatment.

Such a statement, which is understood to be tentative and subject to later modification, will enable the purchaser to estimate cost benefits more realistically.

14. *Prosthetic Devices.* Determination of probable benefits of a hearing aid or aids, and selection or recommendation of an appropriate aid, should be the responsibility of the audiologist, using standard testing procedures in an adequate test environment.

The selection and purchase of a hearing aid does not constitute by itself a complete program of treatment. The purchaser should be responsible for ensuring that post-fitting reassessment and treatment are provided. If the hearing aid is furnished by a hearing-aid dealer, the cost of the aid should include the customary services normally provided by such a dealer.

Guidelines for the Procurement of Hearing Aids for Hearing-Impaired Children

1. *Planning.* An effective and efficient hearing-aid procurement system requires a plan which is related to a total hearing conservation program.

To be effective, provision of a hearing aid for a child must be part of, or coordinated with, an overall program for identification, diagnosis, and eval-

uation, and both medical and non-medical treatment. Planning should also consider:

a. Specific procedures regulating the procurement of services and equipment related to health care.

b. The availability and accessibility of facilities which provide the necessary service.

c. Laws of the state which regulate the selection and sale of hearing aids.

d. The need that exists for hearing aids among the population to be served.

e. Resources available through private and public agencies.

2. *Eligibility.* The procurement plan should ensure that no child who needs a hearing aid is denied this service.

A basic principle is that all children should have an opportunity to receive a hearing aid as a health service, social service, or educational service. Further, provision of an aid should be at the earliest possible age. Standards and methods for determination of eligibility should comply with the rights of individuals under the United States Constitution, the Civil Rights Act of 1964, and all other relevant provisions of federal and state laws.

3. *Purchasing Plan.* The purchasing plan should provide a hearing aid and related services of appropriate quality at a reasonable cost with a minimum of delay.

Hearing aids can be purchased under three basic plans: purchase on the open market, a negotiated contract system, and a bid system. Regardless of the plan adopted for purchasing the aid, provisions must be made (a) to ensure that a range of hearing-aid models is approved which will meet the individual needs of children, and (b) to ensure that the purchasing plan is relevant to the changing technology in the manufacturing of hearing aids.

The contracted unit price should include the cost of the basic instrument and necessary parts and accessories which make the hearing aid immediately operable, including necessary tubing, cords, connectors, couplers, receiver(s), carrier, a reasonable supply of batteries, a telephone pick-up, and similar items. The basic instrument including accessories and assembly should be warranted for at least twelve months.

Ordinarily only those hearing aids approved for purchase should be used in hearing-aid evaluations and ultimately recommended. In certain instances, however, the recommendation may be made that the agency purchase an aid not on an approved list, if such aid has unique characteristics which enhance the degree of aural rehabilitation.

Reasonable costs should be allowed, either directly or as part of the total cost of the aid, for essential services provided prior to and after the delivery of a hearing aid. Such activities include hearing assessment, making earmold impressions, instruction and counseling in the use of the aid, making minor adjustments to the aid, home services if necessary, responsibilities involved in the execution of the terms of the warranty, and compensation for use of an aid on a trial or temporary basis. Purchase of hearing-aid earmolds, batteries, accessories, and repairs may be included in the above purchase plans. Separate plans may be developed to meet special requirements.

4. *Hearing-Aid Assessment.* A system should be established for assessing the performance characteristics of the aids to be selected.

Criteria related to the purchasing of hearing aids should be developed and reviewed annually to ensure that quality products are obtained and that an appropriate selection of aids is available. Consultation and technical advice should be sought at least annually from the field of audiology.

The data on hearing-aid performance published annually by the Veterans Administration is public information and should be employed where feasible. In addition to this information, clinical audiologists may be aware of instruments not evaluated by the Veterans Administration which may be of special value in serving children with specific types of hearing impairments. Samples of these aids should be measured and their performance evaluated to ascertain their usefulness.

A hearing-aid assessment system may be developed by contract with a speech pathology and audiology center or other facilities especially equipped and experienced in this activity.

5. *Hearing-Aid Repair and Replacement.* The procurement plan must provide for effective repair services and replacement of the instrument when indicated.

Hearing aids are delicate instruments, prone to breakdown. Periodic examination of the aid should be made to identify substandard performance, and repairs should be effected immediately. Hearing-aid repairs may be provided by the manufacturer, the hearing-aid dealer, by a company specializing in hearing-aid repairs, or by a technician directly employed by the agency or a contracting organization. Contracts for hearing-aid repair should permit reasonable charges for complete reconditioning of the instrument, for repair or replacement of defective parts outside the warranty, for handling and mailing costs, and for other usual and necessary services.

6. *Delivery System.* The delivery system should include provision for monitoring the program by a specialist in audiology and/or otology, and should ensure that the hearing aid is appropriate for the child and procured in accordance with professional standards.

The procedure should include a plan for authorizing speech pathology and audiology centers and dealers to perform specific services related to children with hearing impairments. Speech pathology and audiology centers authorized to provide hearing aids and hearing-aid services should meet the standards established by the Professional Services Board of the American Speech and Hearing Association. A dealer authorized to provide hearing aids and hearing-aid services should meet the standards established by the National Hearing Aid Society.

The child may be sent to an authorized hearing-aid dealer, with prior authorization from the agency for purchase of the aid. The dealer issues the hearing aid, provides necessary follow-up services, and bills the agency in accordance with a continuing contract or agreement specifying exact services to be provided and costs involved. The child may receive this aid from a center which stocks selected hearing aids purchased and maintained by the agency. A purchase agreement may be negotiated directly with hearing-aid manufacturers or distributors. Aids from this stock may be distributed through any of the following systems:

a. Contracts may be negotiated with existing speech pathology and audiology centers to issue the aid and provide necessary follow-up services. The system has the advantage of distribution occurring under the supervision of a professional audiologist.

b. The agency may establish and staff with state employees a direct service center. Such centers may include use of a mobile unit, or the agency's existing facilities such as health centers, clinics in schools for the deaf, or similar facilities. Designated employees at such centers issue the aid and provide necessary follow-up services.

c. The agency may develop agreements with other agencies for joint purchasing and distribution practices, along the lines suggested above. Such agreements may be interstate in nature, whenever indicated by geographical or other factors.

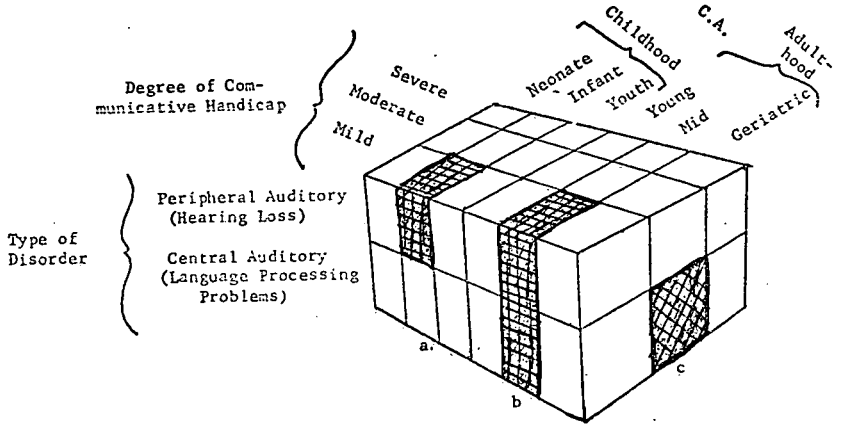
A combination of the above systems may be developed to meet existing needs within a given state.

THE AUDIOLOGIST: RESPONSIBILITIES IN THE HABILITATION OF THE AUDITORILY HANDICAPPED

Audiologists provide and coordinate services to the auditorily handicapped which include detection of the problem and management of any existing communicative handicaps. Auditorily handicapped individuals may have central auditory dysfunction, a peripheral hearing deficit, or both. The audiologist should be prepared to deal with problems in communication stemming from dysfunction of any part of the auditory system. These auditory problems may occur at any age level. The term *auditorily handicapped* is used here to refer to individuals in the age range neonate to geriatric with auditory disabilities of various degrees.

Audiologists may assume a variety of roles in the fulfillment of their professional responsibilities and interests as they provide the variety of audiologic habilitative procedures that may be required in resolving the client's problem or combination of problems. Complex conditions associated with type of disorder and degree of handicap can occur at any chronological age as illustrated in Figure 1. Shaded area *a* represents an infant with a mild peripheral loss.

Shaded area *b* represents a middle-aged adult who has a mild auditory problem that is both peripheral and central in nature. Shaded area *c* represents a geriatric individual with a moderate central auditory problem.



Audiologic habilitation is designed to assist individuals with auditory disabilities to realize their optimal potential in communication regardless of the person's age or his age at the onset of the disability. Audiologic habilitation for adults and children has many components. Among them are: evaluation of the spectra of peripheral and central auditory disorders, development or remediation of communicative skills through training, use of devices to increase sensory input when indicated, guidance and counseling in terms of the auditory problem, re-evaluation of auditory function, and assessment of the effectiveness of the habilitative procedures. Selection of components for the habilitative process depends upon the needs, and goals of the individual with the auditory problem. The term *audiologic habilitation* has replaced the traditional term *aural rehabilitation* which suggested a restricted program of auditory training and speech reading. Audiologic habilitation is a comprehensive term including developmental as well as restorative procedures in auditory language processing. It should be emphasized that audiologic habilitation is a non-medical service which is coordinated with medical treatment.

The initial step in the audiologic habilitation process is an *audiologic assessment* which must not be restricted to differential evaluation of auditory function for the purpose of medical diagnosis; but should include: 1) assessment of auditory sensitivity and dynamic range; 2) assessment of listening behavior including descriptions of auditory attention, auditory awareness, speech perception in quiet and in the presence of completing messages, perception of connected speech, determination of the temporal capacities for speech comprehension, auditory closure, sequencing, memory span and retrieval, and definition of the effective distance for auditory reception; 3) evaluation of phonologic, morphologic, syntactic, and semantic language abilities; and 4) gathering of functional evidence related to the anatomic site of pathology.

The interpretation of the findings on the audiologic assessment leads to a *comprehensive plan for subsequent habilitative procedures.* The development and implementation of this habilitation plan is the responsibility of the audiologist who may provide direct service or use other community resources. Audiologists along with other associated professionals share responsibility to bring about the personal, social, and vocational adjustment of individuals with auditory disabilities.

The development of a comprehensive plan of audiologic habilitation is a crucial step in the habilitative process. The plan should be designed to develop and maintain functional language skills. It may include any or all of these components: 1) selection of an amplification system to make available as much undistorted sensory information as possible; 2) development, remediation, or conservation of receptive and expressive language abilities; 3) counseling for client and family; 4) continuing re-evaluation of auditory function; and 5) assessment of the habilitative procedures in terms of their effectiveness.

Providing more efficient speech reception for the individual with a peripheral sensorineural impairment is a fundamental responsibility of audiologists. The *hearing aid* is a critical tool in habilitation. Indeed the capability of the recommended hearing aid to provide the optimal acoustic signals needed determines and limits other aspects of the habilitative process. After all possible restoration of auditory function is achieved, the concurrent use of such sensory channels as vision and touch should be considered. The normal development and use of language is dependent upon the reception of acoustical information. Speech is primarily an auditory phenomenon. For this reason there can be no compromise with excellence in the selection of the hearing aid when one is needed. The goal must be optimal auditory functioning. To be satisfied with less is to force the hearing-impaired person to rely on sensory channels not designed for the reception of speech.

Other aspects of the habilitative process, such as counseling, speech reading, auditory training, and speech and language training are often rendered ineffective when professional responsibilities concerning hearing aids are relinquished. Moreover, the selection and effective use of group amplifying systems for children in classrooms require audiologic knowledge and supervision, which should be considered primary duties of the audiologist.

The importance of optimal amplification to the audiologic habilitative process requires that audiologists assume the major responsibility for the selection of their client's hearing aid. The selection of an appropriate aid requires extensive knowledge of the performance characteristics of hearing aids, combined with information about the particular auditory parameters necessary for maximum utilization of each client's residual hearing. In addition, professional skills are needed to effect positive changes in human attitudes and behavior. Clearly such knowledge and skill should lie within the expertise of the professional audiologist. Once an amplification device has been provided for a client, it must be maintained in an optimally functioning condition. The audiologist's responsibility must include regular follow-up evaluation of the amplification unit and the client's adjustment to it.

Development, remediation, and conservation of the receptive language abilities should be programmed according to the client's needs. The habilitative program may include: 1) development of discrimination, recognition, and retention of linguistic and nonlinguistic sounds; 2) association of auditory information with other sensory information, particularly visual; and 3) training for the most effective use of amplified sound under various conditions.

Training in development, remediation, and conservation of expressive language abilities may include attention to: voice quality; prosody; phonology; morphology; syntax; and semantics. The development or maintenance of acceptable expressive abilities is contingent upon meaningful sensory input and a feedback system. When there is a critical deficit in auditory reception, auditory input, and auditory feedback, increased use of other sensory modalities is essential.

An organized program of *counseling* is an important and integral aspect of the total audiologic habilitation program. Objectives of counseling for the individual with an auditory disability include: 1) enhancement of the individual's welfare; 2) assistance in the resolution of pertinent problems; 3) stimulation and motivation to achieve; and 4) improvement of self-concepts and social relationships. It is evident that the degree of direct involvement of the audiologist in individual client and family counseling is dependent upon his particular education and professional skills. Nevertheless, he has the professional responsibility to help the client obtain needed counseling through direct or referral sources.

Keeping the client and the client's family informed is an important responsibility of the audiologist. Useful information should be provided about: 1) hearing; 2) the hearing mechanism; 3) the client's hearing loss; 4) the use of amplification; 5) economic considerations; 6) referral procedures for appropriate public assistance or community programs; and 7) appropriate placement in educational settings and participation in vocational rehabilitation programs.

Auditory function should be re-evaluated regularly since changes may occur which would suggest modification of the audiologic habilitative plan. Provision for surveillance of auditory function with and without amplification should be scheduled at specific time intervals and at completion of specific units of the habilitation plan. In addition, evaluation of auditory function may be made any time a change is suspected.

Assessment of the effectiveness of remediation techniques should be planned and implemented at appropriate times. Modification of habilitative approaches are dependent upon knowledge gained from careful evaluation of procedures used.

SUMMARY

It is the position of the American Speech and Hearing Association that audiologic habilitation is a complex process designed to assist individuals with auditory disabilities in realizing their optimal potential in communication, social adjustment, and vocational placement. It involves assessment and periodic re-assessment of auditory function, formulation of appropriate remedial plans, implementation of remediation procedures, evaluation of results obtained through audiologic habilitative procedures, and development of more effective remedial approaches.

Audiologic habilitation is the responsibility of the audiologist in cooperation with other professionals who work with the auditorily handicapped. Others who may share a professional role in the audiologic habilitative process are physicians, teachers of the deaf, speech pathologists, counselors, educators, and psychologists. The cooperative role of audiology with these other professionals is recognized and mutual responsibilities in the interest of the client are accepted.

NOTE: Prepared by the Committee on Rehabilitative Audiology, August, 1973.

ITEM 42. LETTER FROM NICHOLAS GEORGESCU-ROEGEN, PROFESSOR OF ECONOMICS, VANDERBILT UNIVERSITY, NASHVILLE, TENN., TO SENATOR FRANK CHURCH, DATED DECEMBER 7, 1973

DEAR SENATOR CHURCH: Some recent literature distributed by the Retired Professional Action Group and related to the problem of hearing aids prompts me to write to you hoping that what I have to say on this problem may be useful to you as the Chairman of the Subcommittee on Consumer Interests of the Elderly as well as to the other members of that Subcommittee. I think that what I have to say is relevant because of the following reasons:

1. I have been wearing hearing aids for the last seven years. Such a long struggle with my infirmity has taught me certain facts, of which even the ear specialists do not seem to be aware.

2. Being an economist, I have been able, through my experience as a buyer of hearing aids, to analyze the basis of the present monopolistic practices of the manufacturers of such aids.

3. As a beneficiary of Medicare (I am older than 65), I find that the present rules for compensation discriminate against the hard-of-hearing. For example, because I have a cardiac insufficiency my physician prescribed a portable oxygen apparatus, whose cost was covered by Medicare according to the prevailing rules. But the cost of my hearing aids or of the batteries I use continously are not accepted as valid medical expenses. I cannot see the reason why the expenses for instruments called for by a heart ailment, a leg impairment, etc., are covered by Medicare but those for instruments called for by an ear deficiency are not.

The four points I wish to make are the following:

A. The reasons why the hearing aid industry has been able to maintain a strongly monopolistic structure of the market are grounded in some characteristics of the loss of hearing. Without understanding the relationship between these characteristics and the existence of monopolistic practices, no efficient measure can be taken against these practices.

The first fact concerning the loss of hearing termed "nerve loss" is that at present such a loss can be neither eliminated by surgery nor corrected by a hearing aid in the way that eyeglasses can correct near- or farsightedness, or astigmatism. (Since middle ear defects, generally, are operable, they have little relation to the issue of hearing aids.) *A hearing aid can help the person with nerve loss only to a limited degree;* this is because the main difficulties of such a person are not only the loss of ability to hear low sounds (i. e., volume deficiency) but also the difficulty of discrimination, i. e., the difficulty of distinguishing between the sounds "p" and "b" or between the sounds "c" and "g". Anyone who has a nerve loss must be convinced of the fact that at present there is no hearing aid to correct adequately that infirmity. Indeed, how can an exterior apparatus correct the lack of discrimination of the aural nerve (or of whatever causes us to hear)? Actually, any hearing aid renders the sound with immense distortion, a fact that aggravates the plight of the aid wearer. Naturally, when even a voluminous apparatus cannot eliminate distortion, how can a hearing aid packed into less than one cubic inch reproduce sound with high fidelity?

For him who has a nerve loss there is only one solution: to learn how to understand distorted sound (such as that of a poor loudspeaker in some of our airports). It can be done; I have done it myself. But it takes time and patience. The false hope that one may find a hearing aid that will reestablish his hearing will not only work against patience and hard trying, but it will also make the hard-of-hearing *go from dealer to dealer in search of his aural salvation,* instead of going through the hard job of learning to live with a hearing aid. Numerous people possess several aids and refuse to wear them because "the aid is not helping me to hear."

It is on this false hope of the hard-of-hearing that the industry bases its monopolistic practices. (I have learned my lesson after spending more than $1,800 on hearing aids, only two of which are adequate for my own type of frequency sound deficiencies.)

It is imperative, therefore, that the medical profession, the qualified audiologists, and even some public institutions such as the AMA and HEW should tell those suffering from nerve loss that such a loss cannot be restored by any hearing aid. The dealers also should be obliged to have such a statement included conspicuously in their sale literature as well as in their ads. The statement should be displayed in large letters in every office selling hearing aids—in speech and hearing clinics, too. We have done something similar for cigarettes. Why not also for hearing aids?

B. One must not fall into the other extreme and believe that because no hearing aid can restore his hearing, any hearing aid is useless. A hearing aid does help provided that it is of the type adapted to a person's particular type of hearing loss. But in finding the aid that could help one best, a person is beset with several difficulties, which again help the manufacturers to maintain a monopolistic practice.

As a rule, the prospective buyer has no other practical chance than to decide on a hearing aid only after having tried it on in the office, or rather the examination room of the retailer. This point is further aggravated by two systematic factors. First, the examination room is ordinarily set up so that it has very good accoustics. Second, the sellers themselves often have a phonogenic voice, the voice of a baritone pitch which is understood best by almost everyone. They generally are also trained to have excellent diction. As a result, any customer is impressed by the excellence of the aids tried on in these circumstances.

However, to know which of several aids is doing the best job for a certain person, that person must therefore be able to try them on, one after another, repeatedly, and in various conditions for a few days. To prevent the hard-of-hearing from making such a comparative test, the manufacturers force the dealers to sell only one brand. Some dealers even do not allow the customer to try an aid for one day or two. But even if all did, it is not easy for a person to obtain "on trial" hearing aids from several agents *at the same time.* The case of automobile dealers who ordinarily sell only one make of cars—constitutes no defense at all for the hearing aid industry. One compares cars mainly on objective characteristics visible to all; hearing aids can be properly compared only *subjectively,* by the person who tries them on.

Because aural memory is probably the weakest of all, it is impossible for anyone to compare the hearing aids that have been tried on even at a distance of more than a couple of hours (unless one of the aids is directly unfit). Because a hearing aid may help in one situation but not in another, a hearing aid must also be tried on in various situations—large rooms, crowded groups, male voices, female voices, etc.

There is also a third factor. Practically any hearing aid that is tried on for the first time "*sounds better*" than that currently used by the customer. The reason is that each hearing aid has its own pattern of reproducing frequencies. Changing aids causes one to hear frequencies which he heard very poorly with his old aid. He thus gets the impression that he hears better with the new instrument. But this impression is only temporary, for the new aid muffles other frequencies. One thus buys the "impressively efficient aid," only to discover a few hours later that the aid does not perform as he judged it in the shop. Most people will try another dealer, and another, and another.

The result is that the industry sells more hearing aids than the population of the hard-of-hearing needs. To achieve this, the manufacturers must maintain the conditions mentioned above: One dealer, one make. Naturally, since any dealer now sells fewer hearing aids than he would if he were to sell several makes, the mark-up must necessarily be substantial for him to stay in business. Those who

profit are the manufacturers, not the dealers. *There obviously is a tremendous waste (misallocation of resources): more hearing aids are produced than necessary, and there are more dealers than necessary.*

To put an end to this situation, there seems to be no other solution than to license the dealers and to require each licensed dealer to effectively offer for sale at least, say, three different makes. (Whether three is the right number is a technical question. Customers who would like to try several aids at home for comparison may be charged a reasonable rental fee, to be waived in case of purchase.)

C. The audiologists of the accredited speech-and-hearing clinics—however useful their services may be in other respects—also cause those who have a nerve loss to "pay through their ears." The fees for a hearing test are exorbitant and the tests themselves complicated beyond reason. The only useful thing such a test can show is the degree of loss for some basic frequencies and whether the difficulty comes from the nerve or from the middle ear. This information requires only a very simple test. All other data revealed by the elaborate test (as now administered) have no relevance for the choice of a proper hearing aid. The point one should bear in mind is that a hearing test is in no way analogous to the eye examination by an oculist or an optometrist. The latter test leads to a definite prescription, the former only to a broad classification of the infirmity.

The audiologists of the accredited clinics offer their personal services in fitting the person with a hearing aid. This implies no more than trying on that person several hearing aids in various situations. Today, audiologists charge for this trial-and-error fitting as much as $100. But such an operation could be performed by almost any person, if the lilensed dealers were required to handle several makes. One should seek a way to stop the present tendency of the audiologists to amplify their services without any effective need.

D. Expenses for hearing aids should be covered by Medicare. To avoid having people buy one hearing aid after another in search of the "perfect" one, only the expenses of a hearing aid (eventually two, if one in each ear is needed) during the usual average life of a hearing aid (about four years) should be covered. The necessity of the hearing aid(s) should be confirmed by a physician or an accredited speech-and-hearing clinic. Repairs as well as the cost of batteries should also be covered at some fixed maximum rate.

Sincerely yours,

NICHOLAS GEORGESCU-ROEGEN,
Distinguished Professor of Economics.

ITEM 43. LETTER AND ENCLOSURE FROM DAVID P. GOLDSTEIN, PH. D., PROFESSOR OF AUDIOLOGY, DIRECTOR, HEARING CLINIC, PURDUE UNIVERSITY, WEST LAFAYETTE, IND., TO SENATOR FRANK CHURCH, DATED NOVEMBER 23, 1973

DEAR SENATOR CHURCH: While on Sabbatical leave in England recently, I devoted part of my time to learning about the hearing aid part of the British National Health Service. I gathered similar information on the French program.

Although I missed the hearings you conducted concerning hearing aid programs for the elderly, it has been suggested that some of my researched material might be of interest to you. Enclosed is a manuscript prepared on the subject. I hope it can be of some use in your deliberations.

Any comments from you or your staff would be most welcome. Should there be further specific inforination in this area that you are seeking, please do tell me. I am currently pursuing means of returning to Europe to finish this job in late spring 1974, and would be happy to try to track down points of concern to you.

Yours truly,

DAVID P. GOLDSTEIN, Ph. D..
Professor of Audiology, Director, Hearing Clinic.

Enclosure.

MEDRESCO: THE HEARING AID PROGRAM UNDER THE BRITISH NATIONAL HEALTH SERVICE

(By David P. Goldstein, Ph. D., Department of Audiology and Speech Sciences, Purdue University, West Lafayette, Ind.)

Historical Background

Cooperative medical insurance societies have existed in Britain as early as the nineteenth century. Groups of individuals banded together in a cooperative effort in order that they might afford the cost of medical care. The need for a national health plan to take over this function was long recognized as desirable and was supported by both the Conservative and Labour Parties. Even during the dark days of World War II, during which time the Conservative Party was in power, development of a plan to implement such a program went forward with the cooperation of all political groups. National health legislation was enacted at the end of the war when the Labour Party was in power and went into full effect in 1948.

In 1947 the Medical Research Council of Great Britain issued Special Report Series No. 261, entitled *Hearing Aids and Audiometers*. Like the Harvard Report of the same period, it concluded that through the use of optimal design characteristics one type of hearing aid could meet the needs of most hearing impaired people. Under National Health Service, the Department of Health and Social Security translated these recommendations into the manufacture of one standard hearing aid to be issued free to all deaf and hard of hearing individuals. In this way the Medresco hearing aid, named after the *Med*ical *Res*earch *Co*uncil, was born and the Medresco program came to be known throughout the world. It was a singularly imaginative and innovative program at the time it was launched.

The Medresco is a body aid. While maintaining the one aid philosophy in principle, several variations in its characteristics gradually became available. Today it can be obtained in maximum power output configurations ranging from 110 dB to 132 dB. Maximum gain can be varied from as low as 42 dB to as high as 60 dB. A bone conduction receiver version is available and some frequency response shaping through use of a tone control switch also can be obtained. The one aid with these options has been thought to meet the individual needs of most National Health Service patients.

The Medresco service is totally free. All aids, molds, batteries, repairs, replacements, or service are supplied on prescription or demand as is appropriate to the case. No other program in the National Health Service involving a prosthetic device enjoys this total freedom from cost to the recipient. Even prescription drugs carry a minimal charge.

Method of Manufacture

The English telephone and postal system are two branches of the same government-owned communication network. In the early days of the Medresco program the government telephone engineers, in consultation with physicists and otolaryngologists, were asked to develop the technical specifications for the Medresco aid. The aids were then bought from English hearing aid manufacturers who bid on contracts let by the post office.

After about 10 years a new scheme was devised to substantially reduce the cost of the aids to the government. The post office, already a large volume purchaser of high quality electronic equipment, was asked to buy the hearing aid components, and supply them to private British companies who would assemble them into the Medresco aid. This system has permitted the government to provide hearing aids estimated to cost them well under $25.00.

This scheme, however, was not without problems. Since the closest possible tolerances were demanded by the post office in its purchase of components, it was rationalized that this would naturally lead to the production of a quality aid. Therefore, the finished aids assembled by the subcontractor were *not* checked

for their electroacoustic characteristics, or even their functional integrity. For many years, users and issuing centers complained about the poor quality of the Medresco aids produced in this manner. Finally, a system for evaluating the finished product was adopted and significant improvements became evident. Even with this additional cost of quality control, however, the $25.00 figure cited above is still considered to be a rather high estimate of what the aid is actually costing the government.

Hearing Aid Dealers

With the support of otolaryngologists, engineers, and physicists the limited-variety-of-aid philosophy remained in force from 1948 until July, 1973. During this period when enormous gains in hearing aid type and variety were being made available to hearing impaired people throughout the world, the one-aid Medresco philosophy created a void in the English hearing aid market. This void was rapidly filled by aggressive private hearing aid dealer industry. While they prospered by providing the English market with the variety of amplification developments being introduced by hearing aid manufacturers of other countries, the English hearing aid manufacturing industry decreased in size and significance. One major dealer described it to me as "our cottage industry."

There are approximately 850 hearing aid dealers in the British Isles. Their growth has been accompanied by problems not unknown to us in the United States. A national hearing aid registration act was passed in 1968 to control some of these problems and to ensure a minimal level of competency among dealers. Estimates indicate that about half of the aids dispensed in England are privately sold by dealers. This statistic may be one way of evaluating the single body type aid philosophy of the Medresco program. In a country not known for its surplus of individual capital, at least half the users of hearing aids choose to buy one rather than get one free. In general, they buy a behind-the-ear or eyeglass aid, but in many instances it is a body type aid considered superior to the Medresco aid, or one having some special characteristic.

Retail Price of Hearing Aids

In contrast to the United States, it is rather easy to obtain information regarding the retail price of hearing aids in England. Many hearing aid dealers provide a printed price sheet to anyone who inquires, and the Royal National Institute for the Deaf prints a summary document listing the retail price of all hearing aids marketed in the British Isles. A review of these lists reveals that privately purchased hearing aids cost significantly less in England than here. For example, behind-the-ear aids range in price from about $60.00 to $225.00. One or two aids of American manufacture crash through the price ceiling at $260.00 to $300.00. This is much less than the often quoted average cost of $370.00 for behind-the-ear hearing aids sold in the United States. In fact, some American aids can be bought in England for less money than in Minnesota where they are manufactured. Since the English hearing aid dealer has as much, if not more, invested in audiometric facilities and provides just as complete an after fitting service as any American dealer, there must be some other factor keeping down the price. A number of people have suggested to me that free aids available through the Medresco program acts as a competitive force to the private dealer and provide healthy, economic constraints on his pricing policy.

Audiology and Medresco Clinics

Under the National Health Service, audiology clinics are located in hospitals throughout the British Isles. Audiological testing is performed and Medresco aids and supplies are dispensed there. Virtually no audiological rehabilitation activities are conducted, a shortcoming which is well recognized.

The physician is the only point of entree into this system. He has total legal control over all aspects of the operation. In practice the degree of control varies from clinic to clinic. The patient with a hearing problem must first see his family doctor who then refers him to a specialist if he feels it is indicated. The otolaryngologist then orders any audiological tests he feels are necessary and/or a hearing aid.

The clinics are staffed by audiology technicians. They are hired as trainees, usually at about the age of 16 to 18 years, with an education roughly comparable to that from an American high school. Trainees often receive their initial training from the person they are replacing, or sometimes from other technicians or

a supervisor. Many newly hired trainees leave the job after a short period either to get married or to earn more money as a hearing aid dealer. Those who finish one year of apprenticeship are then required to take a three-month course in audiology. This is followed by a written examination, nine more months of practice on the job, and a practical examination. If they successfully complete these requirements they are then eligible to move up the career ladder to become a senior technician.

Until very recently, the rate of pay for the audiology technician was below the scale provided for *any* other hospital technician; although their relative position has now been improved, their salary is still quite low. The audiology centers are extremely understaffed and overworked, and it is difficult for them to provide the full service they recognize as being necessary. Funds for personnel are difficult to obtain and when they are available it is difficult to hire people because of the low pay scale.

There are about 275 audiology technicians in the country who dispense about 65,000 hearing aids in a year, in addition to providing all of the other audiological services offered in their clinics. The 850 hearing aid dealers in the country sell about 75,000 hearing aids in a year. Under these circumstances it is not surprising to hear the dealers criticize the quality of service offered under the Medresco program. Lack of a variety of aids and limitations in the quality of service are often cited by otolaryngologists as the reason that they refer so many of their private patients to hearing aid dealers rather than have them take advantage of the free Medresco program.

Behind-the-Ear Aids

In the early 1960's, the Department of Health and Social Security began receiving requests to expand the variety of aids available under the Medresco program. Especially strong support developed for providing a behind-the-ear aid. This proposal was fought by the hearing aid industry who felt that expanding the program would cause a decrease in their business. Hearing aid dealers are frank to admit that only inadequacies in the Medresco program have permitted their growth.

By the end of the decade, pressure to provide a behind-the-ear aid was so great that it was decided to distribute one type on a trial basis to a limited number of school-age children. The aid had an external receiver lest it be too attractive and thus competitive to a private aid. Interestingly enough, the aid selected for trial was of foreign manufacture. Children using this aid on a trial basis were expected to return to use of the body type aid upon completion of their schooling. The trial program was considered highly successful, and in July, 1973, it was announced that behind-the-ear aids will be generally distributed under the Meresco program. It will take several years to catch up to the demand for this type of aid but the one-type-of-aid-for-all philosophy was broken. The latest word available indicates that the government will specify the characteristics of the aid(s) it wishes to purchase and will then solicit bids for the large numbers needed. This should be a welcome economic boost to the British hearing aid manufacturing industry.

The decision to issue ear level aids may be the most significant break-through in the history of the Medresco program. It means that even the Englishman with limited financial resources may have access to a new range and variety of hearing aids. Of course, the National Health Service will decide the innovations and amount of financial support which will be made available. These decisions, which will determine the strength and quality of the program, are often based on political as well as health service factors. Nevertheless, the door has been opened to what may be the beginning of a new era for the Medresco program.

The Future

In considering the Medresco program, one fairly new variable needs to be discussed. There are now three universities offering graduate degrees in audiology. They are located in Southampton, Manchester, and Salford. This is a new development for England.

There always has been a group of university-trained audiologists in Britain, but they have done their degrees in allied fields such as medicine, physics, psychology, and engineering. Included in this group are renowned individuals with international reputations for their work. Few of them, however, provide service

as part of the Medresco program. They are employed in diverse settings and some of them would even argue that audiology is not really an independent entity.

The new graduates with degrees in audiology will work in National Health Service hospitals and become a part of the audiology clinics. They will also play a role in the Medresco program, and are likely to bring a new orientation which will lead to program innovation and improvement in quality of service surrounding the dispensing of government hearing aids. The service may also broaden its scope to incorporate audiological rehabilitation including lip reading, auditory training, counseling, hearing aid orientation, and all the individual post-fitting hearing aid adjustments as needed by each patient. One experimental rehabilitation program is now being offered in Manchester by a hospital audiology clinic which has begun to include post-dispensing services to its patients on a programmed basis. Further impetus for movement in this direction is likely to develop as the university audiology programs incorporate rehabilitation into their curricula. Of all the ways in which the newly trained personnel with degrees in audiology may bring about changes in the Medresco programs, this may be the most significant.

ITEM 44. LETTER FROM M. J. MUSSER, M.D., CHIEF MEDICAL DIRECTOR, DEPARTMENT OF MEDICINE AND SURGERY, VETERANS ADMINISTRATION, WASHINGTON, D.C., TO SENATOR FRANK CHURCH

DEAR MR. CHAIRMAN: I am pleased to respond to your letter of December 11 to Donald G. Causey, Ph. D., Chief, Central Audiology and Speech Pathology Program, VA Hospital, Washington, D.C., and welcome the opportunity to provide you with details of the Veterans' Administration Hearing Aid Program. As the only agency routinely measuring the performance of hearing aids and attempting to assess their quality, we are sensitive to the public's demand for information and the need to remain in the forefront of research and development in this area.

The VA has been dispensing hearing aids on a large scale through its Audiology Clinics since 1955. At the present time there are 41 centers engaged in this activity. These centers report that 20% of their workload is devoted to hearing aid evaluations. Last year at these centers 11,074 hearing aids were dispensed. An additional 2,909 aids, obtained from the VA, were dispensed by military audiologists or by audiologists under contract to the Public Health Service.

The following questions are appropriate and timely: How does the VA obtain the instruments? How much do they cost the government? How are they dispensed and kept in good repair? What does it cost to dispense them? What are the problems?

First, how does the VA obtain the instruments? When this program was initiated, a group of consultants, appointed by the VA, developed a series of procedures for determining the electroacoustic performance and characteristics of hearing aids. Presently, through the auspices of the Committee on Prosthetics Research and Development of the National Research Council, a team of nationally recognized audiologists, physicists, and engineers meet periodically to refine the evaluation system. The National Academy of Sciences group reviews and upgrades procedures each year on the basis of new research and clinical findings. Each instrument is tested by the National Bureau of Standards under exacting conditions which have been specified in detail. The analysis of these data is performed by the Auditory Research Laboratory, Veterans Administration Hospital in Washington. The electroacoustic attributes of the hearing aids are assigned specific weightings based upon their importance, as determined currently by the hearing aid consultant group. The weighted scores for the several characteristics are then summed to obtain an Index of Characteristics score that represents the performance of each hearing aid model. This system provides the VA with quantitative information on which to base hearing aid purchases for its beneficiaries.

To provide sufficient information on which to judge the performance characteristics of the specific model being evaluated, three sample hearing aids of each model are required for these measurements. Manufacturers are limited to the submission of seven different models. Six of the seven models must be submitted to meet one of the following two categories: (a) Hearing aids adjusted to yield a 6 dB per octave rise or (b) hearing aids adjusted to yield minimum amplifica-

tion below 1000 Hz and maximum amplification above 1000 Hz. The seventh model may be submitted for informal trials and clinical evaluation, if the manufacturer believes it has advanced features or innovative improvements.

The results of this annual measurement are published both by the VA and the Government Printing Office and are available to the profession and the general public.

At the present time there are 26 aids on contract. These include 4 body aids, 10 over-the-ear aids, 3 eyeglass aids, 3 CROS aids, 3 BICROS aids. 1 bone conduction eyeglass aid, and 2 in-the-ear aids.

How much do these instruments cost the government? Last year hearing aids cost the government $1,463,177 for an average acquisition cost per instrument of $104.64. For the aids presently on contract, the price range is from $69.50 to $144 with the higher cost representing BICROS hearing aids. In order to recover the cost of the measurement by the National Bureau of Standards, which is $80,000, and to pay the cost of procurement, stock control, and shipping, which is $84,000, the VA Supply Service sells these instruments to each of the VA clinics or other government clinics with an added charge of 14%. Last year this raised the cost of an aid from the average acquisition cost of $104.64 to an average selling price of $119.29. The hearing aids decided upon are placed on contract, purchased in bulk quantities, and stored in a VA Supply Depot. Stock levels are maintained in individual clinics, and replaceemnts are made from the depot as the aids are issued.

How are the hearing aids dispensed and kept in good repair? The manufacturer's information regarding each hearing aid as well as the test information from the National Bureau of Standards is sent to each clinic for the guidance of the staff. The veteran who is eligible for treatment of a hearing disability applies for a hearing aid to the nearest VA center. He is given an appointment for an otological examination followed by an audiological examination. Upon determination of need for a hearing aid, a hearing aid evaluation is conducted. When the veteran is issued a particular hearing aid, he also receives a two weeks supply of batteries. The Prosthetic Distribution Center in Denver is notified by card that the veteran has been issued a hearing aid. The veteran immediately is sent a 90 day supply of batteries for that instrument. On the average, a 90-day supply of bateries cost $2.94. Parenthetically, let me add that last year the VA issued 1,672,287 batteries at a cost of $235,610. That's an average cost of 14 cents apiece. The veteran also receives from the Prosthetics Center a preaddressed mailing carton with instructions relating to packaging the hearing aid and sending it to the Center any time it requires repair services. Minor repairs and maintenance services are completed at the Center. The instrument needing factory repairs is sent to the manufacturer or other commercial repair facility. The repaired hearing aid is tested at the Center to determine if it is satisfactory, before being returned to the veteran. Last year 16,587 repairs were made by commercial resources at an average cost of $14.77 apiece. The Prosthetic Distribution Center made 10,927 small repairs or provided tubing, cords, or receivers, at an average cost of $1.83 apiece. For the hearing aids currently issued, there is a two year warrantly.

Eligible veterans are often provided spare hearing aids to utilize when their regular hearing aid is sent in for repairs, so that they will not be deprived of aided hearing. Ordinarily, the veteran who receives an initial hearing and may return after six months for a second instrument. The first one issued then becomes his spare aid. Studies have shown that the majority of veterans retain their hearing aids an average of five to seven years.

What does it cost to dispense hearing aids? A preliminary study has shown that it costs the VA $219 to issue a hearing aid. This includes the cost of the aid, professional and clerical services, the earmold, and overhead at the rate of 38%. This figure includes six hours of an audiologist's time spent in counseling, auditory training, and orientation with patients on a group basis.

What are some of the problems? While we try to provide the clinic with hearing aids that will satisfy the requirements of most patients, we recognize the limitations. To that end, the program provides for the procurement of instruments which have special features. The determination of which special aids are put on contract is made on the basis of clinical need and acceptability.

Even with the addition of special-feature hearing aids to clinic stocks, not all hearing-impaired veterans can be adequately aided from this stock for various reasons. Chiefly, the size of the clinic stock must be limited for practical considerations such as bookkeeping, storage room, instrument aging factors, main-

tenance of repair and replacement parts, etc. Therefore, the VA allows their audiologists two other avenues for obtaining the proper hearing aids for their patients. Upon request of the audiologist, many manufacturers agree to exchange or modify certain hearing aid models already on contract so that a particular frequency response or other characteristic may be obtained. Frequently, there is no charge for this service. If no instrument currently in a clinic's stock provides adequate improvement for a patient, other aids not on contract may be procured from dealers, tested on the patient, and purchased.

Of necessity, the VA hearing aid program has more flexibility than might be immediately apparent. We believe that any program which restricts all hearing aid selection to a relatively small group of instruments, or to a particular manufacturer, regardless of method of procurement, cannot hope to provide the quality of service to the hearing-impaired population which it deserves.

In order to guard against a static and sterile system, the VA funds research on hearing aids at Northwestern University and the University of Maryland where new clinical techniques and measurement methods are evaluated. The research, administrative, and clinical activities of the hearing aid program are coordinated and guided by Dr. G. Donald Causey. Dr. Causey maintains liaison with the Hearing Aid Industry Conference, the American Speech and Hearing Association, the American National Standards Institute, the Committee on Hearing, Bioacoustics, and Biomechanics and the Committee on Prosthetics Research and Development, both of the National Research Council. Please feel free to solicit his counsel or request from him further information regarding VA hearing and matters.

The opportunity to voice our enthusiasm over the hearing aid program is greatly appreciated.

Sincerely yours,

M. J. MUSSER, M.D.,
Chief Medical Director.

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