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**ABSTRACT** 

Presented are data on audiological examinations collected by the Annual Survey of Hearing Impaired Children and Youth for over 35,000 students enrolled in special educational programs for the hearing impaired during the 1969-70 school year. Statistics reported include age, sex, and hearing threshold levels (better ear averages) of the students; the audiometric standard used in testing; place conducting audiological examination; profession of examiner; and recency of examination. (Author/KW)



# ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

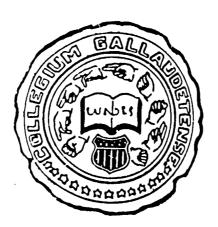
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## DATA FROM THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

# AUDIOLOGICAL EXAMINATIONS OF HEARING IMPAIRED STUDENTS

UNITED STATES: 1969-70

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Better ear averages, audiometric standard used in testing, profession of examiner, place conducting audiological examination and recency of examination for approximately 35,000 students enrolled in participating special educational programs for the hearing impaired during the 1969-70 school year.

OFFICE OF DEMOGRAPHIC STUDIES
GALLAUDET COLLEGE

Washington, D.C.

November, 1971



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We wish to express our appreciation to those who have continued to support and guide the efforts of the Annual Survey of Hearing Impaired Children and Youth. Our special thanks must be directed to the personnel of the participating programs who work so diligently to supply the information to the Survey. The names of these programs appear in Appendix IV.

We also would like to extend our gratitude to the members of our National Advisory Committee whose continued assistance and guidance have proved invaluable. The current members of the committee are listed below.

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Finally we wish to express our thanks to all the staff members of the Office of Demographic Studies. For this publication, we especially wish to acknowledge the contributions of Barbara McCarthy, Dorothea Bateman and Gail Davis.

Patricia Voneiff Augustine Gentile Washington, D. C. November, 1971



### **ABSTRACT**

This publication contains data on audiological examinations collected by the Annual Survey of Hearing Impaired Children and Youth for over 35,000 students enrolled in special educational programs for the hearing impaired during the 1969-70 school year. Given are statistics showing the age, sex and hearing threshold levels (better ear averages) of these students. Also reported are the audiometric standard used in testing, the place and profession of the person conducting the audiological examinations, and the recency of the examinations.

The data show that on students for whom these items were reported, about 50 percent had hearing threshold levels (better ear averages) of 85 decibels or higher; 84 percent were tested according to the ISO standard; 78 percent of the students were examined by either an audiologist or otologist; the examinations were conducted in a speech and hearing clinic or hospital and university for 46 percent of the students and in schools for the deaf for 34 percent of the students; 66 percent of the students had had an audiological examination within two years and 82 percent had had an examination within three years of the midpoint of the school year.

The Annual Survey of Hearing Impaired Children and Youth is conducted by the Office of Demographic Studies of Gallaudet College. The major portion of the funding for the project is provided by the Division of Research, Bureau of Education for the Handicapped, Department of Health, Education and Welfare.



# Audiological Examinations of Hearing Impaired Students United States, 1969-70 School Year

Patricia Voneiff

### INTRODUCTION

Reported in this publication are data on audiological examinations gathered by the Annual Survey of Hearing Impaired Children and Youth during the 1969-70 school year. These data are based on information obtained for over 35,000 hearing impaired students enrolled in special educational programs throughout the United States. Presented are statistics on the student's better ear average, audiometric standard used in testing, the place and profession of the person conducting the audiological examination and recency of the examination.

Although the audiological information contained in this report is presented in terms of better ear averages, the Survey Office collects data on the complete audiograms from which the averages were computed. Thus, more detailed information can be made available to researchers for more intensive

studies. A major policy of the Annual Survey program is to share the data it collects with researchers and other professionals interested in the hearing impaired population.

This publication is one of a series of reports that describe the characteristics of hearing impaired children enrolled in special educational programs. A list of previous publications appears on the inside back cover. A continuing program which began operation in May, 1968, the Annual Survey is committed to the collection and dissemination of information related to hearing impaired children and youth. The Survey, conducted by the Office of Demographic Studies of Gallaudet College, receives a major portion of its funding from the Division of Research, Bureau of Education for the Handicapped, Department of Health, Education, and Welfare. The balance of its funding is provided by Gallaudet College. Further details concerning the scope of activities and policies of the Annual Survey may be found in Appendix I.

<sup>1</sup> See Basic Data Form, Section V, Appendix II.

### **SOURCES OF THE DATA**

During the 1969-70 school year, all special educational programs serving the hearing impaired known to the Survey were invited to participate in the program. Of the 570 programs contacted, approximately 76 percent agreed to participate in the Survey for the 1969-70 school year. The enrollment of the participating programs (35,285) represented 80 percent of the estimated student enrollment of all programs contacted. Appendix IV contains a list of the educational programs that provided data for the 1969-70 school year.

Three survey forms were used to collect data during the 1969-70 school year. The two basic survey forms, one for children six years of age and over and one for children under six, are shown in Appendices II and III. The third form, an abbreviated version of the Basic Data Form (ACHIC-2), was used for students reported to the Survey during the 1968-69 school year. This form determined if the student was still enrolled in the program and allowed for updating the previous year's data. Any information obtained the previous year was not requested again.

All items on the Survey forms were selected on the basis of recommendations made by the National Advisory Committee to the Annual Survey.

### QUALIFICATIONS AND LIMITATIONS OF THE DATA

In order to accurately use and interpret these data, one should note carefully the qualifications and limitations of the data presented in this report.

An important factor to consider in interpreting any statistical data is the level of participation and the rate of non-reporting for particular variables. Records were obtained on approximately 80 percent of the students attending special educational programs for the hearing impaired known to the Survey. While it is believed that the data are representative for each of the major types of programs (residential schools, day schools and full-time special classes, and part-time programs such as itinerant services), the proportion of students included in the data of the Annual Survey is not equivalent for each type of program. The proportion ranges from approximately 85 percent of all students in residential schools to an estimated one-third of the students receiving parttime services.

Table A shows the rate of non-reporting for the particular variables presented in this report. In all

cases, the non-reporting seemed to be random and did not focus on any particular age or hearing threshold level group. In the few cases where the sex and age of a student were not submitted, these were determined through the use of other information contained on the form. Where this was not possible, direct correspondence with the reporting source took place. More specific comments about non-reporting rates for each variable are made in the discussion of the data which follows.

Also noted are the methods used to summarize, classify and code data. These comments also should be carefully reviewed.

The quality of data obtained in surveys is, of course, another important factor to consider in interpreting survey results. Although the Survey has not validated the reported audiological information by independent means, it is believed that these data are valid for general statistical purposes. This belief is based on the fact that for those reporting the information, almost 80 percent of the examinations were conducted by an audiologist or otologist, and that over 65 percent of the examinations were conducted within a 24 month period of the midpoint of the survey year (December, 1969).

TABLE A: Percentage of records for which data for selected items were not reported or were not usable: United States, 1969-70 school year

l tem	Percent of Records for Which Data Were Not Reported or Were Not Usable
Sex <sup>1</sup>	0.0
Age <sup>1</sup>	0.0
Better ear average <sup>2</sup>	25.3
Standard used for testing	20.5
Place of examination	10.4
Profession of examiner Recency of audiological	15.4
examination	14.4

<sup>&</sup>lt;sup>1</sup>Data for these items were edited.

<sup>&</sup>lt;sup>2</sup>Only 5 percent of the records did not report some audiological results.

### **DISCUSSION OF THE DATA**

Tables 1-6 which follow in a later section present detailed data on the audiological examinations of 35,285 students attending special educational programs for the hearing impaired. Some highlights, summary tables and additional qualifying aspects of these data are discussed here.

### **Hearing Threshold Levels**

Hearing threshold levels are presented here in terms of better ear averages which were determined by averaging the puretone thresholds for 500, 1000 and 2000 cycles per second in the better ear. Approximately 67 percent of the audiometric results were reported according to the ISO1 standard, while only 13 percent were reported according to the ASA<sup>2</sup> standard. For the purposes of this report, better ear averages based on the ASA standard were converted to the ISO standard by increasing the ASA average 10 decibels. Where the standard was not reported (20.5 percent), the better ear averages for these students have been treated as though obtained according to the ISO standard. (See Table B.) It should be noted that a better ear average could not be obtained on 8,930 (25.3 percent) of the students; however, only 5 percent of the forms contained no audiological results. The remaining 20 percent contained information but did not give results for one or more of the frequencies used to determine the better ear average.

TABLE B: Number and percentage distribution of students enrolled in participating special educational programs for the hearing impaired by audiometric standard used in testing: United States, 1969-70 school year

Standard Used in Testing	Number of Students	Percent
All Standards	35,285	100.0
ISO	23,457	66.5
ASA	4,587	13.0
Standard not reported	7,241	20.5

In the tables which follow, students for whom audiological data were submitted but for whom a better ear average could not be determined, will be classified under the category "Unable to Compute." Students for whom no audiological data were given are referred to as "Data Not Reported." In some tables this category is included with those in "Unable to Compute." In these instances, the combination of these two categories is referred to as "Data Not Available."

The data in detailed Table 1, indicate no significant difference between the hearing loss of males versus that of females. For each of the sexes, the largest number of students reported to the Survey

TABLE C: Number and percentage distribution of students enrolled in participating special educational programs for the hearing impaired by sex, according to hearing threshold levels: United States, 1969-70 school year

Better Ear Averages	Both	Sexes	Ma	les	Fem	ales	
in Decibels (ISO) <sup>1</sup>	Number of Students <sup>2</sup>	Percent	Number of Students <sup>2</sup>	Percent	Number of Students <sup>2</sup>	Percent	
All Hearing Levels	evels 26,355 100.0		14,343	100.0	12,012	100.0	
U <b>nde</b> r 45dB	3,205	12.2	1,807	12.6	1,398	11.6	
45 - 64dB	3,583	13.6	2,052	14.3	1,531	12.7	
65 - <b>84</b> dB	6,587 25.0		3,615 25.2		2,972	24.7	
85dB & above	12,980	49.3	6,869	47.9	6,111	50.9	

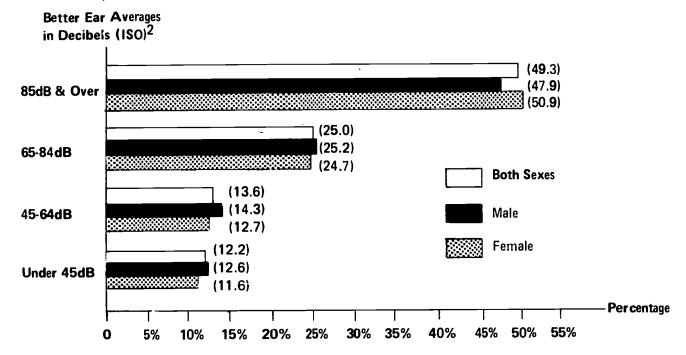
<sup>1</sup> Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

<sup>1</sup> International Organization for Standardization

<sup>&</sup>lt;sup>2</sup>American Standard Association

<sup>&</sup>lt;sup>2</sup>Excludes those students for whom a better ear average was not reported or could not be computed.

CHART 1: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by hearing threshold levels, 1 according to sex: United States, 1969-70 school year



<sup>1</sup> Excludes those students for whom a better ear average was not reported or could not be computed.

tended to fall in the more severe hearing loss categories. For example, Table C shows that approximately 50 percent of the students for whom this information was reported had better ear averages of 85 dB or higher, while almost 75 percent had a loss of 65 dB and above. (Also see Chart 1.)

Also shown in Table 1 are better ear averages

according to the age of the students. These data indicate that the percentage of students with a better ear average of 85 dB or greater increases with age for students six years of age and over. (See Table D.) This table also shows that data were not available for a much higher proportion of the children under six compared to children age six and over.

TABLE D: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by age, according to hearing threshold levels: United States, 1969-70 school year

Better Ear				Age			
Averages in Decibels (ISO) 1	Total Students	Under 3 Years	3-5 Years	6-9 Years	10-13 Years	14-17 Years	18 Years and Over
All Hearing Levels	100.0	100.0	100.0	100.0	<u>100.0</u>	100.0	100.0
Under 45dB	9.1	1.5	2.0	12.2	11.3	9.8	4.2
45 - 6 <b>4</b> dB	10.1	5.9	6.3	11.6	11.4	10.2	9.5
65-84dB	18.7	11.3	17.7	17.3	19.9	19.4	19.0
85dB & above	36.8	18.7	32.3	34.9	36.7	40.5	47.0
Data not available	25.3	62.5	41.6	23.9	20.8	20.1	20.3

<sup>&</sup>lt;sup>1</sup>Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

<sup>&</sup>lt;sup>2</sup>Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

### **Profession of Examiner**

The profession of the examiner testing the student was asked for all students reported to the Survey. This information was submitted on all but 5,453 or 15.4 percent of the students. Check boxes were supplied in answering this question for "audiologist," "otologist," "other M.D.," "audiometrist," "nurse" and "teacher." Where none of the above applied, a space to write in the profession of the examiner was available.

The profession of the person conducting the audiological examination was reported for 29,832 students. Of these, 22,191 or approximately 75 percent were tested by audiologists. The other most frequently reported professions were otologist, audiometrist, nurse and teacher. None of these, however, exceeded 5 percent of the records for which this item was reported. (See Table E.)

Table 2 shows the profession of the examiner that conducted the audiological examination by age and hearing threshold level of the students. Table F indicates that students reported to the Survey with losses of 45 dB or greater in the better ear were tested by audiologists or otologists in about 80 percent of the cases. However, for students with less than a 45 dB loss in the better ear, only about 57 percent were tested by audiologists or otologists, while approximately 30 percent were tested by school nurses.

TABLE E: Number and percentage distribution of students enrolled in participating special educational programs for the hearing impaired by profession of examiner: United States, 1969-70 school year

Profession of Examiner	Number of Students 1	Percent		
All Examiners	29,832	100.0		
Audiologist	22,191	74.4		
Oto logist	1,031	3.5		
Audiometrist	1,427	4.8		
Nurse	1,351	4.5		
Teacher	1,326	4.4		
Other	2,506	8.4		

<sup>&</sup>lt;sup>1</sup>Excludes 5,453 students for whom the profession of the examiner was not reported.

Table G summarizes by age the data in detailed Table 2. It excludes students for whom the profession of the person who conducted the audiological examination was not reported. These data show that an audiologist or otologist was reported as conducting

TABLE F: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by hearing threshold levels, according to profession of examiner: United States, 1969-70 school year

Better Ear			Prof	ession of Examir	ier		
Averages in Decibels (ISO) <sup>1</sup>	All Examiners <sup>2</sup>	Audiologist	Otologist	Audiometrist	Nurse	Teacher	Other
All Hearing Levels	100.0	74.4	3.5	4.8	4.5	4.4	8.4
Under 45d8	100.0	50.5	6.2	1.9	29.2	1.9	10.3
<b>45</b> - 6 <b>4</b> d8	100.0	74.3	4.3	5.2	4.5	3.3	8.4
65 - 84d8	100.0	76.5	3.1	5.8	1.8	5.2	7.6
<b>85dB &amp; ab</b> ove	100.0	79.9	2.1	4.8	1.2	5.5	6.5
Data not available	100.0	73.1	4.7	4.8	2.0	3.6	11.9

<sup>1</sup> Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

<sup>&</sup>lt;sup>2</sup>Excludes 5,453 students for whom the profession of the examiner was not reported.



TABLE G: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by age, according to profession of examiner: United States, 1969-70 school year

			F	rofession	of Exam	iner				
Age	All Exam- iners <sup>1</sup>	Audiol- ogist	Otolo- gist	Other M.D.	Audiom- etrist	Nurse	Teacher	School Prin- cipal	Speech Thera- pist	Other
All Ages	100.0	74.4	3.5	<u>1.1</u>	4.8	4.5	4.4	5	2.3	4.4
Under 3 years	100.0	96.5	1.4	_	_	_	1.0	-	.7	.3
3-5 years	100.0	89.3	2.9	.8	3.0	.6	1.3	•	.3	1.7
6-9 years	100.0	74.7	3.8	1.2	5.0	5.8	3.7	.4	1.4	4.0
10-13 years	100.0	70.6	3.7	1.3	4.9	5.6	5.4	.5	2.9	5.1
14-17 years	100.0	68.6	3.4	1.0	5.4	5.2	6.1	.9	3.8	5.7
18 years & over	100.0	69.5	2.9	1.3	6.6	3.4	5.2	1.0	3.8	6.3

<sup>\*</sup>Less than .05 percent.

TABLE H: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by profession of examiner, according to place of examination: United States, 1969-70 school year

					Place	of Exami	nation				
Profession of Examiner	All Places	Speech & Hearing Clinic	Hos- pital or Univer- sity	Health Depart- ment	Audiologist's Office	School for Deaf	Other School	Hearing Aid Co.	M.D.'s Private Office	Other	Data Not Re- ported
Ali Examiners <sup>1</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1 <u>00.0</u>	100.0
Audio:ogist	74.4	89.7	79.2	49.8	99.4	74.3	33.5	30.8	27.7	70.6	67.6
Otologist	3.5	2.5	4.6	2.7	.3	2.4	1.1	_	45.1	13.3	1.9
Other M.D.	1.1	.8	2.2	.4	-	.2	.3	_	24.3	3.4	2.0
Audiometrist	4.8	1.5	1.0	30.1	-	6.2	7.0	36.5	.7	2.1	6.9
Nurse	4.5	.3	.1	4.2	-	.6	32.7	9.6	1.0	2.4	10.9
Teacher	4.4	.7	.3	-	-	8.8	9.4	_	-	1.6	5.0
School Principal	.5		_		-	.3	3.2	-	-	_	.2
Speech Therapist	2.3	2.8	.1	4.1	.3	.1	7.2	_	.6	2.6	4.1
Other	4.4	1.7	12.4	8.7	_	7.1	5.6	23.1	.7	4.0	1.5

<sup>\*</sup>Less than .05 percent.

<sup>&</sup>lt;sup>1</sup>Excludes 5,453 students for whom the profession of the examiner was not reported.

<sup>&</sup>lt;sup>1</sup>Excludes 5,453 students for whom the profession of the examiner was not reported.

the examination proportionally more frequently for the younger students. For students under 3 years of age, an audiologist or otologist conducted the examination for almost 98 percent of the students; for students from 3-5 years of age this proportion was about 92 percent; for students 6-9 years of age it was about 79 percent; for students 10-13 years it was 74 percent; and for students 14 years of age and over it was about 72 percent.

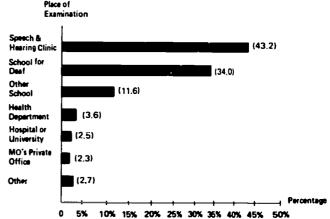
Detailed Table 3 shows the profession of the examiner according to the type of place in which the student was tested. A percentage distribution for this table is shown in text Table H. It may be seen that an audiologist or an otologist was testing most of the students reported as being seen in speech and hearing clinics, hospitals or universities, schools for the deaf and in audiologists' or M.D.s' private offices. Although members of these professions tested a large percentage of the students who obtained examinations in health departments, other schools and hearing aid companies, this percentage was proportionately lower than for the previously mentioned places.

### Place of Examination

Three types of facilities were reported as conducting the audiological examinations for the majority of the stradents. These were speech and hearing clinics, schools for the deaf and other schools. Additional types of facilities reported as the place of examination were hospitals or universities,

Where a speech and hearing clinic was located at a school for the deaf or hospital, the place of examination was coded as a speech and hearing clinic.

CHART 2: Percentage distribution<sup>1</sup> of students enrolled in participating special educational programs for the hearing impaired by place of examination: United States, 1969-70 school year



<sup>1</sup>Excludes 3,672 students for whom the place of examination was not reported.

health departments, audiologists' and M.D.s' private offices, and hearing aid companies. This information was not reported for 3,672 or 10.4 percent of the students. If those for whom this information was not reported are excluded, the number and percentage distribution would be as follows. Chart 2 also depicts this distribution.

Numbe	er Percent
Speech and Hearing Clinic 13,65	5 43.2
School for the Deaf10,75	3 34.0
Other School	2 11.6
Health Department	1 3.6
Hospital or University 80	1 2.5
M.D.'s Private Office 71	9 2.3
Other 85	2 2.7

TABLE 1: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by hearing threshold levels, according to place of examination: United States, 1969-70 school year

	1		•	Place of Ex	kamination	1		
Better Ear Averages in Decibels (ISO) <sup>1</sup>	All Places <sup>2</sup>	Speech & Hearing Clinic	Hospital or University	Health Depart- ment	School for Deaf	Other School	M.D.'s Private Office	Other
All Hearing Levels	100.0	43.2	2.5	<b>3</b> .6	34.0	11.6	2.3	2.7
Under 45dB	100.0	40.9	3.2	4.3	4.6	36.9	6.8	3.2
<b>45</b> - 64dB	100.0	54.2	4.2	4.4	16.5	14.1	2.3	4.1
65 · 84dB	100.0	46.0	2.6	3.8	33.2	9.7	1.8	2.9
85dB & above	100.0	37.3	1.5	2.9	<b>48</b> .0	7.3	.8	2.0
Data not availalbe	100.0	46.8	3.1	4.1	31.1	8.8	3.3	2.8

<sup>&</sup>lt;sup>1</sup>Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

<sup>&</sup>lt;sup>2</sup>Excludes 3,672 students for whom the place of examination was not reported.

TABLE J: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by age, according to place of examination: United States, 1969-70 school year

			-	Place of E	xa <b>m</b> ination	1		
Age	All Places <sup>1</sup>	Speech & Hearing Clinic	Hospital or University	Health Depart- ment	School for Deaf	Other School	M.D.'s Private Office	Other
All Ages	100.0	43.2	2.5	<u>3.6</u>	34.0	11.6	2.3	<u><b>2</b>.7</u>
Under 3 years	100.0	79.3	6.3	-	5.0	6.3	2.0	1.0
3-5 years	100.0	65.0	4.5	2.4	16.7	5.9	2.0	3.5
6-9 years	100.0	47.4	2.3	4.8	26.5	13.3	2.7	3.0
10-13 years	100.0	38.0	2.1	4.2	36.5	14.0	2.2	2.9
14-17 years	100.0	32.0	2.1	3.2	47.2	11.6	₹2.3	<b>1</b> .7
18 years & over	100.0	27.5	1.5	2.3	55.1	9.9	1.5	<b>2</b> .3

<sup>&</sup>lt;sup>1</sup>Excludes 3,672 students for whom the place of examination was not reported.

The places in which the audiological examinations were conducted according to the age and hearing threshold levels of the students are shown in Table 4. When better ear averages are shown in relation to the place conducting the audiological examination, it was found that the majority of students with losses of 45 dB or less in the better ear were tested in clinics and other schools. (See Table I.) As the severity of the loss increases, however, the majority of students were reported as being tested in clinics and schools for the deaf. This probably suggests the location of the more severely hard-of-hearing student in a school for deaf as opposed to a regular school providing special educational programs.

Table J summarizes the data presented in detailed Table 4 by age. For those students under 3 years of age, 79.3 percent were reported as being given their audiological examinations at speech and hearing clinics. In the 3-5 year category, 65 percent were tested in clinics. For students six years of age and over, however, the percentage of students tested at a clinic decreases and there is an increase in those reported as being tested in schools for the deaf and other schools.

### **Recency of Audiological Examination**

Tables 5 and 6 show the recency of the audiological examination according to the profession

TABLE K: Number and percentage distribution of students enrolled in participating special educational programs for the hearing impaired by recency of audio-

hearing impaired by recency of audiological examination: United States,

1969-70 school year

Recency of Audiological Examination	Number of Students <sup>1</sup>	Percent
Total	<u>30,185</u>	100.0
Under 1 year	10,447	34.6
1 year, less than 2 years	9,535	31.6
2 years, less than 3 years	4,878	16.2
3 years, less than 4 years	2,433	8.1
4 years, less than 5 years	1,287	4.3
5 years, less than 6 years	614	2.0
6 years & over	991	3.3

<sup>1</sup> Excludes 5,100 students for whom recency of examination was not reported.

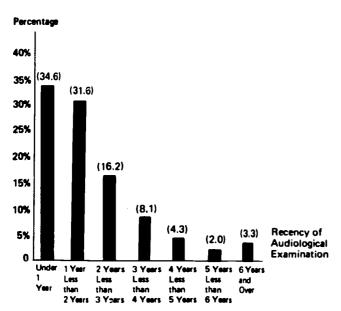
and place of the person conducting the examination. Recency of examination refers to the difference in time between the date of the audiological examination and December 31, 1969. For example, the recency of an examination given in October, 1968, is one year—3 months, and is counted in the "one year, less than two years" category.

As previously stated, this item was not reported for 5,100 students. If these students are excluded, the number and percentage distribution would be as indicated in Table K. Chart 3 also depicts this distribution.

As seen in this table, over 10,000 students (35 percent) had been tested within one year of December 31, 1969. Another 9,535 students (32 percent) were tested the previous year.

Tables L and M summarize the data presented in detailed Tables 5 and 6 respectively. These tables show that in any given year, a very high proportion of the students reported to the Survey had been tested by an audiologist or otologist. Furthermore, these data indicate that the largest percentage of the audiological examinations were consistently found to be conducted in either a speech and hearing clinic or a school for the deaf.

CHART 3: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired according to the recency of audiological examination: United States, 1969-70 school year



<sup>1</sup>Excludes 5,100 students for whom recency of the examination was not reported.

TABLE L: Percentage distribution of students enrolled in participators special educational programs for the hearing impaired by recency of audiological examination, according to profession of examiner: United States, 1969-70 school year

	Prof	ession of Ex	aminer
Recency of Audiological Examination	All Exam- iners 1	Audio- logist and Otolo- gist	All Other Exam- iners
Total	100.0	77.8	22.2
Under 1 year	100.0	75.9	24.1
1 year, less than 2 years	100.0	79.2	20.8
2 years, less than 3 years	100.0	79.1	20.9
3 years & over	100.0	79.7	20.3

<sup>1</sup> Excludes those students for whom the profession of the examiner was not reported,

TABLE M: Percentage distribution of students enrolled in participating special educational programs for the hearing impaired by recency of audiological examination, according to place of examination: United States, 1969-70 school year

		Plac	e of Examination	n	
Recency of Audiological Examination	All Places <sup>1</sup>	Speech and Hearing Clinic	School for Deaf	Other School	All Other Places
Total_	100.0	43.2	34.0	11.6	<u>11.1</u>
Under 1 year	100.0	45.5	25.2	17.2	12.1
1 year, less than 2 years	100.0	39.9	39.1	10.9	10.1
2 years, less than 3 years	100.0	42.4	39.2	6.9	11.6
3 years & over	100.0	47.7	35.0	6.9	10.3

<sup>&</sup>lt;sup>1</sup>Excludes students for whom the place of examination was not reported.

### SUMMARY

Data relative to the audiological examinations of 35,285 students reported to the Annual Survey for the 1969-70 school year have been presented. Specifically, this report focused on better ear averages, audiometric standard used in testing, place and profession of the person conducting the audiological examination and the recency of examination.

The methodology used to collect the data as well as its qualifications and highlights have been discussed. With respect to the major variables presented in this report, the results are as follows:

- 1. The largest percentage of students reported to the Survey fell into the more severe hearing loss categories. (i.e. For those students for whom a better ear average could be computed, almost 50 percent had a hearing loss of 85 dB or greater.) Also, this percentage gradually increased among the older age groups.
- 2. Of the students on whom the information was

- reported, almost 78 percent were tested by an audiologist or an otologist.
- 3. Speech and hearing clinics and schools for the deaf were reported as the place of examination for 77 percent of the students for whom this information was reported.
- 4. Excluding the 5,100 students on whom this item was not reported, almost 35 percent of the students had been given audiological examinations within one year of the midpoint of the school year (December, 1969). Another 32 percent had been tested within 2 years.

Studies toward the development of audiological profiles or the relationship of audiological data to other significant variables such as age at onset, cause of hearing loss and additional handicapping conditions all present interesting possibilities for further research. Although the Annual Survey will be doing some of these studies, the assistance of outside researchers is needed and encouraged.

### LIST OF DETAILED TABLES

- TABLE 1: Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Hearing Threshold Levels, According to Age and Sex: United States, 1969-70 School Year.
- TABLE 2: Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Age and Hearing Threshold Levels, According to Profession of Examiner: United States, 1969-70 School Year.
- TABLE 3: Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Profession of Examiner, According to Place of Examination: United States, 1969-70 School Year.
- TABLE 4: Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Age and Hearing Threshold Levels, According to Place of Examination: United States, 1969-70 School Year.
- TABLE 5: Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Recency of Audiological Examination, According to Profession of Examiner: United States, 1969-70 School Year.
- TABLE 6. Number of Students Enrolled in Participating Special Educational Programs for the Hearing Impaired by Recency of Audiological Examination, According to Place of Examination: United States, 1969-70 School Year.



TABLE 1: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY HEARING THRESHOLD LEVELS, ACCORDING TO AGE AND SEX: UNITED STATES, 1969-70 SCHOOL YEAR.

								Во	th Sex	es							_		_	
Better Ear Averages in Decibels (ISD) <sup>1</sup>	Total Number of Students	Under 3 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	20 Years and Over
All Hearing Levels	35,285	336	699	1,865	3,478	1,766	2,020	2,076	2,462	2,946	3,309	2,362	2,264	2,115	1,936	1,836	1,708	1,168	586	353
Under 15	518		2	1	8	12	47	46	43	66	45	45	55	43	38	28	26	6	6	1
15-24	533	-	5	3	12	23	37	59	51	58	63	51	41	43	31	20	23	9	2	2
25-29	551	1			12	28	40	45	62	62	43	57	47	48	30	29	29	9	5	4
30-34	506	1	2	2	12	20	41	60	43	62	63	41	42	32	28	27	16	9	5	
35-39	540	2	7	4	14	27	50	41	56	51	51	50	48	39	28	28	28	9	4	3
40-44	557	1	7	11	21	45	36	49	56	44	53	48	41	43	34	32	22	8	2	4
45-49	666	3	3	17	33	36	48	58	59	60	73	56	52	46	33	24	28	25	9	3
50-54	823	8	10	28	57	43	53	57	65	80	90	73	42	48	46	53	37	20	10	3
55-59	929	2	12	35	58	66	49	49	87	85	97	53	73	60	58	44	45	33	13	10
60-64	1,165	7	13	40	76	65	74	70	88	109	121	87	88	65	66	64	57	46	19	10
65-69	1,394	8	21	45	126	73	74	85	100	131	144	103	85	83	64	91	78	49	20	14
70-74	1,616	11	23	80	151	79	83	93	98	139	186	93	108	93	88	95	87	64	28	17
75-79	1,759	12	29	104	173	85	90	86	127	147	188	110	117	99	101	98	90	63	19	21
80-84	1,818	7	36	94	185	88	89	94	98	182	188	133	109	119	104	101	85	54	27	25
85-89	1,907	9	36	87	213	73	81	95	123	167	190	133	123	125	111	109	93	81	40	18
90-94	2,225	17	46	82	203	104	125	138	133	178	204	174	134	157	106	147	128	76	50	23
95-98	2,285	8	31	93	202	82	113	1 12	168	190	208	151	135	147	155	167	128	102	58	35
99 and Above	6,563	29	69	271	621	299	369	393	501	512	608	456	428	399	391	360	350	277	158	72
Unable to Compute	7,187	163	277	685	1,055	429	411	355	397	492	551	366	414	344	346	243	293	205	93	68
Data Not Reported	1,743	47	70	183	246	89	110	91	107	131	143	82	82	82	78	76	65	23	18	20

<sup>&</sup>lt;sup>1</sup>Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

TABLE 1 (continued): NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY HEARING THRESHOLD LEVELS, ACCORDING TO AGE AND SEX: UNITED STATES, 1969-70 SCHOOL YEAR.

										Male										
Better Ear Averages in Decibels (ISO) <sup>1</sup>	Total Number of Students	3	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	20 Years and Over
All Hearing Levels	19,082	174	370	951	1,787	966	1,063	1,140	1,349	1,608	1,776	1,322	1,216	1,151	1,090	997	921	650	332	219
Under 15	292		1	1	7	7	25	25	21	39	25	26	32	19	21	13	22	4	4	
15-24	318		3	3	7	12	26	34	35	34	35	31	19	23	21	15	11	5	2	2
<b>25</b> -29	308	-	-		6	18	21	26	38	36	23	35	29	23	17	14	10	6	4	2
30-34	272	1	1	1	10	12	21	35	18	35	36	21	25	16	18	11	6	3	2	
35-39	297	2	3	1	6	15	32	23	32	28	26	31	23	20	17	16	12	5	3	2
40-44	320	-	6	5	11	34	18	31	33	26	29	22	24	26	14	18	15	4	1	3
45-49	401	2	1	7	22	18	22	39	35	37	39	30	26	33	24	20	18	21	5	2
50-54	460	4	5	17	27	23	31	32	36	39	53	42	20	30	27	26	25	14	'	2
<b>55</b> · <b>5</b> 9	544	2	8	22	33	31	30	22	52	51	60	29	46	38	38	23	26	18	11	4
60-64	647	4	7	17	38	37	35	35	59	64	64	55	52	32	41	28	32	27	15	5
<b>65</b> - <b>6</b> 9	766	3	14	18	62	42	43	46	55	73	75	61	50	50	32	54	39	32	10	7
70-74	914	6	12	55	75	46	34	52	57	82	104	59	66	52	58	57	37	36	12	14
75-79	964	4	13	54	92	43	54	39	72	82	103	62	66	57	59	55	45	37	13	14
80-84	971	5	18	46	90	47	48	49	48	96	109	70	61	70	56	56	42	27	16	17
<b>85</b> - <b>8</b> 9	1,042	7	20	35	97	44	48	58	72	90	98	75	61	78	68	66	56	38	19	12
90-94	1,201	12	28	42	104	50	58	91	67	99	109	101	71	80	52	83	74	43	24	13
95-98	1.210	2	17	41	111	42	59	55	87	110	117	87	73	69	90	84	57	57	29	23
99 and Above	3,416	20	41	136	327	165	196	206	241	264	316	249	214	199	209	174	186	146	86	41
Unable to Compute	3,784	77	138	348	528	228	209	190	228	257	- 278	188	215	190	180	142	173	114	59	42
Data Not Reported	955	23	34	102	134	52	53	52	63	66	77	48	43	46	48	42	35	13	10	14

<sup>&</sup>lt;sup>1</sup>Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.



TABLE 1 (continued): NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY HEARING THRESHOLD LEVELS, ACCORDING TO AGE AND SEX: UNITED STATES, 1969-70 SCHOOL YEAR.

										Female	es		•			_				
Better Ear Averages in Decibels (ISO) <sup>1</sup>	Total Number of Students	Under 3 Years	3	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	20 Years and Over
All Hearing Levels	16,203	162	329	914	1,691	800	957	936	1,113	1,338	1,533	1,040	1,048	964	846	839	787	518	254	134
Under 15	226		1		1	5	22	21	22	27	20	19	23	24	17	15	4	2	2	1
15-24	215		2		5	11	11	25	16	24	28	20	22	20	10	5	12	4		
25-29	243	1			6	10	19	19	24	26	20	22	18	25	13	15	19	3	1	2
30-34	234	-	1	1	2	8	20	25	25	27	27	20	17	16	10	16	10	6	3	••
35-39	243		4	3	8	12	18	18	24	23	25	19	25	19	11	12	16	4	1	1
40-44	237	1	1	6	10	11	18	18	23	18	24	26	17	17	20	14	7	4	1	1
45-49	265	1	2	10	11	18	26	19	24	23	34	26	26	13	9	4	10	4	4	1
50-54	363	4	5	11	30	20	22	25	29	41	37	31	22	18	19	27	12	6	3	1
55-59	385		4	13	25	35	19	27	35	34	37	24	27	22	20	21	19	15	2	6
60-64	518	3	6	23	38	28	39	35	29	45	57	32	36	33	25	36	25	19	4	5
65-69	628	5	7	27	64	31	31	39	45	58	69	42	35	33	32	37	39	17	10	7
70-74	702	5	11	25	76	33	49	41	41	57	82	34	42	41	30	38	50	28	16	3
75·7 <b>9</b>	795	8	16	50	81	42	36	47	55	65	85	48	51	42	42	43	45	26	6	7
80-84	847	2	18	48	95	41	41	45	50	86	79	63	48	49	48	45	43	27	11	8
85-89	865	2	16	52	116	29	33	37	51	77	92	58	62	47	43	43	37	43	21	6
90-94	1,024	5	18	40	99	54	67	47	66	79	95	73	63	77	54	64	54	33	26	10
95-98	1,075	6	14	52	91	40	54	57	81	80	91	64	62	78	65	83	71	45	29	12
99 and Above	3,147	9	28	135	294	134	173	187	260	248	292	267	214	200	182	186	164	131	72	31
Unable to Compute	3,403	86	139	337	527	201	202	165	169	235	273	178	199	154	166	101	120	91	34	26
Data Not Reported	788	24	36	81	112	37	57	39	44	65	66	34	39	36	30	34	30	10	8	6

<sup>&</sup>lt;sup>1</sup>Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

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 $G_{ij}^{(i)}$ 

TABLE 2: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE AND HEARING THRESHOLD LEVELS, ACCORDING TO PROFESSION OF EXAMINER: UNITED STATES, 1969-70 SCHOOL YEAR.

					Profession	of Exami	ner				
8etter Ear Averages in Decibels (ISO) <sup>1</sup> and Age	All Examiners	Audiol- ogist	Otolo- gist	Other M.D.	Audiom- etrist	Nurse	Teacher	School Prin- cipal	Speech Thera- pist	Other	Data Not Reported
All Ages-All						4.054	4.000	445	700	4 007	F 4F2
Hearings Levels	35,285	22,191_	1,031	334	1,427	1,351	1,326	145	700	1,327	5,453
Under 45	3,205	1,457	178	67	56	841	54	1	156	73	322
45-64	3,583	2,398	138	42	168	146	107	21 49	73 126	135 234	355 724
65-84	6,587	4,485	181 246	37 39	342 567	105 138	304 642	56	199	468	1,256
B5 and Above Data Not Available	12,980 8,930	9,369 4,482	288	149	294	121	219	18	146	417	2,796
	0,330	4,402	200	143	204	121	2.0	''	1.0	,,,	
Under 3 Years- All Hearing Levels	336	278	4	••			3		2	1	48
Under 45	5	5	<del>  .</del> -	-		••			••		
45-64	20	20		••						-	••
65-84	38	35				-	2	<b></b>		-	1
85 and Above	63	60	1				1	<b></b>		-	. 1
Data Not Available	210	158	3				<u></u>	<u></u>	2	1	46
3-5 Years-	0.040	4 200	143	41	147	30	65	2	17	82	1,119
All Hearing Levels	6,042	4,396 93	143		147	12	1		3	1	9
Under 45 45-64	123 382	314	11	9	6	3	4		1	4	30
45-84 ×	1,067	882	22	6	29	2	15		2	17	92
85 and Above	1,954	1,634	40	6	75	<u> </u>	25	1	1	26	145
Data Not Available	2,516	1,473	67	20	36	12	20	1	10	34	843
6-9 Years-All	<u>`</u>		<del> </del>								
Hearing Levels	8,324	5,225	267	85	351	405	260	25	99	282	1,325
Under 45	1,017	451	56	26	20	292	17	1	49	20	85
45-64	967	680	38	10	41	33	25	2	15	34	89
65-84	1,442	1,011	42	14	74	14	45 120	6	9 14	51 100	176 281
85 and Above	2,909 1,989	2,140 943	60 71	9 26	143 73	31 35	53	5	12	77	694
Data Not Available	1,909	343	<del>                                     </del>	20		33	- 30	<u> </u>			
10-13 Years-All Hearing Levels	10,881	6,514	339	118	454	514	502	43	266	475	1,656
Under 45	1,227	539	77	·31	20	315	19		65	39	122
45-64	1,239	798	56	17	54	63	34	6	29	54	128
65-84	2,163	1,397	54	11	127	44	123	21	48	78	260
85 and Above	3,991	2,729	75	9	159	59	258	15	85	167	435
Data Not Available	2,261	1,051	77	50	94	33	68	1	39	137	₹ 711
14-17 Years-All		4		00	050	220	401		240	371	1,040
Hearing Levels	7,595	4,498	224	66	353	339	401	<del>                                     </del>	246 36	13	98
Under 45	745	333	37 26	8 5	10 52	195	15 37	8	24	33	82
45-64 65-84	774 1,476	470 913	53	4	79	37	100	17	51	69	153
85 and Above	3,073	2,112	54	7	138	40	188	21	77	131	305
Data Not Available	1,527	670	54	42	74	30	61	11	58	125	402
18 Years & Over-	<del>'</del>			<del>-</del>			1				
All Hearing Levels	2,107	1,280	54	24	122	63	95	18	70	116	265
Under 45	88	36	5	2	5	27	2		3	10	8 26
45-64 65-04	201	116 247	7 10	1 2	15 33	10	7 19	5	16	19	42
65-84	401	1	16	8	52		50	5	22	44	89
85 and Above	990	694	i in	, ×	1 27	1 7	וות	8		, 44	00



TABLE 3: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SCIECUAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY PROFESSION OF EXAMINER, ACCORDING TO PLACE OF EXAMINATION: UNITED STATES, 1969-70 SCHOOL YEAR.

					Plac	e of Exami	nation				
Profession of Examiner	AII Places	Speech & Hear- ing Clinic	Hospi- tal or Univer- sity	Health Depart- ment	Audiol- ogist's Office	School for Deaf	Other School	Hearing Aid Com- pany	M.D.'s Private Office	Other	Data Not Reported
All Examiners	35,285	13,655	801	1,151	350	10,753	3,682	72	719	430	3,672
Audiologist	22,191	11,355	569	482	342	7,438	1,168	16	190	266	365
<b>0t</b> ologist	1,031	319	33	26	1	245	37		310	50	10
Other M.D.	334	96	16	4		16	11		167	13	11
Audiometrist	1,427	195	7	291		622	243	19	5	8	37
Nurse	1,351	32	1	41		57	1,140	5	7	9	59
Teacher	1,326	85	2			878	328			6	27
School Principal	145	1				32	111				1
Speech Therapist	700	358	1	40	1	14	250		4	10	22
Other	1,327	213	89	84		706	195	12	5	15	8
Data Not Reported	5,453	1,001	83	183	6	745	199	20	31	53	3,132

TABLE 4: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE AND HEARING THRESHOLD LEVELS, ACCORDING TO PLACE OF EXAMINATION: UNITED STATES, 1969-70 SCHOOL YEAR.

					Place of	Examinati	on				
Better Ear Averages in Decibels (ISO) <sup>1</sup> and Age	All Places	Speech & Hearing Clinic	Hospital or Univer- sity	Health Depart- ment	Audiol- ogist's Office	School for Deaf	Other School	Hear- ing Aid Com- pany	M.D.'s Private Office	Other	Data Not
All Ages-Fill									740		0.070
Hearing Levels	35,285	13,655	801	1,151	350	10,753	3,682	72	719	430	3,672
Under 45	3,205	1,231	97	128	43	139	1,110	11	205	42	199
45-64	3,583	1,849	145	152	49	564	483	14	80	77	170
65-84	6,587	2,886	164	237	90	2,085	607	18	112	76 145	312 684
85 and Above	12,980	4,590	188	362	80	5,908	902 580	20	101 221	90	2,307
Data Not Available	8,930	3,099	207	272	88	2,057	360	<del>'</del>	221	90	2,307
Under 3 Years- All Hearing Levels	336	238	19	<b></b>	2	15	19		6	11	36
Under 45	5	5	••		••	••			••		••
45-64	20	20	••				-	-	•		-
65-84	38	32	3	-	-	2	1	•			-
85 and Above	63	54	1		_	2	5	•	1		
Data Not Available	210	127	15		2	11	13	••	5	1	36
3-5 Years-All Hearing Levels	6,042	3,429	239	124	91	882	309	6	105	90	767
Under 45	123	72	3	-	2	21	16	1	3	3	2
45-64	382	272	17	14	6	31	16		10	8	8
65-84	1,067	703	45	25	20	156	49		26	17	26
85 and Above	1,954	1,165	56	55	27	451	115	3	19	25	38
Data Not Available	2,516	1,217	118	30	36	223	113	2	47	37	693
6-9 Years-All Hearing Levels	8,324	3,539	168	355	86	1,976	996	11	205	125	863
Under 45	1,017	380	21	41	14	39	383	3	73	11	52
45-64	967	553	37	47	17	99	127	1	24	26	36
65-84	1,442	714	36	87	20	329	136	4	37	21	58
85 and Above	2,909	1,170	46	97	13	1,137	218	1	25	48	154
Data Not Available	1,989	722	28	83	22	372	132	2	46	19	563
10-13 Years-All	1,000	+	<del> </del>	<del>                                     </del>	<del>                                     </del>					<del> </del>	<del>                                     </del>
Hearing Levels	10,881	3,718	202	410	104	3,571	1,372	36	217	143	1,108
Under 45	1,227	450	42	57	19	40	431	6	83	21	78
<b>45</b> -64	1,239	589	51	62	17	204	196	6	29	31	54
65-84	2,163	858	44	83	26	735	244	11	23	22	117
85 and Above	3,991	1,204	31	120	21	1,931	327	10	25	51	271
Data Not Available	2,261	617	34	88	21	661	174	3	57	18	588
14-17 Years-All			_					1			1
Hearing Levels	7,595	2,208	145	219	39	3,259	798	17	157	58	695
Under 45	745	297	28	29	7	30	242	1	43	7 .	61
45-64	774	343	31	27	7	167	118	6	14	10	51
65-84	1,476	462	32	35	14	668	142	3	23	13	84
85 and Above	3,073	776	42	71	5	1,788	180	5	22	18	166
Data Not Available	1,527	330	12	57	6	606	116	2	55	10	333
18 Years & Over- All Hearing Levels	2,107	523	28	43	28	1,050	188	2	29	13	203
	88	27	3	1	1	9	38	-	3		6
Under 45 45-64	201	72	9	2	2	63	26	1	3	2	21
45-84 65-84	401	117	4	7	10	195	35		3	3	27
85 and Above	990	221	12	19	14	599	57	1	9	3	55
	427	86		14	1	184	32	'.	11	5	94
Data Not Available	421	00	"	1 1	1 '	'07	""	"	''	1	]



TABLE:5: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY RECENCY OF AUDIOLOGICAL EXAMINATION, ACCORDING TO PROFESSION OF EXAMINER: UNITED STATES, 1969-70 SCHOOL YEAR.

					Profe	ssion of l	Examiner				,
Recency of Audiological Examination	All Examiners	Audiol- ogist	Otol- ogist	Other M.D.	Audiome- trist	Nurse	Teacher	School Princi- pal	Speech Thera- pist	Other	Data Not Reported
Total	35,285	22,191	1,031	334	1,427	1,351	1,326	145	700	1,327	5,453
Under 1 Year	10,447	7,156	309	88	401	765	476	3	160	475	614
1 Year, Less Than 2 Years	9,535	6,770	307	65	357	352	294	79	266	447	598
2 Years, Less Than 3 Years	4,878	3,454	133	50	286	53	251	19	154	134	344
3 Years, Less Than 4 Years	2,433	1,617	80	32	117	25	84	9	63	159	247
4 Years, Less Than 5 Years	1,287	917	35	21	30	12	34	8	9	49	172
5 Years, Less Than 6 Years	614	387	17	19	19	10	25	7	4	19	107
6 Years, Less Than 7 Years	377	257	13	12	17	6	17	5		8	42
7 Years, Less Than 8 Years	199	147	4	2	6	1	10	2	2	6	19
8 Years, Less Than 9 Years	161	107	4	3	4	5	19	4			15
9 Years and Over	254	157	9	2	11	6	36	8	5	1	19
Data Not Reported	5,100	1,222	120	40	179	116	80	1	37	29	3,276

TABLE 6: NUMBER OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY RECENCY OF AUDIOLOGICAL EXAMINATION, ACCORDING TO PLACE OF EXAMINATION: UNITED STATES, 1969-70 SCHOOL YEAR.

					Plac	e of Exam	ination				
Recency of Audiological Examination	All Places	Speech & Hear- ing Clinic	Hospi- tal or Univer- sity	Health Depart- ment	Audiol- ogist's Office	School for Deaf	Other School	Hearing Aid Com- pany	M.D.'s Private Office	Other	Data Not Reported
Total	35,285	13,655	801	1,151	350	10,753	3,682	72	719	430	3,672
Under 1 Year	10,447	4,690	202	485	151	2,598	1,775	34	239	139	134
1 Year, Less Than 2 Years	9,535	3,711	256	313	68	3,644	1,018	13	155	133	224
2 Years, Less Than 3 Years	4,878	2,040	175	180	55	1,885	331	5	87	55	65
3 Years, Less Than 4 Years	2,433	1,078	64	45	15	937	160	7	56	26	45
4 Years, Less Than 5 Years	1,287	588	21	45	22	479	77	2	29	14	10
5 Years, Less Than 6 Years	614	307	20	29	9	159	53	1	17	14	5
6 Years, Less Than 7 Years	377	213	9	21	5	79	24	2	15	7	2
7 Years, Less Than 8 Years	199	115	7	1	1	53	11		3	3	5
8 Years, Less Than 9 Years	161	81	3	2	1	50	16		2	1	5
9 Years and Over	254	125	4	5	5	83	19		5	5	3
Oata Not Reported	5,100	707	40	25	18	786	198	8	111	33	3,174

### **APPENDICES**

- Appendix I -Description of the Annual Survey of Hearing Impaired
  - Children and Youth
- Basic Data Form Used in the Annual Survey for the Appendix II -
  - 1969-70 School Year
- Appendix III Preschool Data Form Used in the Annual Survey for the
  - 1969-70 School Year
- Programs Participating in the Annual Survey of Hearing Impaired Children and Youth Appendix IV -



### APPENDIX I

### THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

### **BACKGROUND AND PURPOSE**

The Annual Survey of Hearing Impaired Children and Youth began its activities in May 1968. The program is established as a permanent research organization to collect, process and disseminate data on hearing impaired individuals through college age in the United States. The need for such information on this universe has been of prime concern to educators, audiologists, legislators, psychologists and others.

Two preceding years of pilot and developmental work in a five state area determined its operational feasibility and crystalized its methodology. The Division of Research, Bureau of Education for the Handicapped, Office of Education, Department of Health, Education and Welfare initiated the Annual Survey and provides the major share of its funding. The program is conducted by the Office of Demographic Studies of Gallaudet College.

The long range goal of the Annual Survey is to collect data on the entire hearing impaired population through college age in the United States. For operational reasons the hearing impaired population has been divided into three groups:

- GROUP A Hearing impaired individuals who are receiving special educational services related to their hearing loss.
- GROUP B Individuals who have been diagnosed as being hearing impaired but who are not receiving any special educational services.
- GROUP C Individuals in the general population who, in fact, are hearing impaired but their hearing loss has not been diagnosed at a given point of time.

### **POLICIES AND PRINCIPLES**

It is of paramount importance that participating institutions be assured that the data collected will

be held in strictest confidence. Only staff members of the Office of Demographic Studies will have access to the records and then only for the purpose of preparing statistical summaries for analyses of the data. Individual student identification may be established by code numbers assigned and known only by the reporting institution. Each school will receive data on its own students, but no information permitting identification of any individual student or school will be published or made available for any purpose. Independent researchers will have access only to summary statistics and will not know the identity of the schools from which the data were compiled.

Of great importance is the fact that policies and direction of the Annual Survey are determined by a committee representing all areas of services to hearing impaired individuals. The committee is formally called the National Advisory Committee to the Annual Survey of Hearing Impaired Children and Youth. Its membership has broad width and depth in technical and executive expertise. In addition, a technical subcommittee composed of members of the Advisory Committee is called upon for advice and direction as special needs arise.

Suggestions and comments also come from discussions with teachers, audiologists, psychologists and other professionals who work directly with hearing impaired individuals. Also, aside from these direct contacts the staff members of the Annual Survey have with people in the field, periodic formal surveys of the cooperating educational programs are conducted to aid in determining the kinds of information needed in the field. To be effective, the program must assist these persons in solving problems with which they struggle day after day.

Since the Annual Survey attempts to promote the use of its data by those whose judgements and decisions will have a direct or indirect bearing on the education of hearing impaired individuals, it recognizes a responsibility to devote a part of its resources to the evaluation of the quality of the data collected and disseminated. This is particularly im-



portant because it seeks to establish national norms on the basic characteristics of hearing impaired children and youth that may be used by teachers, administrators and researchers. Thus, in the dissemination of information, the Annual Survey makes every effort to properly qualify the data and indicate any limitation associated with it.

Fourthly, the Annual Survey devotes part of its resources to developing the methodologies and instruments for best collecting data on a continuing basis for a national population of hearing impaired children and youth. The methodologies and instruments are of two basic kinds: (1) those associated with basic demographic variables that are collected on the total student population each year, and (2) those relating to the performance of the student in various areas, or to topics of special interest in a given year which may be collected on a sample basis.

### **DATA COLLECTION**

### 1968-69 School Year

During the first year of the program, data collection activities were directed towards all schools for the deaf and a representative sample (15 percent) of all special classes. In addition, records on students who were receiving itinerant services were obtained in total from two states and in part from several states. In all 25,363 individual records were collected. This represented nearly 80 percent of the total enrollment of all institutions invited to participate.

Also during the first year, an acade mic Achievement Testing Program was conducted. Over 12,000 Stanford Achievement Tests were administered. The Annual Survey supplied testing materials and scoring services free of charge to participating programs. Achievement test scores for hearing impaired students based on the results of that testing program were published and distributed in the Fall of 1969. In addition, each participating school received distributions of achievement test scores based on the performance of their own students.

### 1969-70 School Year

The Annual Survey extended its coverage during the second year of data collection. Efforts were made to reach students in all of the special classes for the hearing impaired, as well as in all of the schools. Data were obtained on 35,285 students from 435 reporting sources.

### 1970-71 School Year

Approximately 600 reporting sources with about 42,000 students enrolled in their programs are cooperating with the Annual Survey for the 1970-71 school year. This represents an increase of 197 new participating educational programs with almost 8,000 students. At the same time, about 98 percent of those programs that participated last year have been retained in this year's Survey.

An Achievement Testing Program is being conducted again this year by the Annual Survey. Approximately 305 sources including roughly 22,000 students are involved in this program. The procedures being followed in the current program were influenced heavily by the results of the Achievement Testing Program conducted by the Annual Survey during the 1968-69 school-year. This influence is reflected especially in three areas of this year's program: (1) Students were given a screening test to determine the most appropriate battery they should receive. (2) The schools were supplied with practice materials for their students, to familiarize students with test format and procedures. (3) In cooperation with Harcourt Brace Jovanovich, Inc., the test publishers, special printings of the Primary levels were arranged in which written instructions were provided to supplement oral ones. A reliability study also is being conducted in conjunction with this year's Achievement Testing Program. This evaluation study will help to determine the reliability of an achievement test designed for hearing students when used by hearing impaired students. This study is also designed to shed some light on the validity of these tests.

### PROGRAM SERVICES AND PUBLICATION OF THE DATA

The program is accumulating a large volume of statistical data. The processing and dissemination of these data hold wide implications and potential benefits for educational, audiological, medical, psychological, legislative and other services to the hearing impaired. Towards the goal of fully utilizing the data, the program will make data available to independent investigators for research purposes. Masters' theses, doctoral dissertations, institutional level research programs, private studies, etc., are solicited. Competent researchers are encouraged to propose detailed analyses of the data to further increase its usefulness. The Office of Demographic Studies will not permit the data to be used in a manner that is not scientific or objective in its approach. The Annual Survey plans to produce at least six major publications per year not including those that may be prepared by independent researchers using data collected by this program.

The Survey Office also provides each participating school or program with tabulations of the characteristics of their own students. The participating programs may obtain a set of punch cards containing the information submitted on each of their students. Further, the Annual Survey Office is available to provide consultation services to particular schools or school systems that are concerned with gathering and processing data on their students.

Participation in the Survey has led many of the programs to examine their current forms and record keeping procedures. This led to requests that the Survey develop a uniform record form to keep student information for use in schools and classes throughout the country. Such a form was developed

and used on a trial basis by a few schools during the 1970-71 school year. On the basis of this experience, the form was revised and will be distributed for use during the 1971-72 school year. Preliminary indications are that more than half of the educational programs in the United States are planning to use the form during the coming school year.

The initial success of the Annual Survey can be measured only in terms of the levels of participation and interest expressed by many individuals. The ultimate success will be measured not in terms of volume of data that will be collected and published, but in terms of its contributions to improving educational and other opportunities for hearing impaired children and youth. In this regard, it appears that progress is being made. For the first time a vast body of statistical information is becoming available for research and planning purposes.

### APPENDIX II

d only b	by persons engaged in t	which would permit he survey for prepari	ing statistical sum	imaries. The data	stitution will be held strictle will not be disclosed to other	ers for any other purpos
_	Reporting Source:					
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B. 1	. Present School or Ag	•	·· ·		·	
•			•	eme)		
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	Type of school or ager  Type of student:	ncy: 🗌 Public	□ Private			
_	. Total full years attended. Attendance at other s	chools since age six	. (Do <b>not</b> include		present school year)	
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Name  ADDITIONAL HANG Check all educationals Epilepsy Cleft Lip or Pala Other (describe)	Description DICAPPIP	NG CO	NDITI	Level Consider Conditions Conditi	itions:		Emotic	k here	□ oblems		Non-	rceptual	-Motor [	(Mor	nth, Y
Name  ADDITIONAL HANG Check all educationals Epilepsy Cleft Lip or Pala Other (describe)	Description DICAPPIP	NG CO	NDITI	Level Consider Conditions Conditi	itions:		Emotic	k here	□ oblems		Non-	rceptual	-Motor [	(Mor	nth, Y
Name  ADDITIONAL HANG Check all educationals Epilepsy Cleft Lip or Pala Other (describe)	Description DICAPPIP	NG CO	NDITI	Level Consider Conditions Conditi	itions:		Emotic	k here	□ oblems		Non-	rceptual	-Motor Calsy	(Mor	nth, Y
Name  ADDITIONAL HANG Check all educationals Epilepsy Cleft Lip or Pala Other (describe)	Description DICAPPIP y significate	NG CO	NDITI	Level Consider Conditions Conditi	itions:		Emotic	k here	□ oblems		Non-	rceptual	-Motor [alsy	(Mor	nth, Y
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### APPENDIX III

**ACHIC-4** OFFICE OF DEMOGRAPHIC STUDIES, GALLAUDET COLLEGE, WASHINGTON, D.C. (This form is to be used for children who will become six years of age after December 31, 1989) ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN - 1969-70 School Year CONFIDENTIAL: All information which would permit identification of any individual or institution will be held strictly confidential and will be used only by persons engaged in the survey for preparing statistical summaries. The data will not be disclosed to others for any other purpose. Name of Reporting Source: I. GENERAL INFORMATION Date of A. 1. Name of Student \_\_\_\_\_ .\_ 🗆 M 🗍 Birth.... or Code Number (Mo., Day, Yr.) 2. Residence \_\_\_\_\_ (City) (County) B. 1. Present School or Agency\_\_\_\_\_ (State & ZIP Code) (Number and Street) II. EDUCATIONAL PROGRAM A. TYPE OF SCHOOL OR AGENCY ☐ School for Multiply Handicapped 1. 

School for Hearing Residential School for Deaf ☐ Speech and Hearing Clinic ☐ Classes for Hearing Impaired □ Day School for Deaf ☐ Other (specify): \_\_\_\_\_\_ 2. Is School or Agency: 

Public 

Private 3. Type of Student: 

Residential 

Day B. TYPE OF PROGRAM Indicate number of hours per week the child is seen: \_\_\_\_\_\_ Hours Per Week
 Is the child seen: \_\_\_\_\_ Individually \_\_\_ Group or \_\_\_\_ Both 3. Total time child has been enrolled in this school or agency: \_\_\_\_\_ Years 4. Parent Training: (a) Are parents enrolled in a special parent program: 

Yes □ No (b) Are parents participating in a correspondence course: 

Yes III. EDUCATIONAL HISTORY A. Prior to the present program, has the child received other special educational training: 

| Yes 1. if YES, age started first program: \_\_\_\_\_ Years \_\_\_\_ Months 2. Type (specify): \_\_\_\_\_ 3. Total time enrolled: \_\_\_\_\_ Years \_\_\_\_ Months IV. HISTORY OF HEARING LOSS A. STUDENT HISTORY 1. Probable age at onset of hearing loss: 

At Birth \_\_\_\_\_ Years of Age 2. Age hearing loss discovered: \_\_\_\_\_ Years \_\_\_\_ Months 3. If onset of loss at birth, what was probable cause (mark all that apply): ☐ No Known Cause □ Data Not Available 
 □ Maternal Rubella
 □ Trauma to Mother
 □ Prematurity
 □

 □ Trauma at Birth
 □ Medication During Pregnancy
 □ RH Incompatibility
 ☐ Complications of Pregnancy ☐ Hereditary Other (specify) \_\_\_\_\_\_ ☐ No Known Cause ☐ Data Not Available 4. If loss acquired after birth, what was probable cause (mark all that apply): ☐ Meningitis ☐ Mumps ☐ Measles ☐ Otitis-Media ☐ Trauma ☐ Other (specify): \_\_\_\_\_ 5. Birth weight, if known: \_\_\_\_ lbs. \_\_\_ ozs. **B. FAMILY HISTORY** ☐ Hearing loss before age 6; Mother (check one):
 Normal hearing before age 6;
 Father (check one):
 Normal hearing before age 6; □ Data not available. ☐ Hearing loss before age 6; ☐ Data not available. 3. Siblings (indicate number in each category—If none, write "0"): Total number \_\_\_\_; Normal hearing before age 6 \_\_\_\_; Hearing loss before age 6 \_\_\_\_; Data not available 4. Does student have a twin: 

Yes 

No (If yes, complete items 4(a) and 4(b) below): (a) Sex of twin: 🗆 M □ F □ No (b) Is twin enrolled in this school: Yes 5. Is there any familial history of deafness other than indicated above: 

Yes 
No 6. Are parents known to be related in any way? ☐ Yes ☐ No

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### APPENDIX IV

### Participants in the Annual Survey of Hearing Impaired Children and Youth

### **ALABAMA**

Alabama Institute for the Deaf & Blind

- \*Bessemer City Schools
  Birmingham Public Schools
- \*Blossomwood Elementary School
- \*Children's Center of Montgomery, Inc.
- \*Etowah County Board of Education
- \*Franklin County Board of Education
- \*Holt Elementary School
- \*Huntsville Rehabilitation Center
- \*Lewis-Slossfield Speech & Hearing Center
- \*Mobile County Deaf Education Program
- \*Mobile Preschool for the Deaf, Inc.
- \*Tuscaloosa County Schools
- \*University of Montevallo Speech & Hearing Clinic

### **ALASKA**

\*Alaska Treatment Center for Crippled Children & Adults, Inc.

Anchorage Borough School District

\*Bethel State School

### **ARIZONA**

Arizona State School for the Deaf & Blind

\*Emerson School

Samuel Gompers Memorial Rehabilitation Center,

\*Phoenix Day School for the Deaf
Phoenix Elementary Oral Day Classes

### **ARKANSAS**

Arkansas Speech & Hearing Center Jenkins Memorial Children's Center

### **CALIFORNIA**

Alhambra City School District

Alum Rock Union Elementary School District

Anaheim Union High School District

\*Aurally Handicapped Classes of Solano County
Bellflower Unified School District

Mary E. Bennett School for the Deaf

**Butte County Schools** 

\*California School for the Blind, Deaf-Blind

**Department** 

California School for the Deaf, Berkeley

California School for the Deaf, Riverside

Cedarcreek School for the Deaf

Centinela Valley Union High School District

Centralia School District

Ceres Unified School District

\*Chula Vista City School District

Covina Valley Unified School District

Cutler-Orosi Unified School District

\*Downey Senior High School

\*East San Gabriel Valley School for Multi-

Handicapped Children

Escondido Union School District

Fremont Unified School District -

**Blacow** Elementary

Fresno City Unified School District

\*Garden Grove Unified School District

Goleta Union Elementary School District

Hayward City Unified School District

Chris Jespersen School

Kern County Schools

\*La Mesa – Spring Valley School District

Lancaster Elementary School District

\*Language, Hearing, & Speech Clinic, Fresno State College

Little Lake City Elementary School District

Livermore Valley Joint Unified School District

Lompoc Unified School District

Long Beach Unified School District

Marin County Schools

Mariton Elementary School

Montebello Unified School District

Monterey County Schools

Mt. Diablo Therapy Center

Mt. Diablo Unified School District

Napa Valley Unified School District

Norwalk-La Mirada Unified School District

Oakland City Unified School District

Orange Unified School District

\*Orcutt Union Elementary School District

<sup>\*</sup>Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.



\*Pajaro Valley Unified School District

\*Palo Alto Unified School District
Pasadena City Unified School District

\*Placer County Public Schools
Pomona Unified School District
Redondo Beach City Elementary School District
Richmond Unified School District
Riverside Unified School District
Sacramento City Unified School District

\*San Bernardino County Schools
San Diego Unified School District
San Francisco Speech & Hearing Center
San Jose City Unified School District
San Juan Unified School District
San Mateo County Classes for the Deaf
San Mateo Union High School District
Santa Ana Unified School District
Santa Clara Unified School District

\*Santa Cruz County Itinerant Program for the Hearing Impaired Santa Rosa City School District Shasta County Schools Simi Valley Unified School District

\*South Junior High School
Southwest School for the Deaf
Stockton Unified School District
Sunnyvale Elementary School District
Sutter County Schools – Lincrest School

\*Tehama County Public Schools
Tulare County Schools
Tulare Union High School District
Union Elementary School District
Ventura Unified School District

### **COLORADO**

\*Aurora Public Schools
Children's Hospital, Denver
Colorado School for the Deaf & Blind
\*Colorado Speech & Hearing Center, Denver
Colorado State College — Bishop Lehr Laboratory
Jefferson County Public Schools R-1
\*John Evans School

\*Meadow Elementary School
Pleasant View Elementary School
Poudre R-1 Services for Aurally Handicapped Children

### CONNECTICUT

\*American School for the Deaf
Capitol Region Education Council — Hearing
Impaired Class

Class for Preschool Hearing Impaired Children, Hartford

Easter Seal Goodwill Industries Rehabilitation Center

\*East Hartford Public Schools

Enfield Public Schools — Preschool Hearing
Impaired Class
Fairfield Public Schools — Preschool Hearing
Impaired Class
Green Acres School

Hearing Plant House Cooperative Educational

Hamden-New Haven Cooperative Educational
Center

\*Kings Highway School
Magrath School
Monroe Preschool Hearing Impaired Program
Mystic Oral School for the Deaf
Reynolds Preschool Hearing Impaired Program
South School
West Haven Department of Special Education

### DELAWARE

Margaret S. Sterck School for Hearing Impaired

### DISTRICT OF COLUMBIA

\*Allie Yniestra School

**Brevard County Public Schools** 

\*Capitol Region Model Secondary School for the Deaf
Department of Special Education
Kendall School for the Deaf
Speech and Hearing Center — Public Schools of the District of Columbia

### **FLORIDA**

\*Easter Seal Rehabilitation Center, Fort
Lauderdale
\*Edge Elementary School
Florida School for the Deaf & Blind
Hillsborough County Public Schools
\*Holly Hill Elementary School
\*Jackson Memorial Hospital, Audiology —
Speech Pathology
\*Lee County Department of Special Education
\*Leon County Program for Hearing Impaired

Children
Robert McCord Oral School
Palm Beach County Schools
\*Pinellas County Schools
Rock Lake Elementary School

\*Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.



\*Speech and Hearing Center, Inc., Jacksonville

\*Tampa Oral School for the Deaf

### **GEORGIA**

\*Atlanta Public Schools
Atlanta Speech School, Inc.
Cobb County Board of Education
The Davison School, Inc.
Lawton B. Evans School
Georgia School for the Deaf

\*Houston Speech & Hearing School Savannah Speech & Hearing Center

\*Robert Shaw Center

### HAWAII

Central Intermediate School
Diamond Head School for the Deaf
McKinley High School

### **IDAHO**

Idaho School for the Deaf & Blind Speech & Hearing Center — Idaho State University

### **ILLINOIS**

Bartonville Grade School Deaf Program
Bell Elementary School
Bi-County Oral Deaf Program
Black Hawk Hearing Handicapped Program
Champaign Community Schools
Chicago Vocational High School
Decatur Public School District
Dixon State School
Elim Christian School for the Exceptional Child
Ericson School

\*Nathaniel Greene School

\*Harrison High School
Dr. Robert Henner Hearing & Speech Center
Illinois School for the Deaf

\*The Institute for Hearing & Speech
Jamieson School
Maine Township Special Education Program
Marquette Elementary School
Thomas Metcalf School

\*Morrill Elementary School

Niles Township Department of Special Education

\*Northern Suburban Special Education District
Northwestern Illinois Association
Northwest Suburban Special Education
Organization

Perry School

\*Quincy Public Schools Ray School Reinberg School

\*St. Joseph's Speech & Hearing Clinic Scammon School

\*Shields Elementary School
South Metropolitan Association for LowIncidence Handicapped
Special Education District of Lake County

\*Springfield Public Schools

Tazewell-Mason Counties Special Education
Association

\*James Ward Elementary School
West Suburban Association for the Hearing
Handicapped

\*Williamson County Special Education District

### **INDIANA**

Ball State University
Central Avenue School
Deaf-Oral Nursery of the Rehabilitation Center,
Evansville

East Chicago Day Class for the Deaf \*Floyd County Preschool Deaf Class Glenwood Elementary School

\*Hammond Public Schools

\*Hearing & Speech Center of St. Joseph's County, Inc.

Indiana School for the Deaf
Indiana University Medical Center
Marion Community Schools

\*Michigan City Area Schools

\*Morrison-Mock School

Oral Deaf Classes & Hearing Conservation Program, South Bend

\*Trade Winds Rehabilitation Center, Inc.

### **IOWA**

Black Hawk-Buchanan County Board of
Education
Cedar Rapids Community School
\*Dubuque County Schools
Hope Haven School
lowa School for the Deaf
Ottumwa Community School District
Smouse Opportunity School
Wilson School — Oral Deaf Department

Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.



### **KANSAS**

Hays Regional Classroom for the Hard-of-Hearing \*Hoisington Unified School District #431

Institute of Logopedics, Inc.

Kansas School for the Deaf

Lawrence Unified School District 497 –
Grant School

\*Salina Public Schools

\*Speech & Hearing Clinic, Kansas State University

\*Topeka Public Schools

\*Mark Twain Elementary School
University of Kansas Medical Center
Wichita Public Schools

### **KENTUCKY**

Kentucky School for the Deaf Knox Central High School Lexington Deaf Oral School Louisville Deaf Oral Institute Louisville Public Schools

\*West Kentucky Easter Seal Center for Crippled Children & Adults

### **LOUISIANA**

Acadia Parish School Board

Delgado College

Jefferson Parish School Board

Lafayette Parish School Board

Louisiana School for the Deaf

Speech & Hearing Center of Southwest

Louisiana, Inc.

State School for the Deaf — Southern Branch
Sunset Acres School

### MAINE

Bangor Regional Speech & Hearing Center Governor Baxter State School for the Deaf Northeast Hearing & Speech Center, Inc. Pine Tree Society

### **MARYLAND**

William S. Baer School #301

Baltimore County Department of Special

Education

\*Board of Education of Harford County
Forest Park Senior High School
Gateway Preschool
Maryland School for the Deaf
Montgomery County Public Schools
\*Pikesville Junior High School

\*Prince George's County Public Schools

\*Special Education Center, Hagerstown

### **MASSACHUSETTS**

\*Belmont Public Schools
Beverly School for the Deaf
Boston School for the Deaf
Peter Bulkeley School

Clarke School for the Deaf

\*Communications Disorders Department, Franklin County Public Hospital Day Class for Preschool Deaf, Lowell

Sarah Fuller Foundation

Habilitation Center for the Pre-School Hard-of-Hearing & Deaf Children, Canton

Haverhill Preschool Class for Deaf

\*Horatio A. Kempton School

\*Lawrence Primary Program for the Deaf

\*Leominster Day Classes for the Hearing Impaired

\*Horace Mann School for the Deaf

Mercer School

Myrtle Street School

Page School

Perkins School for Blind

\*Reading Day Class for Deaf

\*Willie Ross School for the Deaf

Thayer-Lindsley Parent Centered Nursery

Upsala Street School

Waltham Public Schools

Woburn Day Class Program

\*Worcester County Hearing & Speech Center

### **MICHIGAN**

\*Allen Park Public Schools

\*Brighton Public Schools

Howard D. Crull Intermediate School

\*Delta-Schoolcraft Intermediate School District

Detroit Day School for Deaf

Douglas School

Durant-Tuuri-Mott School

\*Eastern Michigan University Speech & Hearing Clinic

Handley School

Ida Public Schools

Thomas Jefferson School

\*Kalamazoo Public Schools

Ann J. Kellogg School

\*Lakeview Elementary School, Negaunee Lakeview Public Schools

Lansing Public Schools



Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.

Lapeer State Home & Training School John A. Lemnier School Lutheran School for the Deaf Marquette Elementary

\*Michigan School for the Deaf Michigan School for the Blind

\*Michigan State University Speech & Hearing Clinic

Mott Foundation Children's Health Center Oakland Schools

Preschool Physically Handicapped Program, Wyoming

Public School Program for Deaf & Hard-of-Hearing, Jackson

Redford Union Hard-of-Hearing Program

Riverside Elementary School

Shawnee Park Schools

\*Speech Clinic of the University of Michigan **Medical School** 

Tecumseh Public Schools

Traverse City Public Schools

Tri-County Preschool

Utica Schools

Warren Consolidated Schools

\*Wayne Community School District

### **MINNESOTA**

\*Anoka-Hennepin School District #11

\*Austin Public Schools Duluth Public Schools Lutheran High School Minneapolis Public Schools Minnesota School for the Deaf St. Paul Area Program for Impaired Hearing Technical Vocational Institute

### MISSISSIPPI

\*Mississippi School for the Deaf

\*Tupelo Regional Rehabilitation Center

### **MISSOURI**

\*Central Institute for the Deaf Delaware Elementary School

\*Gallaudet School for the Deaf Hearing & Speech Center, Kansas City

**Humboldt School** 

Missouri School for the Deaf

\*Neosho Public Schools

\*North Kansas City Public Schools

St. Louis County Special School District for the Handicapped - Litzsinger School St. Louis University Speech & Hearing Clinic School District of Kansas City

### **MONTANA**

Montana State School for the Deaf & Blind University of Montana Speech & Hearing Clinic

### **NEBRASKA**

Nebraska School for the Deaf Omaha Hearing School for Children, Inc. \*Omaha Public Schools Prescott Acoustically Handicapped Unit

### **NEVADA**

Ruby Thomas Elementary School \*Washoe County School District

### **NEW HAMPSHIRE**

Crotched Mountain School for the Deaf \*Easter Seal Rehabilitation Center of Greater Manchester Portsmouth Rehabilitation Center

### **NEW JERSEY**

\*American Institute for Mental Studies Avon School Bruce Street School Class for the Hard-of-Hearing, Kearny Clifton Public Schools \*Cumberland County Public Schools Douglas Nursery for Hearing Handicapped

Hackensack Program for the Deaf Helmbold Education Center Hunterdon Medical Center Nursery for Hearing Impaired Children

\*Marie H. Katzenbach School for the Deaf

\*The Midland School Millburn Avenue School Newark State College

\*North Jersey Training School

\*Speech & Hearing Center, Burlington County Memorial Hospital Summit Speech School Township Public Schools, Neptune Woodbridge Public School System

<sup>\*</sup>Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.



### **NEW MEXICO**

\*Albuquerque Hearing & Speech Center New Mexico School for the Deaf

### **NEW YORK**

Albany Medical Center Hospital Board of Cooperative Educational Services, Nassau

- \*Board of Cooperative Educational Services, Suffolk County II .
- \*Board of Cooperative Educational Services, Suffolk County III
- \*Board of Cooperative Educational Services of Washington, Warren, & Hamilton Counties
- \*Buffalo Public Schools
  Catholic Charities Day Classes for Deaf Children
  Cerebral Palsy Preschool
- Children's Hospital & Rehabilitation Center
- \*Demonstration Home Program, Rochester
  \*Dutchess County Board of Cooperative
  Educational Services
- \*Erie County Board of Cooperative Educational Services

Grasslands Hospital

- \*Alexander Hamilton School #31
- \*Hebrew Institute for the Deaf
  Junior High 47-M School for Deaf
- \*Meadowbrook Hospital Speech & Hearing Clinic
- \*Mill Neck Manor Lutheran School for the Deaf New York Institute for the Education of the Blind New York School for the Deaf, White Plains New York State School for the Deaf, Rome
- \*Queens College Speech & Hearing Center
- \*Rensselaer County Board of Cooperative Educational Services

Rochester School for the Deaf

- \*St. Francis de Sales School for the Deaf
- St. Joseph's School for the Deaf

St. Mary's School for the Deaf

School for Language & Hearing Impaired Children – Public School 158

Suffolk School for Deaf Children

Union-Endicott Central School District

### **NORTH CAROLINA**

Charlotte Speech & Hearing Center, Inc.

Duke University Medical Center

Eastern North Carolina School for the Deaf

\*Mecklenburg School — Department of Special

Education

The Governor Morehead School North Carolina School for the Deaf Path School, Inc.

\*Wake County Preschool for the Hearing Impaired

### **NORTH DAKOTA**

Longfellow School

\*Minot State College Speech & Hearing Clinic North Dakota School for the Deaf University of North Dakota Speech & Hearing Clinic

### OHIO

Akron Board of Education

\*Alexander Graham Bell School, Columbus Alexander Graham Bell School for the Deaf, Cleveland

Betty Jane Oral School

Canton Public Schools

Cincinnati Educational Center

- \*Clark County Hearing & Speech Center
- \*Cleveland Heights High School
- \*Elyria City Schools

Hearing & Speech Center of Columbus and Central Ohio

- \*Howard Day School for the Hearing Impaired
- \*L.B. Kean Elementary School

Kennedy School for the Deaf

Kent Public Schools

Kent State University

Litchfield Rehabilitation Center

\*McKinley Elementary School

Mansfield City Schools

Millridge Center for Hearing Impaired

Ohio School for the Deaf

Program for Physically Handicapped, Toledo

- \*St. Rita's School for the Deaf
- \*Springfield City Schools

Trumbull County Hearing Society

Warren City Schools

\*Youngstown Public Schools

Zanesville Classes for Deaf

### **OKLAHOMA**

Community Speech & Hearing Center, Enid
Eastside School
The Junior League Program for Children with
Hearing Losses

\*Kerr Junior High School



Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.

Oklahoma City Public Schools \*Oklahoma School for the Deaf University of Oklahoma Medical Center \*Washington School

Hearing and Speech Center, Eugene

### **OREGON**

Oregon State School for the Deaf Portland Center for Hearing & Speech, Inc. Portland Public Schools Tucker-Maxon Oral School \*Washington County Intermediate Education District

### **PENNSYLVANIA**

Archbishop Ryan Memorial Institute for the Deaf De Paul Institute

- \*Ebensburg State School and Hospital
- \*Elwyn Institute Eric City School District
- \*Home of the Merciful Saviour for Crippled Children Willis and Elizabeth Martin School
- \*Pennhurst State School and Hospital Pennsylvania School for the Deaf Pennsylvania State Oral School for the Deaf

\*The Pittsburgh Hearing & Speech Society, Inc.

Western Pennsylvania School for the Deaf Programs for Speech & Hearing Handicapped:

Adams County Schools Allegheny County Schools **Armstrong County Schools** Beaver County Schools **Bedford County Schools** Berks County Schools **Blair County Schools Bradford County Schools Bucks County Schools** Butler County Schools Cambria County Schools

Cameron County Schools

Carbon County Schools Centre County Schools

Chester County Schools

Clarion County Schools

Clinton County Schools Crawford County Schools

Cumberland County Schools

Dauphin County Schools

**Delaware County Schools** 

**Elk County Schools** 

Favette County Schools Franklin County Schools **Fulton County Schools** Greene County Schools **Huntingdon County Schools** Indiana County Schools Juniata County Schools Lackawanna County Schools Lancaster County Schools Lawrence County Schools Lebanon County Schools Luzerne County Schools Lycoming County Schools McKean County Schools Mercer County Schools Mifflin County Schools Monroe County Schools Montgomery County Schools Montour County Schools Northampton County Schools Northumberland County Schools Perry County Schools Pike County Schools Potter County Schools Schuylkill County Schools Snyder County Schools Somerset County Schools Sullivan County Schools Susquehanna County Schools Tioga County Schools Venango County Schools Warren County Schools Washington County Schools

**Erie County Schools** 

### **RHODE ISLAND**

\*Preschool Language Class at Meeting Street School Rhode Island Hospital Hearing & Speech Center Rhode Island School for the Deaf \*Windmill Hearing Therapy Program

### SOUTH CAROLINA

**Charleston County Schools** \*Estes Elementary School Florence County School District #3 \*Hearing and Speech Center, Columbia \*Keowee Schools

Westmoreland County Schools

York County Schools

<sup>\*</sup>Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.



\*Parker House Education Center for Hearing Handicapped Children Pate Elementary School

\*Pee Dee Hearing & Speech Center

\*Spartanburg Speech & Hearing Clinic South Carolina School for the Deaf & Blind United Speech & Hearing Services

### **SOUTH DAKOTA**

South Dakota School for the Deaf

### **TENNESSEE**

\*Arlington State Hospital & School

\*Clover Bottom Hospital & School
East Tennessee State University - Speech
& Hearing Clinic

\*Green Valley Hospital & School
Hamilton County Speech & Hearing Center

\*Knox County Public Schools
Memphis City Schools
Memphis Parents' School for Deaf & Aphasic
Memphis Speech & Hearing Center
Metropolitan Schools of Nashville & Davidson
County
Sunnyside School
Tennessee School for the Deaf

University of Tennessee – Preschool Deaf Program

Bill Wilkerson Hearing & Speech Center

### **TEXAS**

\*Abilene Public Schools – Day Class for the Deaf Amarillo Regional Hearing & Speech Center Austin Independent School District Baylor Speech & Hearing Clinic

\*Bi-County Deaf & Hard of Hearing School, Brownsville

\*Bexar County School for the Deaf P.F. Brown Elementary School The Callier Hearing & Speech Center Corpus Christi Independent School District County-Wide Area Day School, El Paso Dallas Independent School District Dallas Society for Crippled Children

\*Easter Seal Society for Crippled Children & Adults of Tarrant County, Inc.

\*Farias Special Education School
Grayson County Crippled Children & Adult
Center

\*Harlandale Independent School District

Houston Independent School District Houston School for Deaf Children

\*Houston Speech & Hearing Center Helen Keller Special Education School

\*Midland Independent School District Multi-County School for the Deaf Pasadena Independent School District

\*Port Arthur Independent School District

\*Sunshine Cottage School for Deaf Children
Tarrant County Day School for Deaf

\*Temple Memorial Treatment Center
Texas Christian University Speech & Hearing
Clinic

Texas School for the Deaf
Waco Independent School District
Wichita Falls Independent School District

### **UTAH**

Brigham Young University — Communicative
Disorders Clinic
Utah Schools for the Deaf & Blind
Utah State University — Edith Bowen
Laboratory School

### **VERMONT**

Austine School for the Deaf

### **VIRGINIA**

Arlington County Public Schools
Blue Ridge Speech & Hearing Center, Inc.

\*Bristol Memorial Hospital Speech & Hearing Center

\*Charlottesville Public Schools

\*Chesterfield County Public Schools
Diagnostic, Adjustive & Corrective Center for
Learning

Diagnostic Special Education School of Tidewater Rehabilitation Institute

St. Paul's Oral School

Virginia School for the Deaf & Blind Virginia State School for the Deaf at Hampton

### **WASHINGTON**

Bellingham School District #501

\*Bellevue Public Schools
Bremerton School District 100-C

\*Edmonds School District #15 Edna E. Davis School

\*Kent Public Schools

\*Northshore School District #417

<sup>\*</sup>Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.

- \*Seattle Community College, Classes for the Deaf Seattle Public Schools
- \*Shoreline School District #412 University of Washington — Experimental **Education Unit**

Washington State School for Blind Washington State School for the Deaf

\*Washington State University Speech & Hearing Clinic

Yakima School District #7

### **WEST VIRGINIA**

\*Kanawha Hearing & Speech Center West Virginia School for the Deaf & the Blind

### **WISCONSIN**

Bartlett School

Berryville School City District Public Schools, La Crosse Cooper Day School for Deaf Day School for Deaf, Wausau Madison Public Schools Milwaukee Hearing Society, Inc. \*Oshkosh Program for Hearing Impaired Children

- \*Pleasant Hill School
- \*St. John's School for the Deaf School for the Deaf, Green Bay E.H. Wadewitz School
- \*Washington School, Sheboygan Wisconsin School for the Deaf

### **WYOMING**

Wyoming School for the Deaf



Programs that joined the Survey during the 1970-71 school year-Data from these programs are not included in this report.

### REPORTS FROM THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

### SERIES D

- No. 1 Academic Achievement Test Performance of Hearing Impaired Students— United States: Spring 1969
- No. 2 Item Analysis of Academic Achievement Tests Hearing Impaired Students— United States: Spring 1969
- No. 3 Additional Handicapping Conditions, Age at Onset of Hearing Loss, and Other Characteristics of Hearing Impaired Students—United States: 1968-69
- No. 4 Type and Size of Educational Programs Attended By Hearing Impaired Students—United States: 1968-69
- No. 5 Summary of Selected Characteristics of Hearing Impaired Students United States: 1969-70
- No. 6 Audiological Examinations of Hearing Impaired Students United States: 1969-70

