

# **Prevalence of Selected Impairments United States - 1971**

Statistics on the prevalence of impairments involving vision, hearing, speech, paralysis, absence of extremities, and orthopedic defects by type, site, and etiology. Distributed by age, sex, color, family income, education of head of family, usual activity status, place of residence, geographic region, and associated chronic activity limitation. Based on data collected in the Health Interview Survey during 1971.

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Under the legislation establishing the National Health Survey, the Public Health Service is authorized to use, insofar as possible, the services or facilities of other Federal, State, or private agencies.

In accordance with specifications established by the Health Interview Survey, the Bureau of the Census, under a contractual arrangement, participates in most aspects of survey planning, selects the sample, and collects the data.

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### SYMBOLS

Data not available-----	- - -
Category not applicable-----	. . .
Quantity zero-----	-
Quantity more than 0 but less than 0.05-----	0.0
Figure does not meet standards of reliability or precision (more than 30 percent relative standard error)-----	*

# PREVALENCE OF SELECTED IMPAIRMENTS

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## INTRODUCTION

During 1971 the prevalence of selected impairments among members of the civilian population, not confined to institutions, was measured in the Health Interview Survey. Prevalence estimates and measures of impact of these conditions on the population are presented in this report. A report on the prevalence of impairments due to injury during 1971 was published in Series 10, No. 87. An earlier report on the prevalence of impairments during July 1963-June 1965 was published in Series 10, No. 48.

Methodological studies (Series 2, Nos. 7, 23, and 57) have shown that chronic conditions are generally underreported in interview surveys. Respondents in health interviews tend to report conditions of which they are aware and which they are willing to report to the interviewer. Reporting is better for those conditions which have made a significant impact on the affected individual and his family. Conditions that are severe or costly or require treatment tend to be better reported than conditions having lesser impact. For instance a condition which has caused limitation of activity, visits to the doctor, or days in bed is more likely to be reported in the interview than a condition which has little or no impact on the person.

Methodological studies have also indicated that inclusion of a checklist of descriptive condition titles as part of the interview questionnaire will increase the probability that a

respondent will recognize the terms and report those of which he is aware. Of course, the diagnostic accuracy of reported conditions is dependent on the information the respondent remembers that the attending physician has passed on to the family or, in the absence of medical attendance, on the previous experience or education of the family. From 1957 through 1967 the Health Interview Survey collected data on all chronic conditions. Beginning in 1968 as part of the redesign of the data collection procedure the reporting of chronic conditions was limited to those causing disability days, physician visits, or limitation of activity and, in addition, to the measurement of the prevalence of a single system of chronic conditions through the use of an extended checklist of chronic conditions in that system.<sup>1</sup> During 1971 the system under study was that of impairments. A list of 24 impairments including chronic conditions usually causing visual or hearing impairment was employed in the 1971 questionnaire.

The substantive part of this report presents prevalence estimates for 10 groups of impairments. The effect of the impairment on the individual is shown by a series of measures of impact such as long-term and short-term disability and the degree to which the condition bothers the person. Also presented are detailed prevalence estimates of components of each of

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<sup>1</sup>A report on this new design and the results of a study of the previous method and the revised procedures is presented in Series 2, No. 48.

the 10 impairment sets mentioned above, information on the etiologic (cause) factors for each group, and data on the distribution of the prevalence of each set of impairments for a series of demographic characteristics.

## SOURCE OF DATA

The information presented in this report on the prevalence of selected impairments is based on data collected in the Health Interview Survey, a continuing nationwide survey conducted by household interview. Each week a probability sample is interviewed by trained personnel of the U.S. Bureau of the Census to obtain information about the health and other characteristics of each household member in the sample. During 1971 the sample representing the civilian, noninstitutionalized population of the United States was composed of some 44,000 households containing about 134,000 persons living at the time of the interview.

A description of the design of the survey, the methods used in estimation, and the general qualifications of the data is presented in appendix I. Since estimates shown in this report are based on a sample of the population rather than on the entire population, they are subject to sampling error. Therefore particular attention should be paid to the section entitled "Reliability of Estimates." Since many of the estimates shown in this report are quite small, the sampling error of a number or rate may be substantial.

Appendix II presents definitions of certain terms used in this report. It also contains a listing of all impairment codes and etiology codes. Appendix III illustrates portions of the questionnaire used to obtain information about impairments. The entire questionnaire used during 1971 is illustrated in appendix III of the Current Estimates report for 1971 (Series 10, No. 79).

In addition to the limitation of the data on the prevalence of chronic conditions reported in health interviews which is explained in the introduction, it should be pointed out that the restriction of the survey to the civilian population not confined to institutions affects the esti-

mated prevalence. The omission of the institutionalized population reduces the prevalence estimates since the proportion of persons with chronic conditions in institutions is high.<sup>2</sup>

## PREVALENCE AND MEASURES OF IMPACT OF IMPAIRMENTS

The term prevalence means the number of some item existing at a given point of time; this term is usually stated as point-prevalence. Another definition of prevalence in use is the average number of some item existing during a specified interval of time. The latter definition is the one usually used in the Health Interview Survey. The main source for obtaining a report of an impairment is the question: "Does anyone in the family (you, your -, etc.) NOW have \_\_\_?" A list of impairments including chronic conditions associated with hearing or vision impairment follows (see appendix III for probe questions):

- Deafness in one or both ears?
- Any other trouble hearing with one or both ears?
- Tinnitus or ringing in the ears?
- Blindness in one or both eyes?
- Cataracts?
- Glaucoma?
- Color blindness?
- A detached retina or any other condition of the retina?
- Any other trouble seeing with one or both eyes even when wearing glasses?
- A cleft palate or harelip?
- Stammering or stuttering?
- Any other speech defect?
- A missing finger, hand, or arm, toe, foot, or leg?

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<sup>2</sup>Some indication of the prevalence of impairments among the institutionalized population may be obtained from the report, "Chronic Conditions and Impairments of Nursing Home Residents: United States, 1969" (Series 12, No. 22). This survey covered an estimated 815,130 persons in the institutional population. An estimated 25.1 percent of these persons had cerebrovascular disease (stroke effects), 23.8 percent had permanent stiffness or deformity (limbs or back), 10.0 percent had chronic trouble with back or spine, and 9.8 percent had paralysis or palsy not due to a stroke.

A missing (breast), kidney, or lung?  
 Palsy or cerebral palsy?  
 Paralysis of any kind?  
 Curvature of the spine?  
 REPEATED trouble with back or spine?  
 Any TROUBLE with fallen arches or flat-  
 feet?  
 A clubfoot?  
 Permanent stiffness or any deformity of the  
 back, foot, or leg?  
 Permanent stiffness or any deformity of the  
 fingers, hand, or arm?  
 Mental retardation?  
 Any condition caused by an old accident or  
 injury?

Table A shows the prevalence rate per 1,000  
 persons in the civilian, noninstitutionalized

population for 10 groups of impairments report-  
 ed in the health interviews. Impairments are  
 coded using a special coding scheme developed  
 by the Public Health Service in 1955-56. In this  
 coding scheme, known as the X-code, impair-  
 ments are grouped according to type of func-  
 tional impairment and etiology. The term  
 "impairment" has no actual, definitive medical  
 significance. The term refers to chronic or  
 permanent defects resulting from disease, injury,  
 or congenital malformation. These defects  
 represent a decrease in or loss of ability to per-  
 form various functions, particularly those of the  
 musculoskeletal system and sense organs.

Within each of the 10 impairment groups,  
 with the exception of deformities (X80-X89),  
 the prevalence estimate may be considered as a  
 count of persons in the group. However, a

Table A. Prevalence of selected impairments reported in health interviews, number per 1,000 persons, percent of condi-  
 tions by measures of impact, and disability days in past year: United States, 1971

Type of impairment and impairment code <sup>1</sup>	Prevalence		Percent of conditions				Disability days			
	Num- ber in thou- sands	Num- ber per 1,000 per- sons	Caus- ing limi- tation of activ- ity	With 1 or more bed- days in past year	With doc- tor ever seen	With 1 or more physi- cian visits in past year	Restricted- activity days per condition per year	Bed- days per con- dition per year	Bed- days per bed- dis- abling con- dition <sup>2</sup>	Work- loss days per con- dition per year
Visual impairments-----X00-X05	9,596	47.4	12.5	2.3	87.5	36.5	6.0	1.2	53.9	0.4
Severe visual impairment-----X00	1,306	6.5	37.9	3.7	89.9	37.7	19.8	4.3	118.0	*
Other visual impairments---X01-X05	8,291	41.0	8.5	2.0	87.1	36.3	3.8	0.7	35.6	0.3
Hearing impairments-----X06-X09	14,491	71.6	4.0	1.6	68.0	21.0	1.0	0.4	23.2	*
Speech defects-----X10,X11	1,934	9.6	9.7	*	52.4	16.6	3.3	1.7	*	*
Paralysis, complete or partial-----X40-X69	1,392	6.9	61.9	8.4	97.3	25.1	40.4	17.3	205.6	1.6
Absence of major extremi- ties <sup>3</sup> -----X20-X24,X26-X30,X32,X33	274	1.4	63.5	...	100.0	...	46.2	23.7	...	*
Upper only-----X20-X24	74	0.4	62.2	...	100.0	...	*	*	...	*
Lower only-----X26-X30	197	1.0	65.0	...	100.0	...	63.0	32.9	...	*
Absence of entire finger(s) or toe(s) only <sup>3</sup> -----X25,X31,X34	858	4.2	5.1	...	99.5	...	2.9	*	...	*
Orthopedic impairments (except paralysis or absence):										
Back or spine-----X70-X72,X80,X81	8,018	39.6	24.5	15.3	88.7	33.0	13.8	4.0	26.0	1.4
Upper extremity and shoulder-----X73,X74,X86-X88	2,440	12.1	19.9	4.3	89.0	20.0	9.4	2.3	51.8	1.1
Lower extremity and hip-----X75-X77,X82-X85	7,387	36.5	23.4	5.0	80.2	22.1	12.9	2.8	57.2	1.2
Other and multiple, N.E.C. of limbs, back, and trunk-----X78,X79,X89	1,034	5.1	55.3	17.4	94.5	32.7	36.5	10.2	58.8	2.8

N.E.C. = not elsewhere classified.

<sup>1</sup>See appendix II for a detailed list of impairment codes.

<sup>2</sup>Figure is obtained by dividing the annual volume of bed-days (used in computing the previous column) by the number  
of persons with the condition who reported 1 or more bed-days in the year.

<sup>3</sup>Persons with missing extremities were not asked questions about bed-days and physician visits in the past year.

person may have an impairment in one or more groups.<sup>3</sup> For example a person may be visually impaired and also have an orthopedic impairment. Some combinations are not possible; for instance a person cannot have paralysis and also be coded to an orthopedic impairment in categories X70-X79. (See the list of impairments in appendix II for exclusions under X11, X20-X39,

<sup>3</sup>The estimates of the prevalence of the 10 impairment groups presented in this report are estimates of the number of persons with an impairment in each group, with no attempt to account for persons who have impairments in more than one of these groups. A summation of the 10 impairment groups indicates an estimated 47,424,000 such impairments among the civilian, noninstitutionalized population. However, this should not be interpreted as 47.4 million persons with these impairments since there may be duplication. The following figures show the estimated number of persons with impairments in one or more of the 10 groups by age:

	<i>Number of persons</i>
All ages.....	37,279,000
Under 17 years.....	3,918,000
17-44 years.....	12,152,000
45-64 years.....	11,449,000
65 years and over.....	9,760,000

Some of the combinations for persons who have more than one impairment are shown below. The combinations have been limited to selected pairs of impairment groups.

<i>Combinations of impairments</i>	<i>Persons reporting</i>
Vision and hearing (X00-X05, X06-X09).....	2,559,000
Vision and speech (X00-X05, X10, X11).....	130,000
Vision and paralysis (X00-X05, X40-X69).....	256,000
Vision and absence of extremity (X00-X05, X20-X34).....	148,000
Vision and orthopedic (X00-X05, X70-X89).....	1,927,000
Hearing and speech (except deaf-mute) (X06-X09, X10, X11).....	295,000
Hearing and paralysis (X06-X09, X40-X69).....	288,000
Hearing and absence of extremity (X06-X09, X20-X34).....	229,000
Hearing and orthopedic (X06-X09, X70-X89).....	3,122,000
Paralysis and orthopedic (X40-X69, X70-X89).....	159,000
Absence of extremity and orthopedic (X20-X34, X70-X89).....	219,000

A person can have more than one code in X80-X89, and also may have one code in absence of major extremity and another code in absence of minor extremity of another site. These combinations shown above are actual person counts since only the first of any multiples in X20-X34 and X80-X89 is counted.

X70-X79, X80-X89, and X90-X99.) Reference will be made in this text to the code numbers in the Classification of Impairments. The reader is advised to consult the classification scheme in appendix II for the title and inclusions and exclusions.

The 10 impairment groups in table A encompass most (92.8 percent) of the impairments reported in interviews during 1971. In addition there were an estimated 3,661,000 impairments which are not included in the 10 categories. These impairments are from categories X12-X19, X36-X39, X90-X99. (The estimated prevalence of cleft palate and harelip (X91) is shown in table P.) The report has been restricted to the presentation of detailed information on the 47,424,000 impairments comprising the 10 groups since it is felt that these are reasonably well reported in health interviews using the checklist of impairments shown in appendix III. There is greater likelihood that the gross estimate of 3,661,000 impairments reported for the remaining impairment categories is underreported. Also, due to an error in coding absence of fingers or toes, some portion of these 3.7 million (perhaps about 900,000) should have been coded to X25, X31, or X34.

### Visual Impairments

Estimates of the number of persons with visual impairments have been derived from responses to six items on the checklist of impairments shown in appendix III. The six items are:

- Blindness in one or both eyes?
- Cataracts?
- Glaucoma?
- Color blindness?
- A detached retina or any other condition of the retina?
- Any other trouble seeing with one or both eyes even when wearing glasses?

Additional information about the impairments other than color blindness was obtained from question 23 on the condition page: "Can - see well enough to read ordinary newspaper print (with glasses) with his (left, right) eye?" This question has been used to classify persons according to the severity of the visual impair-

ment. This question was not asked for persons under 6 years of age. The severe visual impairment category (code X00) was used only if the response to the above question was "No" for both eyes, or if there was a report that the person had no useful vision in either eye or was stated to be blind in both eyes. "Severe visual impairment" was assigned to persons under 6 years of age on the basis of a report of "Blind in both eyes" or similar phrasing indicating no useful vision in both eyes in question 3 of the condition page.

Codes X01, X02, X03, and X05 were assigned on the basis of the information reported on the condition page in questions 3 and 23

according to the degree of visual impairment. The questions on functional vision loss (questions 24-29 on the condition page) were not used in coding the visual impairment. Since these questions do not appear on the questionnaire every year, the medical coding employed only the information available each year. By using standard coding rules it is possible to have comparability in coding when a condition is reported from year to year. For instance, causes of limitation of activity are obtained each year, therefore, visual impairments reported as the cause of limitation are coded according to the same rules each year.

Persons with refractive errors (nearsighted,

Table B. Persons 6 years of age and older with visual impairments and percent distribution by responses to vision screener questions, according to severity of visual impairment: United States, 1971

Responses to condition questions (24-28)	Visual impairments			Visual impairments		
	Total	Severe	Other	Total	Severe	Other
Persons with visual impairment-----	9,534	1,300	8,234	100.0	100.0	100.0
Question 24. Can see well enough to recognize the features of people he knows if they are close enough						
Yes-----	7,358	1,029	6,330	77.2	79.2	76.9
No-----	314	266	48	3.3	20.5	0.6
Unknown or not reported <sup>1</sup> -----	1,862	*	1,856	19.5	*	22.5
Question 25. Can see moving objects, such as cars moving or people walking						
Yes-----	7,468	1,126	6,342	78.3	86.6	77.0
No-----	204	168	36	2.1	12.9	0.4
Unknown or not reported <sup>1</sup> -----	1,862	*	1,856	19.5	*	22.5
Question 26. Can see well enough to step down						
Yes-----	7,155	925	6,230	75.0	71.2	75.7
No-----	505	360	145	5.3	27.7	1.8
Unknown or not reported <sup>1</sup> -----	1,874	*	1,859	19.7	*	22.6
Question 27. Can see well enough to recognize a friend walking on the other side of the street						
Yes-----	6,058	430	5,628	63.5	33.1	68.4
No-----	1,525	855	670	16.0	65.8	8.1
Unknown or not reported <sup>1</sup> -----	1,952	*	1,937	20.5	*	23.5
Question 28. Persons with "no" responses to above questions: can see well enough to tell if a light is on						
Yes-----	...	57	...	...	4.4	...
No-----	...	58	...	...	4.5	...
Unknown or not reported-----	...	*	...	...	*	...
One or more "yes" response-----	...	1,171	...	...	90.1	...

<sup>1</sup>Color blind persons are included in this data; they were not asked any questions on the condition page.

farsighted, etc.), those with allergy or migraine causing some vision problem, and those with strabismus, corneal opacity, or keratitis are *not* coded as visually impaired unless they also reported visual impairment from some other cause.

As mentioned above functional vision loss questions were not used in the medical coding of vision impairments. It is of considerable interest to know whether the coded responses of visual impairment among persons 6 years of age and older agree with the answers to the functional questions. Table B presents information for severe visual impairment and other less severe visual impairment for both positive and negative responses to questions 24-28 for persons 6 years of age and over (see appendix III, condition page 63). Although color blind persons have a visual impairment code (usually X05), they were not asked the functional vision loss questions 24-29; therefore, the number of persons with "unknown or not reported" responses to these questions is much larger than is usual for data from the Health Interview Survey.

In 1971 an estimated 1,300,000 persons aged 6 years and over were reported to have answered "no" for both eyes to the question about reading newspaper print with glasses. Therefore, these persons were coded

as having severe visual impairment. When the functional vision questions 24-28 on the condition page were asked of these persons, most of them responded with answers that were consistent with the severe visual impairment to which they were assigned in medical coding. However an estimated 430,000 persons (see the 2nd and 5th columns for responses of "yes" to the 4th question of table B) responded positively to the question about recognizing a friend walking on the other side of the street. The visual tasks of reading newspaper and recognizing a friend across the street are not equivalent, and thus the responses are not necessarily inconsistent.<sup>4</sup> (The information in table B cannot be compared with that reported in the report, "Characteristics of Visually Impaired Persons"-Series 10 No. 46,

<sup>4</sup>The respondent status, i.e., did the person respond for himself or was the information obtained from another household member, has been examined for the 1,300,000 persons with severe visual impairment. An estimated 951,000, 73.2 percent of the total, responded for themselves entirely or partly in the interview; about 38.2 percent of these self respondents stated that they could recognize a friend across the street. When some other person responded in the interview (proxy response), the percentage of persons able to recognize a friend across the street was 18.9 percent of the persons who were reported not to be able to read newspaper.

Table C. Persons with visual impairments and percent distribution by degree of trouble seeing, according to type of visual impairment: United States, 1971

Degree of trouble seeing	Visual impairments			Visual impairments		
	Total	Severe	Other	Total	Severe	Other
	Number in thousands			Percent distribution		
All persons with visual impairments-----	9,596	1,306	8,291	100.0	100.0	100.0
Great deal of trouble seeing-----	1,249	664	585	13.0	50.8	7.1
Some trouble seeing-----	2,782	384	2,397	29.0	29.4	28.9
Hardly any or none-----	2,966	61	2,905	30.9	4.7	35.0
Unknown or not reported <sup>1</sup> -----	2,600	197	2,402	27.1	15.1	29.0

<sup>1</sup>Color blind persons are included in this data; they were not asked any questions on the condition page.

because the question about seeing a friend across the street was not asked of persons who could not read newsprint with glasses.)

The same type of seeming inconsistency between visual acuity and distance vision has been reported in a paper entitled, "Development of a Scale Designed to Measure Functional Distance Vision Loss Using an Interview Technique" by K. W. Haase and E. E. Bryant, published in the 1973 Social Statistics Section Proceedings of the American Statistical Association. In this study patients 6 years of age and over who visited six eye clinics were asked a series of questions about distance vision. It is of interest that 9.2 percent of 219 persons with visual acuity (using present correction in best eye) of 20/400 or worse stated that they could recognize a friend across a street. Similarly, 19.7 percent of 178 persons with visual acuity between 20/200 and 20/400 also said they could recognize a friend across a street. From unpublished data in this study, about 12 percent of 477 persons who reported that they could not read newsprint stated that they could recognize a friend across the street.

Table C presents information from the question: "How much trouble would you say that \_\_\_ has in seeing, a great deal, some, or hardly any at all?" (question 29 on condition page). It shows that 50.8 percent of persons of all ages with severe visual impairment have a great deal of trouble seeing. An additional 29.4 percent stated that they had some trouble seeing.

Prevalence estimates of visual impairments for each of the specific types of impairment in categories X01-X05 are shown in table D. Measures of impact of visual impairments are shown in table A. About two of each five persons with severe visual impairment reported that they were limited in activity due to the impairment. An average of 19.8 days of restricted activity during the year were reported by persons with this impairment.

When an impairment is coded by type and site, an etiology code, that is, the cause of the impairment, is also coded. A list of 12 etiology codes used for visual impairments is presented in appendix II. Since only one etiology code is assigned and a person can have multiple causes of the impairment, priority rules have been used

Table D. Prevalence, percent distribution, and number per 1,000 persons of visual impairments reported in health interviews, by type of impairment: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Visual impairments-----X00-X05	9,596	100.0	47.4
Severe visual impairment: Inability to read ordinary newspaper print with glasses, and impairment indicating no useful vision in either eye-----X00	1,306	13.6	6.5
Blind in one eye, other eye defective, but not blind-----X01	409	4.3	2.0
Blind in one eye, other eye good or not mentioned-----X02	2,604	27.1	12.9
Visual impairment N.E.C. in both eyes-----X03	2,082	21.7	10.3
Impaired vision except as in X00-X03-----X05	3,195	33.3	15.8

N.E.C. = not elsewhere classified.

Table E. Prevalence, percent distribution, and number per 1,000 persons of visually impaired persons reported in health interviews, by etiology: United States, 1971

Etiologic group	All visual impairments			Severe visual impairments			Other visual impairments		
	Number in thousands	Percent distribution	Number per 1,000 persons	Number in thousands	Percent distribution	Number per 1,000 persons	Number in thousands	Percent distribution	Number per 1,000 persons
All causes-----	9,596	100.0	47.4	1,306	100.0	6.5	8,291	100.0	41.0
Cataract-----	2,764	28.8	13.7	472	36.1	2.3	2,292	27.6	11.3
Glaucoma, N.E.C.-----	645	6.7	3.2	102	7.8	0.5	543	6.5	2.7
Other eye diseases----	2,585	26.9	12.8	108	8.3	0.5	2,477	29.9	12.2
General diseases-----	316	3.3	1.6	117	9.0	0.6	199	2.4	1.0
Injury-----	932	9.7	4.6	71	5.4	0.4	861	10.4	4.3
Congenital or birth factors-----	306	3.2	1.5	*	*	*	281	3.4	1.4
Other and ill-defined conditions-----	540	5.6	2.7	103	7.9	0.5	437	5.3	2.2
Unknown to respondent-----	1,508	15.7	7.5	308	23.6	1.5	1,200	14.5	5.9

N.E.C.=not elsewhere classified.

<sup>1</sup>See appendix II for description of etiology codes.

to select the etiology; these are also presented in appendix II. The 12 etiologic codes have been reduced to 8 classes in table E, as follows:

<i>Etiologic class</i>	<i>Etiologic codes included</i>
Cataract .....	.1 and .2
Glaucoma, N.E.C. ....	.3
Other eye diseases .....	.4
General diseases .....	.5, .6, .7, and .8
Injury .....	.9
Congenital or birth factors .....	.X
Other and ill-defined conditions ...	.Y
Unknown to respondent .....	.O

Cataract was the leading cause of severe visual impairment with about one-third of all such impairments assigned this etiology.

The prevalence of certain chronic eye diseases which are *also* coded as visual impairments is presented in table F. The estimated prevalence of 3.0 million persons with cataract is larger than the 2.8 million who reported cataract as the etiology of vision impairments. This incon-

sistency is explained by the low order of cataract on the list of preference rules for assigning the etiology code. The reader should note that color blindness requires an impairment code; prior to 1969 color blindness by itself did not have an impairment code unless some visual problem was present.

Table F. Prevalence of selected chronic eye diseases reported in health interviews per 1,000 persons: United States, 1971

Chronic condition and ICDA code	Prevalence in thousands	Number per 1,000 persons
Cataract-----374,744.3	3,013	14.9
Glaucoma-----375,744.2	797	3.9
Detachment of retina-----376	145	0.7
Color blindness-----377.3	1,993	9.8

Table G. Prevalence of selected impairments reported in health interviews and percent distribution of impairments by frequency of bed-disability days in past year for the condition, according to type of impairment: United States, 1971

Type of impairment	Prevalence in thousands	Bed-disability days in past year					
		Total	None	1-7	8-30	31 or more	Unknown if any
Percent distribution							
Visual impairments-----	9,596	100.0	73.1	1.2	0.9	*	24.7
Severe visual impairment-----	1,306	100.0	81.2	*	*	*	15.1
Other visual impairments-----	8,291	100.0	71.8	1.1	0.8	*	26.2
Hearing impairments-----	14,491	100.0	92.2	1.2	0.4	*	6.1
Speech defects-----	1,934	100.0	88.5	*	*	*	10.4
Paralysis, complete or partial-----	1,392	100.0	51.9	2.5	2.5	3.4	39.7
Absence of major extremities <sup>1</sup> -----	274	...	...	...	...	...	...
Upper only <sup>1</sup> -----	74	...	...	...	...	...	...
Lower only <sup>1</sup> -----	197	...	...	...	...	...	...
Absence of entire finger(s) or toe(s) only <sup>1</sup> -----	858	...	...	...	...	...	...
Orthopedic impairments (except paralysis or absence):							
Back or spine-----	8,018	100.0	72.2	9.3	4.5	1.6	12.5
Upper extremity and shoulder-----	2,440	100.0	76.5	2.1	1.4	*	19.1
Lower extremity and hip-----	7,387	100.0	74.6	2.3	1.7	1.0	20.4
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	100.0	50.0	9.9	5.0	*	29.3

N.E.C. = not elsewhere classified.

<sup>1</sup>Persons with missing extremities were not asked about bed-days in past year.

About 2 of each 100 persons with visual impairments required a bedstay during the year prior to interview (table G). (Color blind persons were not asked any of the questions on the condition page. They are included in table G and elsewhere in the unknown group.) About one in each three persons saw or talked to a medical doctor about the impairment (table H). About half of the persons with visual impairments were bothered by the impairment (tables J, K, and L). As would be expected, severe visual impairment caused a higher percentage of botheration than did lesser degrees of vision impairment (table K). About 1 in each 11 persons with visual impairment experienced the impairment for the first time during the year prior to interview (table M).

The questionnaire used in 1971 requested information about the use of corrective lenses and hearing aids by household members (question 37a, p. 61 appendix III). An estimated 78.8 percent of the 9.6 million persons with visual impairment reported using corrective lenses; about 3.4 percent reported using a hearing aid. The use of these aids among persons with severe visual impairment and other visual impairment is as follows:

	Corrective lenses	Hearing aid
	Percent	
Severe visual impairment . . . . .	70.1	5.0
Other (less severe) visual impairment . . . . .	80.1	3.2

Table H. Prevalence of selected impairments reported in health interviews and percent distribution of impairments by frequency of physician visits in past year for the condition, according to type of impairment: United States, 1971

Type of impairment	Prevalence in thousands	Physician visits in past year					
		Total	None	1	2-4	5 or more	Unknown if any
		Percent distribution					
Visual impairments-----	9,596	100.0	45.1	19.1	13.4	4.0	18.4
Severe visual impairment-----	1,306	100.0	47.5	16.3	15.5	5.7	14.8
Other visual impairments-----	8,291	100.0	44.7	19.5	13.1	3.8	18.9
Hearing impairments-----	14,491	100.0	73.6	12.4	6.0	2.5	5.4
Speech defects-----	1,934	100.0	75.2	9.2	5.3	2.2	8.2
Paralysis, complete or partial-----	1,392	100.0	34.2	9.1	7.6	8.4	40.7
Absence of major extremities <sup>1</sup> -----	274	....	....	....	....	....	....
Upper only <sup>1</sup> -----	74	....	....	....	....	....	....
Lower only <sup>1</sup> -----	197	....	....	....	....	....	....
Absence of entire finger(s) or toe(s) only <sup>1</sup> -----	858	....	....	....	....	....	....
Orthopedic impairments (except paralysis or absence):							
Back or spine-----	8,018	100.0	53.1	12.9	11.8	8.2	13.9
Upper extremity and shoulder-----	2,440	100.0	60.1	7.9	6.1	6.0	19.8
Lower extremity and hip-----	7,387	100.0	57.2	9.4	8.1	4.6	20.7
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	100.0	33.4	7.5	11.1	14.1	33.9

N.E.C. = not elsewhere classified.

<sup>1</sup>Persons with missing extremities were not asked about physician visits in past year.

The prevalence of visual impairments was highest at age 65 years and over (table 1). When these impairments were classified into severe and less severe visual impairments, the prevalence rates again were highest among older persons (tables 2 and 3). The prevalence rate of severe visual impairment was about the same by sex and color (table 2). This prevalence rate was higher for persons with low family income or low education of the family head than for persons with more income or education. The prevalence rate was also higher for residents of the South Region than for those in the other regions. The same pattern of prevalence rates also occurred for other less severe visual impairments (table 3).

### Hearing Impairments

In the health interview a hearing impairment was reported primarily in response to items A,

B, or C in question 36 (see figure I in appendix III). In some instances it could have been reported from the "hearing aid" part of question 37. The estimated prevalence of hearing impairments in 1971 was 14,491,000 (table A).

Questions on functional hearing loss were asked of persons who reported any kind of hearing problem (figure I, appendix III). Question 40 was not asked for persons under 3 years of age. This latter question employs a version of a hearing scale developed at Gallaudet College.<sup>5</sup> An estimated 13,228,000 persons 3 years of age and older had some degree of hearing loss that

<sup>5</sup>Gallaudet College, Washington, D.C., is a federally sponsored institution devoted to the education of persons with severely impaired hearing.

Table J. Prevalence of selected impairments reported in health interviews and percent distribution of impairments by frequency of bother caused by condition, according to type of impairment: United States, 1971

Type of impairment	Prevalence in thousands	Frequency of bother					Not bothered	Unknown if bothered
		Total	All the time	Often	Once in a while	Frequency not specified		
		Percent distribution						
Visual impairments-----	9,596	100.0	28.9	6.0	15.0	1.9	24.1	24.2
Severe visual impairment-----	1,306	100.0	60.1	7.7	8.2	*	8.5	13.7
Other visual impairments-----	8,291	100.0	24.0	5.7	16.0	1.9	26.5	25.9
Hearing impairments-----	14,491	100.0	37.6	6.4	29.2	1.8	20.4	4.6
Speech defects-----	1,934	100.0	26.6	6.2	29.0	2.3	27.2	8.7
Paralysis, complete or partial-----	1,392	100.0	28.7	4.2	13.0	*	13.6	39.4
Absence of major extremities <sup>1</sup> -----	274	...	...	...	...	...	...	...
Upper only <sup>1</sup> -----	74	...	...	...	...	...	...	...
Lower only <sup>1</sup> -----	197	...	...	...	...	...	...	...
Absence of entire finger(s) or toe(s) only <sup>1</sup> -----	858	...	...	...	...	...	...	...
Orthopedic impairments (except paralysis or absence):								
Back or spine-----	8,018	100.0	13.6	15.8	49.2	2.3	7.1	12.0
Upper extremity and shoulder-----	2,440	100.0	17.8	6.8	25.9	2.6	28.9	18.0
Lower extremity and hip-----	7,387	100.0	14.8	10.9	35.9	2.9	16.0	19.5
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	100.0	22.3	16.3	25.7	*	*	32.5

N.E.C. = not elsewhere classified.

<sup>1</sup>Persons with missing extremities were not asked about botheration.

could be ranked according to this scale.<sup>6</sup> A report entitled "Persons with Impaired Hearing, United States, 1971" (Series 10, No. 100) presents information about hearing problems responses to questions 39-41. This report presents more information about hearing problems than can be derived from the information from the condition page on hearing impairments coded to X06-X09.

There is a net difference of 1,263,000 between the estimates of 14,491,000 persons with hearing impairments in table A and the estimate of 13,228,000 persons with hearing

<sup>6</sup>The following table summarizes the responses to this scale:

	<i>Number of persons in thousands</i>	<i>Percent distribution</i>
Total with hearing problems.....	13,228	100.0
With bilateral hearing problems.....	6,414	48.5
Trouble with one ear only.....	6,225	47.1
Both ears good.....	336	2.5
No response.....	253	1.9
Total with bilateral hearing problems...	6,414	100.0
Can hear words spoken in a normal voice.....	3,878	60.5
Can hear words shouted across a room....	1,740	27.1
Can hear words shouted in better ear.....	372	5.8
Can not hear any speech.....	335	5.2
No response.....	89	1.4

Table K. Prevalence of selected impairments reported in health interviews and percent distribution of impairments by degree person was bothered by condition, according to type of impairment: United States, 1971

Type of impairment	Prevalence in thousands	Degree condition bothers person							
		Total	Bothered					Not bothered	Unknown if bothered
			Total	Great deal	Some	Very little	Other		
Percent distribution									
Visual impairments-----	9,596	100.0	51.7	17.4	21.0	11.0	2.4	24.1	24.2
Severe visual impairment-----	1,306	100.0	77.8	44.3	23.3	7.5	2.7	8.5	13.7
Other visual impairments-----	8,291	100.0	47.5	13.1	20.6	11.5	2.3	26.5	25.9
Hearing impairments-----	14,491	100.0	75.0	15.7	31.2	25.1	3.0	20.4	4.6
Speech defects-----	1,934	100.0	64.1	15.3	23.2	22.4	3.2	27.2	8.7
Paralysis, complete or partial---	1,392	100.0	46.9	19.7	18.5	6.8	*	13.6	39.4
Absence of major extremities <sup>1</sup> ----	274	...	...	...	...	...	...	...	...
Upper only <sup>1</sup> -----	74	...	...	...	...	...	...	...	...
Lower only <sup>1</sup> -----	197	...	...	...	...	...	...	...	...
Absence of entire finger(s) or toe(s) only <sup>1</sup> -----	858	...	...	...	...	...	...	...	...
Orthopedic impairments (except paralysis or absence):									
Back or spine-----	8,018	100.0	80.8	32.4	37.1	7.9	3.5	7.1	12.0
Upper extremity and shoulder---	2,440	100.0	53.0	13.9	23.6	13.5	2.0	28.9	18.0
Lower extremity and hip-----	7,387	100.0	64.5	19.4	30.2	13.0	1.9	16.0	19.5
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	100.0	65.8	34.2	25.2	*	3.5	*	32.5

N.E.C. = not elsewhere classified.

<sup>1</sup>Persons with missing extremities were not asked about botheration.

Table L. Prevalence of selected impairments reported in health interviews as causing bother and percent distribution of degree person was bothered by condition, according to type of impairment: United States, 1971

Type of impairment	Number of persons bothered in thousands	Degree condition bothers person				
		Total	Great deal	Some	Very little	Other
Percent distribution						
Visual impairments-----	4,958	100.0	33.6	40.6	21.2	4.6
Severe visual impairment-----	1,016	100.0	57.0	29.9	9.6	3.4
Other visual impairments-----	3,942	100.0	27.5	43.3	24.2	4.9
Hearing impairments-----	10,862	100.0	20.9	41.6	33.5	4.0
Speech defects-----	1,239	100.0	23.8	36.2	34.9	5.0
Paralysis, complete or partial-----	653	100.0	42.0	39.5	14.5	*
Orthopedic impairments (except paralysis or absence):						
Back or spine-----	6,480	100.0	40.0	45.9	9.8	4.3
Upper extremity and shoulder-----	1,294	100.0	26.2	44.4	25.4	3.9
Lower extremity and hip-----	4,765	100.0	30.1	46.8	20.2	2.9
Other and multiple, N.E.C. of limbs, back, and trunk-----	680	100.0	52.1	38.4	*	5.3

Table M. Prevalence and incidence in past year of selected impairments reported in health interviews and percent of impairments occurring in past 12 months: United States, 1971

Type of impairment <sup>1</sup>	Prevalence in thousands	Incidence <sup>2</sup> in thousands	Percent occurring in past 12 months
Visual impairments-----	9,596	829	8.6
Severe visual impairment-----	1,306	89	6.8
Other visual impairments-----	8,291	739	8.9
Hearing impairments-----	14,491	792	5.5
Speech defects-----	1,934	135	7.0
Paralysis, complete or partial-----	1,392	136	9.8
Absence of major extremities-----	274	*	*
Upper only-----	74	*	*
Lower only-----	197	*	*
Absence of entire finger(s) or toe(s) only-----	858	36	4.2
Orthopedic impairments (except paralysis or absence):			
Back or spine-----	8,018	761	9.5
Upper extremity and shoulder-----	2,440	284	11.6
Lower extremity and hip-----	7,387	722	9.8
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	123	11.9

N.E.C. = not elsewhere classified.

<sup>1</sup>See table A for impairment codes.

<sup>2</sup>Onset of the impairment within 12 months of the week of interview.

problems based on the scale questions. This difference is even greater since 599,000 persons in the 13.2 million were not coded as having a hearing impairment. Some hearing problems due to allergy are not coded as impairments. Also most hearing problems beginning less than 3 months prior to interview are not coded as impairments. The difference can be accounted for in the following ways:

There were a few sample persons under 3 years of age included with the estimate of hearing impairments and excluded from the 13.2 million.

Persons who reported tinnitus or ringing in the ears and did not report deafness or trouble hearing (items A or B in question 36) are omitted from the 13.2 million but are included in the 14.5 million.

Table A shows that hearing impairments cause relatively little limitation of activity. About one in five persons with hearing impairments saw a physician about their hearing prob-

lems in the year prior to interview; among these persons the majority saw the physician only once during the year (table H). As expected, most persons with hearing impairment are bothered by the condition (tables J-L).

The bulk of the hearing impairments were coded to the categories "hearing impairment, except total deafness, involving both ears" (X07) or to "hearing impairment involving only one ear" (X08) (table N). Causes of hearing impairment are presented in table O; about 10.4 percent were caused by infection.

As mentioned above (see page 9), the questionnaire for 1971 asked about the use of corrective lenses and hearing aids. About 77.0 percent of persons with hearing impairment use corrective lenses and 10.6 percent use a hearing aid. About 49.7 percent of persons in the category, "Deafness, total, both ears; deaf-mutism" (X06) reported use of a hearing aid.

The prevalence rate of hearing impairment rose with age (table 4). It was higher for males than for females. The rate was higher for white

Table N. Prevalence, percent distribution, and number per 1,000 persons of hearing impairments reported in health interviews, by type of impairment: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Hearing impairments-----X06-X09	14,491	100.0	71.6
Deafness, total, both ears; deaf-mutism-----X06	330	2.3	1.6
Hearing impairment not coded to X06 involving both ears-----X07	6,388	44.1	31.6
Hearing impairments involving only one ear-----X08	7,014	48.4	34.7
Hearing impairments, unknown whether one or both ears involved-----X09	758	5.2	3.7

persons than for other persons. As family income rose, the prevalence rate declined; a similar pattern was present for education of the head of family. The prevalence rate was considerably higher for persons living outside metropolitan areas than for those living in standard metropolitan statistical areas. The rate was lowest for residents of the Northeast Region.

### Speech Defects

Three items in the checklist of impairments were the primary sources of obtaining estimates

of the prevalence of speech defects. These were: a cleft palate or harelip, stammering or stuttering, and any other speech defect. Table A shows 1,934,000 persons with impairments of speech coded to X10-stammering, stuttering or X11-other speech defect (see appendix II). In addition to these speech defects, persons with deaf-mutism are included in the category X06-deafness, total, both ears, including deaf-mutism; and persons with cleft palate or harelip are included in the group X91X-cleft palate or harelip. A separate estimate of the number of

Table O. Prevalence, percent distribution, and number per 1,000 persons of hearing impairments reported in health interviews, by etiology: United States, 1971

Etiologic group <sup>1</sup>	Number in thousands	Percent distribution	Number per 1,000 persons
All causes of hearing impairments-----	14,491	100.0	71.6
Infection-----	1,506	10.4	7.4
General diseases-----	230	1.6	1.1
Injury-----	946	6.5	4.7
Congenital or birth factors-----	300	2.1	1.5
Other and ill-defined conditions-----	4,655	32.1	23.0
Unknown to respondent-----	6,854	47.3	33.9

<sup>1</sup>See appendix II for description of etiology codes.

Table P. Prevalence, percent distribution, and number per 1,000 persons of speech defects, by type of impairment, and of cleft palate and harelip reported in health interviews: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Speech defects-----X10,X11	1,934	100.0	9.6
Stammering and stuttering-----X10	940	48.6	4.6
Other speech defect-----X11	994	51.4	4.9
Cleft palate and harelip-----X91X	114	...	0.6

deaf-mutes is not available from these data. There were an estimated 114,000 persons with cleft palate or harelip (table P). About 9 percent of the 1,934,000 speech defects were of congenital origin and another 7.3 percent were due to cerebrovascular disease (table Q).

The prevalence rate of speech impairments coded to X10 or X11 was highest among children under 17 years of age (table 5). It was higher for males than for females, and was higher for persons of races other than white than for white persons. The rate declined with increasing family income and education of the head of the family.

### Paralysis, Complete or Partial

During 1971 there were an estimated 1,392,000 persons in the civilian population not confined in institutions, with paralysis, X40-X69 of the Classification of Impairments (table A). Table R shows a distribution of types of paralysis included in the total of 1,392,000. About 199,000 persons were reported as hemiplegics, of these persons about 64,000 were 45-64 years of age and 99,000 were 65 years or older. Of the 181,000 with cerebral palsy about 90,000 were under 17 years of age and 67,000 were aged 17-44 years. These estimates include cases of

Table Q. Prevalence, percent distribution, and number per 1,000 persons of speech defects reported in health interviews, by etiology: United States, 1971

Etiologic group <sup>1</sup>	Number in thousands	Percent distribution	Number per 1,000 persons
All causes of speech defects-----	1,934	100.0	9.6
Cerebrovascular disease-----	142	7.3	0.7
Congenital or birth factors-----	174	9.0	0.9
Other and ill-defined conditions-----	688	35.6	3.4
Unknown to respondent-----	930	48.1	4.6

<sup>1</sup>See appendix II for description of etiology codes.

Table R. Prevalence, percent distribution, and number per 1,000 persons of cases of paralysis, complete or partial, reported in health interviews, by type of impairment: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Paralysis, complete or partial-----X40-X69	1,392	100.0	6.9
Paralysis N.O.S. (complete) of extremities and trunk-----X40-X49	721	51.8	3.6
Upper extremity(ies), except finger(s) only-----X40,X41	110	7.9	0.5
Finger(s) only-----X42	*	*	*
Lower extremity(ies), except toes only-----X43	177	12.7	0.9
Paraplegia-----X44,X46	102	7.3	0.5
Toes only-----X45	*	*	*
Hemiplegia-----X47	199	14.3	1.0
Quadriplegia-----X48	51	3.7	0.3
Other sites-----X49	74	5.3	0.4
Cerebral palsy; paralysis (partial) of extremities and trunk-----X50-X59	599	43.0	3.0
Cerebral palsy (and synonyms)-----X50	181	13.0	0.9
Partial paralysis, arm(s) or fingers(s)-----X51	66	4.7	0.3
Partial paralysis, leg(s), any part(s)-----X52	101	7.3	0.5
Partial paralysis, one side of body-----X53	134	9.6	0.7
Partial paralysis, other sites-----X54	83	6.0	0.4
Partial paralysis, palsy, paresis N.O.S.-----X59	*	*	*
Paralysis (complete or partial) sites except extremities and trunk-----X60-X69	73	5.2	0.4
Paralysis, face-----X60	55	4.0	0.3
Paralysis, bladder or anal sphincter-----X61	*	*	*
Paralysis, other sites-----X69	*	*	*

N.O.S. = not otherwise specified.

residual paralysis, of all types and degrees, that have persisted for at least 3 months following the initial attack. About three of each five persons with paralysis reported that the impairment caused limitation of activity (table A). One in four had seen or talked to a physician about the condition in the year prior to interview. Paralysis caused considerable amounts of short-term disability—an average of 40 days of restricted activity per condition per year including 17 days of bed disability. About 46.9 percent of

the paralytics reported botheration due to the impairment (table K). About 23.0 percent of all paralysis reported in the health interview was a residual of poliomyelitis (table S). One-third of the total was caused by cerebrovascular disease (stroke).

The prevalence rate of paralysis, complete or partial, increased substantially with age. The rate for persons 65 years and over was about 10 times that for persons under 17 years of age (table 6). The prevalence rate was approximately

Table S. Prevalence, percent distribution, and number per 1,000 persons of cases of paralysis, complete or partial, reported in health interviews, by etiology: United States, 1971

Etiologic group <sup>1</sup>	Number in thousands	Percent distribution	Number per 1,000 persons
All causes of paralysis, complete or partial-	1,392	100.0	6.9
Poliomyelitis-----	320	23.0	1.6
Cerebrovascular disease-----	459	33.0	2.3
Injury-----	157	11.3	0.8
Congenital or birth factors-----	158	11.4	0.8
Other and ill-defined conditions-----	140	10.1	0.7
Unknown to respondent-----	158	11.4	0.8

<sup>1</sup>See appendix II for description of etiology codes.

the same by sex, color, place of residence, and geographic region. The rate was higher for persons in low income families than for persons in middle or upper income families.

### Absence of Extremity

During 1971 about 274,000 persons were reported to have missing major extremities, that is, an absent leg, foot, arm, or hand classified to X20-X24, X26-X30, X32, or X33 (table A). An estimated 858,000 persons reported the absence of entire fingers or toes (X25, X31, or X34). (Absence of less than the entire finger or toe was coded to the category X39-absence, rib, or bone, joint, muscle, trunk or extremity, without loss of extremity. Partial loss of a finger or toe was interpreted as absence of joint, and therefore coded to this category. However, partial loss of finger or toe should have been included with one of the three codes comprising the group-absence of minor extremities.)

Absence of major extremities was reported to have caused limitation of activity for 63.5 percent of the 274,000 persons with missing extremities. Relatively few of the persons with absence of minor extremities (fingers or toes) reported limitation of activity. Prevalence estimates of specific types of missing extremities are presented in table T. As expected, injury was the

principal cause of the absence of any extremity, either major or minor (table U).

Tables 7 and 8 present information about the distribution of absent extremities among members of the civilian, noninstitutionalized population. The prevalence rate for males was substantially higher than that for females for both major and minor extremities. The rates declined with rise in income and educational levels.

### Orthopedic Impairments

Orthopedic impairments are defects, exclusive of paralysis or absence, of limbs, back, and trunk, categories X70-X89 of the Classification of Impairments in appendix II.

Estimates of orthopedic impairments are presented for four groups, as follows:

- (a) Back or spine only (X70-X72, X80, and X81)
- (b) Upper extremities and shoulders, but no other site (X73, X74, and X86-X88)
- (c) Lower extremities only, or hip(s) with any other site (X75-X77 and X82-X85)
- (d) Multiple sites not involving the hip and not elsewhere classified (N.E.C.), and sites not classifiable in (a), (b), or (c), such as chest or ribs (X78, X79, and X89)

Table T. Prevalence, percent distribution, and number per 1,000 persons of cases of absence of extremities reported in health interviews, by type of impairment: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Absence of major extremities-----X20-X24,X26-X30,X32,X33	274	100.0	1.4
Upper extremity-----X20-X24	74	27.0	0.4
Arm(s)-----X20-X22	47	17.2	0.2
Arm, at or above elbow, and arm N.O.S.-----X20	*	*	*
Arm, below elbow and above wrist-----X21	*	*	*
Arms, both-----X22	*	*	*
Hand(s), except digits only-----X23,X24	*	*	*
Lower extremity-----X26-X30	197	71.9	1.0
Leg(s)-----X26-X28	179	65.3	0.9
Leg, at or above knee, and leg N.O.S.-----X26	96	35.0	0.5
Leg, below knee and above ankle-----X27	68	24.8	0.3
Legs, both-----X28	*	*	*
Foot (feet), except toe(s) only-----X29,X30	*	*	*
Upper and lower extremities-----X32,X33	*	*	*
Absence of minor extremities-----X25,X31,X34	858	100.0	4.2
Entire finger(s) and/or thumb(s) only-----X25	653	76.1	3.2
Entire toe(s) only-----X31	197	23.0	1.0
Entire finger(s) and/or thumb(s) and toe(s)-----X34	*	*	*

N.O.S. = not otherwise specified.

Table U. Prevalence, percent distribution, and number per 1,000 persons of cases of absence of extremities reported in health interviews, by etiology: United States, 1971

Etiologic group <sup>1</sup>	Absence of major extremities			Absence of minor extremities		
	Number in thousands	Percent distribution	Number per 1,000 persons	Number in thousands	Percent distribution	Number per 1,000 persons
All causes-----	274	100.0	1.4	858	100.0	4.2
Injury-----	179	65.3	0.9	748	87.2	3.7
Other causes-----	95	34.7	0.5	111	12.9	0.5

<sup>1</sup>See appendix II for description of etiology codes.

Ill-defined chronic difficulties described in terms such as "stiffness," "weakness," "pain," "trouble," "spasms," and "swelling" and involving muscles, joints, limbs, back, or trunk are classified in categories X70-X79 according to the site. These categories also include reports of old strains, sprains, and dislocations of these sites still causing distress. Coded to X80-X89 are

curvature of the spine, clubfoot, and other specified structural deformities of the limbs, back, and trunk. Excluded from X70-X89, in addition to paralysis and absence of extremities, are all conditions pertaining to displacement of intervertebral discs and impairment of limbs, back, or trunk associated with arthritis or other active chronic disease.

Table V. Prevalence, percent distribution, and number per 1,000 persons of orthopedic impairments (except paralysis or absence) reported in health interviews, by type of impairment: United States, 1971

Type of impairment and impairment code	Number in thousands	Percent distribution	Number per 1,000 persons
Back or spine-----X70-X72,X80,X81	8,018	100.0	39.6
Back N.O.S., vertebra N.O.S.-----X70	5,494	68.5	27.1
Cervical or thoracic region-----X71	536	6.7	2.6
Coccygeal region-----X72	*	*	*
Structural deformities of spine-----X80	1,925	24.0	9.5
Spina bifida-----X81.X	36	0.4	0.2
Upper extremity and shoulder--X73,X74,X86-X88	2,440	100.0	12.1
Shoulder and arm above wrists-----X73	573	23.5	2.8
Wrist, hand, finger, thumb-----X74	729	29.9	3.6
Deformity, neck or shoulder-----X86	53	2.2	0.3
Deformity, finger(s), thumb(s)-----X87	708	29.0	3.5
Deformity, upper extremity(ies)-----X88	378	15.5	1.9
Lower extremity and hip-----X75-X77,X82-X85	7,387	100.0	36.5
Hip and/or pelvis (with any other site in X70-X79)-----X75	624	8.4	3.1
Knee, leg N.O.S.-----X76	1,795	24.3	8.9
Ankle, foot, toe-----X77	712	9.6	3.5
Flatfoot-----X82	3,150	42.6	15.6
Clubfoot-----X83	103	1.4	0.5
Deformity, lower extremity(ies)-----X84	869	11.8	4.3
Deformity, hip and/or pelvis-----X85	134	1.8	0.7
Other and multiple, N.E.C. of limbs, back, and trunk-----X78,X79,X89	1,034	100.0	5.1
Multiple sites N.E.C.-----X78	878	84.9	4.3
Other and ill-defined sites-----X79	126	12.2	0.6
Deformity, trunk bones N.E.C.-----X89	*	*	*

N.O.S. = not otherwise specified.  
N.E.C. = not elsewhere classified.

The totals shown for orthopedic impairments are counts of conditions only, since it is possible for a person to have more than one of the codes X70-X89. When multiple sites involve only X70-X79, category X78 is coded.<sup>7</sup> However it is possible to have more than one code in X80-X89 and it is possible for a person to have one code from X70-X79 and also one or more codes from X80-X89.

Orthopedic impairments cause substantial amounts of limitation of activity, ranging from 19.9 percent of persons with impairment of upper extremity and shoulder to 55.3 percent of other and multiple orthopedic impairments (table A). This latter group also has a high rate of restricted activity—36.5 days per condition per year. About four out of each five persons with impairment of back or spine reported that they were bothered all the time. Also about one-third of persons with impairment of back or spine were bothered a great deal by the impairment.

A distribution of orthopedic impairments in greater detail is presented in table V. For instance, about 24.0 percent of persons with impairment of back or spine reported structural deformities of back or spine (X80). The causes

of orthopedic impairments are shown in table W. Injury was the most frequent condition reported as the cause of orthopedic impairments. Tables 9-12 present the prevalence and number per 1,000 persons by demographic characteristics for the four categories of orthopedic impairments. Each of the four groups have higher prevalence rates among persons with low family income than among higher incomes. Each of the four types is distributed quite evenly among the four geographic regions of the United States.

It will be of interest to readers to compare the estimated prevalence of impairments in the 10 groups discussed above with estimates published previously for July 1963-June 1965 in Series 10, No. 48. Table X summarizes the prevalence estimates and rates per 1,000 population for the two time periods. Some portion of the increase in prevalence of vision and hearing impairments probably results from the inclusion of more terms in the checklist of impairments used in 1971. As explained previously, misinterpretation of coding rules has reduced the estimates of absence of fingers and toes and of multiple orthopedic impairments in X78.

### Reporting of Impairments in Interviews

Throughout the existence of the Health Interview Survey efforts have been made to determine the reliability of data produced by

<sup>7</sup>Misinterpretation of coding rules resulted in some instances where more than one code was assigned in the group X70-X79.

Table W. Prevalence, percent distribution, and number per 1,000 persons of orthopedic impairments (except paralysis or absence) reported in health interviews, by etiology: United States, 1971

Etiologic group <sup>1</sup>	Number in thousands				Percent distribution				Number per 1,000 persons			
	Back or spine	Upper extremity and shoulder	Lower extremity and hip	Other and multiple N.E.C.	Back or spine	Upper extremity and shoulder	Lower extremity and hip	Other and multiple N.E.C.	Back or spine	Upper extremity and shoulder	Lower extremity and hip	Other and multiple N.E.C.
All causes of orthopedic impairment-----	8,018	2,440	7,387	1,034	100.0	100.0	100.0	100.0	39.6	12.1	36.5	5.1
Infection-----	169	325	182	*	2.1	13.3	2.5	*	0.8	1.6	0.9	*
Injury-----	3,117	1,699	2,744	774	38.9	69.6	37.1	74.9	15.4	8.4	13.6	3.8
Congenital or birth factors-----	474	118	1,327	*	5.9	4.8	18.0	*	2.3	0.6	6.6	*
Other and ill-defined conditions-----	1,369	108	937	93	17.1	4.4	12.7	9.0	6.8	0.5	4.6	0.5
Unknown to respondent-----	2,889	190	2,197	148	36.0	7.8	29.7	14.3	14.3	0.9	10.9	0.7

N.E.C. = not elsewhere classified.

<sup>1</sup>See appendix II for description of etiology codes.

Table X. Prevalence of selected impairments reported in health interviews and number per 1,000 persons, by type of impairment: United States, 1971 and July 1963-June 1965

Type of impairment	1971		July 1963- June 1965	
	Number in thou- sands	Num- ber per 1,000 per- sons	Num- ber in thou- sands	Num- ber per 1,000 per- sons
Visual impairments-----	9,596	47.4	5,390	28.8
Severe visual impairment-----	1,306	6.5	1,227	6.6
Other visual impairments-----	8,291	41.0	4,163	22.2
Hearing impairments-----	14,491	71.6	8,549	45.7
Speech defects-----	1,934	9.6	1,298	6.9
Paralysis, complete or partial-----	1,392	6.9	1,516	8.1
Absence of major extremities-----	274	1.4	257	1.4
Absence of entire finger(s) or toe(s) only-----	858	4.2	<sup>1</sup> 1,712	<sup>1</sup> 9.1
Orthopedic impairments (except paralysis or absence):				
Back or spine-----	8,018	39.6	6,486	34.7
Upper extremity and shoulder-----	2,440	12.1	2,925	15.6
Lower extremity and hip-----	7,387	36.5	6,623	35.4
Other and multiple, N.E.C. of limbs, back, and trunk-----	1,034	5.1	1,709	9.1

N.E.C. = not elsewhere classified.

<sup>1</sup>Includes absence of part of finger or toe.

the survey and to implement improved methods of data collection. Because of problems in the collection of data on prevalence of chronic conditions, methodological studies have been undertaken to determine the extent of underreporting. One of these studies was a record-check study conducted in 1961-62 by the Stanford Research Institute to determine how well chronic conditions reported in health interviews compare with those noted in medical records prepared during each visit to a physician during a year. This particular record check study was conducted among a sample of members of the Kaiser Foundation Health Plan, Southern California Region, a large prepayment medical plan providing medical services through Southern California Permanente Medical Group (SCPMG). In this study, records were made of each patient encounter at SCPMG during the study year. Following the end of the year

sample persons were interviewed by trained interviewers. The results of this prospective study have been reported in two methodological reports from the National Center for Health Statistics, Series 2, Nos. 23 and 57.

The second of these reports (Series 2, No. 57) shows the number of conditions in the medical record compared to the number of conditions reported in the interview for persons who stated that they used no medical services other than those of SCPMG. Table Y summarizes these findings for impairments. The prevalence of impairments noted in the patient encounter forms is presented in the column entitled "Conditions reported in medical record" and the prevalence of conditions reported in the health interviews is presented in the column labeled "Conditions reported in interview." Other columns show matches and nonmatches for these conditions. Column F shows the percent

Table Y. Impairments reported in medical records of the Southern California Permanente Medical Group during 1961 and 1962 and whether or not reported in a household interview

Impairment	(A) Con- ditions re- ported in medical record	(B) Con- ditions re- ported in inter- view	(C) Con- ditions re- ported in inter- view and record	(D) Con- ditions re- ported in record but not in in- terview	(E) Con- ditions re- ported in in- terview but not in record	(F) Percent of con- ditions in record re- ported in in- terview  Col. C Col. A
Severe visual impairment-----	2	8	2	-	6	100.0
Other visual impairment-----	80	95	57	23	38	71.3
Hearing impairments-----	50	103	36	14	67	72.0
Speech defects-----	4	7	4	-	3	100.0
Paralysis-----	32	36	20	12	16	62.5
Absence, fingers, toes only-----	4	4	4	-	-	100.0
Impairments (except paralysis and absence), back or spine----	124	138	75	49	63	60.5
Impairments (except paralysis and absence), upper extremities and shoulders-----	15	19	7	8	12	46.7
Impairments (except paralysis and absence) lower extremities and hips with any other site---	64	108	30	34	78	46.9
Impairments (except paralysis and absence), multiple not elsewhere classifiable, and ill-defined, limbs, back, trunk-----	43	33	26	17	7	60.5

Source: Extracted from table 4 of Vital and Health Statistics, Series 2, No. 57.

of conditions in the medical record that were reported in the interview. These percentages indicate that reporting of various impairments was quite good. However, column B presents figures similar to the prevalence estimates from the regular Health Interview Survey. It is quite possible that examining all medical records at SCPMG for the sample persons would show

additional impairments to be added to column A. It is also quite possible that a person did not mention a specific impairment at any time in a patient encounter during the study year. It is conceivable that a person could have an impairment present in the year prior to interview and have it under control so as not to require a physician visit during the year.



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Table 1. Prevalence of visual impairments reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	Number per 1,000 persons				
						All ages	Under 17 years	17-44 years	45-64 years	65 years and over
	Prevalence of conditions in thousands					Number per 1,000 persons				
Total <sup>1</sup> -----	9,596	623	2,385	2,630	3,958	47.4	9.4	31.9	63.0	204.6
<u>Sex</u>										
Male-----	4,962	410	1,595	1,459	1,499	50.8	12.1	44.7	73.6	183.0
Female-----	4,634	213	790	1,172	2,459	44.2	6.5	20.3	53.4	220.4
<u>Color</u>										
White-----	8,476	540	2,136	2,229	3,571	47.9	9.6	32.6	59.1	200.9
All other-----	1,120	83	249	401	387	44.3	7.9	27.2	99.6	245.7
<u>Family income</u>										
Less than \$3,000-----	2,500	51	281	509	1,660	126.5	11.5	51.7	142.7	262.8
\$3,000-\$4,999-----	1,446	61	237	362	787	68.2	9.6	36.2	89.2	186.1
\$5,000-\$6,999-----	1,136	77	325	339	395	41.9	8.5	32.7	61.8	147.8
\$7,000-\$9,999-----	1,292	111	462	393	326	34.7	8.3	31.0	54.2	186.7
\$10,000-\$14,999-----	1,409	137	570	429	272	28.9	7.6	28.7	45.9	181.3
\$15,000 or more-----	1,226	146	428	432	220	34.5	12.6	30.9	48.9	169.2
<u>Education of head of family</u>										
Less than 9 years-----	3,736	127	422	1,027	2,160	80.4	10.1	35.5	83.7	220.6
9-11 years-----	1,492	92	419	441	540	42.5	7.5	33.6	58.5	195.4
12 years-----	2,156	210	743	631	572	33.1	9.1	28.1	52.2	170.8
13 years or more-----	2,046	186	780	486	595	39.0	10.6	34.1	53.5	201.1
<u>Usual activity status</u>										
Usually working (17 years and over)-----	3,421	...	1,576	1,516	329	46.8	...	36.4	56.0	116.1
Usually keeping house (female, 17 years and over)-----	3,019	...	411	707	1,902	77.0	...	22.5	59.6	210.3
Retired (45 years and over)-----	1,624	...	...	251	1,373	200.8	...	...	153.0	212.9
<u>Causing limitation of activity</u>										
Unable to carry on major activity <sup>2</sup> -----	374	*	*	79	266	1.8	*	*	1.9	13.7
Limited in amount or kind of major activity <sup>2</sup> -----	472	*	84	110	258	2.3	*	1.1	2.6	13.3
Limited, but not in major activity-----	354	55	113	87	98	1.7	0.8	1.5	2.1	5.1
Not causing limitation-----	8,397	540	2,166	2,354	3,336	41.5	8.1	29.0	56.4	172.4
<u>Place of residence</u>										
All SMSA-----	5,694	391	1,474	1,593	2,237	43.9	9.3	30.0	58.7	193.0
Central city-----	2,889	153	644	826	1,266	49.3	8.5	29.3	66.1	206.2
Not central city-----	2,805	238	830	767	970	39.4	9.9	30.6	52.4	177.9
Outside SMSA-----	3,487	205	848	903	1,531	54.3	9.4	36.7	72.5	225.8
Nonfarm-----	415	*	63	134	190	50.2	*	25.2	61.6	194.9
<u>Geographic region</u>										
Northeast-----	2,078	155	512	504	907	43.0	10.2	29.1	47.3	182.8
North Central-----	2,414	160	570	561	1,023	43.0	8.5	27.8	58.5	187.5
South-----	3,589	205	867	1,023	1,495	57.1	9.8	37.2	80.3	249.5
West-----	1,515	103	436	443	533	43.3	8.8	32.8	62.7	181.4

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage or preschool activities.

Table 2. Prevalence of severe visual impairments reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
	Prevalence of conditions in thousands				Number per 1,000 persons			
Total <sup>1</sup> -----	1,306	120	276	909	6.5	0.8	6.6	47.0
<u>Sex</u>								
Male-----	503	69	119	314	5.2	1.0	6.0	38.3
Female-----	803	51	157	595	7.7	0.7	7.2	53.3
<u>Color</u>								
White-----	1,068	90	191	787	6.0	0.7	5.1	44.3
All other-----	238	*	85	123	9.4	*	21.1	78.1
<u>Family income</u>								
Less than \$3,000-----	581	42	111	427	29.4	4.2	31.1	67.6
\$3,000-\$4,999-----	232	*	52	160	10.9	*	12.8	37.8
\$5,000-\$9,999-----	252	*	69	158	3.9	*	5.4	35.8
\$10,000 or more-----	141	*	*	94	1.7	*	*	33.6
<u>Education of head of family</u>								
Less than 9 years-----	797	61	165	571	17.1	2.5	13.5	58.3
9-11 years-----	175	*	41	118	5.0	*	5.4	42.7
12 years-----	176	*	38	110	2.7	*	3.1	32.8
13 years or more-----	121	*	*	84	2.3	*	*	28.4
<u>Usual activity status</u>								
Usually working (17 years and over)-----	123	*	58	*	1.7	*	2.1	*
Usually keeping house (female, 17 years and over)-----	520	*	114	373	13.3	*	9.6	41.2
Retired (45 years and over)-----	371	...	53	319	45.9	...	32.3	49.5
<u>Causing limitation of activity</u>								
Unable to carry on major activity <sup>2</sup> -----	234	*	39	181	1.2	*	0.9	9.4
Limited in amount or kind of major activity <sup>2</sup> -----	181	*	41	117	0.9	*	1.0	6.0
Limited, but not in major activity <sup>2</sup> -----	80	*	*	44	0.4	*	*	2.3
Not causing limitation-----	811	66	177	567	4.0	0.5	4.2	29.3
<u>Place of residence</u>								
All SMSA-----	723	77	160	485	5.6	0.8	5.9	41.8
Central city-----	423	45	95	284	7.2	1.1	7.6	46.2
Not central city-----	299	*	65	201	4.2	*	4.4	36.9
Outside SMSA-----	524	39	101	384	8.2	0.9	8.1	56.6
Nonfarm-----	59	*	*	40	7.1	*	*	41.0
Farm-----								
<u>Geographic region</u>								
Northeast-----	272	*	52	194	5.6	*	4.9	39.1
North Central-----	282	*	45	211	5.0	*	4.0	38.7
South-----	602	48	145	409	9.6	1.1	11.4	68.2
West-----	150	*	*	96	4.3	*	*	32.7

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 3. Prevalence of other visual impairments reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
	Prevalence of conditions in thousands					Number per 1,000 persons				
Total <sup>1</sup> -----	8,291	594	2,294	2,354	3,049	41.0	8.9	30.7	56.4	157.6
<u>Sex</u>										
Male-----	4,460	386	1,549	1,340	1,185	45.7	11.4	43.4	67.6	144.7
Female-----	3,831	208	744	1,015	1,864	36.6	6.4	19.1	46.3	167.1
<u>Color</u>										
White-----	7,408	516	2,070	2,038	2,784	41.8	9.2	31.6	54.0	156.6
All other-----	883	78	224	316	265	34.9	7.4	24.4	78.5	168.3
<u>Family income</u>										
Less than \$3,000-----	1,920	50	240	397	1,232	97.1	11.2	44.1	111.3	195.1
\$3,000-\$4,999-----	1,214	61	217	310	627	57.3	9.6	33.1	76.4	148.3
\$5,000-\$6,999-----	990	70	319	303	298	36.5	7.8	32.1	55.2	111.5
\$7,000-\$9,999-----	1,186	104	456	360	265	31.8	7.8	30.6	49.6	151.8
\$10,000-\$14,999-----	1,327	130	560	420	218	27.3	7.2	28.2	44.9	145.3
\$15,000 or more-----	1,167	143	424	419	181	32.8	12.3	30.6	47.4	139.2
<u>Education of head of family</u>										
Less than 9 years-----	2,939	114	375	861	1,589	63.2	9.1	31.5	70.2	162.3
9-11 years-----	1,317	90	406	400	422	37.5	7.3	32.6	53.0	152.7
12 years-----	1,979	204	721	592	462	30.4	8.8	27.2	49.0	138.0
13 years or more-----	1,925	181	772	461	511	36.7	10.3	33.7	50.7	172.7
<u>Usual activity status</u>										
Usually working (17 years and over)-----	3,298	...	1,542	1,458	299	45.1	...	35.6	53.9	105.5
Usually keeping house (female, 17 years and over)-----	2,500	...	378	593	1,529	63.8	...	20.7	50.0	169.1
Retired (45 years and over)-----	1,253	...	...	198	1,054	154.9	...	...	120.7	163.4
<u>Causing limitation of activity</u>										
Unable to carry on major activity <sup>2</sup> -----	140	*	*	41	85	0.7	*	*	1.0	4.4
Limited in amount or kind of major activity <sup>2</sup> -----	291	*	70	68	140	1.4	*	0.9	1.6	7.2
Limited, but not in major activity <sup>2</sup> -----	274	51	101	69	54	1.4	0.8	1.4	1.7	2.8
Not causing limitation-----	7,586	528	2,112	2,177	2,769	37.5	7.9	28.3	52.1	143.1
<u>Place of residence</u>										
All SMSA-----	4,971	368	1,419	1,433	1,751	38.3	8.8	28.9	52.8	151.0
Central city-----	2,465	145	607	731	982	42.0	8.0	27.6	58.5	159.9
Not central city-----	2,506	223	812	702	769	35.2	9.3	29.9	47.9	141.0
Outside SMSA-----	2,963	199	815	802	1,147	46.1	9.1	35.3	64.4	169.1
Nonfarm-----	356	*	60	119	150	43.0	*	24.0	54.7	153.8
Farm-----										
<u>Geographic region</u>										
Northeast-----	1,806	146	495	452	714	37.3	9.6	28.1	42.4	143.9
North Central-----	2,132	156	548	616	812	38.0	8.3	26.8	54.5	148.9
South-----	2,987	198	826	878	1,086	47.5	9.5	35.4	68.9	181.2
West-----	1,365	94	425	408	437	39.0	8.0	32.0	57.7	148.7

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 4. Prevalence of hearing impairments reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	Prevalence of conditions in thousands						Number per 1,000 persons					
	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over
Total <sup>1</sup> -----	14,491	863	3,167	4,765	2,783	2,912	71.6	13.0	42.4	114.1	231.1	398.6
<u>Sex</u>												
Male-----	7,864	480	1,834	2,780	1,472	1,299	80.6	14.2	51.4	140.2	277.8	449.2
Female-----	6,626	383	1,333	1,985	1,311	1,613	63.3	11.7	34.2	90.5	194.4	365.5
<u>Color</u>												
White-----	13,371	747	2,895	4,409	2,611	2,710	75.5	13.3	44.2	116.8	235.3	405.8
All other-----	1,119	117	272	357	172	202	44.3	11.1	29.7	88.7	181.4	322.2
<u>Family income</u>												
Less than \$3,000-----	3,300	75	347	717	961	1,201	166.9	16.9	63.8	201.0	278.0	420.1
\$3,000-\$4,999-----	2,144	87	317	496	645	600	101.2	13.7	48.4	122.2	237.7	395.8
\$5,000-\$6,999-----	1,916	99	420	671	416	310	70.6	11.0	42.2	122.3	219.5	399.0
\$7,000-\$9,999-----	2,157	177	673	833	231	242	57.9	13.2	45.2	114.8	197.1	421.6
\$10,000-\$14,999-----	2,407	250	782	1,003	221	150	49.4	13.9	39.3	107.3	216.9	311.9
\$15,000 or more-----	1,731	139	496	759	155	182	48.6	12.0	35.8	85.9	184.7	394.8
<u>Education of head of family</u>												
Less than 9 years-----	5,560	200	547	1,693	1,559	1,561	119.6	16.0	46.0	138.0	262.4	405.3
9-11 years-----	2,415	173	614	854	394	381	68.8	14.0	49.3	113.2	217.7	399.4
12 years-----	3,540	266	1,137	1,274	414	450	54.4	11.5	42.9	105.4	196.3	362.9
13 years or more-----	2,705	221	836	863	371	414	51.6	12.6	36.5	94.9	191.8	404.3
<u>Usual activity status</u>												
Preschool (under 6 years)-----	84	84	...	...	...	...	3.9	3.9	...	...	...	...
School-age (6-16 years)-----	779	779	...	...	...	...	17.3	17.3	...	...	...	...
Usually working (17 years and over)-----	5,551	...	2,008	2,903	483	156	75.9	...	46.4	107.3	201.8	355.4
Usually keeping house (female, 17 years and over)-----	4,366	...	736	1,276	1,109	1,245	111.4	...	40.2	107.6	199.5	357.2
Retired (45 years and over)-----	2,740	...	...	393	1,106	1,241	338.7	...	...	239.6	296.8	455.7
Other (17 years and over)-----	971	...	422	193	85	271	63.2	...	32.1	159.8	232.2	411.9
<u>Causing limitation of activity</u>												
Unable to carry on major activity <sup>2</sup> -----	101	*	*	*	*	39	0.5	*	*	*	*	5.3
Limited in amount or kind of major activity <sup>2</sup> -----	189	36	45	49	*	36	0.9	0.5	0.6	1.2	*	4.9
Limited, but not in major activity <sup>2</sup> -----	283	56	105	72	*	*	1.4	0.8	1.4	1.7	*	*
Not causing limitation-----	13,918	770	3,012	4,618	2,707	2,812	68.8	11.6	40.3	110.6	224.8	384.9
<u>Place of residence</u>												
All SMSA-----	8,436	515	1,959	2,884	1,532	1,546	65.0	12.3	39.9	106.3	207.6	366.9
Central city-----	3,850	215	817	1,229	782	807	65.7	11.9	37.2	98.4	202.4	354.3
Not central city-----	4,586	301	1,142	1,654	750	739	64.4	12.6	42.1	112.9	213.3	381.7
Outside SMSA-----	5,349	314	1,112	1,598	1,089	1,236	83.2	14.3	48.1	128.4	269.5	451.1
Nonfarm-----	705	*	96	284	161	130	85.2	*	38.4	130.6	257.6	371.4
Farm-----												
<u>Geographic region</u>												
Northeast-----	3,042	148	619	1,063	579	632	62.9	9.8	35.1	99.7	186.5	340.2
North Central-----	3,977	217	866	1,293	756	846	70.9	11.5	42.3	114.4	225.1	403.4
South-----	4,739	286	968	1,521	980	983	75.4	13.7	41.5	119.4	261.6	437.5
West-----	2,733	211	714	888	469	451	78.1	18.1	53.7	125.6	255.6	409.3

<sup>1</sup> Includes unknown income and education.

<sup>2</sup> Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 5. Prevalence of speech defects reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
	Prevalence of conditions in thousands					Number per 1,000 persons				
Total <sup>1</sup> -----	1,934	995	505	268	165	9.6	15.0	6.8	6.4	8.5
<u>Sex</u>										
Male-----	1,254	683	320	162	88	12.8	20.2	9.0	8.2	10.7
Female-----	680	311	185	106	78	6.5	9.5	4.7	4.8	7.0
<u>Color</u>										
White-----	1,448	721	377	208	142	8.2	12.9	5.8	5.5	8.0
All other-----	486	274	128	60	*	19.2	26.1	14.0	14.9	*
<u>Family income</u>										
Less than \$3,000-----	349	145	77	67	61	17.7	32.6	14.2	18.8	9.7
\$3,000-\$4,999-----	283	141	64	41	37	13.4	22.2	9.8	10.1	8.8
\$5,000-\$6,999-----	290	139	86	36	*	10.7	15.4	8.7	6.6	*
\$7,000-\$9,999-----	314	182	87	39	*	8.4	13.6	5.8	5.4	*
\$10,000-\$14,999-----	352	201	106	35	*	7.2	11.2	5.3	3.7	*
\$15,000 or more-----	227	132	54	*	*	6.4	11.4	3.9	*	*
<u>Education of head of family</u>										
Less than 9 years-----	621	259	165	116	81	13.4	20.7	13.9	9.5	8.3
9-11 years-----	411	230	102	61	*	11.7	18.7	8.2	8.1	*
12 years-----	523	308	136	44	35	8.0	13.3	5.1	3.6	10.5
13 years or more-----	345	187	92	41	*	6.6	10.7	4.0	4.5	*
<u>Usual activity status</u>										
Preschool (under 6 years)-----	253	253	...	...	...	11.8	11.8	...	...	...
School-age (6-16 years)-----	742	742	...	...	...	16.4	16.4	...	...	...
Usually working (17 years and over)-----	393	...	253	127	*	5.4	...	5.8	4.7	*
Usually keeping house (female, 17 years and over)-----	198	...	87	65	47	5.1	...	4.8	5.5	5.2
Retired (45 years and over)-----	120	...	...	42	79	14.8	...	...	25.6	12.2
Other (17 years and over)-----	227	...	166	35	*	14.8	...	12.6	29.0	*
<u>Causing limitation of activity</u>										
Causing limitation-----	187	57	*	55	46	0.9	0.9	*	1.3	2.4
Not causing limitation-----	1,746	938	476	214	119	8.6	14.1	6.4	5.1	6.2
<u>Place of residence</u>										
All SMSA-----	1,195	628	316	167	83	9.2	15.0	6.4	6.2	7.2
Central city-----	617	323	162	83	49	10.5	17.9	7.4	6.6	8.0
Not central city-----	578	306	153	84	*	8.1	12.8	5.6	5.7	*
Outside SMSA-----	739	366	189	101	82	10.2	14.9	7.4	6.9	10.6
<u>Geographic region</u>										
Northeast-----	444	229	119	62	*	9.2	15.1	6.8	5.8	*
North Central-----	408	221	98	50	38	7.3	11.7	4.8	4.4	7.0
South-----	803	393	217	119	74	12.8	18.9	9.3	9.3	12.3
West-----	279	151	71	38	*	8.0	12.9	5.3	5.4	*

<sup>1</sup>Includes unknown income and education.

Table 6. Prevalence of paralysis, complete or partial, reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
	Prevalence of conditions in thousands					Number per 1,000 persons				
Total <sup>1</sup> -----	1,392	158	342	446	446	6.9	2.4	4.6	10.7	23.1
<u>Sex</u>										
Male-----	731	83	186	237	225	7.5	2.5	5.2	12.0	27.5
Female-----	661	75	156	208	221	6.3	2.3	4.0	9.5	19.8
<u>Color</u>										
White-----	1,255	147	323	401	384	7.1	2.6	4.9	10.6	21.6
All other-----	138	*	*	45	63	5.5	*	*	11.2	40.0
<u>Family income</u>										
Less than \$3,000-----	332	*	44	85	191	16.8	*	8.1	23.8	30.2
\$3,000-\$4,999-----	222	*	42	83	82	10.5	*	6.4	20.4	19.4
\$5,000-\$6,999-----	173	*	41	70	48	6.4	*	4.1	12.8	18.0
\$7,000-\$9,999-----	198	*	74	58	*	5.3	*	5.0	8.0	*
\$10,000-\$14,999-----	214	45	79	58	*	4.4	2.5	4.0	6.2	*
\$15,000 or more-----	164	*	46	65	*	4.6	*	3.3	7.4	*
<u>Education of head of family</u>										
Less than 9 years-----	490	*	73	145	241	10.5	*	6.1	11.8	24.6
9-11 years-----	229	*	60	81	57	6.5	*	4.8	10.7	20.6
12 years-----	388	56	114	126	92	6.0	2.4	4.3	10.4	27.5
13 years or more-----	269	41	92	90	46	5.1	2.3	4.0	9.9	15.5
<u>Usual activity status</u>										
Usually working (17 years and over)-----	311	...	154	149	*	4.3	...	3.6	5.5	*
Usually keeping house (female, 17 years and over)-----	290	...	59	121	110	7.4	...	3.2	10.2	12.2
Retired (45 years and over)-----	352	...	...	118	234	43.5	...	...	72.0	36.3
<u>Causing limitation of activity</u>										
Unable to carry on major activity <sup>2</sup> -----	397	*	48	129	206	2.0	*	0.6	3.1	10.6
Limited in amount or kind of major activity <sup>2</sup> -----	304	50	85	110	58	1.5	0.8	1.1	2.6	3.0
Limited, but not in major activity <sup>2</sup> -----	161	36	65	46	*	0.8	0.5	0.9	1.1	*
Not causing limitation-----	531	58	144	161	169	2.6	0.9	1.9	3.9	8.7
<u>Place of residence</u>										
All SMSA-----	840	95	229	277	240	6.5	2.3	4.7	10.2	20.7
Central city-----	391	45	92	130	124	6.7	2.5	4.2	10.4	20.2
Not central city-----	450	51	137	147	115	6.3	2.1	5.0	10.0	21.1
Outside SMSA-----	552	62	114	169	207	7.6	2.5	4.5	11.6	26.7
<u>Geographic region</u>										
Northeast-----	305	41	84	96	84	6.3	2.7	4.8	9.0	16.9
North Central-----	366	46	103	112	105	6.5	2.4	5.0	9.9	19.2
South-----	495	49	96	150	199	7.9	2.4	4.1	11.8	33.2
West-----	226	*	59	88	58	6.5	*	4.4	12.4	19.7

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 7. Prevalence of absence of major extremities reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	45-64 years	65 years and over	Number per 1,000 persons			
					All ages	Under 17 years	45-64 years	65 years and over
	Prevalence of conditions in thousands				Number per 1,000 persons			
Total <sup>1</sup> -----	274	70	127	77	1.4	0.5	3.0	4.0
<u>Sex</u>								
Male-----	214	56	105	53	2.2	0.8	5.3	6.5
Female-----	60	*	*	*	0.6	*	*	*
<u>Color</u>								
White-----	223	63	101	58	1.3	0.5	2.7	3.3
All other-----	51	*	*	*	2.0	*	*	*
<u>Family income</u>								
Less than \$5,000-----	117	*	41	53	2.9	*	5.4	5.0
\$5,000-\$9,999-----	76	*	38	*	1.2	*	3.0	*
\$10,000 or more-----	60	*	37	*	0.7	*	2.0	*
<u>Education of head of family</u>								
Less than 12 years-----	183	35	89	59	2.2	0.7	4.5	4.7
12 years or more-----	83	*	36	*	0.7	*	1.7	*
<u>Usual activity status</u>								
Usually working (17 years and over)---	118	*	76	*	1.6	*	2.8	*
Retired (45 years and over)-----	66	...	*	44	8.2	...	*	6.8
<u>Causing limitation of activity</u>								
Causing limitation-----	174	49	85	40	0.9	0.3	2.0	2.1
Not causing limitation-----	100	*	42	37	0.5	*	1.0	1.9
<u>Place of residence</u>								
All SMSA-----	154	*	70	51	1.2	*	2.6	4.4
Outside SMSA-----	120	36	57	*	1.7	0.7	3.9	*
<u>Geographic region</u>								
Northeast-----	51	*	*	*	1.1	*	*	*
North Central-----	56	*	*	*	1.0	*	*	*
South-----	111	*	53	*	1.8	*	4.2	*
West-----	56	*	*	*	1.6	*	*	*

<sup>1</sup>Includes unknown income and education.

Table 8. Prevalence of absence of entire finger(s) or toe(s) only, reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
	Prevalence of conditions in thousands				Number per 1,000 persons			
Total <sup>1</sup> -----	858	287	336	236	4.2	2.0	8.0	12.2
<u>Sex</u>								
Male-----	677	223	272	182	6.9	3.2	13.7	22.2
Female-----	181	64	64	53	1.7	0.9	2.9	4.7
<u>Color</u>								
White-----	759	249	299	211	4.3	2.0	7.9	11.9
All other-----	99	38	37	*	3.9	1.9	9.2	*
<u>Family income</u>								
Less than \$5,000-----	289	54	83	152	7.1	2.4	10.9	14.4
\$5,000-\$9,999-----	245	95	110	41	3.8	2.0	8.6	9.3
\$10,000 or more-----	261	121	118	*	3.1	1.9	6.5	*
<u>Education of head of family</u>								
Less than 9 years-----	355	68	149	137	7.6	2.8	12.1	14.0
9-11 years-----	156	65	59	*	4.4	2.6	7.8	*
12 years-----	214	98	86	*	3.3	2.0	7.1	*
13 years or more-----	115	49	37	*	2.2	1.2	4.1	*
<u>Usual activity status</u>								
Usually working (17 years and over)---	463	194	235	*	6.3	4.5	8.7	*
Usually keeping house (female, 17 years and over)-----	108	*	39	46	2.8	*	3.3	5.1
Retired (45 years and over)-----	193	...	44	149	23.9	...	26.8	23.1
<u>Causing limitation of activity</u>								
Causing limitation-----	44	*	*	*	0.2	*	*	*
Not causing limitation-----	815	262	327	226	4.0	1.9	7.8	11.7
<u>Place of residence</u>								
All SMSA-----	455	160	174	121	3.5	1.8	6.4	10.4
Central city-----	205	62	79	64	3.5	1.5	6.3	10.4
Not central city-----	250	98	95	57	3.5	1.9	6.5	10.5
Outside SMSA								
Nonfarm-----	333	99	139	95	5.2	2.2	11.2	14.0
Farm-----	70	*	*	*	8.5	*	*	*
<u>Geographic region</u>								
Northeast-----	152	56	48	48	3.1	1.7	4.5	9.7
North Central-----	282	90	116	76	5.0	2.3	10.3	13.9
South-----	295	109	114	72	4.7	2.5	8.9	12.0
West-----	130	*	58	39	3.7	*	8.2	13.3

<sup>1</sup>Includes unknown income and education.

Table 9. Prevalence of impairments, except paralysis, of back or spine reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over
	Prevalence of conditions in thousands						Number per 1,000 persons					
Total <sup>1</sup> -----	8,018	210	3,662	2,847	824	474	39.6	3.2	49.0	68.2	68.4	64.9
<u>Sex</u>												
Male-----	3,726	75	1,853	1,352	292	155	38.2	2.2	51.9	68.2	55.1	53.6
Female-----	4,292	135	1,809	1,496	533	319	41.0	4.1	46.4	68.2	79.0	72.3
<u>Color</u>												
White-----	7,247	195	3,360	2,522	752	417	40.9	3.5	51.3	66.8	67.8	62.4
All other-----	771	*	302	325	72	57	30.5	*	33.0	80.7	75.9	90.9
<u>Family income</u>												
Less than \$3,000-----	1,380	*	344	460	317	248	69.8	*	63.2	128.9	91.7	86.7
\$3,000-\$4,999-----	979	*	368	325	193	71	46.2	*	56.2	80.0	71.1	46.8
\$5,000-\$6,999-----	1,099	*	527	387	118	37	40.5	*	53.0	70.5	62.3	47.6
\$7,000-\$9,999-----	1,327	*	728	469	71	*	35.6	*	48.8	64.6	60.6	*
\$10,000-\$14,999-----	1,655	71	943	582	45	*	34.0	4.0	47.4	62.3	44.2	*
\$15,000 or more-----	1,144	*	587	461	36	*	32.1	*	42.4	52.2	42.9	*
<u>Education of head of family</u>												
Less than 9 years-----	2,294	39	543	1,004	446	262	49.3	3.1	45.6	81.9	75.1	68.0
9-11 years-----	1,351	48	624	498	115	66	38.5	3.9	50.1	66.0	63.5	69.2
12 years-----	2,325	70	1,307	756	124	68	35.7	3.0	49.3	62.5	58.8	54.8
13 years or more-----	1,943	51	1,161	548	129	54	37.0	2.9	50.8	60.3	66.7	52.7
<u>Usual activity status</u>												
Usually working (17 years and over)-----	4,046	...	2,238	1,633	144	*	55.3	...	51.7	60.4	60.2	*
Usually keeping house (female, 17 years and over)-----	2,617	...	994	927	438	258	66.8	...	54.4	78.1	78.8	74.0
Retired (45 years and over)-----	528	...	...	178	203	146	65.3	...	...	108.5	54.5	53.6
<u>Causing limitation of activity</u>												
Unable to carry on major activity <sup>2</sup> -----	271	*	62	113	53	38	1.3	*	0.8	2.7	4.4	5.2
Limited in amount or kind of major activity <sup>2</sup> -----	1,226	*	531	506	120	52	6.1	*	7.1	12.1	10.0	7.1
Limited, but not in major activity <sup>2</sup> -----	471	*	265	148	*	*	2.3	*	3.5	3.5	*	*
Not causing limitation-----	6,051	155	2,805	2,081	635	375	29.9	2.3	37.5	49.8	52.7	51.3
<u>Place of residence</u>												
All SMSA-----	5,214	148	2,512	1,834	472	248	40.2	3.5	51.2	67.6	64.0	58.9
Central city-----	2,397	57	1,035	898	262	145	40.9	3.2	47.1	71.9	67.8	63.7
Not central city-----	2,817	92	1,477	936	210	103	39.6	3.8	54.4	63.9	59.7	53.2
Outside SMSA-----	2,436	51	1,020	859	300	206	37.9	2.3	44.1	69.0	74.2	75.2
Nonfarm-----	368	*	130	155	52	*	44.5	*	52.0	71.3	83.2	*
Farm-----												
<u>Geographic region</u>												
Northeast-----	1,877	53	846	634	193	101	38.8	3.5	48.0	59.5	62.2	54.4
North Central-----	2,015	51	962	679	200	123	35.9	2.7	47.0	60.1	59.6	58.7
South-----	2,318	51	982	833	265	187	36.9	2.4	42.1	65.4	70.7	83.2
West-----	1,808	55	873	651	167	63	51.7	4.7	65.7	92.1	91.0	57.2

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 10. Prevalence of impairments, except paralysis or absence, of upper extremity and shoulder reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
	Prevalence of conditions in thousands					Number per 1,000 persons				
Total <sup>1</sup> -----	2,440	120	886	855	578	12.1	1.8	11.9	20.5	29.9
<u>Sex</u>										
Male-----	1,460	75	648	502	235	15.0	2.2	18.1	25.3	28.7
Female-----	979	45	238	353	343	9.3	1.4	6.1	16.1	30.7
<u>Color</u>										
White-----	2,217	109	787	779	542	12.5	1.9	12.0	20.6	30.5
All other-----	222	*	98	77	36	8.8	*	10.7	19.1	22.9
<u>Family income</u>										
Less than \$3,000-----	482	*	98	128	246	24.4	*	18.0	35.9	38.9
\$3,000-\$4,999-----	332	*	103	97	118	15.7	*	15.7	23.9	27.9
\$5,000-\$6,999-----	336	*	115	129	77	12.4	*	11.6	23.5	28.8
\$7,000-\$9,999-----	405	*	194	149	42	10.9	*	13.0	20.5	24.1
\$10,000-\$14,999-----	410	*	203	150	*	8.4	*	10.2	16.1	*
\$15,000 or more-----	326	*	136	139	*	9.2	*	9.8	15.7	*
<u>Education of head of family</u>										
Less than 9 years-----	838	*	152	329	339	18.0	*	12.8	26.8	34.6
9-11 years-----	461	*	192	173	72	13.1	*	15.4	22.9	26.0
12 years-----	580	36	276	187	81	8.9	1.6	10.4	15.5	24.2
13 years or more-----	512	37	251	151	73	9.8	2.1	11.0	16.6	24.7
<u>Usual activity status</u>										
Usually working (17 years and over)-----	1,205	...	602	529	74	16.5	...	13.9	19.6	26.1
Usually keeping house(female, 17 years and over)-----	600	...	106	210	284	15.3	...	5.8	17.7	31.4
Retired (45 years and over)-----	256	...	...	62	194	31.6	...	...	37.8	30.1
<u>Causing limitation of activity</u>										
Unable to carry on major activity <sup>2</sup> -----	97	*	*	43	*	0.5	*	*	1.0	*
Limited in amount or kind of major activity <sup>2</sup> -----	202	*	85	85	*	1.0	*	1.1	2.0	*
Limited, but not in major activity <sup>2</sup> -----	186	*	105	59	*	0.9	*	1.4	1.4	*
Not causing limitation-----	1,955	94	666	669	526	9.7	1.4	8.9	16.0	27.2
<u>Place of residence</u>										
All SMSA-----	1,529	68	589	542	330	11.8	1.6	12.0	20.0	28.5
Central city-----	700	*	252	273	147	11.9	*	11.5	21.9	23.9
Not central city-----	829	41	337	269	183	11.6	1.7	12.4	18.4	33.6
Outside SMSA-----	810	51	256	272	231	12.6	2.3	11.1	21.9	34.1
Nonfarm-----	810	51	256	272	231	12.6	2.3	11.1	21.9	34.1
Farm-----	101	*	40	41	*	12.2	*	16.0	18.9	*
<u>Geographic region</u>										
Northeast-----	595	*	205	204	161	12.3	*	11.6	19.1	32.4
North Central-----	689	43	267	209	171	12.3	2.3	13.0	18.5	31.3
South-----	714	35	253	275	150	11.4	1.7	10.9	21.6	25.0
West-----	441	*	161	166	96	12.6	*	12.1	23.5	32.7

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 11. Prevalence of impairments, except paralysis or absence, of lower extremity and hip reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over	All ages	Under 17 years	17-44 years	45-64 years	65-74 years	75 years and over
	Prevalence of conditions in thousands						Number per 1,000 persons					
Total <sup>1</sup> -----	7,387	1,281	2,544	2,017	853	691	36.5	19.3	34.1	48.3	70.8	94.6
<u>Sex</u>												
Male-----	3,874	777	1,555	1,006	298	238	39.7	22.9	43.6	50.7	56.2	82.3
Female-----	3,513	504	990	1,011	555	453	33.5	15.4	25.4	46.1	82.3	102.7
<u>Color</u>												
White-----	6,398	1,107	2,178	1,728	765	620	36.1	19.8	33.2	45.8	68.9	92.8
All other-----	989	174	367	289	88	72	39.1	16.6	40.1	71.8	92.8	114.8
<u>Family income</u>												
Less than \$3,000-----	1,461	97	306	373	354	331	73.9	21.8	56.3	104.5	102.4	115.8
\$3,000-\$4,999-----	935	124	279	223	178	131	44.1	19.5	42.6	54.9	65.6	86.4
\$5,000-\$6,999-----	969	169	361	273	104	62	35.7	18.7	36.3	49.8	54.9	79.8
\$7,000-\$9,999-----	1,245	264	520	335	89	38	33.4	19.8	34.9	46.2	75.9	66.2
\$10,000-\$14,999-----	1,428	357	587	401	48	36	29.3	19.9	29.5	42.9	47.1	74.8
\$15,000 or more-----	944	216	366	295	*	40	26.5	18.6	26.4	33.4	*	86.8
<u>Education of head of family</u>												
Less than 9 years-----	2,193	190	412	754	467	372	47.2	15.2	34.6	61.5	78.6	96.6
9-11 years-----	1,191	242	396	358	111	84	33.9	19.6	31.8	47.5	61.3	88.1
12 years-----	1,991	413	826	492	144	116	30.6	17.8	31.2	40.7	68.3	93.5
13 years or more-----	1,883	409	882	379	113	100	35.9	23.3	38.6	41.7	58.4	97.7
<u>Usual activity status</u>												
Preschool (under 6 years)-----	454	454	...	...	...	...	21.2	21.2	...	...	...	...
School-age (6-16 years)-----	828	828	...	...	...	...	18.3	18.3	...	...	...	...
Usually working (17 years and over)-----	2,914	...	1,572	1,175	136	*	39.8	...	36.3	43.4	56.8	*
Usually keeping house (female, 17 years and over)-----	1,818	...	444	584	444	347	46.4	...	24.3	49.2	79.9	99.6
Retired (45 years and over)-----	595	...	...	141	226	229	73.6	...	...	86.0	60.7	84.1
Other (17 years and over)-----	778	...	529	117	47	85	50.7	...	40.3	96.9	128.4	129.2
<u>Causing limitation of activity</u>												
Unable to carry on major activity <sup>2</sup> -----	373	*	37	121	75	131	1.8	*	0.5	2.9	6.2	17.9
Limited in amount or kind of major activity <sup>2</sup> -----	749	*	184	271	118	144	3.7	*	2.5	6.5	9.8	19.7
Limited, but not in major activity <sup>2</sup> -----	605	100	261	169	44	*	3.0	1.5	3.5	4.0	3.7	*
Not causing limitation-----	5,660	1,140	2,063	1,457	616	385	28.0	17.1	27.6	34.9	51.1	52.7
<u>Place of residence</u>												
All SMSA-----	4,744	873	1,711	1,288	485	388	36.5	20.8	34.9	47.5	65.7	92.1
Central city-----	2,256	343	785	560	233	235	38.5	19.0	35.7	52.8	60.3	103.2
Not central city-----	2,489	530	925	628	252	153	35.0	22.1	34.1	42.9	71.7	79.0
Outside SMSA-----	2,350	368	751	636	328	268	36.6	16.8	32.5	51.1	81.2	97.8
Nonfarm-----	292	41	83	93	40	35	35.3	15.6	33.2	42.8	64.0	100.0
<u>Geographic region</u>												
Northeast-----	1,792	337	570	500	212	174	37.0	22.3	32.4	46.9	68.3	93.6
North Central-----	1,834	321	631	512	213	157	32.7	17.0	30.8	45.3	63.4	74.9
South-----	2,425	382	790	685	307	261	38.6	18.3	33.9	53.8	82.0	116.2
West-----	1,335	241	554	321	121	100	38.2	20.6	41.7	45.4	65.9	90.7

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 12. Prevalence of impairments, except paralysis or absence, other and multiple, N.E.C. of limbs, back, and trunk reported in health interviews and number of conditions per 1,000 persons, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
	Prevalence of conditions in thousands				Number per 1,000 persons			
Total <sup>1</sup> -----	1,034	425	394	216	5.1	3.0	9.4	11.2
<u>Sex</u>								
Male-----	553	234	228	91	5.7	3.4	11.5	11.1
Female-----	482	191	166	125	4.6	2.7	7.6	11.2
<u>Color</u>								
White-----	901	373	342	187	5.1	3.1	9.1	10.5
All other-----	133	52	52	*	5.3	2.6	12.9	*
<u>Family income</u>								
Less than \$3,000-----	228	50	69	108	11.5	5.1	19.3	17.1
\$3,000-\$4,999-----	157	60	53	44	7.4	4.6	13.1	10.4
\$5,000-\$6,999-----	118	50	44	*	4.3	2.6	8.0	*
\$7,000-\$9,999-----	182	98	73	*	4.9	3.5	10.1	*
\$10,000-\$14,999-----	162	91	59	*	3.3	2.4	6.3	*
\$15,000 or more-----	150	64	81	*	4.2	2.5	9.2	*
<u>Education of head of family</u>								
Less than 9 years-----	366	92	136	137	7.9	3.8	11.1	14.0
9-11 years-----	186	84	79	*	5.3	3.4	10.5	*
12 years-----	241	113	107	*	3.7	2.3	8.8	*
13 years or more-----	230	132	68	*	4.4	3.3	7.5	*
<u>Usual activity status</u>								
Usually working (17 years and over)-----	460	233	202	*	6.3	5.4	7.5	*
Usually keeping house (female, 17 years and over)-----	298	95	101	102	7.6	5.2	8.5	11.3
Retired (45 years and over)-----	114	...	41	73	14.1	...	25.0	11.3
<u>Causing limitation of activity</u>								
Unable to carry on major activity <sup>2</sup> -----	110	*	55	*	0.5	*	1.3	*
Limited in amount or kind of major activity <sup>2</sup> -----	307	98	139	69	1.5	0.7	3.3	3.6
Limited, but not in major activity <sup>2</sup> -----	155	87	55	*	0.8	0.6	1.3	*
Not causing limitation-----	462	218	145	99	2.3	1.5	3.5	5.1
<u>Place of residence</u>								
All SMSA-----	675	293	256	126	5.2	3.2	9.4	10.9
Central city-----	280	111	112	57	4.8	2.8	9.0	9.3
Not central city-----	395	182	145	69	5.5	3.6	9.9	12.7
Outside SMSA-----	359	132	138	90	4.9	2.6	9.4	11.6
<u>Geographic region</u>								
Northeast-----	241	95	104	41	5.0	2.9	9.8	8.3
North Central-----	242	109	87	46	4.3	2.8	7.7	8.4
South-----	328	122	116	91	5.2	2.8	9.1	15.2
West-----	224	98	87	38	6.4	3.9	12.3	12.9

N.E.C. = not elsewhere classified.

<sup>1</sup>Includes unknown income and education.

<sup>2</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 13. Population used in obtaining rates shown in this publication, by age and selected characteristics: United States, 1971

[Data are based on household interviews of the civilian, noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

Characteristic	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	Under 45 years	65-74 years	75 years and over
Number of persons in thousands								
Total <sup>1</sup> -----	202,360	66,544	74,703	41,764	19,349	141,247	12,044	7,305
<u>Sex</u>								
Male-----	97,603	33,875	35,705	19,832	8,191	69,580	5,299	2,892
Female-----	104,757	32,669	38,998	21,932	11,158	71,667	6,745	4,413
<u>Color</u>								
White-----	177,093	56,040	65,541	37,737	17,774	121,581	11,097	6,678
All other-----	25,267	10,504	9,162	4,026	1,575	19,666	948	627
<u>Family income</u>								
Less than \$5,000-----	40,966	10,808	11,986	7,628	10,545	22,794	6,170	4,375
Less than \$3,000-----	19,770	4,448	5,439	3,568	6,316	9,887	3,457	2,859
\$3,000-\$4,999-----	21,196	6,360	6,547	4,060	4,228	12,907	2,713	1,516
\$5,000 or more-----	148,676	51,948	58,589	30,921	7,218	110,537	4,925	2,293
\$5,000-\$9,999-----	64,395	22,387	24,846	12,743	4,418	47,234	3,067	1,351
\$5,000-\$6,999-----	27,128	9,028	9,942	5,486	2,672	18,970	1,895	777
\$7,000-\$9,999-----	37,267	13,360	14,904	7,257	1,746	28,264	1,172	574
\$10,000 or more-----	84,281	29,561	33,742	18,178	2,800	63,303	1,858	942
\$10,000-\$14,999-----	48,694	17,962	19,886	9,345	1,500	37,849	1,019	481
\$15,000 or more-----	35,587	11,599	13,856	8,833	1,300	25,455	839	461
<u>Education of head of family</u>								
Less than 12 years-----	81,576	24,861	24,349	19,811	12,556	49,210	7,751	4,805
Less than 9 years-----	46,490	12,536	11,896	12,266	9,791	24,432	5,941	3,851
9-11 years-----	35,087	12,325	12,453	7,544	2,764	24,778	1,810	954
12 years or more-----	117,598	40,744	49,364	21,182	6,308	90,108	4,043	2,265
12 years-----	65,132	23,023	26,488	12,092	3,349	49,691	2,109	1,240
13 years or more-----	52,466	17,542	22,876	9,090	2,959	40,418	1,934	1,024
<u>Usual activity status</u>								
Preschool (under 6 years)-----	21,386	21,386	...	...	...	21,386	...	...
School-age (6-16 years)-----	45,158	45,158	...	...	...	45,158	...	...
Usually working (17 years and over)-----	73,172	...	43,287	27,052	2,833	43,287	2,394	439
Usually keeping house (female, 17 years and over)-----	39,195	...	18,288	11,863	9,044	18,288	5,558	3,485
Retired (45 years and over)-----	8,089	...	...	1,640	6,449	...	3,726	2,723
Other (17 years and over)-----	15,359	...	13,127	1,208	1,024	13,127	366	658
<u>Place of residence</u>								
All SMSA-----	129,828	41,998	49,095	27,142	11,593	91,093	7,379	4,214
Central city-----	58,639	18,040	21,967	12,492	6,141	40,007	3,863	2,278
Not central city-----	71,189	23,958	27,129	14,650	5,452	51,086	3,516	1,936
Outside SMSA-----	72,532	24,547	25,607	14,621	7,756	50,154	4,666	3,091
Nonfarm-----	64,259	21,925	23,105	12,448	6,781	45,031	4,041	2,740
Farm-----	8,272	2,621	2,502	2,174	975	5,123	625	350
<u>Geographic region</u>								
Northeast-----	48,376	15,141	17,615	10,657	4,963	32,755	3,105	1,858
North Central-----	56,124	18,885	20,485	11,299	5,455	39,370	3,358	2,097
South-----	62,880	20,835	23,314	12,738	5,993	44,148	3,746	2,247
West-----	34,981	11,684	13,289	7,070	2,938	24,973	1,835	1,102

<sup>1</sup>Includes unknown income.

NOTE: For official population estimates for more general use, see U.S. Bureau of the Census reports on the civilian population of the United States in Current Population Reports, Series P-20, P-25, and P-60.

## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### Background of This Report

This report is one of a series of statistical reports prepared by the National Center for Health Statistics (NCHS). It is based on information collected in a continuing nationwide sample of households in the Health Interview Survey (HIS).

The Health Interview Survey utilizes a questionnaire which obtains information on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued which cover one or more of the specific topics. The present report is based on data collected in household interviews during 1971.

The population covered by the sample for the Health Interview Survey is the civilian, non-institutionalized population of the United States living at the time of the interview. The sample does not include members of the Armed Forces or U.S. nationals living in foreign countries. It should also be noted that the estimates shown do not represent a complete measure of any given topic during the specified calendar period since data are not collected in the interview for persons who died during the reference period. For many types of statistics collected in the survey, the reference period covers the 2 weeks prior to the interview week. For such a short period, the contribution by decedents to a total inventory of conditions or services should be very small. However, the contribution by decedents during a long reference period (e.g., 1 year) might be sizable, especially for older persons.

#### Statistical Design of the Health Interview Survey

*General plan.*—The sampling plan of the survey follows a multistage probability design which permits a continuous sampling of the civilian, noninstitutionalized population of the United States. The sample is designed in such a way that the sample of households interviewed each week is representative of the target population and that weekly samples are additive over time. This feature of the design permits both continuous measurement of characteristics of samples and more detailed analysis of less common characteristics and smaller categories of health-related items. The continuous collection has administrative and operational advantages as well as technical assets since it permits fieldwork to be handled with an experienced, stable staff.

The overall sample was designed so that tabulations can be provided for each of the four major geographic regions and for urban and rural sectors of the United States.

The first stage of the sample design consists of drawing a sample of 357 primary sampling units (PSU's) from approximately 1,900 geographically defined PSU's. A PSU consists of a county, a small group of contiguous counties, or a standard metropolitan statistical area. The PSU's collectively cover the 50 States and the District of Columbia.

With no loss in general understanding, the remaining stages can be combined and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined in such a manner that each segment contains an expected six households. Three general types of segments are used.

Area segments which are defined geographically.

List segments, using 1960 census registers as the frame.

Permit segments, using updated lists of building permits issued in sample PSU's since 1960.

Census address listings were used for all areas of the country where addresses were well defined and could be used to locate housing units. In general the list frame included the larger urban areas of the United States from which about two-thirds of the HIS sample was selected.

The usual HIS sample consists of approximately 8,000 segments containing 57,000 assigned households, of which 11,000 were vacant, demolished, or occupied by persons not in the scope of the survey. The 46,000 eligible occupied households yield a probability sample of about 134,000 persons in 44,000 interviewed households in a year.

Descriptive material on data collection, field procedures, and questionnaire development in the HIS has been published<sup>8</sup> as well as a detailed description of the sample design<sup>9</sup> and a report on the estimation procedure and the method used to calculate sampling errors of estimates derived from the survey.<sup>10</sup>

*Collection of data.*—Field operations for the survey are performed by the U.S. Bureau of the Census under specifications established by the National Center for Health Statistics. In accordance with these specifications the Bureau of the Census participates in survey planning, se-

lects the sample, and conducts the field interviewing as an agent of NCHS. The data are coded, edited, and tabulated by NCHS.

*Estimating procedures.*—Since the design of the HIS is a complex multistage probability sample, it is necessary to use complex procedures in the derivation of estimates. Four basic operations are involved:

1. *Inflation by the reciprocal of the probability of selection.*—The probability of selection is the product of the probabilities of selection from each step of selection in the design (PSU, segment, and household).
2. *Nonresponse adjustment.*—The estimates are inflated by a multiplication factor which has as its numerator the number of sample households in a given segment and as its denominator the number of households interviewed in that segment.
3. *First-stage ratio adjustment.*—Sampling theory indicates that the use of auxiliary information which is highly correlated with the variables being estimated improves the reliability of the estimates. To reduce the variability between PSU's within a region, the estimates are ratio adjusted to the 1960 populations within six color-residence classes.
4. *Poststratification by age-sex-color.*—The estimates are ratio adjusted within each of 60 age-sex-color cells to an independent estimate of the population of each cell for the survey period. These independent estimates are prepared by the Bureau of the Census. Both the first-stage and poststratified ratio adjustments take the form of multiplication factors applied to the weight of each elementary unit (person, household, condition, and hospitalization).

The effect of the ratio-estimating process is to make the sample more closely representative of the civilian, noninstitutionalized population by age, sex, color, and residence, which thereby reduces sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of the population. Consolidation of samples over a time period, e.g., a calendar

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<sup>8</sup>National Center for Health Statistics: Health survey procedure: concepts, questionnaire development, and definitions in the Health Interview Survey. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 1-No. 2. Public Health Service. Washington. U.S. Government Printing Office, May 1964.

<sup>9</sup>U.S. National Health Survey: The statistical design of the health household interview survey. *Health Statistics*. PHS Pub. No. 584-A2. Public Health Service. Washington, D.C., July 1958.

<sup>10</sup>National Center for Health Statistics: Estimation and sampling variance in the Health Interview Survey. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 38. Public Health Service. Washington. U.S. Government Printing Office, June 1970.

quarter, produces estimates of average characteristics of the U.S. population for the calendar quarter. Similarly, population data for a year are averages of the four quarterly figures.

For prevalence statistics, such as number of persons with speech impairments or number of persons classified by time interval since last physician visit, figures are first calculated for each calendar quarter by averaging estimates for all weeks of interviewing in the quarter. Prevalence data for a year are then obtained by averaging the four quarterly figures.

For other types of statistics—namely those measuring the number of occurrences during a specified time period—such as incidence of acute conditions, number of disability days, or number of visits to a doctor or dentist, a similar computational procedure is used, but the statistics are interpreted differently. For these items, the questionnaire asks for the respondent's experience over the 2 calendar weeks prior to the week of interview. In such instances the estimated quarterly total for the statistic is 6.5 times the average 2-week estimate produced by the 13 successive samples taken during the period. The annual total is the sum of the four quarters. Thus the experience of persons *interviewed during a year*—experience which actually occurred for each person in a 2-calendar-week interval prior to week of interview—is treated as though it measured the total of such experience *during the year*. Such interpretation leads to no significant bias.

## General Qualifications

*Nonresponse.*—Data were adjusted for nonresponse by a procedure which imputes to persons in a household which was not interviewed the characteristics of persons in households in the same segment which were interviewed. The total noninterview rate, the ratio of the total noninterviewed eligible households to the total eligible households, was 3.6 percent, including a 1.1-percent refusal rate with the remainder primarily due to the failure to find an eligible respondent at home after repeated calls.

*The interview process.*—The statistics presented in this report are based on replies obtained in interviews with persons in the sample

households. Each person 19 years of age and over present at the time of interview was interviewed individually. For children and for adults not present in the home at the time of the interview, the information was obtained from a related household member such as a spouse or the mother of a child.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information, the household respondent can usually pass on to the interviewer only the information the physician has given to the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. However, other facts, such as the number of disability days caused by the condition, can be obtained more accurately from household members than from any other source since only the persons concerned are in a position to report this information.

*Rounding of numbers.*—The original tabulations on which the data in this report are based show all estimates to the nearest whole unit. All consolidations were made from the original tabulations using the estimates to the nearest unit. In the final published tables, the figures are rounded to the nearest thousand, although these are not necessarily accurate to that detail. Devised statistics such as rates and percent distributions are computed after the estimates on which these are based have been rounded to the nearest thousand.

*Population figures.*—Some of the published tables include population figures for specified categories. Except for certain overall totals by age, sex, and color, which are adjusted to independent estimates, these figures are based on the sample of households in the HIS. These are given primarily to provide denominators for rate computation, and for this purpose are more appropriate for use with the accompanying measures of health characteristics than other population data that may be available. With the exception of the overall totals by age, sex, and color mentioned above, the population figures differ from figures (which are derived from different sources) published in reports of the Bureau of the Census. Official population estimates are presented in Bureau of the Census reports in Series P-20, P-25, and P-60.

## Reliability of Estimates

Since the statistics presented in this report are based on a sample, they will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures.

As in any survey, the results are also subject to reporting and processing errors and errors due to nonresponse. To the extent possible, these types of errors were kept to a minimum by methods built into survey procedures. Although it is very difficult to measure the extent of bias in the Health Interview Survey, a number of studies have been conducted to study this problem. The results have been published in several reports.<sup>11-15</sup>

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the standard error also reflects part of the variation which arises in the measurement process. It does not include estimates of any biases which might be in the data.

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<sup>11</sup>National Center for Health Statistics: Reporting of hospitalization in the Health Interview Survey. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No.6. Public Health Service. Washington. U.S. Government Printing Office, July 1965.

<sup>12</sup>National Center for Health Statistics: Health interview responses compared with medical records. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 7. Public Health Service. Washington. U.S. Government Printing Office, July 1965.

<sup>13</sup>National Center for Health Statistics: Comparison of hospitalization reporting in three survey procedures. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 8. Public Health Service. Washington. U.S. Government Printing Office, July 1965.

<sup>14</sup>National Center for Health Statistics: Interview data on chronic conditions compared with information derived from medical records. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 23. Public Health Service. Washington. U.S. Government Printing Office, May 1967.

<sup>15</sup>National Center for Health Statistics: The influence of interviewer and respondent psychological and behavioral variables on the reporting in household interviews. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 26. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1968.

The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error and about 99 out of 100 that it would be less than 2½ times as large.

The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate. For this report, asterisks are shown for any cell with more than a 30-percent relative standard error. Included in this appendix are charts from which the relative standard errors can be determined for estimates shown in the report. In order to derive relative errors which would be applicable to a wide variety of health statistics and which could be prepared at a moderate cost, a number of approximations were required. As a result, the charts provide an estimate of the approximate relative standard error rather than the precise error for any specific aggregate or percentage.

Three classes of statistics for the health survey are identified for purposes of estimating variances.

*Narrow range.*—This class consists of (1) statistics which estimate a population attribute, e.g., the number of persons in a particular income group, and (2) statistics for which the measure for a single individual during the reference period used in data collection is usually either 0 or 1 or on occasion may take on the value 2 or very rarely 3.

*Medium range.*—This class consists of other statistics for which the measure for a single individual during the reference period used in data collection will rarely lie outside the range 0 to 5.

*Wide range.*—This class consists of statistics for which the measure for a single individual during the reference period used in data collection can range from 0 to a number in excess of 5, e.g., the number of days of bed disability.

In addition to classifying variables according to whether they are narrow-, medium-, or wide-range, statistics in the survey are further defined as:

*Type A.* Statistics on prevalence and incidence for which the period of reference in the questionnaire is 12 months.

*Type B.* Incidence-type statistics for which the period of reference in the questionnaire is 2 weeks.

*Type C.* Statistics for which the reference period is 6 months.

Only the charts on sampling error applicable to data contained in this report are presented.

*General rules for determining relative sampling errors.*—The “guide” on page 42, together with the following rules, will enable the reader to determine approximate relative standard errors from the charts for estimates presented in this report.

**Rule 1.** *Estimates of aggregates:* Approximate relative standard errors for estimates of aggregates such as the number of persons with a given characteristic are obtained from appropriate curves on page 43. The number of persons in the total U.S. population or in an age-sex-color class of the total population is adjusted to official Bureau of the Census figures and is not subject to sampling error.

**Rule 2.** *Estimates of percentages in a percent distribution:* Relative standard errors for percentages in a percent distribution of a total are obtained from appropriate curves on page 44. For values which do not fall on one of the curves presented in the chart, visual interpolation will provide a satisfactory approximation.

**Rule 3.** *Estimates of rates where the numerator is a subclass of the denominator:* This rule applies for prevalence rates or where a unit of the numerator occurs, with few exceptions, only once in the year for any one unit in the denominator. For example, in computing the rate of visual impairments per 1,000 population, the numerator consisting of persons with the impairment is a subclass of the denominator, which in-

cludes all persons in the population. Such rates if converted to rates per 100 may be treated as though they were percentages and the relative standard errors obtained from the chart P4AN-M. Rates per 1,000, or on any other base, must first be converted to rates per 100; then the percentage chart will provide the relative standard error per 100.

**Rule 4.** *Estimates of rates where the numerator is not a subclass of the denominator:* This rule applies where a unit of the numerator often occurs more than once for any one unit in the denominator. For example, in the computation of the number of persons injured per 100 currently employed persons per year, it is possible that a person in the denominator could have sustained more than one of the injuries included in the numerator. Approximate relative standard errors for rates of this kind may be computed as follows:

(a) Where the denominator is the total U.S. population or includes all persons in one or more of the age-sex-color groups of the total population, the relative error of the rate is equivalent to the relative error of the numerator, which can be obtained directly from the appropriate chart.

(b) In other cases the relative standard error of the numerator and of the denominator can be obtained from the appropriate curve. Square each of these relative errors, add the resulting values, and extract the square root of the sum. This procedure will result in an upper bound on the standard error and often will overstate the error.

**Rule 5.** *Estimates of difference between two statistics (mean, rate, total, etc.):* The standard error of a difference is approximately the square root of the sum of the squares of each standard error considered separately. A formula for the standard error of a difference,

$$d = X_1 - X_2$$

is

$$\sigma_d = \sqrt{(X_1 V_{x1})^2 + (X_2 V_{x2})^2}$$

where  $X_1$  is the estimate for class 1,  $X_2$  is the estimate for class 2, and  $V_{x1}$  and  $V_{x2}$  are the relative errors of  $X_1$  and

$X_2$  respectively. This formula will represent the actual standard error quite accurately for the difference between separate and uncorrelated characteristics although it is only a rough approximation in most other cases. The relative standard error of each estimate involved in such a difference can be determined by one of the four rules above, whichever is appropriate.

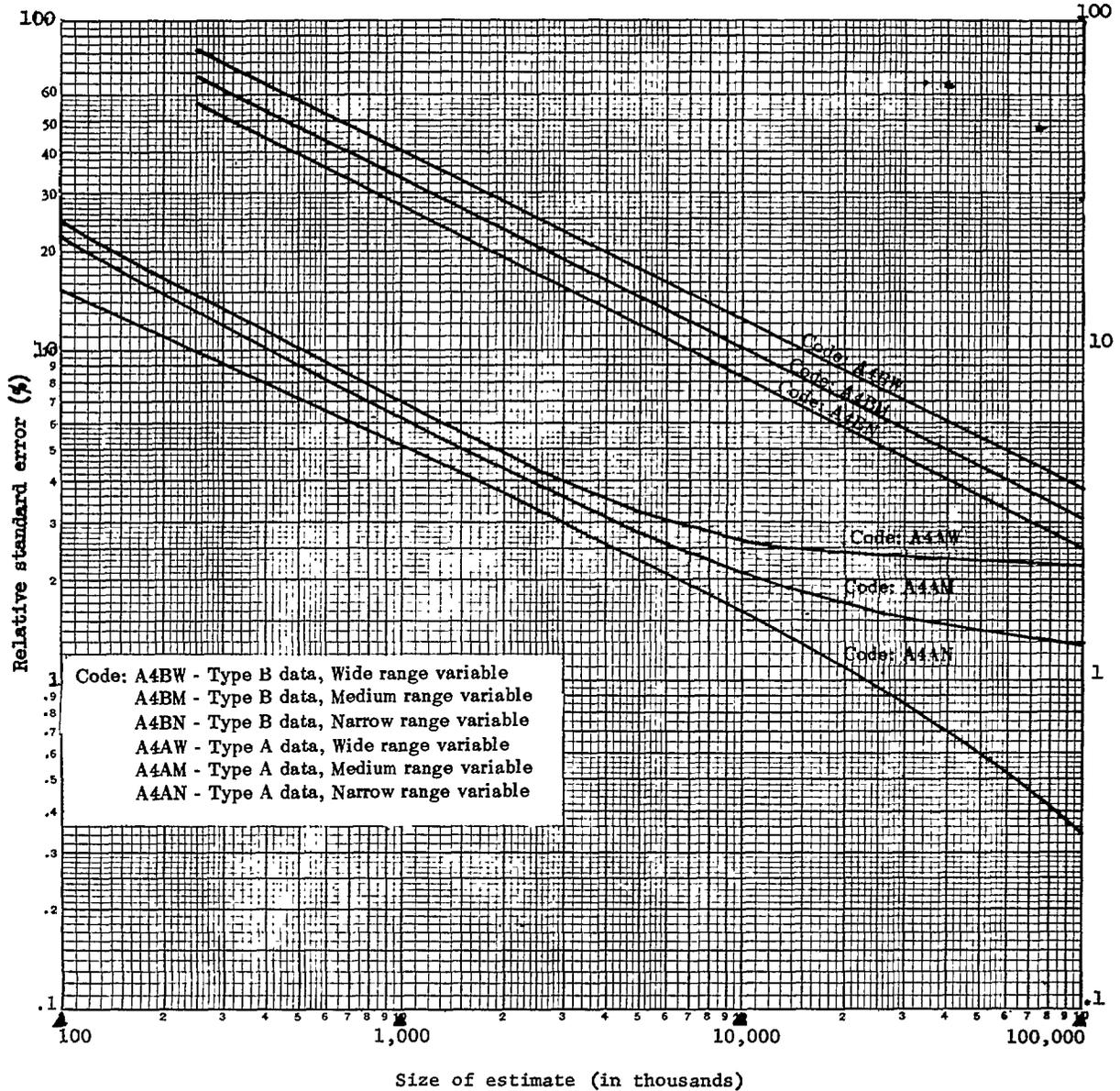
### Guide to Use of Relative Standard Error Charts

The code shown below identifies the appropriate curve to be used in estimating the relative standard error of the statistic described. The four components of each code describe the statistic as follows:

(1) A = aggregate, P = percentage; (2) the number of calendar quarters of data collection; (3) the type of statistic as described on page 40; and (4) the range of the statistic as described on page 40.

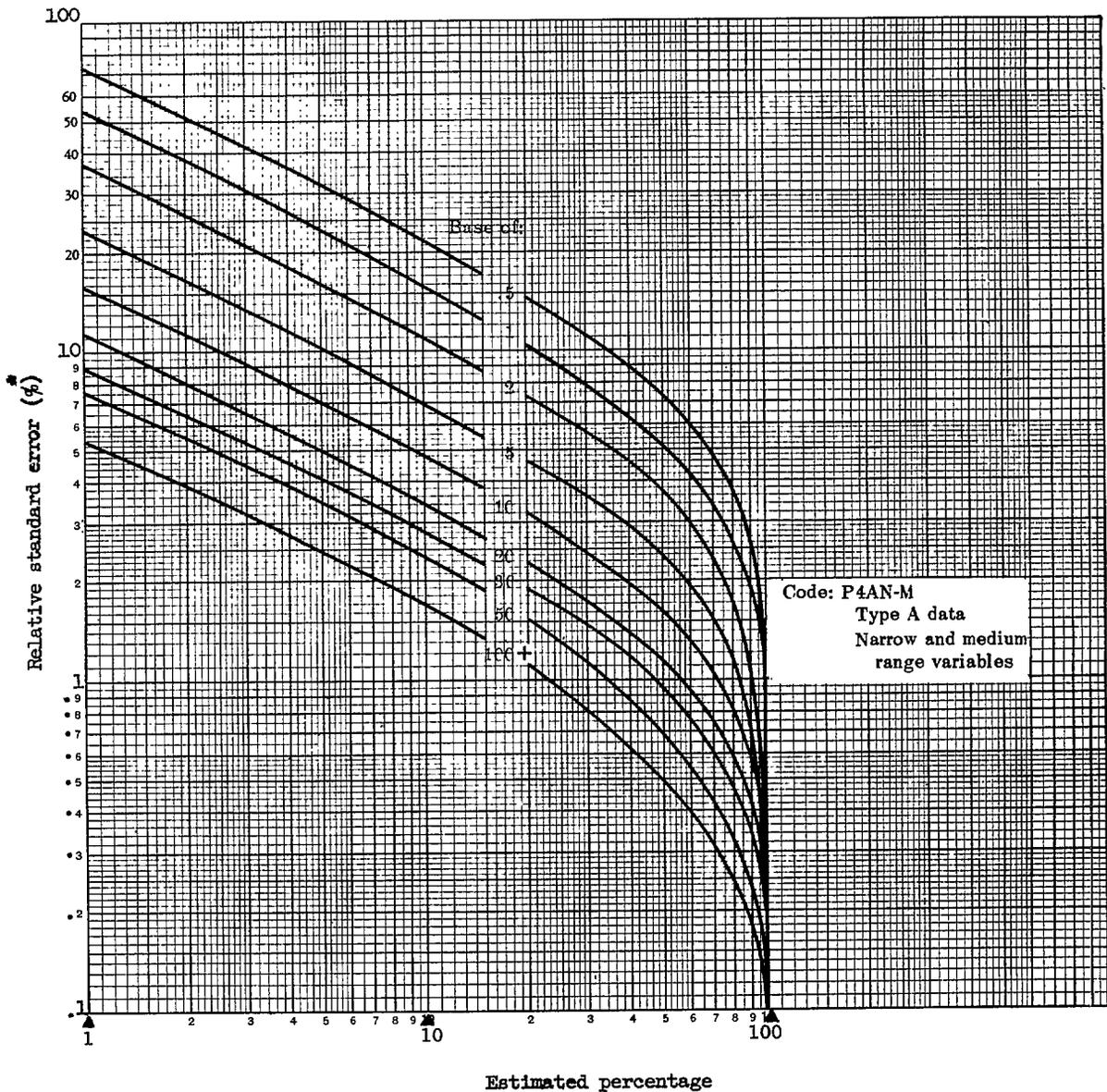
Statistic	Use		
	Rule	Code	Page
Number of:			
Persons in the U.S. population, or any age-sex category thereof . . .		Not subject to sampling error	
Persons in any other population group . . . . .	1	A4AN	43
Impairments, by type . . . . .	1	A4AN	43
Percentage distribution of:			
Impairments by characteristics . . . . .	2	P4AN-M	44
Prevalence rates of impairments:			
Per 1,000 persons in any population group . . . . .	3	P4AN-M	44

Relative standard errors for aggregates based on four quarters of data collection  
for data of all types and ranges



Example of use of chart: An aggregate of 2,000,000 (on scale at bottom of chart) for a Narrow range Type A statistic (code: A4AN) has a relative standard error of 3.6 percent, (read from scale at left side of chart), or a standard error of 72,000 (3.6 percent of 2,000,000). For a Wide range Type B statistic (code: A4BW), an aggregate of 6,000,000 has a relative error of 16.0 percent or a standard error of 960,000 (16 percent of 6,000,000).

Relative standard errors for percentages based on four quarters of data collection  
 for type A data, Narrow and Medium range  
 (Base of percentage shown on curves in millions)



Example of use of chart: An estimate of 20 percent (on scale at bottom of chart) based on an estimate of 10,000,000 has a relative standard error of 3.2 percent (read from the scale at the left side of the chart), the point at which the curve for a base of 10,000,000 intersects the vertical line for 20 percent. The standard error in percentage points is equal to 20 percent X 3.2 percent or 0.64 percentage points.

## APPENDIX II

### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

#### Terms Relating to Conditions

*Condition.*—A morbidity condition, or simply a condition, is any entry on the questionnaire which describes a departure from a state of physical or mental well-being. It results from a positive response to one of a series of “medical-disability impact” or “illness-recall” questions. In the coding and tabulating process conditions are selected or classified according to a number of different criteria such as whether they were medically attended, whether they resulted in disability, or whether they were acute or chronic; or according to the type of disease, injury, impairment, or symptom reported. For the purposes of each published report or set of tables, only those conditions recorded on the questionnaire which satisfy certain stated criteria are included.

Conditions except impairments are classified by type according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*,<sup>16</sup> with certain modifications adopted to make the code more suitable for a household interview survey.

*Chronic condition.*—A condition is considered chronic if (1) the condition is described by the respondent as having been first noticed more than 3 months before the week of the interview or (2) it is one of the conditions listed below which are always considered chronic regardless of the date of onset.

<sup>16</sup>National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

Allergy, any  
Arthritis or rheumatism  
Asthma  
Cancer  
Cleft palate  
Club foot  
Condition present since birth  
Deafness or serious trouble with hearing  
Diabetes  
Epilepsy  
Hardening of the arteries  
Hay fever  
Heart trouble  
Hemorrhoids or piles  
Hernia or rupture  
High blood pressure  
Kidney stones  
Mental illness  
Missing fingers, hand, or arm—toes, foot, or leg  
Palsy  
Paralysis of any kind  
Permanent stiffness or deformity of the foot, leg, fingers, arm, or back  
Prostate trouble  
Repeated trouble with back or spine  
Rheumatic fever  
Serious trouble with seeing, even when wearing glasses  
Sinus trouble, repeated attacks of  
Speech defect, any  
Stomach ulcer  
Stroke  
Thyroid trouble or goiter  
Tuberculosis  
Tumor, cyst, or growth  
Varicose veins, trouble with

*Impairment.*—Impairments are chronic or permanent defects, usually static in nature, resulting from disease, injury, or congenital malformation. They represent decrease or loss of ability to perform various functions, particularly those of the musculoskeletal system and the sense organs. All impairments are classified by means of a special supplementary code for impairments. Hence code numbers for impairments in the International Classification of Diseases are not used. In the Supplementary Code, impairments are grouped according to type of functional impairment and etiology. The impairment classification is shown on pages 50 through 56.

*Prevalence of conditions.*—In general, prevalence of conditions is the estimated number of conditions of a specified type existing at a specified time or the average number existing during a specified interval of time. The prevalence of chronic conditions is defined as the number of chronic cases reported to be present or assumed to be present at the time of the interview. Those assumed to be present at the time of the interview are cases described by the respondent in terms of one of the diseases on the list of conditions always considered chronic (see definition of chronic condition above) and reported to have been present at some time during the 12-month period prior to the interview.

*Incidence of conditions.*—The incidence of conditions is the estimated number of conditions having their onset in a specified time period. As previously mentioned, minor acute conditions involving neither restricted activity nor medical attention are excluded from the statistics. The incidence data shown in some reports are further limited to various subclasses of conditions, such as “incidence of conditions involving bed disability.”

*Onset of condition.*—A condition is considered to have had its onset when it was first noticed. This could be the time the person first felt sick or became injured, or it could be the time when the person or his family was first told by a physician that he had a condition of which he was previously unaware.

*Persons with chronic conditions.*—The estimated number of persons with chronic conditions is based on the number of persons who at

the time of the interview were reported to have one or more chronic conditions.

*Bed-disabling condition.*—A condition with onset in the past 2 weeks involving at least 1 day of bed disability is called a bed-disabling condition. (See “Bed-disability day” under “Terms Relating to Disability.”)

### Terms Relating to Disability

*Disability.*—Disability is the general term used to describe any temporary or long-term reduction of a person’s activity as a result of an acute or chronic condition.

*Disability day.*—Short-term disability days are classified according to whether they are days of restricted activity, bed days, hospital days, work-loss days, or school-loss days. All hospital days are, by definition, days of bed disability; all days of bed disability are, by definition, days of restricted activity. The converse form of these statements is, of course, not true. Days lost from work and days lost from school are special terms which apply to the working and school-age populations only, but these too are days of restricted activity. Hence “days of restricted activity” is the most inclusive term used to describe disability days.

*Restricted-activity day.*—A day of restricted activity is one on which a person cuts down on his usual activities for the whole of that day because of an illness or an injury. The term “usual activities” for any day means the things that the person would ordinarily do on that day. For children under school age, usual activities depend on whatever the usual pattern is for the child’s day, which will in turn be affected by the age of the child, weather conditions, and so forth. For retired or elderly persons, usual activities might consist of almost no activity, but cutting down on even a small amount for as much as a day would constitute restricted activity. On Sundays or holidays, usual activities are the things the person usually does on such days—going to church, playing golf, visiting friends or relatives, or staying at home and listening to the radio, reading, looking at television, and so forth. Persons who have permanently reduced their usual activities because of a chronic condition might not report

any restricted-activity days during a 2-week period. Therefore absence of restricted-activity days does *not* imply normal health.

Restricted activity does not imply complete inactivity, but it does imply only the minimum of usual activities. A special nap for an hour after lunch does not constitute cutting down on usual activities, nor does the elimination of a heavy chore such as cleaning ashes out of the furnace or hanging out the wash. If a farmer or housewife carries on only the minimum of the day's chores, however, this is a day of restricted activity.

A day spent in bed or a day home from work or school because of illness or injury is, of course, a restricted-activity day.

*Bed-disability day.*—A day of bed disability is one on which a person stays in bed for all or most of the day because of a specific illness or injury. All or most of the day is defined as more than half of the daylight hours. All hospital days for inpatients are considered to be days of bed disability even if the patient was not actually in bed at the hospital.

*Work-loss day.*—A day lost from work is a day on which a person did not work at his job or business for at least half of his normal workday because of a specific illness or injury. The number of days lost from work is determined only for persons 17 years of age and over who reported that at any time during the 2-week period covered by the interview they either worked at or had a job or business. (See "Currently employed persons" under "Demographic Terms.")

*Chronic activity limitation.*—Persons are classified into four categories according to the extent to which their activities are limited at present as a result of chronic conditions. Since the usual activities of preschool children, school-age children, housewives, and workers and other persons differ, a different set of criteria is used for each group. There is a general similarity between them, however, as will be seen in the following descriptions of the four categories:

1. *Persons unable to carry on major activity for their group* (major activity refers to ability to

work, keep house, or engage in school or preschool activities)

Preschool children:

Inability to take part in ordinary play with other children.

School-age children:

Inability to go to school.

Housewives:

Inability to do any housework.

Workers and all other persons:

Inability to work at a job or business.

2. *Persons limited in amount or kind of major activity performed* (major activity refers to ability to work, keep house, or engage in school or preschool activities)

Preschool children:

Limited in amount or kind of play with other children, e.g., need special rest periods, cannot play strenuous games, or cannot play for long periods at a time.

School-age children:

Limited to certain types of schools or in school attendance, e.g., need special schools or special teaching or cannot go to school full time or for long periods at a time.

Housewives:

Limited in amount or kind of housework, e.g., cannot lift children, wash or iron, or do housework for long periods at a time.

Workers and all other persons:

Limited in amount or kind of work, e.g., need special working aids or special rest periods at work, cannot work full time or for long periods at a time, or cannot do strenuous work.

3. *Persons not limited in major activity but otherwise limited* (major activity refers to ability to work, keep house, or engage in school or preschool activities)

Preschool children:

Not classified in this category.

**School-age children:**

Not limited in going to school but limited in participation in athletics or other extra-curricular activities.

**Housewives:**

Not limited in housework but limited in other activities such as church, clubs, hobbies, civic projects, or shopping.

**Workers and all other persons:**

Not limited in regular work activities but limited in other activities such as church, clubs, hobbies, civic projects, sports, or games.

4. *Persons not limited in activities* (includes persons whose activities are not limited in any of the ways described above)

**Terms Relating to Physician Visits**

*Physician visit.*—A physician visit is defined as consultation with a physician, in person or by telephone, for examination, diagnosis, treatment, or advice. The visit is considered to be a physician visit if the service is provided directly by the physician or by a nurse or other person acting under a physician's supervision. For the purpose of this definition "physician" includes doctors of medicine and osteopathic physicians. The term "doctor" is used in the interview rather than "physician" because of popular usage. However, the concept toward which all instructions are directed is that which is described here.

**Demographic Terms**

*Age.*—The age recorded for each person is the age at last birthday. Age is recorded in single years and grouped in a variety of distributions depending on the purpose of the table.

*Color.*—The population is divided into two color groups, "white" and "all other." "All other" includes Negro, American Indian, Chinese, Japanese, and any other race. Mexican persons are included with "white" unless definitely known to be Indian or of another race.

*Income of family or of unrelated individuals.*—Each member of a family is classified according to the total income of the family

of which he is a member. Within the household all persons related to each other by blood, marriage, or adoption constitute a family. Unrelated individuals are classified according to their own income.

The income recorded is the total of all income received by members of the family (or by an unrelated individual) in the 12-month period preceding the week of interview. Income from all sources is included, e.g., wages, salaries, rents from property, pensions, and help from relatives.

*Education.*—The categories of education status show the years of school completed. Only years completed in regular schools, where persons are given a formal education, are included. A "regular" school is one which advances a person toward an elementary or high school diploma or a college, university, or professional school degree. Thus education in vocational, trade, or business schools outside the regular school system is not counted in determining the highest grade of school completed.

*Education of head of family or of unrelated individuals.*—Each member of a family is classified according to the education of the head of the family of which he is a member. Within the household all persons related to each other by blood, marriage, or adoption constitute a family.

Unrelated individuals are classified according to their own education.

*Usual activity.*—All persons in the population are classified according to their usual activity during the 12-month period prior to the week of interview. The "usual" activity, in case more than one is reported, is the one at which the person spent the most time during the 12-month period. Children under 6 years of age are classified as "preschool." All persons aged 6-16 years are classified as "school age."

The categories of usual activity used in this report for persons aged 17 years and over are *usually working, usually going to school, usually keeping house, retired, and other activity*. For several reasons these categories are not comparable with somewhat similarly named categories in official Federal labor force statistics. First, the responses concerning usual activity are

accepted without detailed questioning since the objective of the question is not to estimate the numbers of persons in labor force categories but to identify crudely certain population groups which may have differing health problems. Second, the figures represent the usual activity status over the period of an entire year, whereas official labor force statistics relate to a much shorter period, usually 1 week. Third, the minimum age for usually working persons is 17 in the Health Interview Survey, and the official labor force categories include all persons aged 14 or older. Finally, in the definitions of specific categories which follow, certain marginal groups are classified differently to simplify procedures.

*Usually working* includes persons 17 years of age or older who are paid employees; self-employed in their own business, profession, or in farming; or unpaid employees in a family business or farm. Work around the house or volunteer or unpaid work such as for a church is not counted as working.

*Usually going to school* includes persons 17 years of age or older whose major activity is going to school.

*Usually keeping house* includes female persons 17 years of age or older whose major activity is described as "keeping house" and who cannot be classified as "working."

*Retired* includes persons 45 years old and over who consider themselves to be retired. In case of doubt, a person 45 years of age or older is counted as retired if he or she has either voluntarily or involuntarily stopped working, is not looking for work, and is not described as "keeping house." A retired person may or may not be able to work.

*Other activity* includes all persons 17 years of age or older not classified as "working," "retired," or "going to school," and females 17 years of age or older not classified as "keeping house."

*Geographic region.*—For the purpose of classifying the population by geographic area, the States are grouped into four regions. These regions, which correspond to those used by the

U.S. Bureau of the Census, are shown below.

<i>Region</i>	<i>States Included</i>
Northeast . . . .	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania
North Central . . .	Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, Nebraska
South . . . . .	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Texas, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma
West . . . . .	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Alaska, Oregon, California, Hawaii

*Place of residence.*—The place of residence of a member of the civilian, noninstitutionalized population is classified as inside a standard metropolitan statistical area (SMSA) or outside an SMSA and either farm or nonfarm.

*Standard metropolitan statistical areas.*—The definitions and titles of SMSA's are established by the U.S. Office of Management and Budget with the advice of the Federal Committee on Standard Metropolitan Statistical Areas. There were 212 SMSA's defined for the 1960 decennial census.

The definition of an individual SMSA involves two considerations: first, a city or cities of specified population which constitute the central city and identify the county in which it is located as the central county; second, economic and social relationships with contiguous counties (except in New England) which are metropolitan in character so that the periphery of the specific metropolitan area may be determined. SMSA's are not limited by State boundaries. In New England SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1960 census and does not include any subsequent additions or changes.

*Central cities.*—Each SMSA must include at least one central city. The complete title of an SMSA identifies the central city or cities. If only one central city is designated, then it must have 50,000 inhabitants or more. The area title may include, in addition to the largest city, up to two city names on the basis and in the order of the following criteria: (1) the additional city has at least 250,000 inhabitants or (2) the additional city has a population of one-third or more of that of the largest city and a minimum population of 25,000. An exception occurs where two cities have contiguous boundaries and con-

stitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

*Farm and nonfarm residence.*—The population residing outside SMSA's is subdivided into the farm population, which comprises all non-SMSA residents living on farms, and the nonfarm population, which comprises the remaining outside SMSA population. The farm population includes persons living on places of 10 acres or more from which sales of farm products amounted to \$50 or more during the previous 12 months or on places of less than 10 acres from which sales of farm products amounted to \$250 or more during the preceding 12 months. Other persons living outside an SMSA were classified as non-farm if their household paid rent for the house but their rent did not include any land used for farming.

Sales of farm products refer to the gross receipts from the sale of field crops, vegetables, fruits, nuts, livestock and livestock products (milk, wool, etc.), poultry and poultry products, and nursery and forest products produced on the place and sold at any time during the preceding 12 months.

## CLASSIFICATION OF IMPAIRMENTS (X-Code)

### History and Purpose

The X-Code for special impairments by type, site, and etiology was developed in 1955-1956 by the, at that time, Division of Public Health Methods of the Public Health Service. This classification provides—in the relatively simple detail required for household health surveys—a method of coding certain residuals of diseases and injuries so that both the present effect and the underlying cause could be reflected within one diagnostic code. The Health Interview Survey has used this X-Code, making very few changes in it, since the beginning of the Survey and will use it instead of the present ICDA for the coding of impairments.

### Abbreviations and Special Use of Parentheses

NOS = not otherwise specified  
NEC = not elsewhere classified

In addition to the usual purpose, parentheses are used to enclose words or phrases that may or may not be specified but, if used with a given diagnosis, do not change the code assignment of that diagnosis. For example, "paralysis (complete) both legs X44" means that the code number is X44 whether or not the modifier "complete" is specified; "glaucoma (congenital)" means that congenital glaucoma is coded in the same manner as glaucoma not specified as congenital.

## CLASSIFICATION OF IMPAIRMENTS, BY TYPE AND SITE (X00-X99)

(The lists of 1-digit etiology codes are shown following X99)

### X00-X05 Impairment of Vision

- X00 Visual impairment: Inability to read ordinary newspaper print with glasses, and impairment indicating no useful vision in either eye
- X01 Blind in one eye, other eye defective, but not blind
- X02 Blind in one eye, other eye good or not mentioned
- X03 Visual impairment NEC, in both eyes
- X05 Impaired vision except as in X00-X03

### X06-X09 Impairment of Hearing

- X06 Deafness, *total, both ears*, including deaf-mutism  
*Includes* persons, with or without speech, who are completely deaf.
- X07 Hearing loss or impairment involving *both ears* not codable to X06
- X08 All hearing loss or impairment involving only *one ear*
- X09 Hearing loss, complete or partial, or impairment for which it is impossible to determine whether one or both ears are involved

## X10-X19 IMPAIRMENT OF SPEECH, INTELLIGENCE, SPECIAL SENSE

### X10, X11 Impairment of Speech

- X10 Stammering, stuttering
- X11 Other speech defect  
*Includes* absence of larynx, and chronic speech and voice defects due to removal of larynx (voice box) and other structures involved in speech and talking.  
*Excludes* deaf-mutism (X06); and cleft palate speech (X91.X)

### X12, X13 Impairment of Special Sense, Except Vision or Hearing

- X12 Loss or impairment of sense of smell and/or taste
- X13 Loss or disturbance of sensation NEC

### X14-X19 Special Learning Disability and Mental Retardation

- X14 Special learning disability (reading) (mathematics) (“mirror” writing or reading) (“mixed dominance”) (affecting school progress)
- X15 Mongolism (Down’s disease or syndrome) (any I.Q.)
- X16 Severe or profound mental retardation NEC (I.Q. under 36)
- X17 Moderate mental retardation (I.Q. 36-51)
- X18 Borderline or mild mental retardation (I.Q. 52-85)  
*Includes:* backwardness; feeble-mindedness; moron.
- X19 Unspecified mental retardation  
*Includes:* mental retardation or deficiency, degree or type not specified.

## **X20-X39 ABSENCE, LOSS, EXTREMITIES, AND CERTAIN OTHER SITES**

*Note:* Absence or loss of one or both eyes is to be coded as for blindness, one or both eyes, in X00-X02. Absence or impairment of other senses, speech, intelligence is coded to X06-X19. *See also* X90, X92.

### **X20-X25 Absence, Loss, Upper Extremity:**

- X20 Arm, at or above elbow, and arm NOS
- X21 Arm, below elbow and above wrist
- X22 Arms, *both*
- X23 Hand, except fingers or thumbs only
- X24 Hands, *both* except fingers or thumbs only
- X25 Fingers and/or thumbs, only, *one or both hands*

### **X26-X31 Absence, Loss, Lower Extremity:**

- X26 Leg, at or above knee, and leg NOS
- X27 Leg, below knee and above ankle
- X28 Legs, *both*
- X29 Foot, except toe(s) only
- X30 Feet, *both*, except toes only
- X31 Toe(s), only, *one or both feet*

### **X32-X34 Absence, Loss, Upper and Lower Extremities:**

- X32 One upper (arm or hand) *with* one lower (leg or foot), except digits only
- X33 Three or more (arm, hand, leg, foot) except digits only
- X34 Fingers and/or thumb(s) *and* toes(s)

### **X36-X39 Absence, Loss, Certain Other Sites**

- X36 Absence, lung
- X37 Absence, kidney
- X38 Absence, breast
- X39 Absence, rib, or bone, joint, muscle, or trunk or extremity, without loss of extremity

## **X40-X69 PARALYSIS, COMPLETE OR PARTIAL**

### **X40-X49 Paralysis NOS (Complete) or Extremities and Trunk, as Follows:**

- X40 Upper extremity, one, except fingers only
- X41 Upper extremities, both
- X42 Finger(s) only
- X43 Lower extremity, one, any part except toes only
- X44 Lower extremities, both (paraplegia)
- X45 Toes only
- X46 Paraplegia with bladder or anal sphincter involvement
- X47 One side of body, one upper and one lower, same side (hemiplegia)
- X48 Three or more major members, or entire body (quadriplegia)
- X49 Paralysis, NOS, or of other sites of extremities or trunk (complete)

## **X50-X59 Cerebral Palsy; Paralysis, Partial, of Extremities and Trunk**

*Includes:* paresis; palsy; paralytic “weakness” or tremor.”

- X50 Cerebral palsy (and synonyms)  
*Includes* “spastic” if present since birth (congenital)
- X51 Partial paralysis, arm(s) or finger(s)
- X52 Partial paralysis, leg(s) any part(s) (“drags foot”)
- X53 Partial paralysis, one side of body (hemiparesis)
- X54 Partial paralysis, other sites of extremities or trunk
- X59 Partial paralysis, palsy, paresis—NOS

## **X60-X69 Paralysis, Complete or Partial, Sites Except Extremities or Trunk**

- X60 Paralysis, complete or partial, *face* (Bell’s palsy or paralysis)
- X61 Paralysis, complete or partial, bladder or anal sphincter, without mention of paralysis of extremities
- X69 Paralysis, complete or partial, sites *not* of extremities, trunk, nor affecting special senses or speech

## **X70-X79 NONPARALYTIC ORTHOPEDIC IMPAIRMENT (CHRONIC) NEC**

*Excludes:* paralysis (X40-X69) and specified deformities in X80-X89.

*Includes:* limitation of motion NEC; stiffness (complete or partial); “flail joint”; instability of joint; frankly ill-defined, symptomatic, but *chronic* difficulty, weakness, “trouble,” pain, swelling, “limping,” involving muscles, joints, limbs, back or trunk, of *unknown cause, or due to healed injuries 3 mos+ or to past and now inactive diseases*; old (3 mos+) sprains, strains, or dislocations with effect not elsewhere classifiable, or not stated.

*Excludes:* all “disc” conditions (ICDA 725)

*NOTE:* Orthopedic impairment NEC, as in X70-X79, is not coded as a separate diagnosis if due to specified active chronic disease; chronic disease only is coded.

### **Orthopedic Impairment NEC (Chronic) Involving:**

- X70 Back NOS, spine NOS, vertebra NOS (low) (lumbosacral) (sacroiliac) (entire)
- X71 Cervical or thoracic region of back, spine, vertebrae
- X72 Coccygeal region of back, spine, vertebrae (last bone of spine)
- X73 Shoulder, upper arm, forearm above wrist; arm NOS
- X74 Wrist, hand, finger, thumb—sites in X73 not involved
- X75 Hip and/or pelvis, *alone, or with any other site in X70-X79*  
*Excludes* congenital dislocation of hip (X85.X).
- X76 Knee, leg NOS—hip not involved
- X77 Ankle, foot, toe—sites in X76 not involved  
*Excludes* impairments involving arches of foot, feet (X82).
- X78 Multiple sites NEC (back and legs) (fingers and toes) (legs and arms) (arms and back)
- X79 Other and ill-defined sites  
*Includes:* rib; trunk, NOS; “side,” NOS; limping, staggering, stumbling, trouble in walking, NOS.  
*Excludes:* jaw (X92); and ataxic gait, which if chronic, is coded as for paralysis, partial.

## X80-X89 SPECIFIED DEFORMITY OF LIMBS, TRUNK, BACK

*Includes:* specified structural deformities of limbs, trunk, back, described as: contracture; atrophy; accessory (“extra”); short or shortness; crippled; shrivelled; “drawn up;” “twisted;” “withered;” and scarring (with contracture) involving limbs, neck, back, trunk.

*Excludes:* dwarfism and other deviations from normal size, weight, height (X94-X97); paralysis, all sites (X40-X69); scarring and disfigurement of face, nose, lips, ears (X90).

- X80 Curvature and other structural deformities of spine or back, except as in X81.X  
*Includes:* all structural deformities of spine or back except spina bifida (X81.X).  
*Excludes:* chronic back conditions NEC in X70-X72, and disc conditions as in ICDA 725, amended. (See 725 in Appendix III).
- X81.X Spina bifida (with meningocele) (always congenital)
- X82 Flatfoot (including weak or fallen arches and other difficulty with arches)
- X83 Clubfoot (congenital)
- X84 Deformity, other and multiple, *lower extremity, NEC*  
*Includes:* genu valgum (knock knee); genu varum (bow leg); tibial torsion; hammer toe; hallux valgus or varus; any deformity of *toe*; deformity *leg NOS, foot NEC, knee*.  
*Excludes:* X82, X83.
- X85 Dislocation, congenital, and other deformity *hip* and/or pelvis
- X86 Deformity, neck or shoulder region  
*Includes:* torticollis; Sprengel’s deformity; deformity of neck and/or shoulder.
- X87 Deformity *finger(s)*, thumb(s), only
- X88 Deformity, upper extremity, except as in X86, X87  
*Includes* deformity of: arm(s); hand(s) and finger(s), but *excludes* deformity involving fingers, thumbs, *only*.
- X89 Deformity, trunk bones, NEC  
*Includes:* pigeon breast; cervical rib; postural defect NEC.

## X90-X99 DEFECT, ABNORMALITY, SPECIAL IMPAIRMENT, NEC

- X90 Disfigurement, scarring, face, nose, lips, ears  
*Includes:* absence of nose, lips, ears; accessory auricle; other abnormality NEC of face, nose, ears, mouth, teeth, jaws if *stated* to be disfiguring. If speech defect is also present, code it also.  
*Excludes:* cleft palate and harelip whether or not disfiguring (X91.X).
- X91.X Cleft palate and harelip (with speech defect) (disfiguring)  
*Includes:* cleft palate and cleft lip (as in ICDA 749) with or without speech defect and whether or not stated to be disfiguring.
- X92 Other dentofacial handicap  
*Includes:* acquired absence of teeth, onset 3 months plus; and abnormalities of teeth, malocclusion, and other jaw and dentofacial anomalies as in ICDA 520.0, 520.1, 520.2, 520.5, 521.6, and 524. If speech defect is also present, code it also.  
*Excludes:* cleft palate and harelip (X91.X); and other dentofacial handicaps if *stated* to be disfiguring (X90).
- X93 Deformity of skull (hydrocephaly) (microcephaly)  
If mental retardation is also present, code it also under X15-X19. If hydrocephaly is due to a specified *active* chronic disease of brain or meninges, code the disease only—not X93.
- X94 Dwarfism; midget; excessively underheight  
*Includes:* “stunted growth” NOS, or late effect (old); if due to some currently active disease, code the disease only.

- X95 Gigantism (excessively overheight)
- X96 Obesity, chronic, cause unknown (familial) (hereditary)  
*See also* category 277, appendix III.
- X97 Underweight, chronic, cause unknown  
*See also* categories 268 and 269.9, appendix III.
- X98 Artificial orifice (opening) or valve (surgical) any site (colostomy)
- X99 Special impairment, ill-defined  
*Includes:* deformed NOS; cripple NOS; “birth injury” or “brain damage” NOS, at ages 3 months or over without specification as to type of impairment; ill-defined “after-effects” of tuberculosis, encephalitis, poliomyelitis, trachoma, toxoplasmosis, rickets, intracranial abscess.  
*See also* item D, appendix I.  
*Excludes:* stroke, or ill-defined “after-effects” of stroke; code the stroke—not X99.

### LIST OF 1-DIGIT ETIOLOGY CODES

#### For Impairment of Vision, Only (X00-X03, X05)

- .0 Unknown or unspecified origin
- .1 Cataract, any origin except as in .5-.9, below (with any condition in .4)
- .2 Cataract with glaucoma, any origin except as in .5-.9, below
- .3 Glaucoma, any origin except as in .5-.9, *without cataract* (with any in .4)
- .4 Other eye diseases (as in ICDA 360-369, 370-373, 376-378) (any infection of eye)
- .5 Diabetes (with cataract or glaucoma)
- .6 Diseases of the arteries NEC (as in ICDA 440-447)
- .7 Cerebrovascular disease (stroke) (with arteriosclerosis) (with hypertension)
- .8 Neoplasm
- .9 Accident or injury except at birth
- .X Congenital origin NEC or birth injury
- .Y Conditions not in .0-.9, or .X (noncongenital) (nontraumatic) (hereditary) (old age) (“age” NOS)

#### For All Impairments *Except* of Vision (X06-X99)

- .0 Unknown or unspecified origin
- .1 Tuberculosis, any site
- .2 Poliomyelitis
- .3 Other infection or inflammation, ulcer, any site (scarlet fever) (meningitis) (encephalitis) (arthritis) (osteomyelitis) (neuritis) (etc.)
- .4 Neoplasm
- .5 Diabetes (with gangrene)
- .6 Diseases of arteries NEC (gangrene) (general arteriosclerosis)
- .7 Cerebrovascular disease (stroke) (with arteriosclerosis) (with hypertension)
- .8 Rickets and osteomalacia
- .9 Accident or injury except at birth
- .X Congenital origin or birth injury
- .Y Diseases and conditions except as in .0-.9, .X (noncongenital) (nontraumatic) (noninflammatory) (hereditary) (old age) (age NOS)

## PREFERENCE RULES USED WHEN MULTIPLE ETIOLOGIES ARE GIVEN

### For Visual Impairments Only (X00-X05)

Select one cause as follows:

- .9 and any other(s): prefer .9 (injury);
- .5 and any other(s) except .9: prefer .5 (diabetes);
- .7 and any except .9 or .5: prefer .7 (vascular lesions, CNS);
- If .9, .5, .7 are not applicable: prefer .8 (neoplasm);
- If .9, .5, .7, .8, are not applicable: prefer .6 (arteries NEC);
- If .5-.9 are not involved, prefer any in .1-.4 over .X or .Y.
- If local diseases of eye, only, are mentioned, code:
  - cataract *and* glaucoma to .2
  - cataract with any in .4 to .1
  - glaucoma with any in .4 to .3
  - other multiple local eye diseases to .4

### For All Impairments Except of Vision (X06-X99)

Select one cause as follows:

- .9 and any other(s): prefer .9 (injury);
- .7 and any except .9: prefer .7 (vascular lesions, CNS)
- If .9 or .7 are not applicable: prefer the etiology code for the cause that started the chain of events.

### APPENDIX III

## PROBE QUESTIONS AND CONDITION PAGES USED TO OBTAIN INFORMATION ABOUT IMPAIRMENTS

<p>This survey is being conducted to collect information on the Nation's health. I will ask about visits to doctors and dentists, illness in the family, and other health related items. (HAND CALENDAR)</p> <p>The next few questions refer to the past 2 weeks, the 2 weeks outlined in red on that calendar, beginning Monday, _____ (date), and ending this past Sunday, _____ (date).</p>	
<p>5a. During those 2 weeks, did --- stay in bed because of any illness or injury?</p>	<p>5a. <input type="radio"/> N <span style="font-size: 2em; vertical-align: middle;">}</span> Y (5b)  <input type="checkbox"/> Days <span style="font-size: 2em; vertical-align: middle;">}</span> If age:  <span style="font-size: 2em; vertical-align: middle;">}</span> 17+ (5c)  <span style="font-size: 2em; vertical-align: middle;">}</span> 6-16 (5d)  <span style="font-size: 2em; vertical-align: middle;">}</span> Under 6 (5f)</p>
<p>b. During that 2-week period, how many days did --- stay in bed all or most of the day?</p>	<p>b. _____ Days (5e)</p>
<p>c. During those 2 weeks, how many days did illness or injury keep --- from work? (For females): not counting work around the house.</p>	<p>c. _____ WL days (5e)  <input type="checkbox"/> None (5f)</p>
<p>d. During those 2 weeks, how many days did illness or injury keep --- from school?</p>	<p>d. _____ SL days (5e)  <input type="checkbox"/> None (5f)</p>
<p>e. On how many of these --- days lost from <span style="font-size: 2em; vertical-align: middle;">}</span> work school <span style="font-size: 2em; vertical-align: middle;">}</span> did --- stay in bed all or most of the day?</p>	<p>e. _____ Days <span style="font-size: 2em; vertical-align: middle;">}</span> (5f)  <input type="checkbox"/> None <span style="font-size: 2em; vertical-align: middle;">}</span></p>
<p>f. (NOT COUNTING the day(s) <span style="font-size: 2em; vertical-align: middle;">}</span> in bed lost from work lost from school <span style="font-size: 2em; vertical-align: middle;">}</span>)</p> <p>Were there any (other) days during the past 2 weeks that --- cut down on the things he usually does because of illness or injury?</p>	<p>f. 1 Y (5g)  2 N (6)</p>
<p>g. (Again, not counting the day(s) <span style="font-size: 2em; vertical-align: middle;">}</span> in bed lost from work lost from school <span style="font-size: 2em; vertical-align: middle;">}</span>)</p> <p>During that period, how many (other) days did he cut down for as much as a day?</p>	<p>g. _____ Days (6a)  <input type="checkbox"/> None (6)</p>
<p>If 1 or more days in Q. 5, ask 6; otherwise go to next person.</p>	
<p>6a. What condition caused --- to <span style="font-size: 2em; vertical-align: middle;">}</span> stay in bed miss work miss school cut down <span style="font-size: 2em; vertical-align: middle;">}</span> during the past 2 weeks?</p>	<p>6a. Enter condition in item C Ask 6b</p>
<p>b. Did any other condition cause him to <span style="font-size: 2em; vertical-align: middle;">}</span> stay in bed miss work miss school cut down <span style="font-size: 2em; vertical-align: middle;">}</span> during that period?</p>	<p>b. Y (6c)  N (NP)</p>
<p>c. What condition?</p>	<p>c. Enter conditions in item C Reask 6b</p>

### PROBE QUESTIONS

12. During the past 2 weeks (the 2 weeks outlined in red on that calendar) how many times did -- see a medical doctor? (Besides those visits)	Y (13b and c) N (14)	12. <input type="checkbox"/> None ____ Number of visits } (NP)
13a. During that 2-week period did anyone in the family go to a doctor's office or clinic for shots, X-rays, tests, or examinations?	Y (13b and c) N (14)	
b. Who was this? - Mark "Doctor visit" box in person's column.		13b. <input type="checkbox"/> Doctor visit
c. Anyone else?	Y (13b and c) N	
If "Doctor visit," ask: d. How many times did -- visit the doctor during that period?		d. ____ Number of visits (NP)
14a. During that period, did anyone in the family get any medical advice from a doctor over the telephone?	Y (14b and c) N (15)	
b. Who was the phone call about? - Mark "Phone call" box in person's column.		14b. <input type="checkbox"/> Phone call
c. Any calls about anyone else?	Y (14b and c) N	
If "Phone call," ask: d. How many telephone calls were made to get medical advice about -- ?		d. ____ Number of calls (NP)
Fill item C, (DOCTOR), from Q.'s 12-14 for all persons. Ask Q. 15a for each person with visits in DOCTOR box.		<input type="checkbox"/> Condition (Item C THEN 15d) <input type="checkbox"/> Pregnancy (15e) <input type="checkbox"/> No condition
15a. For what condition did -- see or talk to a doctor during the past 2 weeks?		15a.
b. Did -- see or talk to a doctor about any specific condition?		b. Y N (NP)
c. What condition?		c. Enter condition in item C and ask 15d
d. During that period, did -- see or talk to a doctor about any other condition?		d. Y (15c) N (NP)
e. During the past 2 weeks was -- sick because of her pregnancy?		e. Y N (NP)
f. What was the matter? - Anything else?		f. Enter condition in item C (NP)

PROBE QUESTIONS

<p><b>M</b></p> <p>Please look at this card (Hand respondent Card M)</p> <p>Which one of these statements fits -- best in terms of health (Circle appropriate number)</p> <p>-----</p> <p>If respondent does not understand or is unable to read the card, ask questions 17-21 for each person.</p>	<p>M.</p>	<p>1 } 2 } 3 } (22a) 4 } 5 } 6 (NP)</p>
<p>17. In terms of health must -- stay IN BED all or most of the time?</p>	<p>17.</p>	<p>1 Y (22a)      N</p>
<p>18. In terms of health must -- stay IN THE HOUSE all or most of the time?</p>	<p>18.</p>	<p>2 Y (22a)      N</p>
<p>19. Does -- need the help of ANOTHER PERSON in getting around inside or outside the house?</p>	<p>19.</p>	<p>3 Y (22a)      N</p>
<p>20. Does -- need the help of some SPECIAL AID, such as a cane or wheelchair in getting around inside or outside the house?</p>	<p>20.</p>	<p>4 Y (22a)      N</p>
<p>21. Although -- does not need the help of another person or a special aid, does he have trouble getting around freely?</p>	<p>21.</p>	<p>5 Y (22a)      6 N (NP)</p>
<p>Ask for each person with a limitation reported in item M or in questions 17-21.</p>		
<p>22a. About how long has --</p> <p style="margin-left: 100px;">         { (1) had to stay in bed because of health?          (2) had to stay in the house because of health?          (3-4) needed help getting around inside or outside the house?          (5) had trouble getting around freely? }       </p>	<p>22a.</p>	<p>000 <input type="checkbox"/> Less than 1 month          1 ___ Mos.    2 ___ Yrs.</p>
<p>b. What (other) condition causes this?          If "old age" only, ask: Is this caused by any specific condition?</p>	<p>b.</p>	<p>Enter condition in item C and ask c  <input type="checkbox"/> Old age only (NP)</p>
<p>c. Is this caused by any other condition?          Mark box or ask:</p>	<p>c.</p>	<p>Y (Reask b and c)      N  <input type="checkbox"/> Only 1 condition</p>
<p>d. Which of these conditions would you say is the MAIN cause of his limitation?</p>	<p>d.</p>	<p>_____          Enter main condition</p>

**PROBE QUESTIONS**

Ages 17+	<p>23a. What was -- doing most of the past 12 months -- (For males): <b>working or doing something else?</b>          If "something else," ask: (For females): <b>keeping house, working, or doing something else?</b></p> <p>b. What was -- doing?          If 45+ years and was not "working," "keeping house," or "going to school," ask:</p> <p>c. Is -- retired?</p> <p>d. If "Retired," ask: Did he retire because of his health?</p>	<p>23. &amp; 24.</p> <p>1 <input type="checkbox"/> Working (28a)          2 <input type="checkbox"/> Keeping house (28b)          3 <input type="checkbox"/> Retired, health (27)          4 <input type="checkbox"/> Retired, other (27)          5 <input type="checkbox"/> Going to school (30)          6 <input type="checkbox"/> 17+ something else (27)          7 <input type="checkbox"/> 6-16 something else (29)</p>			
Ages 6 - 16	<p>24a. What was -- doing most of the past 12 months -- going to school or doing something else?          If "something else," ask:</p> <p>b. What was -- doing?</p>				
Ages under 6		<p>0 <input type="checkbox"/> 1-5 yrs. (25)          0 <input type="checkbox"/> Under 1 (26)</p>			
25a. Is -- able to take part at all in ordinary play with other children?		25a. Y _____ 1 N (32)			
b. Is he limited in the kind of play he can do because of his health?		b. 2 Y (32) _____ N			
c. Is he limited in the amount of play because of his health?		c. 2 Y (32) _____ N (31)			
26a. Is -- limited in any way because of his health?		26a. Y _____ 5 N (NP)			
b. In what way is he limited?		b. _____ (32)			
27a. Does -- health now keep him from working?		27a. 1 Y (32) _____ N			
b. Is he limited in the kind of work he could do because of his health?		b. 2 Y (32) _____ N			
c. Is he limited in the amount of work he could do because of his health?		c. 2 Y (32) _____ N			
d. Is he limited in the kind or amount of other activities because of his health?		d. 3 Y (32) _____ N (31)			
28a. Does -- NOW have a job?		28a. Y (28c) _____ N			
b. In terms of health, is -- NOW able to (work - keep house) at all?		b. Y _____ 1 N (32)			
c. Is he limited in the kind of (work - housework) he can do because of his health?		c. 2 Y (32) _____ N			
d. Is he limited in the amount of (work - housework) he can do because of his health?		d. 2 Y (32) _____ N			
e. Is he limited in the kind or amount of other activities because of his health?		e. 3 Y (32) _____ N (31)			
29. In terms of health would -- be able to go to school?		29. Y _____ 1 N (32)			
30a. Does (would) -- have to go to a certain type of school because of his health?		30a. 2 Y (32) _____ N			
b. Is he (would he be) limited in school attendance because of his health?		b. 2 Y (32) _____ N			
c. Is he limited in the kind or amount of other activities because of his health?		c. 3 Y (32) _____ N (31)			
31a. Is -- limited in ANY WAY because of a disability or health?		31a. 4 Y _____ 5 N (NP)			
b. In what way is he limited? Record limitation, not condition.		b. _____			
32a. About how long has he <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>been limited in --</td></tr><tr><td>been unable to --</td></tr><tr><td>had to go to a certain type of school?</td></tr></table>		been limited in --	been unable to --	had to go to a certain type of school?	32a. 000 <input type="checkbox"/> Less than 1 month 1 _____ Mos. 2 _____ Yrs.
been limited in --					
been unable to --					
had to go to a certain type of school?					
b. What (other) condition causes this limitation?		b. _____			
If 'old age' only, ask: Is this limitation caused by any specific condition?		Enter condition in item C and ask c			
c. Is this limitation caused by any other condition?		c. Y (Reask b and c) _____ N			
Mark box or ask:		<input type="checkbox"/> Only 1 condition			
d. Which of these conditions would you say is the MAIN cause of his limitation?		d. _____ Enter main condition			

PROBE QUESTIONS

<p>36a. Does anyone in the family (you, your ---, etc.) NOW have – If "Yes," ask b and c</p> <p>b. Who is this? – Enter name of condition and letter of line where reported in appropriate person's column(s) in item C.</p> <p>c. Does anyone else have . . . ?</p>	A. Deafness in one or both ears?		Y	N
	B. Any other trouble hearing with one or both ears?		Y	N
	C. Tinnitus or ringing in the ears?		Y	N
	D. Blindness in one or both eyes?		Y	N
	E. Cataracts?		Y	N
	F. Glaucoma?		Y	N

Does anyone in the family NOW have . . . ? If "Yes," ask b and c								
G. Color blindness?	Y	N	M. A missing finger, hand, or arm, toe, foot, or leg?	Y	N	S. Any TROUBLE with fallen arches or flatfeet?	Y	N
H. A detached retina or any other condition of the retina?	Y	N	N. A missing (breast), kidney, or lung?	Y	N	T. A clubfoot?	Y	N
I. Any other trouble seeing with one or both eyes even when wearing glasses?	Y	N	O. Palsy or cerebral palsy?	Y	N	U. Permanent stiffness or any deformity of the back, foot, or leg?	Y	N
J. A cleft palate or harelip?	Y	N	P. Paralysis of any kind?	Y	N	V. Permanent stiffness or any deformity of the fingers, hand, or arm?	Y	N
K. Stammering or stuttering?	Y	N	Q. Curvature of the spine?	Y	N	W. Mental retardation?	Y	N
L. Any other speech defect?	Y	N	R. REPEATED trouble with back or spine?	Y	N	X. Any condition caused by an old accident or injury? If "Yes," ask: What is the condition?	Y	N

37a. Does anyone in the family use –  
If "Yes," ask b and c

b. Who is this? Circle person's number

c. Anyone else?

1. Contact lenses? . . . Y N . . . . . 1 2 3 4 5 6 7 8 9 10

2. Eyeglasses? . . . . Y N . . . . . 1 2 3 4 5 6 7 8 9 10

3. A hearing aid? . . . Y N . . . . . 1 2 3 4 5 6 7 8 9 10

For "hearing aid," with no hearing problem reported, ask:  
For what condition does he need this?  
Enter condition in item C

PROBE QUESTIONS





36a. Does anyone in the family (you, your --, etc.) NOW have -	A. Deafness in one or both ears?		Y	N
	B. Any other trouble hearing with one or both ears?		Y	N
	C. Tinnitus or ringing in the ears?		Y	N

37a. Does anyone in the family use -	3. A hearing aid?	For "hearing aid," with no hearing problem reported, ask: For what condition does he need this?
--------------------------------------	-------------------	--

For each person with an entry of "A," "B," or "37" in C2, ask Q.'s 38-41.	38.	Y	N
---	-----	---	---

Please look at this card - (Show Card H)	39a.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	S	4 <input type="checkbox"/>	S
39a. Which statement best describes -- 's hearing in his LEFT ear (without a hearing aid)?							
b. Which statement best describes -- 's hearing in his RIGHT ear (without a hearing aid)?	b.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	S	4 <input type="checkbox"/>	S

If under 3, go to 41a	40a.	Y (41a)	N
40a. (Without a hearing aid) Can -- usually HEAR AND UNDERSTAND what a person says without seeing his face if that person WHISPERS to him from across a quiet room?			
b. (Without a hearing aid) Can -- usually HEAR AND UNDERSTAND what a person says without seeing his face if that person TALKS IN A NORMAL VOICE to him from across a quiet room?	b.	Y (41a)	N
c. (Without a hearing aid) Can -- usually HEAR AND UNDERSTAND what a person says without seeing his face if that person SHOUTS to him from across a quiet room?	c.	Y (41b)	N
d. (Without a hearing aid) Can -- usually HEAR AND UNDERSTAND a person if that person SPEAKS LOUDLY into his better ear?	d.	Y (41b)	N
e. (Without a hearing aid) Can -- usually tell the sound of speech from other sounds and noises?	e.	Y (41b)	N
f. (Without a hearing aid) Can -- usually tell one kind of noise from another?	f.	Y (41b)	N
g. (Without a hearing aid) Can -- hear loud noises?	g.	Y (41b)	N (41b)

41a. How old was -- when he began to have trouble hearing?	41a.	<input type="checkbox"/> At birth	<input type="checkbox"/> Less than 1 year	_____ Years old
b. How old was -- when he began to have serious trouble hearing or became deaf?	b.	<input type="checkbox"/> DK	<input type="checkbox"/> No trouble	
Complete Q. 41c from entry in 41a and b or age. If "DK" in Q.'s 41a and b AND 21 or older, ask:				
c. Was it before or after -- 's twenty-first birthday?	c.	<input type="checkbox"/> Before 21	<input type="checkbox"/> After 21 (R2)	

Figure I. Probe questions to obtain information about hearing loss

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