# prevalence of <br> Selected Impairments 

## United States - July 1963-June 1965


#### Abstract

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, geographic region, family income, and associated chronic activity limitation. Based on data collected in household interviews during the period July 1963-June 1965.


DHEW Publication No. (HRA) 74-1286

# U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE Public Health Service 



Vital and Health Statistics-Series $10-48$
First nsucd an the P'ublue Healdi Servece Publication Series No. 1000 November 1968

# NATIONAL CENTER FOR HEALTH STATISTICS 

THEODORE D. WOOLSEY, Director<br>PHILIP S. LAWRENCE, Sc.D., Associate Director<br>OSWALD K. SAGEN, Ph.D., Assistant Director for Healtb Statistics Development<br>waLT R. SIMMONS, M.A., Assistant Director for Research and Scientific Development<br>ALICE M. WATERHOUSE, M.D., Medical Consultant<br>JAmes E. KELLY, D.D.S., Dental Advisor<br>EDWARD E. MINTY, Executiue Officer<br>MARGERY R. CUNNINGHAM, Information Officer

# DIVISION OF HEALTH INTERVIEW STATISTICS 

ELIJAH L. WHITE, Director<br>ROBERT R. FUCHSBERG, Deputy Director<br>KENNETH HAASE, Special Assistant to Director<br>RONALD W. WILSON, Cbief, Survey Methods Branch<br>GERALDINE A. GLEESON, Cbief, Analysis and Reports Branch<br>\section*{COOPERATION OF THE BUREAU OF THE CENSUS}

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 National Health Survey, the Bureau of the Census, under a contractual arrangement, participates in most aspects of survey planning, selects the sample, collects the data, and carries out cortain parts of the statistical processing.

Public Health Service Publication No. 1000-Series 10-No. 48
Library of Congress Catalog Card Number 68-62239

## CONTENTS

Page
Introduction ..... 1
Source and Qualifications of Data ..... 2
Visual Impairments ..... 3
Age and Sex- ..... 4
Color ..... 5
Etiology ..... 5
Region ..... 7
Family Income ..... 7
Activity Limitation ..... 7
Hearing Impairments ..... 8
Age, Sex, and Color ..... 8
Etiology ..... 8
Region ..... 10
Family Income ..... 10
Activity Limitation ..... 10
Speech Impairments ..... 10
Age, Sex, and Color ..... 11
Etiology ..... 11
Region ..... 12
Family Income ..... 12
Activity Limitation ..... 12
Paralysis, Complete or Partial ..... 12
Age, Sex, and Color ..... 12
Etiology ..... 13
Region ..... 14
Family Income ..... 14
Activity Limitation ..... 14

## CONTENTS-Con.

Page
Absence of Extremities ..... 15
Selected Characteristics ..... 15
Etiology ..... 16
Activity Limitation ..... 16
Impairments (Except Paralysis and Absence) of Limbs, Back, and Trunk---- ..... 17
Age and Sex ..... 17
Color ..... 18
Etiology ..... 19
Region ..... 20
Family Income ..... 20
Activity Limitation ..... 20
Increased Prevalence of Impairments ..... 20
Detailed Tables ..... 22
Appendix I. Technical Notes on Methods ..... 59
Background of This Report ..... 59
Statistical Design of the Health Interview Survey ..... 59
General Qualifications ..... 60
Reliability of Estimates ..... 60
Guide to Use of Relative Standard Error Charts ..... 62
Appendix II. Definitions of Certain Terms Used in This Report and Classi- fication of Impairments (X-Code) ..... 65
Demographic and Economic Terms ..... 65
Terms Relating to Chronic Conditions ..... 65
Terms Relating to Disability ..... 66
Classification of Impairments (X-Code) ..... 67
List of Impairments, by Type and Site (X00-X99) ..... 67
Lists of 1-Digit Etiology Codes ..... 70
Preference Rules Used When Multiple Etiologies Are Given ..... 71
Appendix III. Questionnaire ..... 73

| 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- | * |

IN THIS REPORT statistics a̧e presented on the prevalence of impairments involving vision, hearing, speech, paralysis, absence of extremities, and orthopedic defects. The type, site, and etiology of these selected impairments are shown. The data are based on information collected in household interviews in arepresentative sample of the U.S. population during the period July 1963-June 1965.

Each impairment group is discussed separately. The demographic variables by which the data are distributed include age, sex, color, geographic region, and family income. In addition, information is presented on the chronic activity limitation associated with each type of impairment. In the last section of the present report the estimates are compared with estimates produced earlier by the survey.

In the civilian, noninstitutional population it is estimated that there was an average annual number of about 5.4 million visual impairments, 8.5 million hearing impairments, and 1.3 million speech defects during the period July 1963-June 1965. There were also an estimated 1.5 million cases of paralysis, 2.0 million cases of missing extremities, and 17.7 million orthopedic defects during this period. Cataracts were the leading cause reported for visual impairments, and ill-defined and unknown causes for both hearing impairments and speech defects. Vascular lesions affecting the central nervous system were the major cause of paralysis; while injury constituted the major cause of both missing extremities and orthopedic defects. In general, there were substantial variations by age for most topics covered.

# PREVALENCE OF SELECTED IMPAIRMENTS 

Ann L. Jackson, Division of Health Interview Statistics

## INTRODUCTION

The term "impairment" has no actual, definitive medical significance. As used in the Health Interview Survey, the term "impairment" refers to chronic or permanent defects resulting from disease, injury, or congenital malformation. These defects represent a decrease in or loss of ability to perform various functions, particularly those of the musculoskeletal system and sense organs.

This report presents information on impairments involving (1) vision (2) hearing, (3) speech, (4) paralysis, (5) absence of extremities, and (6) orthopedic defects. The prevalence of these se-
lected impairments is summarized in table A. The demographic and economic characteristics reviewed include age, sex, color, region, and family income. In addition, this report describes the etiologic factors contributing to these impairments and the activity limitation associated with them.

Two earlier reports presented data on impairments collected by the Health Interview Survey during the periods of July 1957-June 1958 and July 1959-June 1961 (Health Statistics, Series B, Nos. 9 and 35). In the earliest report medical care status, bed-disability days, the proportion of impairments caused by injury, and the major activity of the impaired person were discussed

Table A. Average prevalence of selected impairments: United States, July 1963-June 1965

| Impairment | Average number in thousands | $\begin{gathered} \text { Rate per } \\ 1,000 \\ \text { population } \end{gathered}$ |
| :---: | :---: | :---: |
| All visual impairments | 5,390 | 28.8 |
| Severe visual impairments | 1,227 | 6.6 |
| Other visual impairments | 4,163 | 22.2 |
| Hearing impairments | 8,549 | 45.7 |
| Speech defects----- | 1,298 | 6.9 |
| Paralysis, complete or partial | 1,516 | 8.1 |
| Absence of extremities, all sit | 1,968 | 10.5 |
| Major extremities---- | 257 | 1.4 |
| Finger(s) or toe(s) only | 1,712 | 9.1 |
| Other impairments of limbs, back, tru | 17,742 | 94.8 |
| Back or spine | 6,486 | 34.7 |
| Upper extremity and shoulde | 2,925 | 15.6 |
| Lower extremity and hip- | 6,623 | 35.4 |
| Other and multiple, NEC | 1,709 | 9.1 |

for many broad types of impairments. The more recent report was restricted to the six impairment groups (excluding the absence of minor extremities) used in the present report, with etiologic factors and activity limitation considered. A comparison of the data shown in the present report with data shown in the earlier reports is made in the last section of this report.

More detailed information about persons with impaired hearing during July 1962-June 1963 may be found in Vital and Health Statistics, Series 10, No. 35. The report Series 10, No. 46, of Vital and Health Statistics, shows more detailed data on visual impairments for the period July 1963-June 1964.

## SOURCE AND QUALIFICATIONS OF DATA

The data presented in this report are derived from information obtained in household interviews conducted by the Health Interview Survey in cooperation with the U.S. Bureau of the Census. The households interviewed were part of a continuous probability sample of the civilian, noninstitutional population of the United States. The sample is so designed that interviews are conducted every week of the year in a representative sample of the Nation's households. During the 2-year period ending in June 1965, about 84,000 households containing approximately 268,000 persons wexe included in the sample.

The restriction of the survey to the noninstitutional population reduces the estimates of impaired persons. Because of this restriction, persons who are not living at home are excluded from the sample while they receive care or training in institutions such as schools for the blind or the deaf, as are those in nursing homes or convalescent homes in which persons may be blind, deaf, paralyzed, or unable to move about freely because of orthopedic conditions. 1

A description of the design of the survey, the methods used in estimation, and the general qualifications of data obtained from surveys is pre-

[^0]sented in appendix 1 . Since the 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." Sampling errors for most of the estimates are of relatively low magnitude. However, where an estimated number or the numerator or denominator of a rate or percentage is small, the sampling error may be high. The data are also subject to errors related to the interviewing process since the information obtained from interviews depends on the respondent ${ }^{2}$ s willingness and ability to answer the interviewer's questions. The adequacy of a response may also depend on whether the respondent is reporting for himself or for a closely related person.

The cautions given above concerning sampling exrors have particular significance when the data are broken down by the various demographic and other variables outlined in the introduction. For example, in making comparisons berween white and nonwhite persons, it should be noted that the estimated numbers for nonwhite persons are considerably lower than those for white persons. The sampling errors, consequently, are higher for estimates for nonwhite persons than for white.

Another qualification should be considered when making compaxisons between different population groups. In general, the estimated prevalence of all types of impairments, except speech defects, increased with age. As illustrated in figure 1, the proportion of persons who were 65 years and older differed among the various population groups used in this report, particularly among income groups. Since the estimates for all ages have not been adjusted for age, these totals may distort the differences between various population groups. Consequently, the best comparisons, between different population groups, particularly color and income groups, can be made by using age-specific rates.

Certain terms used in this report are defined in appendix II. Since many of these terms have specialized meanings for the purpose of this survey, it is suggested that the reader familiarize himself with these definitions. Of particular importance is the classification information given in the definition of "impairments." In addition, the complete Classification of Impairments (X-Code)


Figure 1. Percent of population aged 65 years and over, by selected characteristics.
by type, site, and etiology is shown at the end of appendix II.

The questionnaire used during the period July 1964-June 1965 is illustrated in appendix III. It is similar to the questionnaire used during the preceding 12 months which is reproduced in the "Current Estimates" report for that period (Vital and Health Statistics, Series 10, No. 13).

Conditions which might be classified as impairments were initially recorded from the responses to the illness-recall questions ( $6-12$ ), particularly question 11 in which a list of impairments (card B) was read to the respondent. The more detailed information needed to code these conditions as impairments was obtained in questionnaire table I on illnesses, impairments, and injuries. In addition, information concerning the degree of severity of vision problems was obtained in question 14.

The data in this report on the etiology of impairments are based on the causes given by respondents in column "d-2" of table I. Columns " $t$ " and " $u$ " are the sources of information concerning limitation in usual activities. (See cards E-H in appendix III and the definition of "chronic activity limitation" in appendix II.)

The information obtained about the presence and degree of activity limitation is probably quite subjective. When a respondent is asked to what extent, if at all, activity limitation exists, his reply may be influenced by such factors as his attitudes, his adjustment to the condition, the duration of the condition, and his usual activities prior to the onser of the condition. The situation may be further complicated if the respondent has more than one chronic condition and is unable to distinguish which one(s) causes his activity limitation.

## VISUAL IMPAIRMENTS

The visual defects included in this report are defined according to severity and are divided into "severe visual impairments" and "other visual impairments." Estimates of visual impairments were based for the most part on responses to the question "Does anyone in the family have serious trouble seeing with one or both eyes even when wearing glasses?" (item 2, card B, appendix III). Information recorded in question 14 and/or table I of the questionnaire was used to code the degree of visual loss.

According to the definitions used in this report severe visual impairments include among persons 6 years of age or older, a visual defect which, according to the respondent's reply, prevents his reading ordinary newspaper print even while wearing glasses. Among persons under 6 years of age and those who have never learned to read, a visual impairment is one which was reported as "blind in both eyes" or one for which a reply indicating no useful vision in either eye was given. Visual impairments in this class are coded to X00 of the X-Code (appendix II).

Other visual impairments include among persons 6 years or older, visual difficulties which are not severe enough to prevent reading ordinary newspaper print with glasses. For persons who are under 6 years of age or who cannot read, reports of trouble in seeing but not indicating
loss of vision in both eyes are included in this class. Impairments in this class are coded to X01-X05 of the X-Code.

Reports of certain conditions such as "color blindness," refractive errors, and strabismus are not coded by the Classification of Impairments unless there is additional mention of impaired vision in table I and/or question 14 of the questionnaire (appendix III).

Codes X01-X05 were revised July 1, 1964. At that time, a new code, X03, was added and the inclusions in $\mathrm{X} 01, \mathrm{X} 02$, and X 05 were changed. The two sets of codes used during July 1963-June 1965 are shown in appendix II. With one exception, other visual impairments are grouped together in this report, making it possible to show the combined data for the 2 -year period. The severe visual impairment code, X00, was not affected by the revision.

Only one code in X00-X05 may be assigned per person. The number of visual impairments shown in this report is, therefore, a count of persons with visual loss.

It is estimated by the Health Interview Survey that, during July 1963-June 1965, there was an average annual number of about 5.4 million persons in the civilian, noninstitutional population of the United States who had a visual defect as defined above. Of this number, 22.8 percent, or $1,227,000$ persons, had a severe visual impair-
ment. The remaining 4,163,000 cases are grouped together in this report as other visual impairments.

In table B the data on visual impairments are shown by X -Code categories. Due to the coding changes mentioned earlier, the X -Code breakdown is shown for the July 1964-June 1965 period only. The X05 category includes 53.6 percent of all cases of visual impairment and 70.1 percent of the cases grouped as other visual impairments.

## Age and Sex

About one-half ( 46.4 percent) of' all reported visual impairments were among persons 65 years of age and older. As shown in table 1, the number of visually impaired persons per 1,000 population increased sharply with age. From a rate of 0.6 among young people under 25 , the rate of severe visual impairments increased to 23.6 among persons aged 65-74 and to 97.5 among persons 75 years and older. The corresponding rate increases for other visual impairments were from 6.9 to 77.4 and 131.3 .

The rates of visual impairment weresimilar among males and females at ages under 65 years. Among persons aged 65 years and over, however, the rates for females were appreciably higher than those for males.

Table B. Prevalence and percent distribution of visual impairments, by X-Code categories: United States, July 1964-June 1965

| X -Code categories for visual impairments | $\begin{aligned} & \text { Number } \\ & \text { in } \\ & \text { thousands } \end{aligned}$ | Percent distribution | $\begin{aligned} & \text { Rate per } \\ & 1,000 \\ & \text { population } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Impairment of vision (XOO-X05) | 5,717 | 100.0 | 30.3 |
| Visual impairment ( ${ }^{\text {(00) }}{ }^{1}$ | 1,342 | 23.5 | 7.1 |
| Blind in one eye, with impairment as in X03 (X01)--- | 73 | 1.3 | 0.4 |
| Blind in one eye, with impairment as in X05 (X02)--- | 726 | 12.7 | 3.9 |
| Visual impairment (X03) ${ }^{\text {- }}$ | 511 | 8.9 | 2.7 |
| Impaired vision except as in X00-X03 (X05)-mon-m- | 3,065 | 53.6 | 16.3 |

[^1]
## Color

The rate of all visual impairments per 1,000 population was slightly greater among nonwhite persons (32.0) than among white persons (28.4) as shown in table 2. Because the two color groups differ somewhat in age composition (fig. 1), the figures for all ages obscure greater differences between the two groups among persons under 65 and among persons 65 years of age and older. In both age groups, the rates among nonwhite persons were substantially higher for all visual impairments combined and for severe visual impairments. For other visual impairments, however, rates for nonwhite persons were only slightly higher than those for white persons.

## Etiology

Twelve etiology codes which are applicable only to visual impairments are provided in the Classification of Impairments (X-Code). One of these codes is assigned to each reported visual defect according to the cause stated by the respondent. Coding rules which define preferences when multiple causes were given are shown following the list of etiology codes in appendix II.

The codes used for visual impairments only were revised July 1, 1964, as listed in appendix II. The etiologic data on visual impairments shown in tables 3 and 4 are for the July 1964-June 1965 period only, using the revised codes. Because of the small numbers in some of the etiologic classes, the 12 groups have been combined into eight etiologic classes as follows:

| Etiologic group | Etiologic <br> codes |
| :--- | ---: |
| included ${ }^{2}$ |  |

[^2]The leading causes of visual impairment varied with age as shown in table 3 and figure 2. Among persons under 65 years of age, other local eye diseases and injury were equally important as the major causes of visual defects. Either one or the other of these causes was reported by persons in this age group for 44 percent of all cases. For persons 65 years and over, on the other hand, cataracts were reported as the cause of visual impairment in 39.6 percent of all cases-far more frequently than any other cause. Because of their high frequency among older persons, cataracts were also the leading cause of visual impairments ( 24.0 percent) among persons of all ages. Although the distribution of cases by etiology was different in the two age groups, the rates of visual impairment for persons 65 and over were greater in every etiologic group.

There was also variation in the distribution of cases among etiologic groups according to the degree of severity of the impairment (fig. 3). Cataracts, injuries, and other local eye diseases were the leading causes of other visual impairments, as well as of all visual impairments combined. The most frequently reported causes of severe visual impairments were cataracts, other local eye diseases, and general diseases. This reflects the fact that injury was not one of the most important causes of severe visual impairment among persons under 65 years of age. In addition, persons in both age groups reported general diseases more frequently as causes of severe visual impairment than as causes of other visual impairment. In both figures 2 and 3 it should be noted that the cause of visual impairment was unknown to the respondent in a relatively large percentage of the cases.

Etiologic data by sex are shown in table 4. Injury, reported in 26.9 percent of all cases, was the leading cause of visual impairment among males; however, only 7.6 percent of the cases among females were reported as being caused by injury. The causes most frequently reported by females were cataracts (27.1 percent of all cases) and other local eye diseases ( 18.0 percent). These causes were also important among males, who reported cataracts for 20.1 percent of the cases and other local eye diseases for 14.0 percent of the cases. For all etiologic groups, except injury and congenital or birth factors, the


Figure 2. Percent distribution of visual impairments, by etiology according to age: July 1964-June 1965.


Figure 3. Percent distribution of visual impairments, by etıology according to degree of severity: July 1964June 1965.
rates for females were higher than the rates for males.

## Region

The rate of visual impairments per 1,000 population was considerably higher in the South Region than in any other region (table 5). In the South Region about 39 persons per 1,000 population had a visual impairment as defined in the survey-a rate which was about 50 percent greater than the corresponding rates in the North Central and West Regions and about 77 percent greater than the rate in the Northeast Region. Relatively high rates were found in the South Region for both severe defects and other visual impairments, and for both persons under 65 years of age and persons 65 years and older.

## Family Income

About 56 percent of all cases of visual impairments were among persons with a family income of less than $\$ 4,000$. The high prevalence of visual defects among persons in the lower income groups was influenced by the older age composition of these population groups as illustrated in figure 1.

The rates of visual impairment among persons with a family income of less than $\$ 3,000$ were considerably higher than the rates for any other income group regardless of age (table 6). Persons with a family income of $\$ 3,000-\$ 3,999$ also had relatively high rates, particularly those under the age of 65 . The rates of visual impairment did not differ markedly among persons in the family income groups of $\$ 4,000$ or more.

## Activity Limitation

About one-fourth of all persons reporting a visual impairment considered themselves limited in some degree by their vision problem. Data on activity limitation caused by visual defects are presented in tables 7 and 8 according to degree of activity limitation as defined in appendix II. When activity limitation was reported, it usually involved limitation in major activity. Figure 4 shows the percent distribution of all cases involving activity limitation by the degree of activity limitation.


Figure 4. Percent distribution of visual impairments causing limitation of activity, by degree of limitation of activity according to degree of severity.

The percentage of persons reporting activity limitation varied considerably with the degree of severity of the impairment. Activity limitation in some degree was reported for 53.6 percent of the persons with severe visual impairment. For other visual impairments, this figure was only 15.1 percent. Of those persons reporting some degree of activity limitation, 51.5 percent with severe visual impairments and 23.0 percent with other visual impairments were unable to perform their major activity as shown in figure 4.

The percent distributions of cases by degree of activity limitation were similar among males and females (table 7). A slightly higher percentage of limiting cases among males ( 25.6 percent) than among females ( 22.5 percent) may reflect the fact that a higher proportion of males have a major activity outside the home.

The percentage of persons whose activities were limited by visual impairments generally increased with age (table 8). Although the estimate was highest ( 55.2 percent) for persons 65 years of age and over, approximately one-half of the persons with severe visual impairments in each of the age groups shown in table 8 had some degree of activity limitation. For other visual impairments, there was a more marked increase with age in the percentage of cases causing activity limitation-ranging from 10.2 percent among persons under 45 years of age to 19.7 percent among persons 65 and older.

## HEARING IMPAIRMENTS

In the Health Interview Survey estimates of hearing loss were based for the most part on responses to the question "Does anyone in the family have deafness or serious trouble hearing with one or both ears?" (item 1, card B, appendix III). Thus, the prevalence of hearing impairments shown in this report is an estimate of hearing loss measurable at a level which the respondent considers serious. The survey does not provide an estimate of the number of clinically detectable cases, nor the number of persons with hearing problems who would benefit from professional help.

There were no special questions on the questionnaire, as in the case of visual impairments, to determine the degree of hearing loss. However, by the use of information recorded in table I of the questionnaire, hearing impairments were coded in one of several degrees of severity (X06X09 of the Classification of Impairments shown in appendix II).

Only one hearing impairment per person is coded; therefore, the number of hearing impairments also represents the number of persons who have hearing loss.

It is estimated that there were about 8.5 million persons in the civilian, noninstitutional population of the United States who experienced some degree of hearing loss which they considered serious. This number represents a rate of 45.7 hearing impairments per 1,000 population based on data collected during the period July 1963June 1965, which is only slightly higher than the
rate of 43.7 obtained from data collected during July 1962-June 1963. ${ }^{3}$ Of the estimated 8.5 million cases, 71,000 were classified as totally deaf (X-Code 06), as shown in table C. Since the prevalence of cases of total deafness is low, estimates for population subgroups do not meet standards of reliability; therefore, with the exception of data shown in table $C$, all degrees of severity are combined in this report.

## Age, Sex, and Color

Rates of hearing impairments increased greatly with age as shown in figure 5 and table 9 , with three-fourths of the persons with impaired hearing being 45 years and older. The rate for persons 75 years and over (317.2) was more than 33 times as high as the rate for young people under 25 years of age (9.5), Hearing impairments were also appreciably more prevalent among males than among females.

The rate of hearing impairments was considerably higher among white persons, 47.8 per 1,000 population, than among nonwhite persons, 29.8 per 1,000 (table 9).

Females 75 years of age and over constituted the only sex-age group for which the rate of hearing impairments among nonwhite persons was greater than that for white persons.

## Etiology

The 12 etiology codes applicable to hearing and all other impairments, except vision, are listed in appendix II following the Classification of Impairments. The appropriate code is assigned to each case of hearing impairment according to the cause reported by the household respondent. Because of the high proportion of cases for which the etiologic factor was ill-defined or unknown, it was necessary in this report to combine the

[^3]Table C. Average prevalence and percent distribution of hearing impairments, by X-Code categories: United States, July 1963-June 1965

| X-Code categories for hearing impairments | Average number in thousands | Percent distribution | $\begin{gathered} \text { Rate per } \\ 1,000 \\ \text { population } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Impairment of hearing (X06-X09) | 8,549 | 100.0 | 45.7 |
| Deafness, total, both ears; deaf-mutism (X06) | 71 | 0.8 | 0.4 |
| Impaired hearing, severe (X07)-------- | 235 | 2.7 | 1.3 |
| Impaired hearing except as in X06, X07 (X09) | 8,243 | 96.4 | 44.1 |

NOTE: For complete titles see Classification of Impairments (X-Code), appendix II.


Figure 5. Rate of hearing impairments per 1,0CO population, by sex and age.
original 12 categories in four etiologic groups as follows:

Infection (.1, .2, and .3)
Injury (.9)
Other and ill-defined conditions (.4, .5, .6, .7, .8, . X, and . Y)

Unknown to respondent (. 0 )
The numbers in parentheses are the etiology codes shown in appendix II which are included in each of the above groups. The "other and ill-defined conditions" group includes all cases due to named causes other than infection or injury. It includes cases said to be due to "old age" or described as "hereditary," with no specific disease given. It also includes cases of hearing impairment caused by continued exposure to loud noise.

Infection was reported as the cause of hearing impairments in 20.5 percent of all cases (table 10). In 34.6 percent of all cases, causes in the group of other and ill-defined conditions were given. Of the $2,956,000$ cases in this group, $2,583,000$, or 30.2 percent of all cases, were reported as being caused by ill-defined conditions (etiology code .Y). No cause of any kind was given for 37.3 percent of all hearing impairments. This indicates that, generally, respondents were unable to give specific causes for their hearing impairments.

Figure 6 illustrates the percent distribution of cases by etiologic group according to age. The percent of cases said to be due to infection or injury decreased as age increased, while the percent caused by other and ill-defined or unknown conditions increased with age. The rates for each etiologic group increased with age and, except for infection, were higher among males than among females.

In table 10, the etiologic class of congenital or birth factors was included with other and illdefined conditions because of the small number of cases reported as being caused by these factors. Among persons under 45 years of age, however, congenital or birth factors were reported as the cause of hearing impairments in 163,000 cases, or 7.5 percent of all cases. This means that 1.2 cases of hearing impairment per 1,000 persons under 45 years were reported with congenital or birth factors as the cause.

## Region

Comparative data on hearing impairments by region are presented in table 11. The rates for the Northeast Region were lower than the rates for any of the other regions in every age-sex group shown. The highest rates were found in the South and West Regions. The percent distributions of cases by age were quite similar for the regions.

## Family Income.

Among persons under 65 years of age, those with a family income of less than $\$ 3,000$ had a relatively high rate of hearing impairment (table 12). For persons with higher incomes, there were only slight differences between the rates of hearing loss. Both males and females under 65 years had similar trends in rates by income groups.

Greater differences between income groups were found for persons 65 years of age and older than for younger persons. Among older persons, the rate of hearing impairment decreased steadily from 242.5 per 1,000 persons with a family income of less than $\$ 3,000$ to 173.3 per 1,000 persons with a family income of $\$ 7,000-\$ 9,999$. The rate then increased to 190.4 for persons with a family income of $\$ 10,000$ or more. While a similar


Figure 6. Percent distribution of hearing impairments, by etiology according to age.
pattern was observed for males, the rate for females decreased through the $\$ 4,000-\$ 6,999$ income interval and increased thereafter.

## Activity Limitation

Very little activity limitation was associated with hearing impairments. About 95 percent of the persons with hearing loss reportedno activity limitation of any kind because of this impairment. This figure was fairly consistent among various age-sex groups as shown in table 13.

## SPEECH IMPAIRMENTS

Speech impairments include stammering, stuttering, absence of larynx, speech or voice defects resulting from surgery or other causes, and other or ill-defined "trouble" with speech. They are classified in categories X10 and X11 of the X -Code. Cases of deaf-mutism, which are coded only as a hearing impairment, and cases
of speech defects due to cleft palate are not included as speech impairments. Only one speech defect is coded per person.

It is estimated that, during the period July 1963-June 1965, an average annual number of $1,298,000$ persons had a speech defect-a rate of 6.9 per 1,000 population. Of this number, 17.3 percent, or 225,000 speech defects, were described as stammering or stuttering. The remaining 82.7 percent were classified as other speech impairments.

## Age, Sex, and Color

It can be seen from table $D$ that more than one-half ( 53.5 percent) of all reported speech defects were among children under 17 years of age, and 62.3 pexcent were among males.

For each of the age groups shown in table D, the rate of speech defects among males was greater than that among females. Children 6-16 years of age had the highest rates of speech de-fects-17.3 per 1,000 population among boys and 8.7 among girls. However, it is quite possible that speech defects among younger children are underestimated because a defect of this kind may not be detected until the child enters school. Among adults, the rate of speech defects was comparatively high for persons 65 years of age and older primarily due to vascular lesions affecting the central nervous system.

The rate of speech defects among nonwhite persons ( 10.2 per 1,000 population) was about 57 percent higher than the rate among white persons (6.5). The rates for nonwhite persons were higher for both males and females as shown in table 14.

## Etiology

Physical diseases and injuries were reported infrequently as the causes of speech defects, particularly among younger people. The only defined cause of much importance among persons under 45 years of age was congenital or birth factors which were reported in 11.1 percent of the cases (table 15). In 36.8 percent of the cases among younger persons no cause was given, and other and ill-defined conditions were reported as the cause in about one-half of the cases. Most of the 512,000 cases assigned to other and illdefined causes $-440,000$ defects-were classified in an etiology code which would include cases said to be caused by emotional or environmental factors (etiology code . Y in appendix II).

A large percentage ( 45.6 percent) of the cases among persons 45 years of age and older were caused by vascular lesions affecting the central nervous system. No cause was stated in only 13.1 percent of the cases among older persons.

Table D. Average prevalence of speech defects, by sex and age: United States, July 1963-June 1965

| Age | Both sexes | Male | Female | Both sexes | Male | Female |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands |  |  | Rate per 1,000 population |  |  |
| A11 ages | 1,298 | 809 | 489 | 6.9 | 8.9 | 5.1 |
| Under 6 years | 156 | 99 | 56 | 6.3 | 7.8 | 4.6 |
| 6-16 years- | 539 | 363 | 176 | 13.1 | 17.3 | 8.7 |
| 17-24 years | 137 | 82 | 55 | 6.6 | 8.5 | 5.0 |
| 25-44 years | 168 | 98 | 69 | 3.7 | 4.5 | 2.9 |
| 45-64 years-- | 148 | 89 | 59 | 3.9 | 4.9 | 3.0 |
| 65 years and over | 151 | 77 | 74 | 8.8 | 10.2 | 7.7 |

## Region

The rate of speech defects varied from 4.7 per 1,000 population in the Northeast Region to 9.1 in the South Region. These two regions had the lowest and highest rates, respectively, for all age-sex groups (table 16). The relatively high rates in the South Region may reflect the high rates observed for the nonwhite population.

In every region, the rate for males was higher than the rate for females and the rate for children was higher than that for adults. The rate for females in the South Region (6.7), however, was slightly higher than the rate for males in the Northeast Region (6.4), reflecting the comparatively high prevalence in the South Region.

## Family Income

As family income increased from, less than $\$ 3,000$ to $\$ 10,000$ or more, the rate of speech disorders among children under 17 years of age decreased from 15.2 to 8.0 per 1,000 population (table 17). Among older persons, the corresponding decrease in rates was from 8.8 to 3.2.

## Activity Limitation

Only about 20 percent of all persons with speech disorders considered their activity limited by this condition (table 18). Among persons 45 years of age and older, however, limitation in usual activities was associated with 36.9 percent of the cases. When activity limitation was reported, it usually involved limitation in major activity. Among persons under $45,89.5$ percent of the limiting cases shown in table 18 involved the major activity, while among older persons, 94.5 percent of the cases were limiting to this degree. It is possible that, in some cases, the reported activity limitation was a residual effect of the underlying condition, such as stroke or cerebral palsy, that caused the speech impairment rather than of the speech disorder itself.

## PARALYSIS, COMPLETE OR PARTIAL

Cases of residual paralysis, of all types and degrees, which have continued for at least 3 months after the initial attack are included in
this report. They are classified in the categories X40-X69 of the Classification of Impairments, according to the parts of the body affected and whether the loss of muscle function is complete or partial. Cases of paralysis agitans or Parkinson's disease are excluded.

It is estimated that the average annual prevalence of paralysis in the noninstitutional population of the United States duxing the period July 1963-June 1965 was 1,516,000 cases-a rate of 8.1 per 1,000 population. This estimate also represents the number of persons with paralysis since only one code in categories X40-X69 may, according to coding procedures, be assigned per person.

The $1,516,000$ cases of paralysis were classified by X -Codes as shown in table E . In two instances codes for similar conditions have been combined to obtain figures large enough to meet standards of reliability. About two-thirds of the estimated cases (67.1 percent) involved either cerebral palsy or partial paralysis of the extremities and trunk (X50-X59). With the exception of the material shown in table E , all types, sites, and degrees of paralysis have been combined in this report, since the prevalences of specific types of paralysis are low.

## Age, Sex, and Color

The number of cases of paralysis per 1,000 population was about seven times as great among persons 65 and older (26.8) as it was among persons under 25 years of age (3.8). (See the data for all regions in table 22.) Between the 45-64year and the 65-years-and-over age groups the rate increased sharply-from 10.8 to 26.8 . Similar increases in rates with age were found among both males and females. The rate for males, however, was greater than that for females, regardless of age.

As shown in table 19, the rate of all cases of paralysis was slightly greater among white persons ( 8.2 per 1,000 population) than among nonwhite persons (7.2 per 1,000 population). Nonwhite persons aged 45 years and over, however, experienced a substantially higher rate of paralysis than white persons of the same ages. Among older persons the rate for nonwhite persons was 22.0, while the rate for white persons was 15.2 .

Table E. Average prevalence and percent distribution of cases of paralysis, by X-Code categories: United States, July 1963-June 1965

| -X-Code categories for paralysis | Average number in thousands | Percent distribution | ```Rate per 1,000 popu- lation``` |
| :---: | :---: | :---: | :---: |
|  | 1,516 | 100.0 | 8.1 |
| Paralysis NOS (complete) of extremities and trunk |  |  |  |
| Upper extremity (ies), except finger (s) only (X40), (X41)-- | 52 | 3.4 | 0.3 |
|  | ${ }_{61}^{*}$ | 4. ${ }^{*}$ |  |
|  | 81 | 4.0 5.3 | 0.3 0.4 |
| Toes only (X45) - | * | * | * |
| Hemiplegia (X47) | 147 | 9.7 | 0.8 |
| Quadriplegia (x48) | 35 | 2.3 | 0.2 |
| Other sites (X49) | , | * | * |
| Cerebral palsy; paralysis, partial of extremities and trunk |  |  |  |
| Cerebral palsy (and synonyms) (X50) | 150 | 9.9 | 0.8 |
| Partial paralysis, arm(s) or finger (s) (X51) | 123 | 8.1 | 0.7 |
| Partial paralysis, leg(s), any part(s) (X52) | 335 | 22.1 | 1.8 |
| Partial paralysis, one side of body (X53)- | 205 | 13.5 | 1.1 |
| Partial paralysis, other sites (X54)=-- | 155 | 10.2 | 0.8 |
|  | 50 | 3.3 | 0.3 |
| Paralysis, complete or partial sites except extremities and trunk |  |  |  |
|  | 79 | 5.2 | 0.4 |
| Paralysis, bladder or anal sphincter (X61)-----------------10-1 | * | * | * |
| Paralysis, other sites (X69)- | * | * | * |

NOTE: For complete titles see Classification of Impairments (X-Code), appendix II.

Among both white and nonwhite persons the rate of paralysis was greater for males than for females.

## Etiology

Almost 85 percent of all cases of paralysis were attributed to poliomyelitis, vascular lesions affecting the central nervous system, injury, or congenital or birth factors. Causes other than these four were given in only 8.2 percent of the cases. The respondent was unable to report a cause in 7.3 percent of the cases.

The frequency at which the different causes were reported varied considerably with age as
shown in table 20 and figure 7. Among persons under 45 years of age the leading causes of paralysis were poliomyelitis, reported as the cause in 45.6 percent of the cases, and congenital or birth factors, reported as the cause in 24.8 percent of the cases. Vascular lesions affecting the central nervous system, reported infrequently by younger persons, were the cause in 56.3 percent of the cases among persons 45 years and over. Despite the differences between the two age groups in the distribution of cases by cause, the rate for older persons was higher than that for younger persons in every etiologic group except congenital or birth factors.


Figure 7. Percent of cases of paralysis, by age and etiology.

The distributions of cases by cause were similar among males and females (table 21). Males, however, reported injury more than twice as frequently as females ( 12.4 percent compared with 5.6 percent of the cases). The majority of the cases in both groups were caused by either vascular lesions affecting the central nervous system or poliomyelitis.

## Region

The rate of all cases of paralysis varied from a low of 7.1 per 1,000 population in the Northeast Region to a high of 9.2 in the South Region (table 22). The rate for persons 65 years and over was particularly high in the South Region- 36.9 per 1,000 persons, compared with the next highest rate of 24.5 in the North Central Region. In each region, the rate was higher for males than for females.

## Family Income

Among persons under 45 years of age, the rates of cases of paralysis did not differ markedly among income groups. In this age group the highest rate ( 5.4 per 1,000 population) was among persons with a family income of less than $\$ 3,000$, while the lowest rate (4.0) was among persons with a family income of $\$ 3,000-\$ 3,999$ (table 23).

Among persons 45 years of age and older, however, the rate of cases of paralysis decreased steadily with increasing income. The rate of 25.4 cases per 1,000 population among older persons with a family income of less than $\$ 3,000$ was about three times as high as the rate (8.4) among older persons with a family income of $\$ 10,000$ or more.

## Activity Limitation

In 60.9 percent of all cases, persons with paralysis considered themselves limited in their activity (table 24). When activity limitation was reported, it usually involved limitation in major activity. As shown in the table, 53.1 percent of the cases either prevented the paralyzed person's performing his major activity or limited him in the amount or kind of major activity.


Figure 8. Percent distribution of cases of paralysis causing limitation of activity, by degree of limitation of activity according to age.

Of the cases of paralysis causing limitation of activity, the proportion in which the person was unable to carry on his major activity increased with age-from 26.6 percent among persons under 45 years to 70.3 percent among those 65 years and older (fig. 8).

## ABSENCE OF EXTREMITIES

In this report estimates of missing extremities are shown for both major and minor extremities. Absence of major extremities includes cases of loss of leg, foot, arm, or hand which are classified as X20-X24, X26-X30, X32, and X33 in the Classification of Impairments. Cases of loss of minor extremities (finger(s) or toe(s) only) are classified by the X-Code categories X25, X31, and X34.

Of the estimated $1,968,000$ cases of absence of extremities, only 257,000 were cases of loss of major extremities. The rate of absence of major extremities was 1.4 per 1,000 population and the rate of absence of finger(s) or toe(s) only was 9.1.

The classification of cases of absence of extremities by X-Codes is shown in table F. In 61.5 pexcent of the cases of absence of major extremities the loss of a leg(s) was involved. Missing finger(s) was reported in 85.5 percent of the cases of absence of minor extremities.

## Selected Characteristics

Most impairments of this type-86.4 percent of the cases involving major extremities and 82.7 percent of the cases involving finger(s) or toe(s) only-were among males (table 25). Because of

Table F. Average prevalence and percent distribution of cases of absence of extremities, by X-Code categories: United States, July 1963-June 1965


NOTE: For complete titles see Classification of Impairments (X-Code), appendix II.

Table G. Average prevalence and percent distribution of cases of absence of extremities among both sexes and among males, by age: United States, July 1963-June 1965

| Sex and age | Absence of major extremities |  |  | Absence of finger(s) or toe(s) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ```Average number in thousands``` | Percent distribution | $\begin{gathered} \text { Rate per } \\ 1,000 \\ \text { population } \end{gathered}$ | Average number in thousands | Percent distribution | Rate per 1,000 population |
| Both sexes |  |  |  |  |  |  |
| All ages---- | 257 | 100.0 | 1.4 | 1,712 | 100.0 | 9.1 |
| Under 25 years---- | $\therefore$ | * | $\cdots$ | 178 | 10.4 | 2.1 |
| 25-44 years------- | 51 | 19.8 | 1.1 | 460 | 26.9 | 10.2 |
| 45-64 years------- | 105 | 40.9 | 2.8 | 691 | 40.4 | 18.2 |
| 65 years and over- | 79 | 30.7 | 4.6 | 383 | 22.4 | 22.3 |
| Male |  |  |  |  |  |  |
| All ages---- | 222 | 100.0 | 2.4 | 1,416 | 100.0 | 15.6 |
| Under 25 years---- | $*$ | * | $\cdots$ | 123 | 8.7 | 2.8 |
| 25-44 years------- | 47 | 21.2 | 2.2 | 387 | 27.3 | 17.9 |
| 45-64 years------- | 94 | 42.3 | 5.1 | 590 | 41.7 | 32.3 |
| 65 years and over- | 62 | 27.9 | 8.2 | 316 | 22.3 | 41.7 |

the small number of cases among females, the rates for males were considerably higher than the combined rates for both sexes (table G). The rate of cases of absence of extremities, both major and minor, increased steadily with age.

The rate of all cases of absence of extremities was higher among white persons (10.7) than among nonwhite persons (9.1) as shown in table 25. However, the rate for nonwhite persons was higher for cases of loss of major extremities, while the rate for white persons was somewhat higher for cases of loss of finger(s) or toe(s) only.

The number of cases of absence of major extremities per 1,000 persons was small in all regions, varying from 1.0 in the West Region to 1.5 in the North Central and South Regions (table 25). The rate of absence of finger(s) or toe(s) only varied from a low of 7.4 in the Northeast Region to a high of 10.5 in the North Central Region.

The rate of cases of absence of extremities, both major and minor, decreased with increasing family income. This was true both among persons under 65 years of age and among persons 65 and older (table 26).

## Etiology

Loss of extremities usually resulted froman injury. As shown in table 27, injury was reported as the cause in 70.8 percent of the cases involving major extremities and 92.4 percent of the cases involving finger(s) or toe(s) only. Other causes, including infection, gangrene, and neoplasms, were reported more frequently by older persons than by younger persons. For cases involving major extremities, causes other than injury were given by 24.2 percent of persons under 65 years of age and by 40.5 percent of those 65 and older.

## Activity Limitation

A high percentage ( 61.1 percent) of persons who had a missing major extremity (one or more) considered themselves limited to some degree in their usual activities (table 28). Of the 157,000 persons who attributed activity limitation to this type of impairment, 63,000 (or 40.1 percent) were unable to perform their major activity, and an ad-
ditional 74,000 (or 47.1 percent) were limited in the amount or kind of their major activity. It is significant to note, however, that about one-half of the persons under 45 years of age and about one-third of the older persons with this type of impairment had adjusted to their condition to the extent that they did not consider it limiting.

Loss of finger(s) or toe(s) only was not usually a limiting condition. No activity limitation of any kind was reported in 95.3 percent of these cases among persons under 45 years of age and in 96.3 percent of these cases among older persons.

## IMPAIRMENTS (Except Paralysis And Absence) OF LIMBS, BACK, AND TRUNK

This large group of impairments, which are referred to in the text of this report as "orthopedic defects," consists of those defects which are classified in categories X70-X89 of the Classification of Impairments (see appendix II). Ill-defined chronic difficulties described interms such as "stiffness," "weakness," "pain," "trouble," "spasms," and "swelling" and involving muscles, joints, limbs, back, or trunk are classified in categories $\mathrm{X} 70-\mathrm{X} 79$ according to the site. These categories also include reports of old strains, sprains, and dislocations of these sites. Categories X80-X89 include curvature of the spine, clubfoot, and other specified structural deformities of the limbs, back, and trunk.

In addition to cases of paralysis and absence of extremities, all conditions pertaining to displacement of intervertebral discs are excluded from X70-X89. Ill-defined reports of "trouble" of these sites, if due to arthritis or other active chronic disease, are coded only to the disease and are not assigned an X-Code. Disfigurement of the face and deviations from normal size, weight, or height are also excluded.

The totals shown for orthopedic defects are counts of conditions only, since it is possible for a person to be classified in more than one of the categories X70-X89. Therefore, unlike the estimates for the other impairment groups shown in this report, the number of orthopedic defects cannot be interpreted as the number of persons with orthopedic defects.

Estimates of orthopedic defects are shown in this report for four subgroups by site as well as for all sites combined. The four subgroups and the X -Codes included in each are:
(a) Back or spine only (X70-X72, X80, and X81)
(b) Upper extremities and shoulders, but no other site ( $\mathrm{X} 73, \mathrm{X} 74$, and $\mathrm{X} 86-\mathrm{X} 88$ )
(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 (NEC), and sites not classifiable in (a), (b), or (c), such as chest or ribs (X78, X79, and X89)

For the period July 1963-June 1965 it is estimated by the survey that the average annual prevalence of orthopedic defects was $17,742,000-$ a rate of 94.8 per 1,000 population. About threefourths of all orthopedic defects involved either the back or spine or the lower extremity and hip.

Data on orthopedic defects by X-Code classifications, grouped by site, are shown in table $H$. The largest single category was X70-ill-defined back and spine conditions-in which 27.4 percent of all orthopedic defects and 75.1 percent of back or spine defects were classified. Except in table $H$, estimates of orthopedic impairments are shown only for the four major subgroups listed above.

## Age and Sex

The rate of orthopedic impairments per 1,000 population increased considerably with age as shown in table 29. While this higher prevalence of orthopedic defects with advancing age was characteristic of defects involving the upper extremity, the lower extremity, and other or multiple sites, the rates for back or spine defects were very similar in age groups over 24 years.

The sites for which orthopedic defects were most frequently reported varied with age as illustrated in figure 9. Among children under 17 years of age, orthopedic impairments affecting the lower extremity and hip were reported far more frequently than other types of orthopedic defects.

Table H. Average prevalence and percent distribution of impairments (except paralysis. and absence) of limbs, back, and trunk, by X-Code categories according to site: United States, July 1963-June 1965

| Site and X-Code categories |
| :--- | ---: | ---: | ---: |
| for impairments of limbs, back, and trunk |

NOTE: For complete titles see Classification of Impairments (X-Code), appendix II.

Among persons 17 years and older, orthopedic impairments most frequently affected either the back or spine, or the lower extremity and hip.

Orthopedic defects of each site were more prevalent among males than among females. By age, however, there was variation in this relationship. In general, the rates for males were greater than those for females among persons under the age of 65. Among persons 65 years of age and older, however, the rates for females were greater for each of the four subgroups.

## Color

The overall rate of orthopedic defects per 1,000 population was greater among white persons (96.5) than among nonwhite persons (82.4) as shown in table 30 . The rate for white persons was also higher for every site except other or multiple sites. The greatest difference between the two groups was in the rates of back or spine defects for which the rate for white persons was 36.0, while the rate for nonwhite persons was 24.6 .


Figure 9. Percent distribution of impairments (except paralysis and absence), by site according to age.

By age, rates among white persons were higher only among persons under 45 years of age. At older ages, nonwhite persons had a higher rate of orthopedic impairment of each site.

## Etiology

The etiology of orthopedic defects is shown in table 31 by age and in table 32 by sex. Injury, reported in 69 percent of all cases, was by far the most important cause of orthopedic defects. By site, the percentage of cases caused by injury varied from 56.9 percent of back or spine defects to 83.6 percent of defects of the upper extremity and shoulder. By age, it varied from 60.1 percent among persons under 25 to 72.1 percent among persons $25-44$ years of age. Injury was reported as the cause of 73.0 percent of all cases among males and 64.4 percent of all cases among females.

Among persons under 25 years of age there was another important cause-congenital or birth
factors. Although only 6.4 percent of all cases were caused by congenital or birth factors, 20.8 percent of the cases among young people were attributed to these factors.

Other causes, including ill-defined conditions, were reported for only 10.2 percent of all cases. In 14.4 percent of the cases the cause was unknown to the respondent.

In figure 9 it was illustrated that the sites most frequently affected by orthopedic defects varied with age. This is reflected in table 31 by the relatively high prevalences of residual defects resulting from injury to these sites. In addition to injury, congenital or birth factors were also reported most frequently as the cause of cases involving the lower extremity and hip among young people under 25 years of age. While the prevalence of orthopedic defects caused by injury was high for impairments both of the back or spine and of the lower extremity and hip among persons 25 years and older, the prevalence of cases resulting from other and unknown causes was higher
for back or spine defects. Among persons 65 years and older, however, residual impairments resulting from fracture of the pelvis probably contributed to the particularly high prevalence of orthopedic defects involving the lower extremity and hip.

## Region

In the West Region there were 110.4 orthopedic defects per 1,000 population-a rate which was about 43 percent higher than the rate of 77.3 in the Northeast Region (table 33). The rates in the North Central and South Regions-97.1 and 98.7 , respectively-were also substantially greater than the rate in the Northeast. The prevalence of orthopedic defects was lowest in the Northeast Region, not only for all cases combined, but also for each site by age. The distributions of orthopedic defects by site were similar in each region.

## Family Income

Persons under 65 years of age with a family income of less than $\$ 3,000$ experienced relatively high rates of orthopedic defects of each site (table 34). At higher incomes there were only slight differences among the rates for persons of these ages. For persons under 65, the rate of all cases dropped from 113.1 among persons with an income of less than $\$ 3,000$ to 85.8 among persons with an income of $\$ 3,000-\$ 3,999$ and to 80.5 among persons with an income of $\$ 10,000$ or more.

Among persons 65 years and over, there was a more marked decrease in the prevalence of orthopedic impairments with increasing family income. The rate decreased from 224.4 per 1,000 population among older persons with a family income of less than $\$ 3,000$ to 127.4 among those with a family income of $\$ 10,000$ or more.

## Activity Limitation

The percentage of cases causing activity limitation varied with age and with the part of the body affected. As shown in table 35, persons 65 years and older reported activity limitation in 33.8 percent of all cases, while younger persons reported limitation in 20.5 percent of all cases.

Among persons under 65 years of age, an orthopedic defect prevented the impaired person's performing his major activity in only 1.6 percent of all cases. When activity limitation was associated with orthopedic impairment, persons of all ages reported limitation in amount or kind of major activity for about 60 percent of the limiting cases.

Activity limitation was reported most frequently for those defects involving other or multiple sites-in 31.5 percent of the cases among persons under 65 years of age and in 40.0 percent of the cases among older persons. Orthopedic defects of the upper extremity and shoulder caused limitation of activity in only 12.3 percent of the cases among younger persons and in 19.6 percent of the cases among persons 65 years and older.

## INCREASED PREVALENCE OF IMPAIRMENTS

With the exception of speech defects and absence of extremities, there has been a marked increase in the prevalence estimates for all types of impairments produced by the Health Interview Survey since the first year of data collection during July 1957-June 1958 (table J). While some part of this increase represents an actual increase in the occurrence of impairments, there are other factors related to data collection and processing which have contributed to overall changes in the prevalence rates.
(1) During the course of the survey, there has been a continuing attempt to improve collection methods and techniques. Although the content of the basic questionnaire has not changed appreciably since the beginning of the survey there has been considerable revision from year to year in the wording and format of the questions. These changes have improved the quality and completeness of the collected material but have reduced its value for purposes of trend analysis.
(2) The cumulative experience in collection techniques on the part of the interviewers tends toward the collection of more complete data as the survey progresses. Improvements in training methods and in the quality control of the data also influence the completeness of the reported data.

Table J. Rate per 1,000 population of selected impairments: United States, July 1957June 1958, July 1959-June 1961, and July 1963-June 1965

| Impairment | July $1957{ }^{\text {¹ }}$ June $1958^{1}$ | July $1959{ }^{1}{ }^{2}$ June $1961^{2}$ | July 1963June 1965 |
| :---: | :---: | :---: | :---: |
|  | Rate per 1,000 population |  |  |
| All visual impairments | 18.0 | 19.8 | 28.8 |
| Severe visual impairments | 5.7 | 5.6 | 6.6 |
| Other visual impairments | 12.3 | 14.2 | 22.2 |
| Hearing impairments---------------------------------- | 34.6 | 35.3 | 45.7 |
| Speech defects---------------------------------------- | 6.5 | 5.9 | 6.9 |
| Paralysis, complete or partial | 5.6 | 5.4 | 8.1 |
| Absence of major extremities------------------------ | 1.7 | 1.5 | 1.4 |
| Absence of finger(s) or toe(s) only-------------- Other impairments of limbs, back, trunk, | 8.5 58.6 | 74.9 | 9 9 .1 |

[^4](3) The processing of the collected data has also been improved. To insure accurate coding of the material contained in completed questionnaires, coding instructions were clarified from time to time. Complete tabulation of reported conditions depends on accurate coding of these conditions.
(4) Since the estimates are based on information obtained in a sample survey of household respondents they are subject to qualifications discussed at the beginning of the report. As was pointed out, the information obtained from house-
hold interviews depends on the respondent's willingness and ability to answer questions. The changes in collection methods have been part of a continuing effort to obtain as complete and accurate information as possible from household respondents-the source of the data produced by the survey and therefore the basic source of changes in estimated prevalence of impairments.

While this list is not exhaustive, it points out what are considered to be the major areas responsible for variations over time in the estimated prevalence of impairments.

## DETAILED TABLES

Page
VISUAL IMPAIRMENTS
Table 1. Average prevalence and percent distribution of visual impaiments, by age accord-
2. Average prevalence and percent distribution of visual impairments, by age accord- ing to color: United States, July 1963-June 1965 ..... 24
3. Prevalence and percent distribution of visual impairments, by etiology according to age: United States, July 1964-June 1965-~- ..... 25
4. Prevalence and percent distribution of visual impairments, by etiology according to sex: United States, July 1964-June 1965 ..... 26
5. Average prevalence and percent distribution of visual impairments, by age accord- ing to geographic region: United States, July 1963-June 1965 ..... 27
6. Average prevalence and percent distribution of visual impairments, by family in- come according to age: United States, July 1963-June 1965 ..... 28
7. Average prevalence and percent distribution of visual impairments, by degree of Iimitation of activity according to sex: United States, July 1963-June 1965-n.-. ..... 29
8. Average prevalence and percent distribution of visual impairments, by degree of limitation of activity according to age: United States, July 1963-June 1965----- ..... 30
HEARING IMPAIRMENTS9. Average prevalence and percent distribution of hearing impairments, by age ac-cording to color and sex: United States, July 1963-June 1965-n-31
10. Average prevalence and percent distribution of hearing impairments, by etiology according to sex and age: United States, July 1963-June 1965 ..... 32
11. Average prevalence and percent distribution of hearing impairments, by age ac- cording to sex and geographic region: United States, July 1963-June 1965-------- ..... 33
12. Average prevalence and percent distribution of hearing impairments, by family in-  ..... 34
13. Average prevalence and percent distribution of hearing impairments, by degree of limitation of activity according to sex and age: United States, July 1963- June 1965 ..... 35
SPEECH DEFECTS
14. Average' prevalence and percent distribution of speech defects, by age according to color and sex: United States, July 1963-June 1965 ..... 36
15. Average prevalence and percent distribution of speech defects, by etiology ac- cording to age: United States, July 1963-June 1965 ..... 36
16. Average prevalence and percent distribution of speech defects, by age according  ..... 37
17. Average prevalence and percent distribution of speech defects, by family income according to age: United States, July 1963-June 1965 ..... 38
18. Average prevalence and percent distribution of speech defects, by limitation of activity according to sex and age: United States, July 1963-June 1965 ..... 38

## PARALYSIS

Table 19. Average prevalence and percent distribution of cases of paralysis, by age accord-

20. Average prevalence and percent distribution of cases of paralysis, by etiology

21. Average prevalence and percent distribution of cases of paralysis, by etiology according to sex: United States, July 1963-June 196540

22. Average prevalence and percent distribution of cases of paralysis, by age accord
ing to sex and geographic region: United States, July 1963-June 1965 ..... 41
23. Average prevalence and percent distribution of cases of paralysis, by family in
come according to age and sex: United States, July 1963-June 1965
24. Average prevalence and percent distribution of cases of paralysis, by degree of limitation of activity according to sex and age: United States, July 1963June 1965

## ABSENCE OF EXTREMITIES

25. Average prevalence and percent distribution of cases of absence of extremities, by selected characteristics: United States, July 1963-June 1965-1.-n.-.44
26. Average prevalence and percent distribution of cases of absence of extremities,
by family income according to age: United States, July 1963-June 1965 ..... 45
27. Average prevalence and percent distribution of cases of absence of extremities,
by etiology according to age: United States, July 1963-June 1965 ..... 46
28. Average prevalence and percent distribution of cases of absence of extremities,
by limitation of activity according to age: United States, July 1963-June 1965--

> IMPAIRMENTS OF LIMBS, BACK, AND TRUNK
29. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by age according to sex and site: United


30. Average prevalence and percent distribution of impairments (except paralysis and
absence) of limbs, back, and trunk, by site according to color and age: United
States, July 1963-June 1965-
31. Average prevalence and percent distribution of impairments (except paralysis and
absence) of limbs, back, and trunk, by etiology according to site and age: United
States, July 1963-June 1965
32. Average prevalence and percent distribution of impairments (except paralysis and
absence) of limbs, back, and trunk, by etiology according to site and sex: United
States, July 1963-June 1965
33. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by site according to age and family income: United States, Juiy 1963-June 1965-

## 35. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by degree of limitation of activity according to age and site: United States, July 1963-June 1965

## POPULATION

36. Population used in obtaining rates shown in this publication, by age and selected characteristics: United States, July 1963-June 1965

Table 1. Average prevalence and percent distribution of visual impairments, by age according to sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estamates are given in Appendix I. Definitions of terms are given in Appondix II]


Table 2. Average prevalence and percent distribution of visual impairments, by age according to color: United States, July 1963-June 1965
[See headnote on table 1]


Table 3. Prevalence and percent distribution of visual impairments, by etiology according to age: United States, July 1964-June 1965
 of the estimates are given in tppendix I. Definitions of terms are given in Appendiy II]


${ }^{1}$ For inclusions in each etiology group, see page 5.

Table 4. Prevalence and percent distribution of visual impaiments, by etiology according to sex: United States, July 1964-June 1965
[Data are basod on household intervens of the cavlian, noninstatutional population. The survey design, general qualifications, and infortation on the reliability of the estimates are given in Appendix. I. Definitions of terms are given in Appendix II]

| Sex and etiology ${ }^{1}$ | All visual impairments |  |  | Severe visual impairments |  |  | Other visual impairments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Number in thousands | Percent distribution | Rate per 1,000 popu- | Number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { 1ation } \end{aligned}$ |
| Both sexes |  |  |  |  |  |  |  |  |  |
| All causes------------ | 5,717 | 100.0 | 30.3 | 1,342 | 100.0 | 7.1 | 4,375 | 100.0 | 23.2 |
| Cataract--- | 1,372 | 24.0 | 7.3 | 398 | 29.7 | 2.1 | 974 | 22.3 | 5.2 |
| Glaucoma-- | 362 | 6.3 | 1.9 | 75 | 5.6 | 0.4 | 287 | 6.6 | 1.5 |
| Other local eye diseases---- | 928 | 16.2 | 4.9 | 185 | 13.8 | 1.0 | 742 | 17.0 | 3.9 |
| General diseases------------ | 322 | 5.6 | 1.7 | 154 | 11.5 | 0.8 | 168 | 3.8 | 0.9 |
| Injury (with any other cause) | 914 | 16.0 | 4.9 | 73 | 5.4 | 0.4 | 841 | 19.2 | 4.5 |
| Congenital or birth factors- | 279 | 4.9 | 1.5 | 35 | 2.6 | 0.2 | 244 | 5.6 | 1.3 |
| Other and ill-defined conditions | 522 | 9.1 | 2.8 | 148 | 11.0 | 0.8 | 374 | 8.5 | 2.0 |
| Unknown to respondent---.-.-- | 1,017 | 17.8 | 5.4 | 273 | 20.3 | 1.4 | 744 | 17.0 | 3.9 |
| Male |  |  |  |  |  |  |  |  |  |
| A11 causes------------ | 2,491 | 100.0 | 27.3 | 513 | 100.0 | 5.6 | 1,979 | 100.0 | 21.7 |
| Cataract--------------------- | 500 | 20.1 | 5.5 | 131 | 25.5 | 1.4 | 369 | 18.6 | 4.0 |
| Glaucoma- | 130 | 5.2 | 1.4 | * | * | * | 107 | 5.4 | 1.2 |
| Other local eye diseases---- | 348 | 14.0 | 3.8 | 67 | 13.1 | 0.7 | 281 | 14.2 | 3.1 |
| General diseases------.-.-.-- | 103 | 4.1 | 1.1 | 42 | 8.2 | 0.5 | 61 | 3.1 | 0.7 |
| Injury (with any other cause) | 670 | 26.9 | 7.3 | 53 | 10.3 | 0.6 | 617 | 31.2 | 6.8 |
| Congenital or birth factors- | 142 | 5.7 | 1.6 | * | * | * | 117 | 5.9 | 1.3 |
| Other and ill-defined conditions | 175 | 7.0 | 1.9 | 52 | 10.1 | 0.6 | 123 | 6.2 | 1.3 |
| Unknowr to respondent------- | 425 | 17.1 | 4.7 | 121 | 23.6 | 1.3 | 304 | 15.4 | 3.3 |
| Female |  |  |  |  |  |  |  |  |  |
| All causes------------ | 3,225 | 100.0 | 33.2 | 829 | 100.0 | 8.5 | 2,396 | 100.0 | 24.7 |
| Cataract--------------------- | 873 | 27.1 | 9.0 | 267 | 32.2 | 2.7 | 606 | 25.3 | 6.2 |
| Glaucoma--------------------- | 232 | 7.2 | 2.4 | 52 | 6.3 | 0.5 | 180 | 7.5 | 1.9 |
| Other local eye diseases---- | 580 | 18.0 | 6.0 | 118 | 14.2 | 1.2 | 462 | 19.3 | 4.8 |
| General diseases------------ | 219 | 6.8 | 2.3 | 112 | 13.5 | 1.2 | 107 | 4.5 | 1.1 |
| Injury (with any other cause) | 245 | 7.6 | 2.5 | * | * | * | 224 | 9.3 | 2.3 |
| Congenital or birth factors- | 137 | 4.2 | 1.4 | * | * | * | 127 | 5.3 | 1.3 |
| other and ill-defined conditions | 347 | 10.8 | 3.6 | 96 | 11.6 | 1.0 | 251 | 10.5 | 2.6 |
| Unknown to respondent------- | 592 | 18.4 | 6.1 | 152 | 18.3 | 1.6 | 440 | 18.4 | 4.5 |

${ }^{1}$ For inclusions in each etiology group, see page 5 .

Table 5. Average prevalence and percent distribution of visual impairments, by age according to geographic region: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix 1. Definitions of terms are given in Appendix II]

| Region and age | A11 visual impairments |  |  | Severe visual impairments |  |  | Other visual impairments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { Per } \\ & 1,000 \\ & \text { popu- } \\ & \text { 1ation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popa1ation | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| Al1 regions |  |  |  |  |  |  |  |  |  |
| All ages--- | 5,390 | 100.0 | 28.8 | 1,227 | 100.0 | 6.6 | 4,163 | 100.0 | 22.2 |
| Under 65 years--- | 2,891 | 53.6 | 17.0 | 378 | 30.8 | 2.2 | 2,513 | 60.4 | 14.8 |
| 65+ years-------- | 2,499 | 46.4 | 145.6 | 849 | 69.2 | 49.5 | 1,650 | 39.6 | 96.2 |
| Northeast |  |  |  |  |  |  |  |  |  |
| A11 ages--- | 1,022 | 100.0 | 21.9 | 222 | 100.0 | 4.8 | 800 | 100.0 | 17.2 |
| Under 65 years--- | 521 | 51.0 | 12.4 | 63 | 28.4 | 1.5 | 459 | 57.4 | 10.9 |
| 65+ yearsm------- | 501 | 49.0 | 111.6 | 160 | 72.1 | 35.7 | 341 | 42.6 | 76.0 |
| North Central |  |  |  |  |  |  |  |  |  |
| All ages--- | 1,377 | 100.0 | 25.8 | 311 | 100.0 | 5.8 | 1,066 | 100.0 | 20.0 |
| Under 65 years-m- | 686 | 49.8 | 14.2 | 82 | 26.4 | 1.7 | 604 | 56.7 | 12.5 |
| 65+ years-----.-- | 691 | 50.2 | 134.1 | 229 | 73.6 | 44.5 | 462 | 43.3 | 89.7 |
| South |  |  |  |  |  |  |  |  |  |
| All ages--- | 2,204 | 100.0 | 38.7 | 539 | 100.0 | 9.5 | 1,665 | 100.0 | 29.2 |
| Under 65 years--- | 1,254 | 56.9 | 24.1 | 190 | 35.3 | 3.6 | 1,064 | 63.9 | 20.4 |
| 65+ years--m----- | 950 | 43.1 | 193.8 | 349 | 64.7 | 71.2 | 601 | 36.1 | 122.6 |
| West |  |  |  |  |  |  |  |  |  |
| A11 ages-a- | 786 | 100.0 | 26.0 | 154 | 100.0 | 5.1 | 632 | 100.0 | 20.9 |
| Under 65 yearsm-- | 430 | 54.7 | 15.6 | 44 | 28.6 | 1.6 | 386 | 61.1 | 14.0 |
| 65+ years-------- | 357 | 45.4 | 136.4 | 110 | 71.4 | 42.0 | 246 | 38.9 | 94.0 |

Table 6. Average prevalence and percent distribution of visual impairments, by family income according to age: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Age and family income | All visual impairments |  |  | Severe visual impairments |  |  | Other visual impairments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent distribution | ```Rate per 1,000 popu- lation``` | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| All ages <br> All incomes ${ }^{1}$ - | 5,390 | 100.0 | 28.8 | 1,227 | 100.0 | 6.6 | 4,163 | 100.0 | 22.2 |
| Under \$3,000----- | 2,477 | 46.0 | 71.2 | 744 | 60.6 | 21.4 | 1,732 | 41.6 | 49.8 |
| \$3,000-\$3,999---- | 516 | 9.6 | 32.4 | 109 | 8.9 | 6.8 | 407 | 11.7 | 25.6 |
| \$4,000-\$6,999-..- | 1,083 | 20.1 | 18.8 | 169 | 13.8 | 2.9 | 914 | 22.0 | 15.9 |
| \$7,000-\$9,999---- | 541 | 10.0 | 14.3 | 64 | 5.2 | 1.7 | 477 | 11.5 | 12.6 |
| \$10,000+--------- | 475 | 8.8 | 15.2 | 52 | 4.2 | 1.7 | 422 | 10.1 | 13.5 |
| Under 65 years |  |  |  |  |  |  |  |  |  |
| All incomes ${ }^{1}$ - | 2,891 | 100.0 | 17.0 | 378 | 100.0 | 2.2 | 2,513 | 100.0 | 14.8 |
| Under \$3,000----- | 967 | 33.4 | 36.8 | 206 | 54.5 | 7.8 | 761 | 30.3 | 28.9 |
| \$3,000-\$3,999--- | 280 | 9.7 | 20.0 | 37 | 9.8 | 2.6 | 242 | 9.6 | 17.3 |
| \$4,000-\$6,999---- | 767 | 26.5 | 14.0 | 70 | 18.5 | 1.3 | 697 | 27.7 | 12.7 |
| \$7,000-\$9,999 --- | 401 | 13.9 | 11.0 | * | * | * | 376 | 15.0 | 10.3 |
| \$10,000+--------- | 339 | 11.7 | 11.3 | * | * | * | 321 | 12.8 | 10.7 |
| $\underline{65+\text { years }}$ |  |  |  |  |  |  |  |  |  |
| A11 incomes ${ }^{1}$ - | 2,499 | 100.0 | 145.6 | 849 | 100.0 | 49.5 | 1,650 | 100.0 | 96.2 |
| Under \$3,000----- | 1,509 | 60.4 | 177.5 | 538 | 63.4 | 63.3 | 971 | 58.8 | 114.2 |
| \$3,000-\$3,999---- | 236 | 9.4 | 123.8 | 72 | 8.5 | 37.8 | 164 | 9.9 | 86.0 |
| \$4,000-\$6,999---- | 316 | 12.6 | 109.8 | 99 | 11.7 | 34.4 | 216 | 13.1 | 75.0 |
| \$7,000-\$9,999 | 141 | 5.6 | 110.1 | 39 | 4.6 | 30.4 | 101 | 6.1 | 78.8 |
| \$10,000+----.---- | 136 | 5.4 | 105.7 | 35 | 4.1 | 27.2 | 101 | 6.1 | 78.5 |

${ }^{1}$ Includes persons with unknown incomes.

Table 7. Average prevalence and percent distribution of visual impairments, by degree of limitation of activity according to sex: United States, July 1963-June 1965
[Data are hinsert on houschold intericws of the civilian, noninstitutionnl norulntion. Ihe survey design, general qualifications, and information on the relinbilit, of the estimates are given in [mpondiv I. Definitions of terms are given in Appendix If]

| Sex and degree of limitation of activity | A11 visual impairments |  |  | Severe visual impairments |  |  | Other visual impairments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { Iation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu- 1ation | Average number in thousands | Percent distribution | Rate per 1,000 popuIation |
| Both sexes |  |  |  |  |  |  |  |  |  |
| Total------------------ | 5,390 | 100.0 | 28.8 | 1,227 | 100.0 | 6.6 | 4,163 | 100.0 | 22.2 |
| With limitation of activity- | 1,285 | 23.8 | 6.9 | 658 | 53.6 | 3.5 | 627 | 15.1 | 3.4 |
| Unable to carry on major activity 1 | 483 | 9.0 | 2.6 | 339 | 27.6 | 1.8 | 144 | 3.5 | 0.8 |
| Limitation in amount or <br> kind of major activity ${ }^{1}$-- | 618 | 11.5 | 3.3 | 261 | 21.3 | 1.4 | 357 | 8.6 | 1.9 |
| Limitation, but not in major activity ${ }^{1}$-...-........ | 184 | 3.4 | 1.0 | 58 | 4.7 | 0.3 | 126 | 3.0 | 0.7 |
| With no limitation of activity- | 4,105 | 76.2 | 21.9 | 569 | 46.4 | 3.0 | 3,536 | 84.9 | 18.9 |
| Male |  |  |  |  |  |  |  |  |  |
| Total------------------ | 2,391 | 100.0 | 26.4 | 464 | 100.0 | 5.1 | 1,927 | 100.0 | 21.2 |
| With limitation of activity- | 611 | 25.6 | 6.7 | 271 | 58.4 | 3.0 | 341 | 27.7 | 3.8 |
| Unable to carry on major activity ${ }^{1}$ | 279 | 11.7 | 3.1 | 175 | 37.7 | 1.9 | 104 | 5.4 | 1.1 |
| Limitation in amount or <br> kind of major activityi-- | 262 | 11.0 | 2.9 | 85 | 18.3 | 0.9 | 176 | 9.1 | 1.9 |
| Limitation, but not in major activity ${ }^{1}$ | 71 | 3.0 | 0.8 | * | * | * | 61 | 3.2 | 0.7 |
| With no limitation of activity- | 1,780 | 74.4 | 19.6 | 193 | 41.6 | 2.1 | 1,586 | 82.3 | 17.5 |
| Female |  |  |  |  |  |  |  |  |  |
| Total----------------- | 2,999 | 100.0 | 31.1 | 763 | 100.0 | 7.9 | 2,236 | 100.0 | 23.2 |
| With limitation of activity- | 674 | 22.5 | 7.0 | 388 | 50.9 | 4.0 | 286 | 12.8 | 3.0 |
| Unable to carry on major activity ${ }^{1}$ | 204 | 6.8 | 2.1 | 164 | 21.5 | 1.7 | 40 | 1.8 | 0.4 |
| Limitation in amount or kind of major activity ${ }^{1}$-- | 357 | 11.9 | 3.7 | 176 | 23.1 | 1.8 | 180 | 8.1 | 1.9 |
| Limitation, but not in major activity - --------- | 113 | 3.8 | 1.2 | 48 | 6.3 | 0.5 | 66 | 3.0 | 0.7 |
| With no limitation of activity | 2,325 | 77.5 | 24.1 | 375 | 49.1 | 3.9 | 1,950 | 87.2 | 20.2 |

${ }^{1}$ Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 8. Average prevalence and percent distribution of visual impaiments, by degree of limitation of activity according to age: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in tfpendix I. Definitions of terms are piven in Appendix II]

| Age and degree of limitation of activity | All visual impairments |  |  | Severe visual impairments |  |  | Other visual impairments |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| All ages |  |  |  |  |  |  |  |  |  |
| Total | 5,390 | 100.0 | 28.8 | 1,227 | 100.0 | 6.6 | 4,163 | 100.0 | 22.2 |
| With limitation of activity <br> Unable to carry on major activity ${ }^{1}$ | 1,285 | 23.8 | 6.9 | 658 | 53.6 | 3.5 | 627 | 15.1 | 3.4 |
|  | 483 | 9.0 | 2.6 | 339 | 27.6 | 1.8 | 144 | 3.5 | 0.8 |
| Limitation in amount or kind of major activity ${ }^{1}$ | 618 | 11.5 | 3.3 | 261 | 21.3 | 1.4 | 357 | 8.6 | 1.9 |
| Limitation, but not in major activity ${ }^{1}$ | 184 | 3.4 | 1.0 | 58 | 4.7 | 0.3 | 126 | 3.0 | 0.7 |
| With no Iimitation of activity--- | 4,105 | 76.2 | 21.9 | 569 | 46.4 | 3.0 | 3,536 | 84.9 | 18.9 |
| Under 45 years |  |  |  |  |  |  |  |  |  |
| Total------------------------- | 1,392 | 100.0 | 10.5 | 119 | 100.0 | 0.9 | 1,273 | 100.0 | 9.6 |
| With limitation of activity--n-m- <br> Unable to carry on major activity ${ }^{1}$ | 190 | 13.6 | 1.4 | 61 | 51.3 | 0.5 | 130 | 10.2 | 1.0 |
|  | * | * | * | * | * | * | * | * | * |
| Limitation in amount or kind of major activity ${ }^{1}$ | 107 | 7.7 | 0.8 | 30 | 25.2 | 0.2 | 76 | 6.0 | 0.6 |
| Limitation, but not in major activityl | 58 | 4.2 | 0.4 | * | * | * | 48 | 3.8 | 0.4 |
| With no limitation of activity--- | 1,202 | 86.4 | 9.1 | 59 | 49.6 | 0.4 | 1,143 | 89.8 | 8.7 |
|  |  |  |  |  |  |  |  |  |  |
| Total------------------------ | I,499 | 100.0 | 39.6 | 259 | 100.0 | 6.8 | 1,240 | 100.0 | 32.7 |
| With limitation of activity-n-mm | 301 | 20.1 | 7.9 | 128 | 49.4 | 3.4 | 173 | 14.0 | 4.6 |
| Unable to carry on major activity ${ }^{1}$ | 85 | 5.7 | 2.2 | 56 | 21.6 | 1.5 | * | * | * |
| Limitation in amount or kind of <br>  | 1.63 | 10.9 | 4.3 | 59 | 22.8 | 1.6 | 105 | 8.5 | 2.8 |
| Limitation, but not in major activity ${ }^{1}$ | $\begin{array}{r} 53 \\ 1,198 \end{array}$ | 3.5 | 1.4 | * | * | * | 39 | 3.1 | 1.028.2 |
| With no limitation of activitym-- |  | 79.9 | 31.6 | 131 | 50.6 | 3.5 | 1,067 | 86.0 |  |
| 65 years and over |  |  |  |  |  |  |  |  |  |
| Total------------------------ | 2,499 | 100.0 | 145.6 | 849 | 100.0 | 49.5 | 1,650 | 100.0 | 96.2 |
| With limitation of activity-m---- | 794 | 31.8 | 46.3 | 469 | 55.2 | 27.3 | 325 | 19.7 | 18.9 |
| Unable to carry on major activity | 373 | 14.9 | 21.7 | 263 | 31.0 | 15.3 | 110 | 6.7 | 6.4 |
| Limitation in amount or kind of major activity ${ }^{1}$ | 348 | 13.9 | 20.3 | 172 | 20.3 | 10.0 | 176 | 10.7 | 10.3 |
| Limitation, but not in major activity ${ }^{1}$ | 73 | 2.9 | 4.3 | 34 | 4.0 | 2.0 | 39 | 2.4 | 2.3 |
| With no limitation of activity--- | 1,705 | 68.2 | 99.4 | 379 | 44.6 | 22.1 | 1,325 | 80.3 | 77.2 |

[^5]Table 9. Average prevalence and percent distribution of hearing impairments, by age according to color and sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, roninstitutional 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]


Table 10. Average prevalence and percent distribution of hearing impairments, by etiology according to sex and age: United States, July 1963-June 1965
[Data are bascd on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliablity of the estimates are given in Appendix I Definitions of terms are given in Appendix II]

| Age and etiology ${ }^{1}$ | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent <br> distri- <br> bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1, } 000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation |
| All ages |  |  |  |  |  |  |  |  |  |
| All causes------- | 8,549 | 100.0 | 45.7 | 4,785 | 100.0 | 52.8 | 3,764 | 100.0 | 39.0 |
| Infection-------m----- | 1,751 | 20.5 | 9.4 | 770 | 16.1 | 8.5 | 981 | 26.1 | 10.2 |
| Injury----------------- | 652 | 7.6 | 3.5 | 493 | 10.3 | 5.4 | 158 | 4.2 | 1.6 |
| Other and ill-defined conditions | 2,956 | 34.6 | 15.8 | 1,684 | 35.2 | 18.6 | 1,272 | 33.8 | 13.2 |
| Unknown------------------ | 3,191 | 37.3 | 17.1 | 1,837 | 38.4 | 20.3 | 1,353 | 35.9 | 14.0 |
| Under 45 years |  |  |  |  |  |  |  |  |  |
| All causes------- | 2,164 | 100.0 | 16.4 | 1,231 | 100.0 | 19.0 | 933 | 100.0 | 13.9 |
| Infection-------------- | 714 | 33.0 | 5.4 | 352 | 28.6 | 5.4 | 362 | 38.8 | 5.4 |
| Injury------------------ | 245 | 11.3 | 1.9 | 181 | 14.7 | 2.8 | 64 | 6.9 | 1.0 |
| Other and ill-defined conditions- | 607 | 28.0 | 4.6 | 357 | 29.0 | 5.5 | 250 | 26.8 | 3.7 |
| Unknown---------------- | 599 | 27.7 | 4.5 | 342 | 27.8 | 5.3 | 257 | 27.5 | 3.8 |
| 45-64 years |  |  |  |  |  |  |  |  |  |
| A11 causes------- | 2,673 | 100.0 | 70.5 | 1,591 | 100.0 | 87.1 | 1,081 | 100.0 | 55.1 |
| Infection------------- | 582 | 21.8 | 15.4 | 251 | 15.8 | 13.7 | 331 | 30.6 | 16.9 |
| Injury------------------ | 234 | 8.8 | 6.2 | 195 | 12.3 | 10.7 | 39 | 3.6 | 2.0 |
| Other and ill-defined conditions | 848 | 31.7 | 22.4 | 529 | 33.2 | 28.9 | 318 | 29.4 | 16.2 |
| Unknown----------------- | 1,009 | 37.7 | 26.6 | 616 | 38.7 | 33.7 | 393 | 36.4 | 20.0 |
| 65 years and over |  |  |  |  |  |  |  |  |  |
| All causes------ | 3,712 | 100.0 | 216.3 | 1,962 | 100.0 | 259.0 | 1,750 | 100.0 | 182.7 |
| Infection-------------- | 455 | 12.3 | 26.5 | 167 | 8.5 | 22.0 | 288 | 16.5 | 30.1 |
| Injury------------------ | 172 | 4.6 | 10.0 | 118 | 6.0 | 15.6 | 55 | 3.1 | 5.7 |
| Other and ill-defined conditions- | 1,502 | 40.5 | 87.5 | 798 | 40.7 | 105.3 | 703 | 40.2 | 73.4 |
| Unknown----------------- | 1,583 | 42.6 | 92.3 | 879 | 44.8 | 116.0 | 704 | 40.2 | 73.5 |

${ }^{1}$ For inclusions in each etiology group, see page 8.

Table 11. Average prevalence and percent distribution of hearing impairments, by age according to sex and geographic region: United States, July 1963-June 1965
[Data are based on houschold interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendin I. Definitions of terns are given in Appendix II]

| Region and age | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { l, oon } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popuIation |
| All regions |  |  |  |  |  |  |  |  |  |
| All ages | 8,549 | 100.0 | 45.7 | 4,785 | 100.0 | 52.8 | 3,764 | 100.0 | 39.0 |
| Under 17 years <br> 17-24 years- <br> 25-44 years <br> 45-64 years-an- <br> 65-74 years---...-.........- <br> 75 years and over------- | 513 | 6.0 | 7.8 | 283 | 5.9 | 8.4 | 230 | 6.1 | 7.1 |
|  | 310 | 3.6 | 15.0 | 162 | 3.4 | 16.9 | 148 | 3.9 | 13.5 |
|  | 1,341 | 15.7 | 29.6 | 787 | 16.4 | 36.4 | 554 | 14.7 | 23.4 |
|  | 2,673 | 31.3 | 70.5 | 1,591 | 33.2 | 87.1 | 1,081 | 28.7 | 55.1 |
|  | 1,808 | 21.1 | 162.1 | 1,046 | 21.9 | 207.9 | 763 | 20.3 | 124.6 |
|  | 1,904 | 22.3 | 317:2 | 916 | 19.1 | 359.9 | 987 | 26.2 | 285.4 |
| Northeast |  |  |  |  |  |  |  |  |  |
| All ages---------- | 1,728 | 100.0 | 37.1 | 911 | 100.0 | 40.7 | 817 | 100.0 | 33.8 |
| Under 17 years------------ | $\begin{array}{r} 80 \\ 46 \\ 285 \\ 557 \\ 369 \\ 390 \end{array}$ | $\begin{array}{r} 4.6 \\ 2.7 \\ 16.5 \\ 32.2 \\ 21.4 \\ 22.6 \end{array}$ | $\begin{array}{r} 5.2 \\ 9.4 \\ 24.5 \\ 54.8 \\ 123.9 \\ 258.4 \end{array}$ | 46 | 5.0 | 5.9 | 34* | 4.2 | 4.5 |
|  |  |  |  |  |  |  |  |  |  |
| 25-44 years------------- |  |  |  | 172 | 18.9 | 31.0 | 114 | 14.0 | 18.8 |
| 45-64 years------------- |  |  |  | 310 | 34.0 | 63.3 | 247 | 30.2 | 47.0 |
| 65-74 years-------------- |  |  |  | 194 | 21.3 | 147.8 | 175 | 21.4 | 105.0 |
| 75 years and over---.--- |  |  |  | 165 | 18.1 | 273.6 | 225 | 27.5 | 248.3 |
| North Central |  |  |  |  |  |  |  |  |  |
| All ages---------- | 2,439 | 100.0 | 45.7 | 1,373 | 100.0 | 52.4 | 1,067 | 100.0 | 39.3 |
| Under 17 years----------- <br>  <br> 25-44 years <br>  <br> 65-74 years.-n-...-.......... <br> 75 years and over-n-n-n- | $\begin{array}{r} 146 \\ 85 \\ 385 \\ 742 \\ 508 \\ 574 \end{array}$ | $\begin{array}{r} 6.0 \\ 3.5 \\ 15.8 \\ 30.4 \\ 20.8 \\ 23.5 \end{array}$ | $\begin{array}{r} 7.6 \\ 15.1 \\ 30.5 \\ 68.6 \\ 154.1 \\ 309.6 \end{array}$ | $\begin{array}{r} 79 \\ 44 \\ 212 \\ 452 \\ 303 \\ 283 \end{array}$ | $\begin{array}{r} 5.8 \\ 3.2 \\ 15.4 \\ 32.9 \\ 22.1 \\ 20.6 \end{array}$ | $\begin{array}{r} 8.1 \\ 16.3 \\ 34.6 \\ 85.9 \\ 200.7 \\ 356.0 \end{array}$ | $\begin{array}{r} 66 \\ 41 \\ 173 \\ 290 \\ 205 \\ 290 \end{array}$ | 6.2 | 7.1 |
|  |  |  |  |  |  |  |  | 3.8 | 14.0 |
|  |  |  |  |  |  |  |  | 16.2 | 26.7 |
|  |  |  |  |  |  |  |  | 27.2 | 52.2 |
|  |  |  |  |  |  |  |  | 19.2 | 114.7 |
|  |  |  |  |  |  |  |  | 27.2 | 273.8 |
| South |  |  |  |  |  |  |  |  |  |
| All ages---x------ | 2,842 | 100.0 | 49.9 | 1,605 | 100.0 | 58.5 | 1,237 | 100.0 | 41.8 |
| Under 17 years - --..-..---- <br> 17-24 years <br> 25-44 years <br> 45-64 years <br>  <br> 75 years and over-~-m--- | $\begin{aligned} & 184 \\ & 115 \\ & 409 \\ & 908 \\ & 604 \\ & 622 \end{aligned}$ | $\begin{array}{r} 6.5 \\ 4.0 \\ 14.4 \\ 31.9 \\ 21.3 \\ 21.9 \end{array}$ | $\begin{array}{r} 9.0 \\ 16.8 \\ 30.2 \\ 81.3 \\ 189.5 \\ 362.9 \end{array}$ | $\begin{array}{r} 100 \\ 64 \\ 248 \\ 537 \\ 351 \\ 304 \end{array}$ | $\begin{array}{r} 6.2 \\ 4.0 \\ 15.5 \\ 33.5 \\ 21.9 \\ 18.9 \end{array}$ | $\begin{array}{r} 9.6 \\ 20.1 \\ 39.0 \\ 101.9 \\ 243.6 \\ 416.4 \end{array}$ | $\begin{array}{r} 84 \\ 52 \\ 160 \\ 371 \\ 253 \\ 317 \end{array}$ | 6.84.2 | 8.314.2 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 12.9 | 22.3 |
|  |  |  |  |  |  |  |  | 30.0 | 63.0 |
|  |  |  |  |  |  |  |  | 20.5 | 144.9 |
|  |  |  |  |  |  |  |  | 25.6 | 322.2 |
| West |  |  |  |  |  |  |  |  |  |
| All ages---------- | 1,540 | 100.0 | 51.0 | 897 | 100.0 | 61.1 | 643 | 100.0 | 41.5 |
| Under 17 yearsm-m-n----- | 103 | 6.74.2 | 9.319.9 | 5731 | 6.43.5 | 10.1 | 4533 | 7.0 | 8.3 |
| 17-24 years-m-n-------nm |  |  |  |  |  |  |  |  |  |
| 25-44 years-------------- | 262 | 17.0 | 34.7 | 155 | 17.3 | 43.2 | 107 | 16.6 | 27.0 |
| 45-64 years-------------- | 466 | 30.3 | 81.0 | 292 | 32.6 | 102.6 | 174 | 27.1 | 59.8 |
|  | 328 | 21.3 | 193.7 | 198 | 22.1 | 257.8 | 129 | 20.1 | 139.5 |
| 75 years and over------- | 318 | 20.6 | 343.8 | 163 | 18.2 | 390.9 | 155 | 24.1 | 305.1 |

Table 12. Average prevalence and percent distribution of hearing impaimments, by family income accoxding to age and sex: United States, July 1963-June 1965
[Data are based on household unterviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estımates are given in Appendix I. Definitions of terms are given in Appendix II]

| Sex and family income | All ages |  |  | Under 65 years |  |  | 65 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent <br> distri- <br> bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1, } 000 \\ & \text { popu- } \\ & \text { 1ation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| Both sexes <br> All incomes ${ }^{1}$ |  |  |  |  |  |  |  |  |  |
|  | 8,549 | 100.0 | 45.7 | 4,837 | 100.0 | 28.5 | 3,712 | 100.0 | 216.3 |
| Under \$3,000------------ | 3,131 | 36.6 | 90.0 | 1,070 | 22.1 | 40.7 | 2,061 | 55.5 | 242.5 |
| \$3,000-\$3,999----------- | 803 | 9.4 | 50.4 | 396 | 8.2 | 28.3 | 407 | 11.0 | 213.5 |
| \$4,000-\$6,999 | 2,005 | 23.5 | 34.8 | 1,458 | 30.1 | 26.7 | 547 | 14.7 | 190.0 |
| \$7,000-\$9,999----------- | 1,146 | 13.4 | 30.4 | 924 | 19.1 | 25.3 | 222 | 6.0 | 173.3 |
| \$10,000 and over------- | 1,012 | 11.8 | 32.4 | 767 | 15.9 | 25.6 | 245 | 6.6 | 190.4 |
| Male |  |  |  |  |  |  |  |  |  |
| A11 incomes ${ }^{1}---\cdots-$ | 4,785 | 100.0 | 52.8 | 2,823 | 100.0 | 34.0 | 1,962 | 100.0 | 259.0 |
| Under \$3,000-.-.-....---- | 1,604 | 33.5 | 103.9 | 539 | 19.1 | 45.5 | 1,065 | 54.3 | 296.9 |
| \$3,000-\$3,999-...-....--- | 484 | 10.1 | 64.4 | 235 | 8.3 | 35.7 | 249 | 12.7 | 263.5 |
| \$4,000-\$6,999----------- | 1,207 | 25.2 | 42.4 | 883 | 31.3 | 32.6 | 324 | 16.5 | 230.8 |
| \$7,000-\$9,999---------- | 683 | 14.3 | 36.2 | 571 | 20.2 | 31.2 | 112 | 5.7 | 197.2 |
| \$10,000 and over-------- | 592 | 12.4 | 37.6 | 468 | 16.6 | 30.9 | 124 | 6.3 | 208.8 |
| Female |  |  |  |  |  |  |  |  |  |
| All incomes ${ }^{1}$-.---- | 3,764 | 100.0 | 39.0 | 2,014 | 100.0 | 23.2 | 1,750 | 100.0 | 182.7 |
| Under \$3,000------------ | 1,527 | 40.6 | 78.9 | 532 | 26.4 | 36.8 | 996 | 56.9 | 202.7 |
|  | 319 | 8.5 | 38.0 | 160 | 7.9 | 21.5 | 158 | 9.0 | 1.64 .4 |
| \$4,000-\$6,999----------- | 798 | 21.2 | 27.4 | 576 | 28.6 | 20.9 | 223 | 12.7 | 1.51 .2 |
| \$7,000-\$9,999----------- | 463 | 12.3 | 24.5 | 353 | 17.5 | 19.4 | 110 | 6.3 | 154.5 |
| \$10,000 and over-------- | 420 | 11.2 | 27.1 | 300 | 14.9 | 20.3 | 121 | 6.9 | 174.4 |

[^6]Table 13. Average prevalence and percent distribution of hearing impairments, by degree of limitation of activity according to sex and age: United States, July 1963mJune 1965
[Data are based on household interviews of the civilian, noninstitutional 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 ippendix II]

| Age and degree of limitation of activity | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate <br> per 1,000 population | Average number in thousands | Percent distribution | Rate <br> per 1,000 popu1ation | Average number in thour sands | Percent distribution | Rate <br> per 1,000 <br> population |
| A11 ages |  |  |  |  |  |  |  |  |  |
| Totaln------------------------- | 8,549 | 100.0 | 45.7 | 4,785 | 100.0 | 52.8 | 3,764 | 100.0 | 39.0 |
| With limitation of activity- <br> Unable to carry on major activity ${ }^{1}$ | 461 | 5.4 | 2.5 | 253 | 5.3 | 2.8 | 207 | 5.5 | 2.1 |
|  | 145 | 1.7 | 0.8 | 99 | 2.1 | 2.1 | 46 | 1.2 | 0.5 |
| Limitation in amount or kind of major activity ${ }^{1}$ | 219 | 2.6 | 1.2 | 118 | 2.5 | 1.3 | 101 | 2.7 | 1.0 |
| Limitation, but not in major activity ${ }^{1}$ | 97 | 1.1 | 0.5 | 37 | 0.8 | 0.4 | 60 | 1.6 | 0.6 |
| With no limitation of activity-m-m | 8,088 | 94.6 | 43.2 | 4,532 | 94.7 | 50.0 | 3,557 | 94.5 | 36.9 |
| Under 45 years |  |  |  |  |  |  |  |  |  |
|  | 2,164 | 100.0 | 16.4 | 1,231 | 100.0 | 19.0 | 933 | 100.0 | 13.9 |
| With Iimitation of activity <br> Unable to carry on major activity ${ }^{1}$ | 127 | 5.9 | 1.0 | 64 | 5.2 | 1.0 | 63 | 6.8 | 0.9 |
|  | * | * | * | * | * | * | * | * | * |
| Limitation in amount or kind of major activity ${ }^{1}$ | 70 | 3.2 | 0.5 | 37 | 3.0 | 0.6 | 33 | 3.5 | 0.5 |
| Limitation, but not in major activity ${ }^{1}$ | 41 | 1.9 | 0.3 | * | * | * | * | * | * |
| With no limitation of activity---- | 2,037 | 94.1 | 15.4 | 1,168 | 94.9 | 18.0 | 870 | 93.2 | 12.9 |
| 45-64 years |  |  |  |  |  |  |  |  |  |
| Total-m---------m-------------- | 2,673 | 100.0 | 70.5 | 1,591 | 100.0 | 87.1 | 1,081 | 100.0 | 55.1 |
| With limitation of activity------- <br> Unable to carry on major. <br> activity ${ }^{1}$ | 115 | 4.3 | 3.0 | 68 | 4.3 | 3.7 | 46 | 4.3 | 2.3 |
|  | * | * | * | * | * | 0.9 | * | * | * |
| Limitation in amount or kind of major activity ${ }^{1}$ | 63 | 2.4 | 1.7 | 37 | 2.3 | 2.0 | * | * | * |
| Iimitation, but not in major actfoity ${ }^{1}$ | 30 | 1.1 | 0.8 | * | * | 0.8 | * | * | * |
| With no Iimitation of activity---- | 2,558 | 95.7 | 67.5 | 1,523 | 95.7 | 83.3 | 1,035 | 95.7 | 52.7 |
| 65 years and over |  |  |  |  |  |  |  |  |  |
| Total- | 3,712 | 100.0 | 216.3 | 1,962 | 100.0 | 259.0 | 1,750 | 100.0 | 182.7 |
| With 1imitation of activity------- | 219 | 5.9 | 12.8 | 122 | 6.2 | 16.1 | 98 | 5.6 | 10.2 |
| Unable to carry on major activity ${ }^{1}$ | 108 | 2.9 | 6.3 | 73 | 3.7 | 9.6 | 35 | 2.0 | 3.7 |
| Limitation in amount or kind of major activity ${ }^{1}$ | 86 | 2.3 | 5.0 | 44. | 2.2 | 5.8 | 42 | 2.4 | 4.4 |
| Limitation, but not in major activity ${ }^{1}$ | * | * | * | * | * | * | * | * | * |
| With no limitation of activity---m | 3,493 | 94.1 | 203.6 | 1,841 | 93.8 | 243.0 | 1,652 | 94.4 | 172.4 |

[^7]Table 14. Average prevalence and percent distribution of speech defects, by age according to color and sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Sex and age | Total |  |  | White |  |  | Nonwhite |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distrim bution | Rate per 1,000 popu1ation |
| Both sexes |  |  |  |  |  |  |  |  |  |
| All ages---------- | 1,298 | 100.0 | 6.9 | 1,072 | 100.0 | 6.5 | 226 | 100.0 | 10.2 |
| Under 25 years <br> 25 years and over | $\begin{aligned} & 832 \\ & 466 \end{aligned}$ | $\begin{aligned} & 64.1 \\ & 35.9 \end{aligned}$ | $\begin{aligned} & 9.6 \\ & 4.6 \end{aligned}$ | 676 | 63.1 | 9.1 | 155 | 68.6 | 12.9 |
|  |  |  |  | 396 | 36.9 | 4.4 | 70 | 31.0 | 7.0 |
| Male |  |  |  |  |  |  |  |  |  |
| A11 ages---------- | 809 | 100.0 | 8.9 | 671 | 100.0 | 8.4 | 138 | 100.0 | 13.1 |
| Under 25 years---------- | 544 | 67.2 | 12.6 | 444 | 66.2 | 11.9 | 100 | 72.5 | 16.9 |
| 25 years and over------- | 264 | 32.6 | 5.6 | 227 | 33.8 | 5.3 | 37 | 26.8 | 8.0 |
| Female |  |  |  |  |  |  |  |  |  |
| A11 ages---------- | 489 | 100.0 | 5.1 | 401 | 100.0 | 4.7 | 88 | 100.0 | 7.6 |
| Under 25 years---------- | 287 | 58.7 | 6.6 | 233 | 58.1 | 6.2 | 55 | 62.5 | 9.0 |
| 25. years and over------- | 202 | 41.3 | 3.8 | 168 | 41.9 | 3.5 | 33 | 37.5 | 6.1 |

Table 15. Average prevalence and percent distribution of speech defects, by etiology according to age: United States, July 1963-June 1965
[See headnote on table 14]

| Etiology | All ages |  |  | Under 45 years |  |  | 45 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{gathered} \text { Rate } \\ \text { per } \\ \text { 1,000 } \\ \text { popu- } \\ \text { lation } \end{gathered}$ | Average <br> number in thousands | Percent distribution | Rate per 1,000 popuIation |
| All causes-------- | 1,298 | 100.0 | 6.9 | 999 | 100.0 | 7.6 | 298 | 100.0 | 5.4 |
| Vascular lesions, central nervous system- | 144 | 11.1 | 0.8 | * | * | * | 136 | 45.6 | 2.5 |
| Congenital or birth factors | 119 | 9.2 | 0.6 | 111 | 11.1 | 0.8 | * | * | * |
| Other and ill-defined conditions | 628 | 48.4 | 3.4 | 512 | 51.3 | 3.9 | 115 | 38.6 | 2.1 |
| Unknown to respondent--- | 408 | 31.4 | 2.2 | 368 | 36.8 | 2.8 | 39 | 13.1 | 0.7 |

Table 16. Average prevalence and percent distribution of speech defects, by age according to sex and geographic region: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Region and age | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 population | Average number in thousands | Percent distribution | $\begin{gathered} \text { Rate } \\ \text { per } \\ \text { 1,000 } \\ \text { popu- } \\ \text { 1ation } \end{gathered}$ | Average number in thousands | Percent distribution | Rate per 1,000 population |
| $\frac{\text { All regions }}{\text { All ages---- }}$ | 1,298 | 100.0 | 6.9 | 809 | 100.0 | 8.9 | 489 | 100.0 | 5.1 |
| Under 17 years---- | 695 | 53.5 | 10.5 | 462 | 57.1 | 13.7 | 233 | 47.6 | 7.2 |
| 17 years and over- | 603 | 46.5 | 5.0 | 347 | 42.9 | 6.1 | 256 | 52.4 | 4.0 |
| Northeast |  |  |  |  |  |  |  |  |  |
| A11 ages---- | 221 | 100.0 | 4.7 | 143 | 100.0 | 6.4 | 78 | 100.0 | 3.2 |
| Under 17 years---- | 117 | 52.9 | 7.6 | 74 | 51.7 | 9.5 | 43 | 55.1 | 5.6 |
| 17 years and over- | 104 | 47.1 | 3.3 | 69 | 48.3 | 4.7 | 35 | 44.9 | 2.1 |
| North Central |  |  |  |  |  |  |  |  |  |
| A11 ages---- | 331 | 100.0 | 6.2 | 207 | 100.0 | 7.9 | 124 | 100.0 | 4.6 |
| Under 17 years---- | 166 | 50.2 | 8.7 | 113 | 54.6 | 11.5 | 53 | 42.7 | 5.7 |
| 17 years and over- | 166 | 50.2 | 4.9 | 94 | 45.4 | 5.7 | 71 | 57.3 | 4.0 |
| South |  |  |  |  |  |  |  |  |  |
| A11 ages---- | 519 | 100.0 | 9.1 | 321 | 100.0 | 11.7 | 197 | 100.0 | 6.7 |
| Under 17 years---- | 287 | 55.3 | 14.0 | 194 | 60.4 | 18.6 | 93 | 47.2 | 9.2 |
| 17 years and over- | 232 | 44.7 | 6.4 | 127 | 39.6 | 7.5 | 105 | 53.3 | 5.4 |
| West |  |  |  |  |  |  |  |  |  |
| All ages---- | 227 | 100.0 | 7.5 | 137 | 100.0 | 9.3 | 89 | 100.0 | 5.7 |
| Under 17 years---- | 126 | 55.5 | 11.4 | 81 | 59.1 | 14.4 | 45 | 50.6 | 8.3 |
| 17 years and over- | 101 | 44.5 | 5.3 | 56 | 40.9 | 6.2 | 45 | 50.6 | 4.5 |

Table 17. Average prevalence and percent distribution of speech defects, by family income according to age: United States, July 1963-June 1965
[Data are based on bousehold interviews of the civilian, noninstitutional 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]

| Family income | All ages |  |  | Under 17 years |  |  | 17 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent <br> distribution | $\begin{gathered} \text { Rate } \\ \text { per } \\ \text { 1,000 } \\ \text { popu- } \\ \text { lation } \end{gathered}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu= 1ation |
| A11 incomes ${ }^{1}$-- | 1,298 | 100.0 | 6.9 | 695 | 100.0 | 10.5 | 603 | 100.0 | 5.0 |
| Under \$3,000------ | 370 | 28.5 | 10.6 | 150 | 21.6 | 15.2 | 220 | 36.5 | 8.8 |
| \$3,000-\$3,999----- | 129 | 9.9 | 8.1 | 71 | 10.2 | 12.5 | 57 | 9.5 | 5.6 |
| \$4,000-\$6,999-.--- | 387 | 29.8 | 6.7 | 231 | 33.2 | 10.2 | 155 | 25.7 | 4.4 |
| \$7,000-\$9,999-..-- | 202 | 15.6 | 5.4 | 135 | 19.4 | 9.2 | 67 | 11.1 | 2.9 |
| \$10,000 and over-- | 151 | 11.6 | 4.8 | 85 | 12.2 | 8.0 | 66 | 10.9 | 3.2 |

${ }^{1}$ Includes persons with unknown incomes.

Table 18. Average prevalence and percent distribution of speech defects, by limitation of activity according to sex and age: United States, July 1963-June 1965
[See headnote on table 17]

| Age and limitation of activity | Both sexes |  |  | Ma1e |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 population | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent <br> distri- <br> bution | Rate per 1,000 population |
| All ages <br> Total |  |  |  |  |  |  |  |  |  |
|  | 1,298 | 100.0 | 6.9 | 809 | 100.0 | 8.9 | 489 | 100.0 | 5.1 |
| With limitation of activity---..-With no limitation of activity---~-- | 263 | 20.3 | 1.4 | 152 | 18.8 | 1.7 | 111 | 22.7 | 1.2 |
|  | 1,035 | 79.7 | 5.5 | 657 | 81.2 | 7.2 | 378 | 77.3 | 3.9 |
| Total------- | 999 | 100.0 | 7.6 | 643 | 100.0 | 9.9 | 357 | 100.0 | 5.3 |
| With limitation of activity-----With no limitation of activity------ <br> 45 years and over <br> Total------- | 153 | 15.3 | 1.2 | 88 | 13.7 | 1.4 | 65 | 18.2 | 1.0 |
|  | 847 | 84.8 | 6.4 | 555 | 86.3 | 8.6 | 292 | 81.8 | 4.3 |
|  | 298 | 100.0 | 5.4 | 166 | 100.0 | 6.4 | 132 | 100.0 | 4.5 |
| With limitation of activity-----With no limitation of activity------ | 110 | 36.9 | 2.0 | 64 | 38.6 | 2.5 | 47 | 35.6 | 1.6 |
|  | 188 | 63.1 | 3.4 | 102 | 61.4 | 3.9 | 85 | 64.4 | 2.9 |

Table 19. Average prevalence and percent distribution of cases of paralysis, by age according to color and sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Sex and age | Total |  |  | White |  |  | Nonwhite |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{gathered} \text { Rate } \\ \text { per } \\ 1,000 \\ \text { popu- } \\ \text { 1ation } \end{gathered}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation |
| Both sexes |  |  |  |  |  |  |  |  |  |
| All ages-n-------- | 1,516 | 100.0 | 8.1 | 1,357 | 100.0 | 8.2 | 158 | 100.0 | 7.2 |
|  45 years and over--m---- | $\begin{aligned} & 645 \\ & 871 \end{aligned}$ | $\begin{aligned} & 42.5 \\ & 57.5 \end{aligned}$ | $\begin{array}{r} 4.9 \\ 15.8 \end{array}$ | $\begin{aligned} & 594 \\ & 763 \end{aligned}$ | $\begin{aligned} & 43.8 \\ & 56.2 \end{aligned}$ | $\begin{array}{r} 5.2 \\ 15.2 \end{array}$ | $\begin{array}{r} 50 \\ 108 \end{array}$ | $\begin{aligned} & 31.6 \\ & 68.4 \end{aligned}$ | 22.9 |
| All ages----------- | 788 | 100.0 | 8.7 | 710 | 100.0 | 8.9 | 78 | 100.0 | 7.4 |
| Under 45 years---.-....... 45 years and over-n----- | $\begin{aligned} & 345 \\ & 443 \end{aligned}$ | $\begin{aligned} & 43.8 \\ & 56.2 \end{aligned}$ | 5.3 17.1 | $\begin{aligned} & 319 \\ & 391 \end{aligned}$ | 44.9 55.1 | 5.6 16.6 | 5 * | 66.7 | 22.4 |
| Female |  |  |  |  |  |  |  |  |  |
| All ages-..----.-- | 727 | 100.0 | 7.5 | 647 | 100.0 | 7.6 | 80 | 100.0 | 6.9 |
| Under 45 years - -.----.-. 45 years and over------- | $\begin{aligned} & 300 \\ & 428 \end{aligned}$ | $\begin{aligned} & 41.3 \\ & 58.9 \end{aligned}$ | $\begin{array}{r} 4.5 \\ 14.7 \end{array}$ | $\begin{aligned} & 276 \\ & 372 \end{aligned}$ | $\begin{aligned} & 42.7 \\ & 57.5 \end{aligned}$ | $\begin{array}{r} 4.7 \\ 14.0 \end{array}$ | $5{ }^{*}$ | $70 .{ }^{*}$ | $21.6^{*}$ |
|  |  |  |  |  |  |  |  |  |  |

Table 20. Average prevalence and percent distribution of cases of paralysis, by etiology according to age: United States, July 1963-June 1965
[Fice headnote on table 19]

| Etiology | All ages |  |  | Under 45 years |  |  | 45 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { poput } \\ & \text { Iation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 population | Average number in thousands | Percent distribution | Rate per 1,000 popu- |
| A11 causes-------- | 1,516 | 100.0 | 8.1 | 645 | 100.0 | 4.9 | 871 | 100.0 | 15.8 |
| Poliomyelitis------------ | 451 | 29.7 | 2.4 | 294 | 45.6 | 2.2 | 157 | 18.0 | 2.9 |
| ```Vascular lesions, central nervous system-``` | 519 | 34.2 | 2.8 | * | * | * | 490 | 56.3 | 8.9 |
| Injury-~--------------- | 140 | 9.2 | 0.7 | 67 | 10.4 | 0.5 | 73 | 8.4 | 1.3 |
| Congenital or birth factors- | 171 | 11.3 | 0.9 | 160 | 24.8 | 1.2 | * | * | * |
| Other and ill-defined conditions | 125 | 8.2 | 0.7 | 52 | 8.1 | 0.4 | 73 | 8.4 | 1.3 |
| Unknown to respondent--- | 111 | 7.3 | 0.6 | 43 | 6.7 | 0.3 | 67 | 7.7 | 1.2 |

Table 21. Average prevalence and percent distribution of cases of paralysis, by etiology according to sex: United States, July 1963-June 1965
[Data are based on housebold interviews of the civilian, noninstitutional 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]

| Etiology | Average number in thousands | Percent <br> distri- <br> bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Both sexes |  |  |  |
| A11 causes - | 1,516 | 100.0 | 8.1 |
| Poliomyelitis | 451 | 29.7 | 2.4 |
| Vascular lesions, central nervous syster | 519 | 34.2 | 2.8 |
| Injury- | 140 | 9.2 | 0.7 |
| Congenital or birth factors | 171 | 11.3 | 0.9 |
| Other and ill-defined condition | 125 | 8.2 | 0.7 |
| Unknown to respondent | 111 | 7.3 | 0.6 |
| Male |  |  |  |
| A11 causes- | 788 | 100.0 | 8.7 |
| Poliomyelitis | 243 | 30.8 | 2.7 |
| Vascular lesions, central nervous system | 250 | 31.7 | 2.8 |
| Injury | 98 | 12.4 | 1.1 |
| Congenital or birth factor | 93 | 11.8 | 1.0 |
| Other and ill-defined conditions | 50 | 6.3 | 0.6 |
| Unknown to respondent | 55 | 7.0 | 0.6 |
| Female |  |  |  |
| Al1 causes | 727 | 100.0 | 7.5 |
| Poliomyelitis | 208 | 28.6 | 2.2 |
| Vascular lesions, central nervous system | 269 | 37.0 | 2.8 |
| Injury | 41 | 5.6 | 0.4 |
| Congenital or birth factor | 78 | 10.7 | 0.8 |
| Other and i1ュ-defined conditions | 75 | 10.3 | 0.8 |
| Unknown to responden | 56 | 7.7 | 0.6 |

Table 22. Average prevalence and percent distribution of cases of paralysis, by age according to sex and geographic region: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are qiven in Appendix II]

| Region and age | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent distri= bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popur } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent <br> distri- <br> bution | Rate per 1,000 popum lation |
| All regions |  |  |  |  |  |  |  |  |  |
| All agesm-n-----*- | 1,516 | 100.0 | 8.1 | 788 | 100.0 | 8.7 | 727 | 100.0 | 7.5 |
| Under 25 years-------n-- | 327 | 21.6 | 3.8 | 178 | 22.6 | 4.1 | 149 | 20.5 | 3.4 |
| 25-44 years-------------- | 318 | 21.0 | 7.0 | 168 | 21.3 | 7.8 | 150 | 20.6 | 6.3 |
|  | 410 | 27.0 | 10.8 | 214 | 27.2 | 11.7 | 196 | 27.0 | 10.0 |
| 65 years and over--.--- | 460 | 30.3 | 26.8 | 229 | 29.1 | 30.2 | 231 | 31.8 | 24.1 |
| Northeast |  |  |  |  |  |  |  |  |  |
| A11 ages---------- | 333 | 100.0 | 7.1 | 179 | 100.0 | 8.0 | 154 | 100.0 | 6.4 |
| Under 25 years---------- | 67 | 20.1 | 3.3 | 37 | 20.7 | 3.7 | 30 | 19.5 | 2.9 |
| 25-44 yearsm-n---------- | 77 | 23.1 | 6.6 | 39 | 21.8 | 7.0 | 38 | 24.7 | 6.3 |
| 45-64 years-m----------- | 95 | 28.5 | 9.4 | 55 | 30.7 | 11.2 | 40 | 26.0 | 7.6 |
| 65 years and over-----m- | 94 | 28.2 | 20.9 | 47 | 26.3 | 24.5 | 46 | 29.9 | 17.9 |
| North Central |  |  |  |  |  |  |  |  |  |
| A11 ages---------- | 411 | 100.0 | 7.7 | 214 | 100.0 | 8.2 | 197 | 100.0 | 7.3 |
| Undex 25 years---m-m--m | 92 | 22.4 | 3.7 | 52 | 24.3 | 4.2 | 41 | 20.8 | 3.3 |
| 25-44 years------------- | 85 | 20.7 | 6.7 | 42 | 19.6 | 6.9 | 44 | 22.3 | 6.8 |
| 45-64 years--m----m----- | 108 | 26.3 | 10.0 | 57 | 26.6 | 10.8 | 50 | 25.4 | 9.0 |
| 65 years and over------ | 126 | 30.7 | 24.5 | 64 | 29.9 | 27.8 | 62 | 31.5 | 21.8 |
| South |  |  |  |  |  |  |  |  |  |
| All ages---------- | 527 | 100.0 | 9.2 | 272 | 100.0 | 9.9 | 255 | 100.0 | 8.6 |
| Under 25 years---------- | 111 | 21.1 | 4.1 | 58 | 21.3 | 4.3 | 52 | 20.4 | 3.8 |
| 25-44 years-------------- | 92 | 17.5 | 6.8 | 60 | 22.1 | 9.4 | 31 | 12.2 | 4.3 |
| 45-64 years-m------------ | 144 | 27.3 | 12.9 | 69 | 25.4 | 13.1 | 75 | 29.4 | 12.7 |
| 65 years and over------ | 181 | 34.3 | 36.9 | 84 | 30.9 | 38.7 | 97 | 38.0 | 35.5 |
| West |  |  |  |  |  |  |  |  |  |
| Al1 ages---------- | 245 | 100.0 | 8.1 | 124 | 100.0 | 8.4 | 121 | 100.0 | 7.8 |
| Under 25 years---m------ - - - | 57 | 23.3 | 4.0 | 31 | 25.0 | 4.4 | * | * | * |
|  | 64 | 26.1 | 8.5 | * | * | * | 38 | 31.4 | 9.6 |
| 45-64 years------------- | 64 | 26.1 | 11.1 | 32 | 25.8 | 11.2 | 31 | 25.6 | 10.6 |
| 65 years and over-man-m- | 60 | 24.5 | 22.9 | 35 | 28.2 | 29.5 | * | * | * |

Table 23. Average prevalence and percent distribution of cases of paralysis, by family income according to age and sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the estimates are given in Appendix I. Definitionsof terms are given in Appendix II]

| Sex and family income | All ages |  |  | Under 45 years |  |  | 45 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average <br> number in thousands | Percent <br> distri- <br> bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu1.ation |
| Both sexes |  |  |  |  |  |  |  |  |  |
| All incomes ${ }^{1}$-....- | 1,516 | 100.0 | 8.1 | 645 | 100.0 | 4.9 | 871 | 100.0 | 15.8 |
| Under \$3,000-------- | 497 | 32.8 | 14.3 | 103 | 16.0 | 5.4 | 394 | 45.2 | 25.4 |
| \$3,000-\$3,999----------- | 135 | 8.9 | 8.5 | 44 | 6.8 | 4.0 | 91 | 10.4 | 18.4 |
| \$4,000-\$6,999----------- | 382 | 25.2 | 6.6 | 219 | 34.0 | 5.0 | 163 | 18.7 | 12.2 |
| \$7,000-\$9,999---------- | 234 | 15.412.6 |  |  | 22.6 | 5.0 | 89 | 10.2 | 10.7 |
| \$10,000 and over-------- | 191 |  | $6.1$ | $116$ | 18.0 | 5.2 | 75 | 8.6 | 8.4 |
| Male |  |  |  |  |  |  |  |  |  |
| All incomes ${ }^{1}-$----- | 788 | 100.0 | 8.7 | 345 | 100.0 | 5.3 | 443 | 100.0 | 17.1 |
| Under \$3,000------------ | 260 | 33.0 | 16.8 | 60 | 17.4 | 6.5 | 200 | 45.1 | 31.9 |
| \$3,000-\$3,999----------- | 69 | 8.8 | 9.2 | * | * | * | 45 | 10.2 | 19.9 |
| \$4,000-\$6,999----------- | 211 | 26.8 | 7.4 | 125 | 36.2 | 5.7 | 86 | 19.4 | 12.9 |
| \$7,000-\$9,999----------- | 108 | 13.7 | 5.7 | 68 | 19.7 | 4.7 | 41 | 9.3 | 9.68.6 |
| \$10,000 and over--.----- | 99 | 12.6 | 6.3 | 59 | 17.1 | 5.3 | 40 | 9.0 |  |
| Female |  |  |  |  |  |  |  |  |  |
| A11 incomes ${ }^{1}-\ldots-{ }^{---}$ | 727 | 100.0 | 7.5 | 300 | 100.0 | 4.5 | 428 | 100.0 | 14.7 |
| Under \$3,000------------ | 237 | 32.6 | 12.2 | 43 | 14.3 | 4.3 | 194 | 45.3 | 20.9 |
| \$3,000-\$3,999----------- | 66 | 9.1 | 7.9 | * | * | * | 46 | 10.7 | 17.2 |
| \$4,000-\$6,999----------- | 171 | 23.5 | 5.9 | 94 | 31.3 | 4.2 | 78 | 18.2 | 11.7 |
| \$7,000-\$9,999----------- | 126 | 17.3 | 6.7 | 7857 | 26.0 | 5.3 | 48 | 11.2 | 11.9 |
| \$10,000 and over-------- |  | 12.7 | 5.9 |  | 19.0 | 5.1 | 35 | 8.2 | 8.2 |

[^8]Table 24. Average prevalence and percent distribution of cases of paralysis, by degree of limitation of activity according to sex and age: United States, July 1963-June 1965
[Data are basod on household interviows of the civilian, noninstitutional population. The survey design, general qualifications, and information on the reliability of the entimates are given in Appendix I. Definitions of terms are piven in Appendix II]

| Age and degree of limitation of activity | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { I,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| All ages |  |  |  |  |  |  |  |  |  |
| Total- | 1,516 | 100.0 | 8.1 | 788 | 100.0 | 8.7 | 727 | 100.0 | 7.5 |
| With Iimitation of activity------ <br> Unable to carry on major activity ${ }^{1}$ | 923 | 60.9 | 4.9 | 489 | 62.1 | 5.4 | 434 | 59.7 | 4.5 |
|  | 444 | 29.3 | 2.4 | 271 | 34.4 | 3.0 | 173 | 23.8 | 1.8 |
| Limitation in amount or kind of major activity ${ }^{1}$ $\qquad$ | 361 | 23.8 | 1.9 | 159 | 20.2 | 1.8 | 202 | 27.8 | 2.1 |
| Limitation, but not in major activity ${ }^{1}$ | 118 | 7.8 | 0.6 | 59 | 7.5 | 0.7 | 59 | 8.1 | 0.6 |
| With no limitation of activity---- | 593 | 39.1 | 3.2 | 299 | 37.9 | 3.3 | 293 | 40.3 | 3.0 |
| Under 45 years |  |  |  |  |  |  |  |  |  |
| Total------------------------ | 645 | 100.0 | 4.9 | 345 | 100.0 | 5.3 | 300 | 100.0 | 4.5 |
| With limitation of activity------- | 327 | 50.7 | 2.5 | 182 | 52.8 | 2.8 | 145 | 48.3 | 2.2 |
| Unable to carry on major activity ${ }^{1}$ | 87 | 13.5 | 0.7 | 47 | 13.6 | 0.7 | 40 | 13.3 | 0.6 |
| Limitation in amount or <br> kind of major activity ${ }^{1}$ | 158 | 24.5 | 1.2 | 91 | 26.4 | 1.4 | 67 | 22.3 | 1.0 |
| Limitation, but not in major activity ${ }^{1}$ | 82 | 12.7 | 0.6 | 44 | 12.8 | 0.7 | 37 | 12.3 | 0.6 |
| With no limitation of activity---- | 318 | 49.3 | 2.4 | 163 | 47.2 | 2.5 | 155 | 51.7 | 2.3 |
| 45-64 years |  |  |  |  |  |  |  |  |  |
| Total-------------------------- | 410 | 100.0 | 10.8 | 214 | 100.0 | 11.7 | 196 | 100.0 | 10.0 |
| With limitation of activity------- <br> Unable to carry on major activity | 252 | 61.5 | 6.6 | 131 | 61.2 | 7.2 | 121 | 61.7 | 6.2 |
|  | 114 | 27.8 | 3.0 | 74 | 34.6 | 4.0 | 40 | 20.4 | 2.0 |
| Limitation in amount or <br> kind of major activity ${ }^{1}$ | 112 | 27.3 | 3.0 | 45 | 21.0 | 2.5 | 68 | 34.7 | 3.5 |
| Ismitation, but not in major activity ${ }^{1}$ | * | $\begin{array}{r} * \\ 38.8 \end{array}$ | * | * | * | * | * | * | * |
| With no limitation of activity---- | 159 |  | 4.2 | 83 | 38.8 | 4.5 | 76 | 38.8 | 3.9 |
| 65 years and over |  |  |  |  |  |  |  |  |  |
| Total------------------------- | 460 | 100.0 | 26.8 | 229 | 100.0 | 30.2 | 231 | 100.0 | 24.1 |
| With limitation of activity-------Unable toactivity ${ }^{\text {carry }}$ on major | 344 | 74.8 | 20.0 | 175 | 76.4 | 23.1 | 169 | 73.2 | 17.6 |
|  | 242 | 52.6 | 14.1 | 149 | 65.1 | 19.7 | 93 | 40.3 | 9.7 |
| Limitation in amount or <br> kind of major activity ${ }^{1}$ $\qquad$ | 91 | 19.8 | 5.3 | * | * | * | 67 | 29.0 | 7.0 |
| Limitation, but not in major activity ${ }^{1}$ | * | * | * | * | * | * | * | * | * |
| With no limitation of activity---- | 116 | 25.2 | 6.8 | 54 | 23.6 | 7.1 | 62 | 26.8 | 6.5 |

[^9]Table 25. Average prevalence and percent distribution of cases of absence of extremities, by se1ected characteristics: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitational 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]

| Selected characteristic | Total |  |  | Absence of major extremity |  |  | Absence of finger (s) or toe (s) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 popuIation | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent distribution | Rate per 1,000 population |
| Total------- | 1,968 | 100.0 | 10.5 | 257 | 100.0 | 1.4 | 1,712 | 100.0 | 9.1 |
| Male-------------- | 1,638 | 83.2 | 18.1 | 222 | 86.4 | 2.4 | 1,416 | 82.7 | 15.6 |
| Female------------ | 331 | 16.8 | 3.4 | 35 | 13.6 | 0.4 | 296 | 17.3 | 3.1 |
| Under 65 years---- | 1,507 | 76.6 | 8.9 | 178 | 69.3 | 1.0 | 1,328 | 77.6 | 7.8 |
| 65 years and over- | 462 | 23.5 | 26.9 | 79 | 30.7 | 4.6 | 383 | 22.4 | 22.3 |
| White-------------- | 1,769 | 89.9 | 10.7 | 214 | 83.3 | 1.3 | 1,555 | 90.8 | 9.4 |
| Nonwhite---------- | 200 | 10.2 | 9.1 | 43 | 16.7 | 1.9 | 157 | 9.2 | 7.1 |
| $\underline{\text { Region }}$ |  |  |  |  |  |  |  |  |  |
| Northeast--------- | 402 | 20.4 | 8.6 | 59 | 23.0 | 1.3 | 343 | 20.0 | 7.4 |
| North Central----- | 639 | 32.5 | 12.0 | 81 | 31.5 | 1.5 | 559 | 32.7 | 10.5 |
| South------------- | 596 | 30.3 | 10.5 | 86 | 33.5 | 1.5 | 510 | 30.0 | 9.0 |
| West--------------- | 331 | 16.8 | 11.0 | 31 | 12.1 | 1.0 | 300 | 17.5 | 9.9 |

Table 26. Average prevalence and percent distribution of cases of absence of extremities, by family income according to age: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Age and family income | Total |  |  | Absence of major extremity |  |  | Absence of finger(s) or toe (s) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | Rate per 1,000 population | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent distribution | Rate per 1,000 population |
| All ages |  |  |  |  |  |  |  |  |  |
| A11 incomes ${ }^{1}$-- | 1,968 | 100.0 | 10.5 | 257 | 100.0 | 1.4 | 1,712 | 100.0 | 9.1 |
| Under \$3,000------ | 540 | 27.4 | 15.5 | 94 | 36.6 | 2.7 | 446 | 26.1 | 12.8 |
| \$3,000-\$6,999----- | 766 | 38.9 | 10.4 | 88 | 34.2 | 1.2 | 679 | 39.7 | 9.2 |
| \$7,000 and over--- | 571 | 29.0 | 8.3 | 59 | 23.0 | 0.9 | 511 | 29.8 | 7.4 |
| Under 65 years |  |  |  |  |  |  |  |  |  |
| All incomes ${ }^{1}$-- | 1,507 | 100.0 | 8.9 | 178 | 100.0 | 1.0 | 1,328 | 100.0 | 7.8 |
| Under \$3,000------ | 275 | 18.2 | 10.5 | 46 | 25.8 | 1.7 | 230 | 17.3 | 8.7 |
| \$3,000-\$6,999----- | 640 | 42.5 | 9.3 | 70 | 39.3 | 1.0 | 570 | 42.9 | 8.3 |
| \$7,000 and over | 521 | 34.6 | 7.8 | 49 | 27.5 | 0.7 | 472 | 35.5 | 7.1 |
| 65 years and over |  |  |  |  |  |  |  |  |  |
| A11 incomes ${ }^{1}$ - | 462 | 100.0 | 26.9 | 79 | 100.0 | 4.6 | 383 | 100.0 | 22.3 |
| Under \$3,000------ | 265 | 57.4 | 31.2 | 48 | 60.8 | 5.6 | 217 | 56.7 | 25.5 |
| \$3,000-\$6,999---*- | 126 | 27.3 | 26.3 | * | * | * | 109 | 28.5 | 22.8 |
| \$7,000 and over--- | 50 | 10.8 | 19.5 | * | * | * | 39 | 10.2 | 15.2 |

[^10]Table 27. Average prevalence and percent distribution of cases of absence of extremities, by etiology according to age: United States, July 1963-June 1965
[Tata are based on household intervews of the civilian, noninstututional population. The survoy design, general qualifications, and information on the reliability of the estimates are given in ippendix I. Definitions of terms are given in Appendix I]

| Age and etiology | Total |  |  | Absence of major extremity |  |  | Absence of finger(s) or toe(s) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{gathered} \text { Rate } \\ \text { per } \\ 1,000 \\ \text { popu- } \\ \text { lation } \end{gathered}$ | Average number in thousands | Percent distribution | Rate per 1,000 population |
| All ages |  |  |  |  |  |  |  |  |  |
| All causes--..--- | 1,968 | 100.0 | 10.5 | 257 | 100.0 | 1.4 | 1,712 | 100.0 | 9.1 |
|  | $\begin{array}{r} 1,764 \\ 205 \end{array}$ | $\begin{aligned} & 89.6 \\ & 10.4 \end{aligned}$ | $\begin{aligned} & 9.4 \\ & 1.1 \end{aligned}$ | 18275 | $\begin{aligned} & 70.8 \\ & 29.8 \end{aligned}$ | $\begin{aligned} & 1.0 \\ & 0.4 \end{aligned}$ | 1,582130 | 92.47.6 | 8.5 |
| Under 65 years |  |  |  |  |  |  |  |  |  |
| A1l causes------- | 1,507 | 100.0 | 8.9 | 178 | 100.0 | 1.0 | 1,328 | 100.0 | 7.8 |
|  | $\begin{array}{r} 1,377 \\ 130 \end{array}$ | $\begin{array}{r} 91.4 \\ 8.6 \end{array}$ | $\begin{aligned} & 8.1 \\ & 0.8 \end{aligned}$$26.9$ | $\begin{array}{r} 135 \\ 43 \end{array}$ | $\begin{aligned} & 75.8 \\ & 24.2 \end{aligned}$ | $\begin{aligned} & 0.8 \\ & 0.3 \end{aligned}$ | $\begin{array}{r} 1,241 \\ 87 \end{array}$ | $\begin{array}{r} 93.4 \\ 6.6 \end{array}$ | 7.30.5 |
| 65 years and over |  |  |  |  |  |  |  |  |  |
|  | 462 | 100.0 |  | 79 | 100.0 | 4.6 | 383 | 100.0 | 22.3 |
|  | 387 |  | 22.6 | 47 |  | 2.7 | 340 | 88.8 | 19.82.5 |
|  | 75 | 16.2 | 4.4 | 32 | 40.5 | 1.9 | 43 | 11.2 |  |

Table 28. Average prevalence and percent distribution of cases of absence of extremities, by limitation of activity according to age: United States, July 1963-June 1965


Table 29. Average prevalence and percent distribution of impairments (except paralysis and absence) of Iimbs, back, and trunk, by age according to sex and site: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The survey design, general qualifications, and informulion on the relinbility of the estimates are given in Appendix I. Definitions of terms are given in Appendix II]

| Site and age | Both sexes |  |  | Male |  |  | Female |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average <br> number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { I, } 000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { Iation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 population |
| All sites |  |  |  |  |  |  |  |  |  |
| All ages---------- | 17,742 | 100.0 | 94.8 | 9,465 | 100.0 | 104.4 | 8,277 | 100.0 | 85.8 |
| Under 17 years-n-------- | 1,506 | 8.5 | 22.8 | 832 | 8.8 | 24.8 | 674 | 8.1 | 20.7 |
| 17-24 years------------- | 1,841 | 10.4 | 89.3 | 1,000 | 10.6 | 104.1 | 841 | 10.2 | 76.4 |
| 25-44 years------------- | 5,647 | 31.8 | 124.6 | 3,331 | 35.2 | 154.1 | 2,316 | 28.0 | 97.7 |
| 45-64 years- | 5,549 | 31.3 | 146.4 | 2,986 | 31.5 | 163.4 | 2,564 | 31.0 | 130.7 |
| 65 years and over------- | 3,199 | 18.0 | 186.4 | 1,316 | 13.9 | 173.7 | 1,883 | 22.7 | 196.5 |
| Back or spine |  |  |  |  |  |  |  |  |  |
| All ages---------- | 6,486 | 100.0 | 34.7 | 3,187 | 100.0 | 35.1 | 3,299 | 100.0 | 34.2 |
| Under 17 years---------- | 165 | 2.5 | 2.5 | 67 | 2.1 | 2.0 | 98 | 3.0 | 3.0 |
| 17-24 years-- | 704 | 10.9 | 34.2 | 297 | 9.3 | 30.9 | 406 | 12.3 | 36.9 |
| 25-44 years- | 2,480 | 38.2 | 54.7 | 1,305 | 40.9 | 60.4 | 1,175 | 35.6 | 49.6 |
| 45-64 years--- | 2,186 | 33.7 | 57.7 | 1,109 | 34.8 | 60.7 | 1,077 | 32.6 | 54.9 |
| 65 years and over------ | 951 | 14.7 | 55.4 | 409 | 12.8 | 54.0 | 543 | 16.5 | 56.7 |
| Upper extremity and shoulder |  |  |  |  |  |  |  |  |  |
| Al1 ages-.-------- | 2,925 | 100.0 | 15.6 | 1,690 | 100.0 | 18.6 | 1,235 | 100.0 | 12.8 |
| Under 17 years---------- | 287 | 9.8 | 4.3 | 167 | 9.9 | 5.0 | 120 | 9.7 | 3.7 |
| 17-24 years---w--------- | 282 | 9.6 | 13.7 | 185 | 10.9 | 19.3 | 97 | 7.9 | 8.8 |
| 25-44 years------------- | 839 | 28.7 | 18.5 | 556 | 32.9 | 25.7 | 283 | 22.9 | 11.9 |
| 45-64 years---x--------- | 934 | 31.9 | 24.6 | 540 | 32.0 | 29.5 | 394 | 31.9 | 20.1 |
| 65 years and over------- | 582 | 19.9 | 33.9 | 242 | 14.3 | 31.9 | 340 | 27.5 | 35.5 |
| Lower extremity and hip |  |  |  |  |  |  |  |  |  |
| All ages---------- | 6,623 | 100.0 | 35.4 | 3,667 | 100.0 | 40.4 | 2,957 | 100.0 | 30.7 |
| Under 17 years---------- | 976 | 14.7 | 14.8 | 561 | 15.3 | 16.7 | 415 | 14.0 | 12.8 |
| 17-24 years-------------- | 708 | 10.7 | 34.4 | 437 | 11.9 | 45.5 | 271 | 9.2 | 24.6 |
| 25-44 years------------- | 1,812 | 27.4 | 40.0 | 1,153 | 31.4 | 53.3 | 658 | 22.3 | 27.8 |
| 45-64 years--- | 1,842 | 27.8 | 48.6 | 1,008 | 27.5 | 55.2 | 834 | 28.2 | 42.5 |
| 65 years and over------- | 1,286 | 19.4 | 75.0 | 507 | 13.8 | 66.9 | 778 | 26.3 | 81.2 |
| Other and multiple, NEC |  |  |  |  |  |  |  |  |  |
| All ages---------- | 1,709 | 100.0 | 9.1 | 921 | 100.0 | 10.2 | 787 | 100.0 | 8.2 |
| Under 17 years-----.----- | 78 | 4.6 | 1.2 | 37 | 4.0 | 1.1 | 41 | 5.2 | 1.3 |
| 17-24 years-------------- | 147 | 8.6 | 7.1 | 80 | 8.7 | 8.3 | 67 | 8.5 | 6.1 |
| 25-44 years------------- | 517 | 30.3 | 11.4 | 317 | 34.4 | 14.7 | 200 | 25.4 | 8.4 |
| 45-64 years------------- | 587 | 34.3 | 15.5 | 329 | 35.7 | 18.0 | 258 | 32.8 | 13.1 |
| 65 years and over------- | 380 | 22.2 | 22.1 | 159 | 17.3 | 21.0 | 221 | 28.1 | 23.1 |

Table 30. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by site according to color and age: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]

| Age and site | Total |  |  | White |  |  | Nonwhite |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent <br> distri- <br> bution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation | Average number in thousands | Percent distribution | Rate per 1,000 population |
| All ages |  |  |  |  |  |  |  |  |  |
| All sites--------- | 17,742 | 100.0 | 94.8 | 15,924 | 100.0 | 96.5 | 1,819 | 100.0 | 82.4 |
| Back or spine----------- | 6,486 | 36.6 | 34.7 | 5,944 | 37.3 | 36.0 | 542 | 29.8 | 24.6 |
| Upper extremity and shoulder | 2,925 | 16.5 | 15.6 | 2,635 | 16.5 | 16.0 | 289 | 15.9 | 13.1 |
| Lower extremity and hip- | 6,623 | 37.3 | 35.4 | 5,878 | 36.9 | 35.6 | 746 | 41.0 | 33.8 |
| Other and multiple, NEC- | 1,709 | 9.6 | 9.1 | 1,467 | 9.2 | 8.9 | 242 | 13.3 | 11.0 |
| Under 45 years |  |  |  |  |  |  |  |  |  |
| A11 sites--...---- | 8,994 | 100.0 | 68.1 | 8,113 | 100.0 | 70.6 | 881 | 100.0 | 51.4 |
| Back or spine----------- | 3,348 | 37.2 | 25.4 | 3,094 | 38.1 | 26.9 | 254 | 28.8 | 14.8 |
| Upper extremity and shoulder | 1,409 | 15.7 | 10.7 | 1,260 | 15.5 | 11.0 | 149 | 16.9 | 8.7 |
| Lower extremity and hip- | 3,496 | 38.9 | 26.5 | 3,114 | 38.4 | 27.1 | 381 | 43.2 | 22.2 |
| Other and multiple, NEG- | 741 | 8.2 | 5.6 | 645 | 8.0 | 5.6 | 96 | 10.9 | 5.6 |
| 45 years and over |  |  |  |  |  |  |  |  |  |
| Al1 sites-----m--- | 8,748 | 100.0 | 158.9 | 7,810 | 100.0 | 155.8 | 938 | 100.0 | 190.8 |
| Back or spine----------- | 3,137 | 35.9 | 57.0 | 2,850 | 36.5 | 56.8 | 288 | 30.7 | 58.6 |
| Upper extremity and shoulder | 1,516 | 17.3 | 27.5 | 1,376 | 17.6 | 27.4 | 140 | 14.9 | 28.5 |
| Lower extremity and hip- | 3,128 | 35.8 | 56.8 | 2,763 | 35.4 | 55.1 | 365 | 38.9 | 74.3 |
| Other and multiple, NEC- | 967 | 11.1 | 17.6 | 822 | 10.5 | 16.4 | 145 | 15.5 | 29.5 |

Table 31. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by etiology according to site and age: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]


Table 31. Average prevalence and pereent distribution of impairments (except pacalysis and absence) of limbs, back, and trunk, by etiology according to site and age: United States, July 1963-June 1965-Con.

Data are based on household interviews of the civilian, noninstitutional 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]

| Upper extremity and shoulder |  |  | Lower extremity and hip |  |  | Other and multiple, NEC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { 1ation } \end{aligned}$ |
| 2,925 | 100.0 | 15.6 | 6,623 | 100.0 | 35.4 | 1,709 | 100.0 | 9.1 |
| 2,446 133 | 83.6 4.5 | 13.1 0.7 | 4,753 734 | 71.8 11.1 | 25.4 3.9 | 1,347 30 | 78.8 1.8 | 7.2 0.2 |
| 200 145 | 6.8 5.0 | 1.1 | 531 605 | 8.0 9.1 | 2.8 3.2 | 136 196 | 8.0 11.5 | 0.7 1.0 |
| 570 | 100.0 | 6.6 | 1,684 | 100.0 | 19.4 | 225 | 100.0 | 2.6 |
| 469 66 | 82.3 11.6 | 5.4 0.8 | 880 540 | 52.3 32.1 | 10.1 6.2 | 160 $*$ | 71. ${ }^{1}$ | 1.8 |
| * |  | * | 120 | 7.1 8.6 | 1.4 | * | * | * |
| 839 | 100.0 | 18.5 | 1,812 | 100.0 | 40.0 | 517 | 100.0 | 11.4 |
| 728 38 | 86.8 4.5 | 16.1 0.8 | 1,459 103 | 80.5 5.7 | 32.2 2.3 | 428 $*$ | 82.8 | 9.4 |
| 43 31 | 5.1 3.7 | 0.9 | 108 141 | 6.0 7.8 | 2.4 3.1 | 30 53 | 5.8 10.3 | 0.7 1.2 |
| 934 | 100.0 | 24.6 | 1,842 | 100.0 | 48.6 | 587 | 100.0 | 15.5 |
| 779 $*$ | 83.4 | 20.6 | 1,447 67 | 78.6 3.6 | 38.2 1.8 | 471 | 80.2 | 12.4 |
| $\begin{aligned} & 71 \\ & 62 \end{aligned}$ | 7.6 6.6 | 1.9 | 162 165 | 8.8 9.0 | 4.3 4.4 | 49 63 | 8.3 10.7 | 1.3 1.7 |
| 582 | 100.0 | 33.9 | 1,286 | 100.0 | 75.0 | 380 | 100.0 | 22.1 |
| 471 | 80.9 | 27.5 | 967 $*$ | 75.2 | 56.4 | 288 $*$ | 75.8 $*$ | 16.8 $*$ |
| 70 33 | 12.0 5.7 | 4.1 1.9 | 140 155 | 10.9 12.1 | 8.2 9.0 | 40 51 | 10.5 | 2.3 3.0 |

Table 32. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by etiology according to site and sex: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]


Table 32. Average prevalence and percent distribution of impairments (except paralysis andabsence) of limbs, back, and trunk, by etiology according to site and sex: United States, July 1963-June 1965-Con.
[Data are based on household interviews of the civilian, noninstitutional 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]

| Upper extremity and shoulder |  |  | Lower extremity and hip |  |  | Other and multiple, NEC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 population | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ |
| 2,925 | 100.0 | 15.6 | 6,623 | 100.0 | 35.4 | 1,709 | 100.0 | 9.1 |
| 2,446 | 83.6 | 13.1 | 4,753 | 71.8 | 25.4 | 1,347 | 78.8 | 7.2 |
| 133 | 4.5 | 0.7 | 734 | 11.1 | 3.9 | 30 | 1.8 | 0.2 |
| 200 | 6.8 | 1.1 | 531 | 8.0 | 2.8 | 136 | 8.0 | 0.7 |
| 145 | 5.0 | 0.8 | 605 | 9.1 | 3.2 | 196 | 11.5 | 1.0 |
| 1,690 | 100.0 | 18.6 | 3,667 | 100.0 | 40.4 | 921 | 100.0 | 10.2 |
| 1,470 | 87.0 | 16.2 | 2,692 | 73.4 | 29.7 | 762 | 82.7 | 8.4 |
| 70 | 4.1 | 0.8 | 418 | 11.4 | 4.6 | * | * | * |
| 82 | 4.9 | 0.9 | 253 | 6.9 | 2.8 | 63 | 6.8 | 0.7 |
| 67 | 4.0 | 0.7 | 304 | 8.3 | 3.4 | 81 | 8.8 | 0.9 |
| 1,235 | 100.0 | 12.8 | 2,957 | 100.0 | 30.7 | 787 | 100.0 | 8.2 |
| 976 | 79.0 | 10.1 | 2,061 | 69.7 | 21.4 | 585 | 74.3 | 6.1 |
| 63 | 5.1 | 0.7 | 317 | 10.7 | 3.3 | * | * | * |
| 117 | 9.5 | 1.2 | 278 | 9.4 | 2.9 | 73 | 9.3 | 0.8 |
| 78 | 6.3 | 0.8 | 301 | 10.2 | 3.1 | 115 | 14.6 | 1.2 |

Table 33. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by site according to age and geographic region: United States, July 1963June 1965
[Data are based on household interviews of the civilian, noninstitutional population. The surney design, general qualifications, and information on the reliability of the estimates are given in Appendix 1. Definitions of terms are given in Appendix II]

| Region and site | All ages |  |  | Under 45 years |  |  | 45 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & 1,000 \\ & \text { popt- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate pex 1,000 popu1ation |
| All regions |  |  |  |  |  |  |  |  |  |
| All sites- | 17,742 | 100.0 | 94.8 | 8,994 | 100.0 | 68.1 | 8,748 | 100.0 | 158.9 |
| Back or spine Upper extremity and shoulder- | 6,486 | 36.6 | 34.7 | 3,348 | 37.2 | 25.4 | 3,137 | 35.9 | 57.0 |
|  | 2,925 | 16.5 | 15.6 | 1,409 | 15.7 | 10.7 | 1,516 | 17.3 | 27.5 |
| Lower extremity and hipOther and multiple, NEC- <br> Northeast <br> A11 sites- | 6,623 1,709 | 37.3 9.6 | 35.4 9.1 | 1,496 741 | 38.9 8.2 | 26.5 5.6 | 3,128 | 35.8 11.1 | 56.8 17.6 |
|  |  |  |  |  |  |  |  |  |  |
|  | 3,602 | 100.0 | 77.3 | 1,808 | 100.0 | 56.6 | 1,795 | 100.0 | 122.6 |
| Back or spine----..---.... Upper extremity and shoulder | 1,327 | 36.8 | 28.5 | 681 | 37.7 | 21.3 | 646 | 36.0 | 44.1 |
|  | 611 | 17.0 | 13.1 | 281 | 15.5 | 8.8 | 330 | 18.4 | 22.5 |
| Lower extremity and hipOther and multiple, NEC- <br> North Central <br> All sites | 1,372 292 | 38.1 8.1 | 29.5 6.3 | 717 129 | 39.7 7.1 | 22.5 4.0 | 656 163 | 36.5 9.1 | 44.8 11.1 |
|  |  |  |  |  |  |  |  |  |  |
|  | 5,180 | 100.0 | 97.1 | 2,619 | 100.0 | 70.1 | 2,561 | 100.0 | 160.3 |
| Back or spine-w----~--- <br> Upper extremity and <br> shoulder | 1,975 | 38.1 | 37.0 | 999 | 38.1 | 26.7 | 975 | 38.1 | 61.0 |
|  | 857 | 16.5 | 16.1 | 416 | 15.9 | 11.1 | 441 | 17.2 | 27.6 |
| Lower extremity and hipOther and multiple, NEC- <br> South <br> A11 sites | 1,882 466 | 36.3 9.0 | 35.1 8.7 | 1,001 202 | 38.2 7.7 | 26.8 5.4 | 881 | 34.4 10.3 | 55.2 16.5 |
|  |  |  |  |  |  |  |  |  |  |
|  | 5,625 | 100.0 | 98.7 | 2,735 | 100.0 | 66.8 | 2,891 | 100.0 | 180.0 |
| Back or spine----.-.---. Upper extremity and shoulder | 1,870 | 33.2 | 32.8 | 943 | 34.5 | 23.0 | 927 | 32.1 | 57.7 |
|  | 947 | 16.8 | 16.6 | 447 | 16.3 | 10.9 | 500 | 17.3 | 31.1 |
| Lower extremity and hipOther and multiple, NEC- | 2,167 | 38.5 11.4 | 38.0 11.2 | 1,084 262 | 39.6 9.6 | 26.5 6.4 | 1,084 379 | 37.5 13.1 | 67.5 23.6 |
| West |  |  |  |  |  |  |  |  |  |
| All sites--------- | 3,335 | 100.0 | 110.4 | 1,832 | 100.0 | 83.9 | 1,502 | 100.0 | 179.4 |
| Back or spine-w---..-..-n Upper extremity and shoulder | 1,314 | 39.4 | 43.5 | 725 | 39.6 | 33.2 | 589 | 39.2 | 70.3 |
|  | 510 | 15.3 | 16.9 | 265 | 14.5 | 12.1 | 245 | 16.3 | 29.3 |
| Lower extremity and hipOther and multiple, NEC- | 1,202 | 36.0 | 39.8 | 694 | 37.9 | 31.8 | 508 | 33.8 | 60.7 |
|  | 310 | 9.3 | 10.3 | 148 | 8.1 | 6.8 | 161 | 10.7 | 19.2 |

Table 34. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by site according to age and family income: United States, July 1963June 1965
[Data are based on houschold interviews of the civilian, noninstitutional population. The survey design, general aualifications, and information on the reliability of the estimates are given in Appendix I. Definitions of terms are given in 1ppendix II]

| Family income and site | A11 ages |  |  | Under 65 years |  |  | 65 years and over |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average <br> number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | $\begin{aligned} & \text { Rate } \\ & \text { per } \\ & \text { 1,000 } \\ & \text { popu- } \\ & \text { lation } \end{aligned}$ | Average number in thousands | Percent distribution | Rate per 1,000 popu1ation |
| A11 incomes ${ }^{1}$ |  |  |  |  |  |  |  |  |  |
| All sites--------- | 17,742 | 100.0 | 94.8 | 14,544 | 100.0 | 85.6 | 3,199 | 100.0 | 186.4 |
| Back or spine----------- | 6,486 | 36.6 | 34.7 | 5,534 | 38.1 | 32.6 | 951 | 29.7 | 55.4 |
| Upper extremity and | 2,925 | 16.5 | 15.6 | 2,343 | 16.1 | 13.8 | 582 | 18.2 | 33.9 |
| Lower extremity and hip- | 6,623 | 37.3 | 35.4 | 5,338 | 36.7 | 31.4 | 1,286 | 40.2 | 75.0 |
| Other and multiple, NEC- | 1,709 | 9.6 | 9.1 | 1,329 | 9.1 | 7.8 | - 380 | 11.9 | 22.1 |
| Under \$3,000 |  |  |  |  |  |  |  |  |  |
| All sites--.------ | 4,879 | 100.0 | 140.3 | 2,972 | 100.0 | 113.1 | 1,907 | 100.0 | 224.4 |
| Back or spine-.---------Upper extremity and shoulder | $\begin{array}{r} 1,565 \\ 806 \\ 1,881 \\ 627 \end{array}$ | $\begin{aligned} & 32.1 \\ & 16.5 \\ & 38.6 \\ & 12.9 \end{aligned}$ | $\begin{aligned} & 45.0 \\ & 23.2 \\ & 54.1 \\ & 18.0 \end{aligned}$ | 995 | 33.5 | 37.9 | 570 | 29.9 | 67.1 |
|  |  |  |  | 466 | 15.7 | 17.7 | 340 | 17.8 | 40.0 |
| Lower extremity and hipOther and multiple, NEC- |  |  |  | 1,141 | 38.4 | 43.4 | 740 | 38.8 | 87.1 |
|  |  |  |  | 370 | 12.4 | 14.1 | 257 | 13.5 | 30.2 |
| \$3,000-\$3,999 |  |  |  |  |  |  |  |  |  |
| All sites--------- | 1,546 | 100.0 | 97.1 | 1,203 | 100.0 | 85.8 | 343 | 100.0 | 180.0 |
|  <br> Upper extremity and <br> shoulder | 581 | 37.6 | 36.5 | 474 | 39.4 | 33.8 | 107 | 31.2 | 56.1 |
|  | 252 | 16.3 | 15.8 | 188 | 15.6 | 13.4 | 65 | 19.0 | 34.1 |
| Lower extremity and hip- | 569 143 | 36.8 9.2 | 35.7 9.0 | 433 109 | 36.0 9.1 | 13.9 7.8 | 136 35 | 19.7 10.7 | 71.4 18.4 |
| \$4,000-\$6,999 |  |  |  |  |  |  |  |  |  |
| All sites--------- | 4,821 | 100.0 | 83.7 | 4,387 | 100.0 | 80.2 | 434 | 100.0 | 150.7 |
| Back or spine--------.--- <br> Upper extremity and shoulder | $\begin{array}{r} 1,846 \\ 797 \\ 1,740 \\ 438 \end{array}$ | $\begin{array}{r} 38.3 \\ 16.5 \\ 36.1 \\ 9.1 \end{array}$ | $\begin{array}{r} 32.1 \\ 13.8 \\ 30.2 \\ 7.6 \end{array}$ | 1,703 | 38.8 | 31.1 | 143 | 32.9 | 49.7 |
|  |  |  |  | 722 | 16.5 | 13.2 | 76 | 17.5 | 26.4 |
| Lower extremity and hip- |  |  |  | 1,567 | 35.7 | 28.6 | 173 | 39.9 | 60.1 |
| Other and multiple, NEC- |  |  |  | -396 | 9.0 | 7.2 | 42 | 9.7 | 14.6 |
| \$7,000-\$9,999 |  |  |  |  |  |  |  |  |  |
| All sites-m------- | 3,147 | 100.0 | 83.4 | 2,985 | 100.0 | 81.9 | 162 | 100.0 | 126.5 |
| Back or spinem---m------ | 1,226 | 39.0 | 32.5 | 1,182 | 39.6 | 32.4 | 44 | 27.2 | 34.3 |
| Upper extremity and shoulder- | $\begin{array}{r} 520 \\ 1,151 \\ 249 \end{array}$ | $\begin{array}{r} 16.5 \\ 36.6 \\ 7.9 \end{array}$ | $\begin{array}{r} 13.8 \\ 30.5 \\ 6.6 \end{array}$ | $\begin{array}{r} 486 \\ 1,081 \\ 237 \end{array}$ | $\begin{array}{r} 16.3 \\ 36.2 \\ 7.9 \end{array}$ | $\begin{array}{r} 13.3 \\ 29.6 \\ 6.5 \end{array}$ |  | 21.6 | 27.3 |
| Lower extremity and hip- |  |  |  |  |  |  | 3570$*$ | 43.2 | 54.6 |
| Other and multiple, NEC- |  |  |  |  |  |  |  |  |  |
| \$10,000 and over |  |  |  |  |  |  |  |  |  |
| All sitesm-n---..-- | 2,574 | 100.0 | 82.4 | 2,410 | 100.0 | 80.5 | 164 | 100.0 | 127.4 |
|  Upper extremity and shoulder | 979 | 38.0 | 31.4 | 946 | 39.3 | 31.6 | 33 | 20.1 | 25.6 |
|  |  | 16.5 |  |  | 16.1 | 12.9 | 37 | 22.6 | 28.7 |
| Lower extremity and hip- | 424 <br> 992 | 38.5 | 13.6 31.8 | 908 | 37.7 | 30.3 | 84$*$ | 51. 2 | 65.3 |
| Other and multiple, NEC- | 178 | 6.9 | 5.7 | 168 | 7.0 | 5.6 |  |  |  |

[^11]Table 35. Average prevalence and percent distribution of impairments (except paralysis and absence) of limbs, back, and trunk, by degree of limitation of activity according to age and site: United States, July I.963-June 1965
[Data are based on household interviews of the civilan, noninstitutional 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]


[^12]Table 36. Population used in obtaining rates shown in this publication, by age and selected characteristics: United States, July 1963-June 1965
[Data are based on household interviews of the civilian, noninstitutional 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]


See footnote at end of table.

Table 36. Population used in obtaining rates shown in this publication, by age and selected characteristics: United States, July 1963-June 1965-Con.
[Data are based on household interviews of the civilian, noninstitutional 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]

${ }^{1}$ Includes persons with unknown incomes.
NOTE: For official population estimates for more general use, see 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 1

## TECHNICAL NOTES ON METHODS

## Background of This Report

This report is one of a series of statistical reports prepared by the National Health Survey. It is based on information collected in a continuing nationwide sample of households in the Health Interview Survey, a major part of the program.

The Health Interview Survey utilizes a questionnaire which, in addition to personal and demographic characteristics, obtains information on illnesses,' injuries, chronic conditions and impairments, 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 primarily on the consolidated sample for 104 weeks of interviewing ending June 1965.

The population covered by the sample for the Health Interview Survey is the civilian, noninstitutional population of the United States living at the time of the interview. The sample does not include members of the Armed Forces, U.S: nationals living in foreign countries, or crews of vessels.

## Statistical Design of the <br> Health Interview Survey

General plan.- The sampling plan of the survey follows a multistage probability design which permits a continuous sampling of the civilian population of the United States. The first stage of this design consists of drawing a sample of 357 from about 1,900 geographically defined primary sampling units (PSU's) into which the United States has been divided. A PSU is a county, a group of contiguous counties, or a standard metropolitan statistical area.

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 nine households. A segment consists of a cluster of neighboring households or addresses. Two general
types of segments are used: (1) area segments which are defined geographically, and (2) B segments which are defined from a list of addresses from the Decennial Census and the Survey of Construction. Each week a random sample of about 90 segments is drawn. In the approximately 800 households in these segments, household members are interviewed concerning factors related to health.

Since the household members interviewed each week are a representative sample of the population, samples for successive weeks can be combined into larger samples. Thus the design permits both continuous measurement of characteristics of high incidence or prevalence in the population and, through the larger consolidated samples, more detailed analysis of less common characteristics and smaller categories. The continuous collection has administrative andoperational advantages as well as technical assets, since it permits field work to be handled with an experienced, stable staff.

Sample size and geographic detail. -The national sample plan for the 24-month period ending June 1965 included about 268,000 persons from 84,000 households in about 9,400 segments.

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

Collection of data.-Field operations for the household 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 selects the sample, conducts the field interviewing as an agent of the Center, and performs a manual edit and coding of the questionnaires. The Health Interview Survey, using Center electronic computers, carries out further editing and tabulates the edited data.

Estimating methods.-Each statıstic produced by the survey-for example, the number of persons who have a hearing impairment in a specified period-is the result of two stages of ratio estimation. In the first of these the control factor is the ratio of the 1960
decennial population count to the 1960 estimated population in the National Health Survey's first-stage sample of PSU's. These factors are applied for some 25 colorresidence classes.

Later, ratios of sample-produced estimates of the population to official Bureau of the Census figures for current population in about 60 age-sex-color classes are computed and serve as second-stage factors for ratio estimating.

The effect of the ratio estimating process is to make the sample more closely representative of the population by age, sex, color, and residence, thus reducing sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of that population. Consolidation of samples over a time period, say a calendar quarter, produces estimates of average characteristics of the U.S. population for that calendar quarter. Similarly, population data for a year are averages of the four quarterly figures.

## 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 was 5 percent: 1 percent was refusal, and the remainder was primarily due to the failure to find any eligible household respondent after repeated trials.

The interview process.-The statistics presented in this report are based on replies secured in interviews of persons in the sampled households. Each person 19 years of age and over available at the time of interview was interviewed individually. Proxy respondents within the household were employed for children and for adults not available at the time of the interview, provided the respondent was closely related to the person about whom information was being obtained.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information, the household respondent can, at best, 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 and sex, which are adjusted to independent estimates, these figures are based on the sample of households in the National Health Survey. 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. In some instances these will permit users to recombine published data into classes more suitable to their specific needs. With the exception of the overall totals by age and sex mentioned above, the population figures differ from corresponding figures (which are derived from different sources) published in reports of the Bureau of the Census. For population data for general use, see the official estimates presented in Bureau of the Census reports in the $P-20, P-25$, and $P-60$ series.

## Reliability of Estimates

Since the estimates 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 and instructions and interviewing personnel and procedures. As in any survey, the results are also subject to measurement error.

The standard exror 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 lie in the data. 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 $21 / 2$ 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. Included in this appendix are charts from which the relative standard errors can be determined for estimates shown in this 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 for the period of reference is usually either 0 or 1 , on occasion may take on the value 2, and very rarely is 3 .

Medium range. -This class consists of other statistics for which the measure for a single individual for the period of reference will rarely lie outside the range 0 to 5 .

Wide range. -This class consists of statistics for which the measure for a single individual for the period of reference frequently will range from 0 to a number in excess of 5 , e.g., the number of days of bed disability experienced during the year.

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 data 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 62. 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: Approximaterelative standard errors for estimates of ag-
gregates, such as the number of persons with a given characteristic, are obtained from appropriate curves on page 63. The number of persons in the total U.S. population or in an age-sex 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 appropriatecurves on page 64. 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 orthopedic impairments per 1,000 population, the numerator consisting of persons with the impairment is a subclass of the denominator which includes 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, P8AN-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: (Notrequired for statistics presented in this report.)

## 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 the statistic as described on page 61; and (4) the range of the statistic as described on page 61.

| Statistic | Use: |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rule | Code | on | page |
| Number of: <br> Impairments, by type- <br> Persons in the U.S. population, or total number of persons in any age-sex category | 1 | A8AN |  | 63 |
|  | Not subject to sampling error |  |  | 64 |
| Percentage distribution of: <br> Impairments, by characteristic | 2 | P8AN-M |  |  |
| Prevalence rates of impairments: <br> Per 1,000 total population or per 1,000 persons in <br>  | 3 | P8AN-M |  | 64 |

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


Example of use of chart: An aggregate of $5,000,000$ (on scale at bottom of chart) for a Narrow range type A statistic (code: A8AN) has a relative standard error of 1.9 percent, read from scale at left side of chart, or a standard error of 95,000 ( 1.9 percent of $5,000,000$ ). For a. Wide range type $B$ statistic (code: A8BW), an aggregate of $10,000,000$ has a relative error of 9.3 percent or a standard etror of 930,000 ( 9.3 percent of $10,000,000$ ).

Relative standard errors for percentages based on eight 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) basea on an estimate of $10,000,000$ has a relative standard error of 2.8 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 $X 2.8$ percent or 0.56 percentage points.

## APPENDIX II

# DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT AND CLASSIFICATION OF IMPAIRMENTS (X-CODE) 

## Demographic and Economic 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 upon the purpose of the table.

Color. -The population is divided into two groups according to color, "white" and "nonwhite." Nonwhite includes Negro, American Indian, Chinese, Japanese, and so forth. Mexican persons are included with white persons unless definitely known to be 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 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.

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 Bureau of the Census, are as follows:

| Region | States Included |
| :---: | :---: |
| 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, Nebraska, Kansas |
| Sou | Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas |

West ------------ Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Alaska, Washington, Oregon, California, Hawaii

## Terms Relating to Chronic 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 "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, 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 coded by type according to the International Classification of Diseases with certain modifications adopted to make the code more suitable for a household-interview-type survey.

Chronic condition.-A condition is considered to be chronic if (1) it is described by the respondent in terms of one of the chronic diseases on the "Check List of Chronic Conditions" or in terms of one of the types of impairments on the "Check List of Impairments," or (2) the condition is described by the respondent as having been first noticed more than 3 months before the week of the interview.

All impairments are chronic conditions.
Impairment. - Impairments are chronic or permanent defects, resulting from disease, injury, or congenital malformation. They represent a decrease in 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 Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD) are not used. In
the supplementary code (referred to as the X-Code), impairments are grouped according to the type of functional impairment, site, and etiology. Type and site are expressed by the numbers X00-X99, and etiology is indicated by adding to each type the appropriate 1 digit code from one of the two lists of etiologic factors. The X-Code is shown later in this appendix, and detailed coding instructions are given in the Health Interview Survey's Medical Coding Manual and the Short Index.

The selected types of impairments included in this report, with their X -Code inclusion numbers, are:

1. Visual impairments (X00-X05)
a. Severe visual impairments (X00)
b. Other visual impairments (X01, X02, X03, X05) ${ }^{1}$
2. Hearing impairments (X06-X09)
3. Speech defects (X10, X11)
4. Absence of extremities (X20-X34)
a. Absence of major extremities, i.e., arm, leg, hand, or foot (X20-X24, X26-X30, X32, X33)
b. Absence of minor extremities, i.e., finger(s) or toe(s) only (X25, X31, X34)
5. Paralysis, complete or partial (X40-X69)
6. Impairments (except paralysis or absence) of limbs, back, trunk (X70-X79, X80-X89)
Etiology of impairments. - In this report the etiology of an impairment is its cause in terms of what the respondent considers the cause. The interviewer asks for the cause of each impairment reported. The lists of etiologic codes are shown at the end of this appendix.

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.

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 chronic diseases on the "Check List of Chronic Conditions" and reported to have been present at some time during the 12 -month period prior to the interview.

[^13]
## Terms Relating to Disability

Chronic activity limitation.-Persons with chronic conditions are classified into four categories according to the extent to which their activities are limited at present as a result of these 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 descriptions of the four categories below:

1. Persons unable to carry on major activity for their group (major activity refers to ability to work, keep house, or go to school)

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 house work.

Workers and all other persons: inability to work at a job or business.
2. Persons limited in the amount or kind of major activity performed (major activity refers to ability to work, keep house, or go to school)
Preschool children: limited in the amount or kind of play with other children, e.g., need special rest periods, cannot play strenuous games, 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, 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 pexiods 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, cannot do strenuous work.
3. Persons not limited in major activity but otherwise limited (major activity refers to ability to work, keep house, or go to school)
Preschool children: not classified in this category.

School-age children: not limited in going to school but limited in participation in athletics or other extracurricular activities.

Housewives: not limited in housework hut limited in other ac-
tivities, 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 with chronic conditions whose activities are not limited in any of the ways described above.
## CLASSIFICATION OF IMPAIRMENTS (X-Code)

## History and Purpose

This classification of impairments was developed by the Division of Public Health Methods in the years 1955-1956 in order to provide-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 X-Code is essentially a regrouping and expansion of the Supplementary Y-Codes, Y50-Y88, of ICD, Volume I
Abbreviations and Special Use of Parentheses
NOS $=$ not otherwise specified
$\mathrm{NEC}=$ 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.

LIST OF IMPAIRMEMNTS, BY TYPE AND SITE (X00-X99)
(The lists of 1 -digit etiology codes are shown following X99)

## Impairment of Vision (X00-X05) - Revised July 1, $1964^{2}$

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, with impairment as in X03
X02 Blind in one eye, with impairment as in X05
X03 Visual impairment: Inability to recognize a friend walking on the other side of the street $A N D$ other visual difficulty, but NOT as in X00-X02
X05 Impaired vision except as in X00-X03

[^14]See text under "Visual Impaitments" for an explanation of the effect of the revision on estimates presented in this report.

X06 Deafness, total, both ears including deaf-mutism Includes persons, with or without speech, who are completely deaf and cannot be benefited by a hearing aid
X07 Impaired hearing, severe Includes persons who have some hearing but cannot hear ordinary conversation (except with hearing aid)
X09 Impaired hearing except as in X06, X07 Includes; deafness NOS; hard of hearing NOS; "trouble with hearing" NOS; impaired hearing, one or both ears, not classifiable to X06, X07

Impairment of Speech, Intelligence, Special Sense (X10-X19)
X10 Stammering, stuttering
X11 Other speech defect Excludes deaf-mutism (X06) and cleft palate speech (X91)
X12 Loss or impairment of sense of smell and/or taste
X13 Loss or disturbance of sensation NEC
X14 Special learning disability-affecting school progress
X15 Mental deficiency, mongolism
X16 Mental deficiency, severe except in mongolism
X17 Mental deficiency, moderate
X18 Mental deficiency, mild
X19 Mental deficiency, degree not specified
Absence, Loss, Extremities, and Certain Other Sites (X20-X39)

## Upper Extremity

X20 Arm, at or above elbow, and arm NOS
X21 Arm, below elbow and above wrist
X 22 Arms, both
X23 Hand, except finger(s) or thumb(s) only
X24 Hands, both, except fingers or thumbs only
X25 Finger(s) and/or thumb(s), only, one or both hands

## 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
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 Finger(s) and/or thumb(s) and toe(s)
Certain Other Sites

X36 Absence, lung
X37 Absence, kidney
X38 Absence, breast
X39 Absence, rib, or other bone, joints, muscles, without loss of extremity

```
    X40 Upper extremity, one, except finger(s) only
    X41 Upper extremities, both
    X42 Finger(s) only
    X43 Lower extremity, one, any part except toe(s) only
    X44 Lower extremities, both (paraplegia)
    X45 Toe(s) 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)
Cerebral Palsy; Paralysis, Partial, of Extremities and Trunk (X50-X59)
        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
```

Paralysis, Complete or Partial, Sites Except Extremities or Trunk (X60-X69)
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
¿xtremities
X69 Paralysis, complete or partial, sites not of extremities, trunk, nor affecting special senses
or speech

## Nonparalytic Orthopedic Impairment (Chronic) NEC (X70-X79)

Excludes: paralysis (X40-X69); specified deformities in X80-X89 and all "disc" conditions (ICD 735)
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.

## Orthopedic Impairment (Chronic) NEC Involving:

X70 Back NOS, spine NOS, vertebra NOS (low) (lumbosacral) (sacro-iliac) (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 (paralysis, partial)

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 Excludes chronic back conditions in X70-X72, and chronic disc conditions (735)
X81.X Spina bifida (with meningocele) (always congenital)
X82 Flatfoot (including weak or fallen arches and other difficulty with arches)
X83 Clubfoot
X84 Deformity, other and multiple, lower extremity, NEC Includes: genu valgum (knock knee); genu varum (bowleg); 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
Defect, Abnormality, Special Impairment, NEC (X90-X99)
X90 Disfigurement, scarring, face, nose, lips, ears
X91 Cleft palate and harelip (with speech defect)
X92 Other dentofacial handicap
Includes: malocclusion; congenital anomalies of teeth; deformity or absence of jaw; absence, or deficient number of teeth; deformities of palate and of other oral structures NEC
X93 Deformity of skull (hydrocephaly) (microcephaly)
X94 Dwarfism
X95 Gigantism (excessively overheight)
X96 Obesity (excessively overweight)
X97 Excessively underweight
X98 Artificial orifice (opening) or valve (surgical), any site (colostomy)
X99 Special impairment, ill-defined site Includes: "birth injury" or "brain injury," at ages 3 mos+, without statement about type of residual; deformed NEC, site or type not indicated. Includes alsoill-defined "after effects," of tuberculosis of bones and joints, gonococcal infection, poliomyelitis, encephalitis, rickets Excludes "strokes" without mention of effects

## LISTS OF 1-DIGIT ETIOLOGY CODES

For Visual Impairments Only (X00-X05) -Revised July 1, 19643
. 0 Unknown or unspecified origin
. 1 Cataract, any origin except as in $.5-.9$ (with any condition in .4)
. 2 Cataract with glaucoma, any origin except as in .5-. 9
. 3 Glaucoma, any origin except as in .5-.9, without cataract (with any in .4)
. 4 Other local eye diseases (any infection of eye)
. 5 Diabetes (with cataract or glaucoma)
. 6 Diseases of the arteries NEC

[^15]. 7 Vascular lesions, central nervous system (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) (not localized to eye) (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 (general) (local) (scarlet fever) (meningitis) (encephalitis) (arthritis) (osteomyelitis) (neuritis) (etc.)
. 4 Neoplasm
. 5 Diabetes (with gangrene)
.6 Diseases of arteries (with gangrene) (general arteriosclerosis)
. 7 Vascular lesions, central nervous system
. 8 Rickets and osteomalacia
. 9 Accident or injury except at birth
.X Congenital origin or birth injury
.Y Diseases and conditions except as in . $0-.9$ or . 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. QUESTIONNAIRE

The items below show the exact content and wording of the basic guestionnaire used in the nationwide household survey of the U.S. National Health Survey. The actual questionnaire is designed for a household as a unit and includes additional spaces for reports on more than one person, condition, accident, or hospitalization. Such repetitive spaces are omitted in this illustration.



Turn to Card $\mathbf{J}$ ，and ask：
17．a．LAST WEEK OR THE WEEK BEFORE，did anyone in the family buy or obtain any medieine NOT prescribed by a doctor？This（Show Card J）is a list of SOME of the items in which we ore interested．
YesNo（Go to Q．18）

If＂Yes，＂ask：
b．What is the name of the medicine？（Enter name or kind of medicine in column（a）of Table NP．）
c．LAST WEEK OR THE WEEK BEFORE，did anyone buy or obtain any OTHER medicine NOT prescribed by a doctor？
$\square$ Yes（Ra－atk Q．17b）No（Fill remaining column of Tabte NP for each medictne reportod）

## INTERVIEWER：

＂Impairments＂or
＂conditions＂on Card A reported in question 16 or 17，should be cetried back to Table I if they do not already appear there．

| 退号 | Name of mediciae（If name is unknown enter＂ DK ＂in col．（a）and ask col．（b）．）（ a ） | Whet condition is the－－for？ <br> （b） |  | Who was it preseribed for？ （Enter column number of perzon） （c） | Which weak wos the－－bought， LAST WEEK－or the WEEK BEFORE LAST？（d） |  | dit cost？ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  | Before ${ }^{\text {Lest weck }}$ week | WP）Weck before－ |  |
| Table NP－NONPRESCRIBED MEDICINES |  |  |  |  |  |  |  |
| 年 | Name of medicine （If name is unknown，enter the kind of medicine） <br> （a） |  |  | Which week was the－－bought， LAST WEEK－or the WEEK BEFORE LAST？ <br> （d） | How much did it cost？ $\qquad$ <br> Dollars fents | Where was it bought？(f) |  |
| 1 |  |  |  | $\square$ Last week $\square-$ Week befor $\square$ Before 2 weeks（STOP） | 3 | $\square$ Drug siore $\square$ Grocery store $\square$ Mail order house $\square$ Orher | Spocity） |
| Now I have a fow questions abous smaking－－ <br> For each person 17 years old or over，ask： <br> a．Heve you smoked at least one hundred cigarettes during your entire life？ <br> If＂Yes，＂ask： <br> b．During the period when you were smoking the most，how many cigorattes a day did you usually smok |  |  |  |  |  |  |  |
| 19．a．Do you smoke cigarattex now？ <br> If＂Yes，＂ask questions 19b AND 19c．If＂No，＂go to question 20： <br> b．On the average，about how many eigarettes a day do you smoke？ <br> c．Twalve monthz ago，how many cigarettes a day were you smoking？ |  |  |  |  |  |  |  |
| If＂No＂to question 19a，ask BOTH questions 20a AND 20b： <br> 20．a．On the average，about how many elgarattes a day were yau smoking $\mathbf{1 2}$ months ago？ <br> b．How long has it been since you smaked cigarettas fairly regularly？ |  |  |  |  |  |  |  |
| For each mole 17 yenrs oid or over ask questions 21 AND 22： <br> 21．a．Have you smaked at least 10 cigars during your entire life？ <br> b．Do you smoke cigars now？ <br> If＂Yes＂to 21b，ask： <br> c．About haw many cigars a day do you unwally smake？ <br> If＂No＂to 2Lb，ask： <br> d．About how long has it been since you smoked 3 or more cigars a week？ |  |  |  |  |  |  |  |
| 22. | we you smoked ar least 3 packagos <br> you smoke a pipe now？ <br> es＇to 22b，ask： <br> out how many plpafuls of tobaceo <br> ＇o＂＇to 22b，ask： <br> hout how long has it been since you | of pipe tobacco during $y$ <br> day do you uxually smok <br> smoked 3 or more pipafu | ur entire life？ e？ a maek？ |  |  |  |  |
| For each male 17 years old or over，ask： <br> 23．a．Did you ever serve in the Armed Forces of the United States？ <br> If＂Yes，＂ask： <br> b．Was ony of your service during a war？ <br> If＂Yes，＂ask： <br> c．During which war did you serve？ <br> If＂No＂to 23 b ，ask： <br> d．Was any of your service between June 27，1950，and January 31， 1955 ？ |  |  |  |  |  |  |  |
| If 17 years old or over，ask： <br> 24．a．What ls the highest grade you attended in schoal？（Circle highest grade <br> b．Did you finish the－－grade（year）？ |  |  |  |  |  |  |  |
| 25．Turn to Card K and ask： <br> 25．Which of these income groupz represents your total cambined fomily income for the past 12 monthr，that is，your＇s，your－－＇s，atc？ <br> （Show Card K）．Include income from all sources，sueh as wages，salaries，social securify or retirement benefits，help from relatives， rente from proparty，and so forth． |  |  |  |  |  | Group（1） |  |




| Table A - ACCIDENTS AND INJURIES |  |  |  |
| :---: | :---: | :---: | :---: |
| Line No.fromTable I | 1. When dld the occident happon? | 2. At the time of the accident, what part of the body was hurt? | What kind of Injury was it? Anything olse? |
|  | Year | Part(s) of body | Kind of injury (injusies) |
| Accident happened last week or week before ( $O$ o to Q. 3) | (If 1963, 1964, or 1965 also enter month): |  |  |
|  | Monch |  |  |
|  |  |  |  |
| 4. a. Where did the aecident happen - at home ar some other place? <br> 1 $\square$ At home (inside house) $\square$ At home (adjacent premises) <br> If "Some other place," ask: <br> b. What kind of place was it? <br> 3 Street and highway (includes roadway) <br> 6 $\square$ School (includes school premises) <br> 4 $\square$ Farm <br> 7 $\square$ Place of recreation and sports, except at school <br> 5 $\square$ Industrial place (includes premises) <br> 8 $\square$ Other (Spectif the ptace where accident happened) $\qquad$ |  |  |  |
| 5. Were you at work of your job or business when the cecident happened? <br> 1 $\square$ Yes $\square$ No <br> 3 $\square$ While in Armed Services 4 $\square$ Under 17 at time of accident <br> INTERVIEWER: Return to Table I and complete the rest of this line. |  |  |  |





## OUTLINE OF REPORT SERIES FOR VITAL AND HEALTH STATISTICS

Public Health Service Publication No. 1000

Series 1. Programs and collection procedures.-Reports which describe the general programs of the National Center for Health Statistics and its offices and divisions, data collection methods used, definitions, and other material necessary for understanding the data.

Series 2. Data evaluation and methods research.-Studies of new statistical methodology including: experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, contributions to statistical theory.

Series 3. Analytical studies.-Reports presenting analytical or interpretive studies based on vital and health statistics, carrying the analysis further than the expository types of reports in the other series.

Series 4. Documents and committee reports. - Final reports of major committees concerned with vital and health statistics, and documents such as recommended model vital registration laws and revised birth and death certificates.

Series 10. Data from the Health Interview Survey.-Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, based on data collected in a continuing national household interview survey.

Series 11. Data from the Health Examination Survey. -Data from direct examination, testing, and measurement of national samples of the population provide the basis for two types of reports: (1) estimates of the medically defined prevalence of specific diseases in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics; and (2) analysis of relationships among the various measurements without reference to an explicit finite universe of persons.

Series 12. Data from the Institutional Population Surveys.-Statistics relating to the health characteristics of persons in institutions, and on medical, nursing, and pexsonal care received, based on national samples of establishments providing these services and samples of the residents or patients.

Serics 13. Data from the Hospital Discharge Survey.-Statistics relating to discharged patients in short-stay hospitals, based on a sample of patient records in a national sample of hospitals.

Series 20. Data on mortality. - Various statistics on mortality other than as included in annual or monthly reports-special analyses by cause of death, age, and other demographic variables, also geographic and time series analyses.

Series 21. Data on natality, marriage, and divorce. - Various statistics on natality, marriage, and divorce other than as included in annual or monthly reports-special analyses by demographic variables, also geographic and time series analyses, studies of fertility.

Series 22. Data from the National Natality and Mortatity Surveys. -Statistics on characteristics of births and deaths not available from the vital records, based on sample surveys stemming from these records, including such topics as mortality by socioeconomic class, medical experience in the last year of life, characteristics of pregnancy, etc.

For a list of titles of reports published in these series, write to:
Office of Information
National Center for Health Statistics
U.S. Public Health Service

Washington, D.C. 20201

## DHEW Publication No. (HRA) 74-1286

 Series 10 - No. 48U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFAREPUBLIC HEALTH SERVICE



[^0]:    1Estimates of the prevalence of impairments among residents of nursing and personal care homes based on the findings of a sample survey of these institutions during May and June 1964 may be found in Vital and Health Statistics, Series 12, No. 8.

[^1]:    ${ }^{1}$ Inability to read ordinary newspaper print with glasses, and impairment indicating no useful vision in either eye.
    ${ }^{2}$ Inability to recognize a friend walking on the other side of the street and other visual difficulty, but not as in XOO-XO2.

[^2]:    ${ }^{2}$ See list in appendix II.

[^3]:    ${ }^{3}$ During the period July 1962 -June 1963 the special Health Interview Survey Hearing Supplement was administered to those persons for whom hearingloss was reported during the household interview. Consequently, more detailed information about persons with impaired hearing than is shown in this report is available for that period and may be found in Vital and Health Statistics, Series 10, No. 35.

[^4]:    ${ }^{1}$ U.S. National Health Survey, "Impairments by type, sex, and age, United States, July 1957-June 1958," Health Statistics, PHS Pub. No. 584-B9, Public Health Service, Washington, U.S. Government Printing Office, Apr. 1959.
    ${ }^{2}$ U.S. National Health Survey, "Selected impairments by etiology and activity limitation, United States, July 1959-June 1961," Health Statistics, PHS Pub. No. 584-B35, Public Health Service, Washington, U.S. Government Printing Office, July 1962.

[^5]:    ${ }^{1}$ Major activity refers to ability to work, keep house, or engage in school or preschool activities.

[^6]:    ${ }^{1}$ Includes persons with unknown incomes.

[^7]:    ${ }^{1}$ Major activity refers to ability to work, keep house, or engage in school or preschool activities.

[^8]:    ${ }^{1}$ Includes persons with unknown incomes.

[^9]:    ${ }^{1}$ Major activity refers to ability to work, keep house, or engage in school or preschool activities.

[^10]:    ${ }^{1}$ Includes persons with unknown incomes.

[^11]:    ${ }^{1}$ Includes persons with unknown incomes.

[^12]:    ${ }^{1}$ Major activity refers to ability to work, keep house, or engage in school or preschool activities.

[^13]:    ${ }^{1}$ Codes X01-X05 were revised July 1, 1964. See text under "Visual Impairments" and the list of X-Codes at the end of this appendix.

[^14]:    ${ }^{2}$ The X-Codes for visual impairments in use during the period July 1963-June 1964 were as follows:
    X00 Inclusions the same as listed above
    X01 Blind in one eye, other eye defective but not impaired as in X00
    X 02 Blind in one eye, other eye good or not mentioned
    X05 Impaired vision except as in X00-X02, one or both eyes

[^15]:    ${ }^{3}$ In this report etiologic data for visual impairments are shown only for the July 1964 -June 1965 period.

