

# **Limitation of Activity Due to Chronic Conditions United States, 1969 and 1970**

Statistics on persons limited in activity due to chronic conditions by age, sex, color, family income, educational attainment, usual activity status, geographic region, and place of residence. Statistics are also presented on chronic conditions reported as causing limitation of activity, duration of limitation, and extent of bed disability days in a year. Based on data collected in household interviews during 1969 and 1970.

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

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

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## CONTENTS

	Page
Introduction . . . . .	1
Source and Limitations of the Data . . . . .	2
Limitation of Activity . . . . .	3
Comparison With Prior Years . . . . .	3
Age and Sex . . . . .	3
Family Income, Color, and Age . . . . .	4
Educational Attainment and Age . . . . .	7
Usual Activity Status and Age . . . . .	8
Geographic Distribution and Age . . . . .	8
Chronic Conditions Causing Limitation . . . . .	8
Duration of Limitation . . . . .	14
Extent of Bed Disability in a Year . . . . .	14
List of Detailed Tables . . . . .	15
Appendix I. Technical Notes on Methods . . . . .	40
Background of This Report . . . . .	40
Statistical Design of the Health Interview Survey . . . . .	40
General Qualifications . . . . .	42
Reliability of Estimates . . . . .	43
Guide to Use of Relative Standard Error Charts . . . . .	45
Appendix II. Definitions of Certain Terms Used in This Report . . . . .	49
Terms Relating to Conditions . . . . .	49
Terms Relating to Disability . . . . .	51
Demographic Terms . . . . .	52
Appendix III. Probe Questions on Limitation of Activity, 1970 . . . . .	55

### SYMBOLS

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

# LIMITATION OF ACTIVITY DUE TO CHRONIC CONDITIONS

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## INTRODUCTION

During 1969 and 1970 an estimated average of 23,237,000 persons, about 11.7 percent of the civilian, noninstitutionalized population of the United States, were reported in health interviews to be limited to some extent as a result of chronic disease or impairment. Limitation of activity is a measure of long-term disability resulting from chronic conditions. It is defined as inability to carry on the major activity for one's age-sex group, such as working, keeping house, or going to school; restriction in the amount or kind of major activity; or restriction in relation to other activities, such as recreational, church, or civic interests.

Limitation of activity has served as a measure of long-term disability since the inception of the Health Interview Survey in July 1957. From 1957 through June 1967 the method of collecting information about limitations differed from the method employed since then. Prior to July 1967 the so-called "condition approach" was used in the Health Interview Survey. In this procedure a series of illness-recall questions and checklists of chronic conditions were used to elicit responses about acute and chronic conditions experienced by members of the sample population. Each person who reported having one or more chronic conditions was then shown a card which listed degrees of limitation applicable to his or her reported major activity. The degrees ranged from inability to perform the major activity to no limitation in activity. If a per-

son reported some degree of limitation, he was asked which of the chronic conditions caused the limitation. Thus, the chronic limitation status was reported only if chronic conditions had been reported in the health interview.

Beginning in July 1967 a revised procedure was employed in half of the sample to test the so-called "person approach," while the "condition approach" was continued in the other half of the sample.<sup>1</sup> For the half-sample who were interviewed with the person approach, limitation of activity was measured for all persons rather than for just those who had reported one or more chronic conditions. Each person was classified according to his usual activity status (major activity) in the year prior to interview. Then each person in a particular activity status was asked about his ability to carry on that activity. Again, the scale ranged from complete inability to carry on the activity to no limitation in activity. If a person reported a degree of activity limitation, he was asked to state the conditions causing limitation. In the event he did not report a chronic disease or impairment as the cause of limitation, and instead reported an acute condition as causing temporary disability, the limitation questions were reasked about any long-term disability the person might experience other than this temporary disability.

The present report summarizes the information collected during 1969 and 1970 using the

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<sup>1</sup>Beginning in July 1968 the person approach has been used for the entire sample.

person approach. Information is presented about the number of persons reporting limitation of activity due to chronic conditions, and the number of causative conditions of selected types is also shown.

Earlier reports in Series 10 of *Vital and Health Statistics* specifically devoted to the subject of chronic limitation of activity are Numbers 17, 45, 51, and 61. The Current Estimates reports in this series, Numbers 52, 60, 63, and 72 for the period 1967 through 1970, present a summary of the number of persons with limitation of activity reported each year.

A comparison of the person and condition approaches during July 1967-June 1968 is presented in the *Vital and Health Statistics* report "Interviewing Methods in the Health Interview Survey," Series 2, No. 48. This study indicated that the estimated percentages of the population who were limited in major activity were quite similar in each approach. The percent of the population who were limited in other activities was substantially smaller in the person approach than in the condition approach. It should be pointed out that the proportion of persons limited in other than major activity has risen again as a result of changes in questionnaire design in 1969 and 1970.

## SOURCE AND LIMITATIONS OF THE DATA

The information from the Health Interview Survey presented in this report is based on data collected in a continuing nationwide survey conducted by household interview. Each week a probability sample of households is interviewed by trained personnel of the U.S. Bureau of the Census to obtain information about the health and other characteristics of each member of the household in the civilian, noninstitutionalized population of the United States. During the 52 weeks in calendar year 1969 the sample was composed of approximately 42,000 households containing about 134,000 persons living at the time of the interview. During 1970 data were collected for 45 weeks of the 52-week calendar period. The first quarter contained a sample reduction of 7 full weeks of interviewing due to budgetary restrictions, whereas the remaining

quarters each contained the full 13 weeks. During the 45 weeks in 1970 the sample was composed of approximately 37,000 households containing about 116,000 persons living at the time of the interview.

A description of the design of the survey, the methods used in estimation, and general qualifications of the data obtained from surveys is presented in appendix I. 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. Charts of relative sampling errors and instructions for their use are shown in appendix I.

Certain terms used in this report are defined in appendix II. Some of the terms have specialized meanings for the purpose of the survey; therefore the reader should examine this section of the report.

The questionnaires used during 1969<sup>2</sup> and 1970 are illustrated in the Current Estimates reports for these years (Series 10, Numbers 63 and 72). The portions of the 1970 questionnaire dealing with limitation of activity are presented in appendix III. Questions 17 and 18 classified the household members by usual activity status. Each person was asked one of questions 19-24, and 25 if he did not report limitation in one of questions 19-24. If he reported that he was limited, he was asked question 26 about the duration of the reported degree of limitation. Then he was asked question 27 about the chronic conditions causing limitation. In some instances a specific chronic condition was not reported; in

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<sup>2</sup>Although information was obtained in 1969 about limitation of mobility due to chronic conditions from a person-approach series of questions (questions 32-36 shown in appendix III of Series 10, No. 63), no data are presented in this report on this subject because the estimates differed widely from those presented previously in Series 10, No. 61. A methodological study to determine the cause of the difference in estimates has been undertaken.

this case "old age only" or some similar response about the person's state of health was accepted as a chronic condition. As mentioned earlier, if an acute condition, such as pregnancy or injury, was reported as the cause of limitation, the person was reasked one of questions 19-24 to find out if he was limited due to any other cause. If no limitation was now reported, the person was considered to be not limited.

It should be remembered that respondents in the household interview report only those things which they know about and are willing to talk about in an interview situation. Questionnaire design and interviewer training have been aimed at minimizing the effects of respondent differences in reporting.

The restriction of the survey to the civilian, noninstitutionalized population living at the time of the interview affects the estimates of persons with chronic limitation of activity. The omission of the institutionalized population reduces the estimated total number of limited persons since the proportion of chronically limited persons in institutions is high.

## LIMITATION OF ACTIVITY

### Comparison With Prior Years

During 1969 and 1970 an average of 23,237,000 persons, or 11.7 percent of the civilian, noninstitutionalized population, reported some degree of activity limitation due to chronic disease or impairment (table 1).

It is very interesting that the percentage of all limited persons for 1969 and 1970 combined closely resembles the proportions reported under the condition approach, which was used until mid-1967 (table A). Furthermore, the percentage of persons limited in amount or kind of major activity is similar to that reported earlier. However, the percentage of persons unable to carry on major activity is somewhat larger than that for earlier years. The proportion of persons limited but not in major activity is lower than that reported for most of the years under the condition approach.

Table B compares percentages of limited persons for 1969 and 1970 (data from the "person approach") with corresponding data for July 1965-June 1967 (from the "condition ap-

proach") by age and sex. For these two time periods the percentages of all limited persons were remarkably similar, 11.5 percent for the earlier period compared with 11.7 percent for the later years. There is somewhat more divergence for the least and most severe degrees of limitation. These differences can be noticed to a greater extent when the data are examined by sex and age. For the most severe degree of limitation the group causing the primary divergence in the proportion of persons unable to carry on major activity was men 45 years and over. Among persons who were limited in amount or kind of major activity, the most pronounced change in proportion was experienced by men 65 years and over for whom the percentage in 1969 and 1970 was only about three-fifths of that in the earlier period. The decline in rate of limited persons with the least severe degree of limitation occurred primarily among women 45 years and over.

The information contained in tables A and B suggests that the proportions of limited persons as reported in the Health Interview Survey are more similar than divergent even when two different methods of data collection are employed. Changes in degree of limitation reported for the two time periods (July 1965-June 1967 compared with 1969 and 1970) may result more from the format of the probe questions in the person approach rather than from some other cause. This point is discussed further on page 16 of the report mentioned earlier, Series 2, No. 48.

### Age and Sex

As age increased, the proportion of persons in each age group with limitation of activity rose (table 1). About one in each five persons aged 45-64 years had some degree of activity limitation, and about two in each five persons 65 years and older experienced such limitation.

There was a large sex difference in the proportion of persons who were unable to carry on the major activity of working, keeping house, or engaging in school or preschool activities. About three times as many males as females were so limited—4.3 percent compared with 1.5 percent. Even after adjusting for age differences in the populations of males and females, this sex ratio



Table A. Total population and percent distribution of persons by degree of chronic activity limitation: United States, July 1957-December 1970

Year <sup>1</sup>	Total population		With no limitation of activity	With limitation, but not in major activity <sup>2</sup>	With limitation in amount or kind of major activity <sup>2</sup>	Unable to carry on major activity <sup>2</sup>
	Number in thousands	Percent				
			Percent distribution			
July 1957-June 1958-----	168,369	100.0	89.9	2.7	5.2	2.1
July 1958-June 1959-----	171,300	100.0	90.2	2.5	5.2	2.1
July 1959-June 1960-----	174,621	100.0	89.5	2.8	5.5	2.2
July 1960-June 1961-----	177,984	100.0	88.7	2.9	6.1	2.3
July 1961-June 1962-----	180,790	100.0	88.0	3.3	6.5	2.2
July 1962-June 1963-----	183,146	100.0	87.6	3.4	6.7	2.3
July 1963-June 1964-----	185,797	100.0	87.9	3.4	6.5	2.2
July 1964-June 1965-----	188,430	100.0	88.0	3.1	6.7	2.2
July 1965-June 1966-----	190,710	100.0	88.8	2.8	6.3	2.1
July 1966-June 1967-----	192,359	100.0	88.3	3.0	6.5	2.2
1967-----	193,403	100.0	88.5	2.8	6.3	2.3
1968-----	195,392	100.0	89.1	1.8	6.4	2.8
1969-----	197,422	100.0	88.4	2.4	6.4	2.8
1970-----	199,843	100.0	88.2	2.9	6.0	2.9
Average for July 1965- June 1967-----	191,537	100.0	88.5	2.9	6.4	2.1
Average for 1969-70-----	198,636	100.0	88.3	2.6	6.2	2.9

<sup>1</sup>The data for the period July 1957 through June 1967 were collected by means of the "condition approach." The data for calendar years 1967 and 1968 are a mixture of the "condition" and "person" approaches since half-samples using each approach were employed from July 1967 through June 1968. The information on limited persons for 1969 and 1970 is derived entirely from the "person approach."

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

continued to be present (table C). However, relatively more females than males were limited in amount or kind of major activity. There was little sex difference in the proportion of people who were limited in other activities.

### Family Income, Color, and Age

As family income rose, the age-adjusted proportions of limited persons of each degree fell (tables C, 2, and 3). This inverse relationship with income was most pronounced for the most severe limitation category, in which the age-adjusted percentage of persons who were unable

to carry on their major activity among the lowest income group was four times that for the highest income group.

Without age adjustment the proportions of all limited persons were essentially the same for the two racial categories, white and all other (table 4). However, when the crude rates were further classified by family income of under \$5,000 and \$5,000 or more, white persons in the lower income group had substantially higher proportions of limitations than did other persons (tables 5 and 6). In the higher income group the difference in crude rates was less pronounced.

Table B. Total population and percent distribution of persons by degree of chronic activity limitation according to sex and age: United States, July 1965-June 1967 and 1969-70

Year, sex, and age	Total population		With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
	Number in thousands	Percent				
<u>1969-70</u>						
<u>Both sexes</u>						
All ages-----	198,636	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	66,790	100.0	97.3	1.2	1.3	0.2
17-44 years-----	71,996	100.0	92.4	2.6	4.1	0.9
45-64 years-----	41,022	100.0	80.5	3.8	11.2	4.4
65 years and over-----	18,828	100.0	57.7	5.2	20.7	16.4
<u>Male</u>						
All ages-----	95,631	100.0	87.7	2.7	5.3	4.3
Under 17 years-----	33,983	100.0	96.9	1.4	1.5	0.2
17-44 years-----	34,084	100.0	91.5	3.1	4.0	1.3
45-64 years-----	19,523	100.0	78.9	3.8	10.0	7.3
65 years and over-----	8,040	100.0	54.1	4.1	14.9	26.8
<u>Female</u>						
All ages-----	103,005	100.0	88.8	2.6	7.1	1.5
Under 17 years-----	32,807	100.0	97.7	1.0	1.0	0.2
17-44 years-----	37,912	100.0	93.1	2.1	4.2	0.6
45-64 years-----	21,499	100.0	82.0	3.8	12.4	1.8
65 years and over-----	10,788	100.0	60.4	6.1	25.0	8.5
<u>JULY 1965-JUNE 1967</u>						
<u>Both sexes</u>						
All ages-----	191,537	100.0	88.5	2.9	6.4	2.1
Under 17 years-----	66,921	100.0	98.1	1.0	0.7	0.2
17-44 years-----	67,901	100.0	92.6	2.7	4.1	0.6
45-64 years-----	38,993	100.0	80.7	5.1	11.4	2.8
65 years and over-----	17,723	100.0	54.0	6.5	25.7	13.8
<u>Male</u>						
All ages-----	92,566	100.0	87.8	2.5	6.5	3.1
Under 17 years-----	34,038	100.0	97.9	1.1	0.8	0.2
17-44 years-----	32,099	100.0	92.0	2.5	4.6	0.9
45-64 years-----	18,702	100.0	79.2	4.4	11.9	4.5
65 years and over-----	7,727	100.0	47.0	4.6	26.8	21.6
<u>Female</u>						
All ages-----	98,971	100.0	89.2	3.3	6.3	1.2
Under 17 years-----	32,883	100.0	98.2	1.0	0.7	0.1
17-44 years-----	35,802	100.0	93.1	2.9	3.6	0.4
45-64 years-----	20,290	100.0	82.2	5.7	10.9	1.2
65 years and over-----	9,996	100.0	59.4	8.0	24.9	7.7

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table C. Age-adjusted<sup>1</sup> percent distribution of persons by degree of chronic activity limitation, according to selected characteristics: United States, 1969-70

Selected characteristics	All persons	With no limitation of activity	With limitation, but not in major activity <sup>2</sup>	With limitation in amount or kind of major activity <sup>2</sup>	Unable to carry on major activity <sup>2</sup>
	Percent distribution				
Population, all ages-----	100.0	88.3	2.6	6.2	2.9
<u>Sex</u>					
Male-----	100.0	87.2	2.8	5.4	4.6
Female-----	100.0	89.3	2.5	6.8	1.5
<u>Family income</u>					
Less than \$3,000-----	100.0	79.9	3.5	10.1	6.5
\$3,000-\$4,999-----	100.0	85.2	2.8	7.7	4.3
\$5,000-\$6,999-----	100.0	88.6	2.5	6.2	2.7
\$7,000-\$9,999-----	100.0	89.9	2.5	5.5	2.1
\$10,000-\$14,999-----	100.0	90.7	2.5	4.9	1.8
\$15,000 or more-----	100.0	91.5	2.5	4.3	1.6
<u>Family income and color</u>					
All incomes:					
White-----	100.0	88.5	2.7	6.1	2.7
All other-----	100.0	86.2	2.1	7.0	4.8
Less than \$5,000:					
White-----	100.0	82.5	3.3	9.0	5.2
All other-----	100.0	81.9	2.7	9.0	6.5
\$5,000 or more:					
White-----	100.0	90.2	2.6	5.2	2.0
All other-----	100.0	90.1	1.6	4.9	3.3
<u>Geographic region</u>					
Northeast-----	100.0	89.3	2.4	5.7	2.5
North Central-----	100.0	89.1	2.6	6.0	2.3
South-----	100.0	86.9	2.6	6.7	3.7
West-----	100.0	87.9	3.2	6.2	2.7
<u>Place of residence</u>					
All SMSA-----	100.0	88.9	2.6	5.9	2.6
Central city of SMSA-----	100.0	88.6	2.5	6.1	2.8
Not central city of SMSA-----	100.0	89.2	2.7	5.7	2.4
Outside SMSA:					
Nonfarm-----	100.0	87.1	2.7	6.6	3.5
Farm-----	100.0	87.6	2.5	7.0	2.9

<sup>1</sup>Adjusted to the age distribution of the total civilian, noninstitutionalized population of the United States.

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

After adjusting for age differences between the two racial groups (table C), the proportions of limited persons in the all income group diverged for the two racial groups—11.5 percent of white persons were limited compared with 13.8 percent of persons of other races. However, age adjustment reduced the difference in rates for the two racial groups when classified by income. The unadjusted rate of limitation for white persons with less than \$5,000 income was 25.1 percent contrasted with 16.7 percent for other races. After age adjustment, the percentages were 17.5 and 18.1, respectively. Similar changes occurred as a result of age adjustment for the higher income group.

## Educational Attainment and Age

A question was asked in the health interview of each person 17 years of age and over as to the highest grade he had completed in the regular school system. The level of education shown in tables 7, 8, and D is that of each individual person, rather than that of the head of the family which is commonly used as a socioeconomic indicator. The level of education for younger persons who have not completed their education is their attainment at the time of interview, and may be one or more groups lower than the level after completion of their education. For instance, youths age 17 may not have completed

Table D. Age-adjusted<sup>1</sup> percent distribution of persons 17 years and over by degree of chronic activity limitation, according to selected characteristics: United States, 1969-70

Selected characteristics	All persons 17 years and over	With no limitation of activity	With limitation, but not in major activity <sup>2</sup>	With limitation in amount or kind of major activity <sup>2</sup>	Unable to carry on major activity <sup>2</sup>
	Percent distribution				
Population 17 years and over-----	100.0	83.7	3.3	8.7	4.2
<u>Educational attainment</u>					
Less than 5 years-----	100.0	65.7	4.0	15.2	15.1
5-8 years-----	100.0	79.1	3.2	11.6	6.2
9-11 years-----	100.0	83.9	3.3	9.5	3.4
12 years-----	100.0	87.2	3.1	7.2	2.5
13-15 years-----	100.0	86.5	3.9	7.3	2.3
16 years or more-----	100.0	88.2	4.1	5.8	1.9
<u>Usual activity status</u>					
Usually working-----	100.0	89.3	2.9	7.3	0.5
Usually keeping house-----	100.0	83.1	3.8	12.5	0.6

<sup>1</sup>Adjusted to the age distribution of persons 17 years and over in the civilian, non-institutionalized population of the United States.

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

12 years of high school at the time of interview, but afterwards they may complete high school, continue on to college, and eventually attain the 16 years and over level.

There is an inverse relationship between educational attainment and limitations affecting major activity. As educational level rises, the proportion with such limitations declines (tables D, 7, and 8). The percentage of persons with limitation of other activities, however, shows little variation among the educational categories for both the crude and age-adjusted percentages. It is probable that the type of major activity performed by persons with less than some high school education is of such a nature (for example, blue-collar work) that chronic disease or impairment causes a greater degree of limitation than would the same conditions for persons with more education (who are frequently in white-collar positions).

### Usual Activity Status and Age

In the health interview each respondent was asked to classify himself according to the major activity he usually performed during the 12 months prior to interview. The activity groups, as listed in tables 9 and 10, were preschool (under 6 years of age), school-age (6-16 years), usually going to school (17 years and over), usually working, usually keeping house (females only), retired, and other. Chronic activity limitation status was obtained according to the usual activity reported. Persons who were classified as usually working, retired, or "other" were asked about their ability to work. Females who were keeping house were asked about their ability to do housework. Individuals whose usual activity was going to school were asked about performance of that activity, and preschool children were classified according to play activities.

Since the preschool and school-age groups included all persons under 17 years of age, relatively few in these groups were limited in activity.

Of persons who were usually working or keeping house, the relatively small proportion who reported that they were unable to carry on this activity represented only persons who had been disabled less than 6 months. The retired

and "other" groups included many persons who no longer were able to work or were never able to work.

### Geographic Distribution and Age

Persons living in the South Region reported relatively more limitation of activity than did residents of the other regions (tables C, 11, and 12). The higher proportion for the South occurred for limitations affecting major activity. Compared with residents of metropolitan areas, a higher proportion of persons living outside of metropolitan areas reported some degree of limitation of activity (tables C, 13, and 14). Among residents of metropolitan areas (that is, for the 212 standard metropolitan statistical areas defined for the 1960 decennial census), a larger proportion of residents of the central cities of these SMSA's had some degree of limitation than did other residents of SMSA's. (The central city of an SMSA is the city or cities named in the title of the SMSA. For instance, the Philadelphia, Pennsylvania-New Jersey SMSA was comprised of five counties in Pennsylvania and three counties in New Jersey. Philadelphia was the central city. If two cities appear in the title, both were central cities.)<sup>3</sup>

## CHRONIC CONDITIONS CAUSING LIMITATION

The average of 23,237,000 persons who reported limitation of activity in health interviews during 1969 and 1970 reported 28,762,000 chronic diseases or impairments as causes of limitation. In addition to these specified chronic conditions, 1,465,000 persons who could not attribute any specific chronic condition to be the cause of limitation stated that "old age," "general condition," or something else caused the limitation.

During 1969 and 1970 persons who reported two or more conditions as the cause of limitation were asked to specify the main cause of

<sup>3</sup>U.S. Bureau of the Budget (now U.S. Office of Management and Budget): *Standard Metropolitan Statistical Areas*. Washington. U.S. Government Printing Office, 1967, pp. 1-3, 31.

limitation. Obviously, when only one cause of limitation was reported, it also became the main cause. In the event a person was unable to state which of two or more conditions was the main cause, the first condition reported was classified as the main cause.

For the earlier period, July 1965-June 1967, an average of 1.4 limiting chronic conditions were reported for each person with activity limitation (table B, Series 10, No. 61). During 1969 and 1970, an average of 1.2 such limiting conditions were reported per person. These figures were obtained by dividing the number of specified chronic diseases or impairments by the number of limited persons. Thus, these two ratios are directly comparable. The ratios for each degree of limitation are shown below:

Activity limitation status	Number of limiting chronic conditions per person	
	1969-70	July 1965-June 1967
Persons with activity limitation . . . . .	1.2	1.4
Limited, but not in major activity . . . . .	1.1	1.2
Limited in amount or kind of major activity . . . . .	1.2	1.3
Unable to carry on major activity . . . . .	1.4	1.8

The 1969 and 1970 interviews, which used the person approach discussed earlier, obtained the degree of limitation prior to obtaining the causing conditions. In the condition approach used during July 1965-June 1967 the reverse of this procedure was used in that chronic conditions were reported and then the person was asked about his limitation status. It is apparent from the above tabulation that with the person approach fewer conditions were reported as the cause of the limitation. In view of the reduced reporting of all causes of limitation, parallel tables are presented to show the same type of information for all causes and for the main cause. Tables 15-17 present data for all causes and tables 18-20 show the main cause.

During 1969 and 1970, conditions reported in the health interview (see appendix II) were

coded according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA)*.<sup>4</sup> Prior to 1969 conditions were coded according to the *International Classification of Diseases, Seventh Revision (ICD)*.<sup>5</sup> In the last report showing causes of limitation (Series 10, No. 61) 25 condition groups (classified according to the Seventh Revision ICD) were presented in the detailed tables. In the present report 30 condition groups (classified according to the Eighth Revision ICDA) are presented. Comparison of these two listings shows that the 25 condition groups are included in the 30 groups, but that two groups among the 25, namely, asthma-hay fever and chronic sinusitis and bronchitis, have been subdivided, and that three groups have been added—cerebrovascular disease, emphysema, and diseases of kidney and ureter. The last six groups in each list are directly comparable because the same special supplementary code for impairments (see appendix II, Impairment) has been used for both time periods. The other 24 groups for 1969 and 1970 are subject to changes in comparability introduced by the shift from ICD to ICDA. However, from examination of the section of the Introduction to ICDA dealing with “significant changes in the Eighth Revision” and of provisional comparability ratios of causes of death codes by ICD and ICDA,<sup>6</sup> it is believed that the impact of changes in the ICDA would not be sufficient to negate comparisons between the 24 groups of causes for 1969 and 1970 and the corresponding 19 groups for July 1965-June 1967.

<sup>4</sup>National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

<sup>5</sup>World Health Organization: *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, Based on the Recommendations of the Seventh Revision Conference, 1955. Geneva. World Health Organization, 1957.

<sup>6</sup>National Center for Health Statistics: Provisional estimates of selected comparability ratios based on dual coding of 1966 death certificates by the Seventh and Eighth Revisions of the International Classification of Diseases. *Monthly Vital Statistics Report*, Vol. 17, No. 8 Supplement. Public Health Service. Washington, D.C., Oct. 25, 1968.

Although the comparability ratio for asthma was relatively low, a modification of ICDA for survey purposes resulted in coding asthma and bronchitis in the same person with two codes instead of coding bronchitis alone as instructed in the index to ICDA. Also, an individual with both bronchitis and emphysema has two codes assigned, one for each disease. If a person is paralyzed due to stroke, he is assigned two codes, one for the impairment—paralysis—and another for cerebrovascular disease.

Persons with active rheumatic fever are now included in the heart conditions group; previously rheumatic fever was included with "other conditions of the circulatory system" (however, rheumatic heart disease was included with heart conditions).

A comparison of the causes of activity limitation for the two time periods (July 1965-June 1967 and 1969 and 1970) shows that the same

eight conditions were reported as the leading causes, with the three leading causes holding identical ranks for both periods (see table E). During July 1965-June 1967 the eight conditions caused (or contributed as secondary causes to) 69.1 percent of the limitations, and during 1969 and 1970 they accounted for 62.0 percent. The lower percentage during 1969 and 1970 is consistent with the lower ratio of conditions causing limitation per person mentioned previously—1.2 limiting conditions per person in 1969 and 1970 compared with 1.4 limiting conditions per person for the earlier period.

The 30 condition groups causing limitation during 1969 and 1970 by degree of limitation are shown in table 15. The corresponding data for July 1965-June 1967 are shown in table 3 of Series 10, No. 61, which listed 25 condition groups. In most cases the percentages of the limitations caused by specific conditions were quite

Table E. Leading causes of activity limitation (all causes): United States, July 1965-June 1967 and 1969-70

Year and cause of activity limitation	Percent of limited persons with condition
<u>1969-70</u>	
Heart conditions-----	15.5
Arthritis and rheumatism-----	14.1
Impairments of back or spine-----	6.9
Impairments of lower extremities and hips-----	6.7
Asthma-hay fever <sup>1</sup> -----	5.0
Visual impairments-----	4.8
Hypertension without heart involvement-----	4.6
Mental and nervous conditions-----	4.4
<u>July 1965-June 1967</u>	
Heart conditions-----	16.4
Arthritis and rheumatism-----	14.8
Impairments of back or spine-----	8.2
Mental and nervous conditions-----	7.8
Impairments of lower extremities and hips-----	6.1
Visual impairments-----	5.6
Hypertension without heart involvement-----	5.4
Asthma-hay fever-----	4.8

<sup>1</sup>For 1969-70 "asthma, with or without hay fever" and "hay fever, without asthma" have been combined so that comparison can be made with "asthma-hay fever" in the earlier data.

NOTE: Percentages refer to number of persons with condition per 100 limited persons. For instance, 6.9 percent of the 23,237,000 limited persons reported impairments of back or spine as the main or secondary cause of limitation.

Table F. Leading causes of activity limitation (all causes), by age: United States, 1969-70

Age and cause of activity limitation	Percent of limited persons with condition
<u>Under 45 years</u>	
Impairments of back or spine-----	10.6
Impairments of lower extremities and hips-----	8.9
Asthma, with or without hay fever-----	8.2
Heart conditions-----	6.3
Mental and nervous conditions-----	5.3
<u>45-64 years</u>	
Heart conditions-----	19.0
Arthritis and rheumatism-----	15.7
Impairments of back or spine-----	7.8
Impairments of lower extremities and hips-----	6.0
Other musculoskeletal disorders-----	5.3
<u>65 years and over</u>	
Arthritis and rheumatism-----	21.2
Heart conditions-----	20.5
Visual impairments-----	7.0
Hypertension without heart involvement-----	6.4
Impairments of lower extremities and hips-----	5.3

NOTE: Percentages refer to number of persons with condition per 100 limited persons. For instance, 19.0 percent of the 7,987,000 limited persons age 45-64 years reported heart conditions as the main or secondary cause of limitation.

similar for 1969 and 1970 to those for July 1965-June 1967. The largest proportionate reduction in reporting of a causative condition was for hemorrhoids, which during the earlier period accounted for 1.2 percent of the limitations and during 1969 and 1970 for 0.2 percent of the limitations. Since hemorrhoids is probably a secondary cause of limitation, the reduced reporting of secondary causes during 1969 and 1970 mentioned above may account for the decline in proportion.

The levels of data by age groups for all causes of limitation (tables 16 and 17) and for leading causes (table F) for 1969 and 1970 are comparable to those shown for 1965-67 in the Series 10, No. 61 report (tables 5 and 6). The leading cause of limitation for 1969 and 1970 among people under 45 years of age was impairments of back or spine (table F). Heart con-

ditions and impairments of lower extremities and hips were leading causes in all three of the age groups shown. Visual impairments and hypertension were leading causes only for persons aged 65 years and over.

As mentioned earlier, for the 1969 and 1970 interviews a question was asked about the main cause of limitation. If a single cause was named, it was classified as the main cause; and if no main cause was listed, the first condition reported was considered to be the main cause on the assumption that the first cause to come to mind perhaps affected the person more than some other condition. Tables G, H, and 18-20 each present information by main cause of limitation. The 30 groups in tables 18-20 include 76.2 percent of the causes of limitation. In addition, 6.3 percent of the limited persons were unable to name a specific chronic condition as a



Table G. Leading causes of activity limitation (main cause): United States, 1969-70

Main cause of activity limitation	Percent of limited persons with condition
Heart conditions-----	13.2
Arthritis and rheumatism-----	10.8
Impairments of back or spine-----	6.1
Impairments of lower extremities and hips----	5.6
Asthma, with or without hay fever-----	3.7
Mental and nervous conditions-----	3.6

NOTE: Percentages refer to number of persons with condition per 100 limited persons. For instance, 13.2 percent of the 23,237,000 limited persons reported heart conditions as the main cause of limitation.

cause of limitation. Instead, these persons stated that old age, their general state of health, and similar general causes were responsible for the limitation.

As noted in table E, in 1969 and 1970 heart conditions caused, or contributed as a secondary cause to, 15.5 percent of all limitations. When this condition group was considered only as the main cause, the percentage reduced to 13.2 percent (table G). Thus, about 2.3 percent of heart conditions were considered to be secondary causes of limitation. Similarly, other main causes in table G comprised substantial proportions of the percentages shown in table E. It is apparent, however, that visual impairments and hypertension were reported primarily as secondary causes of limitation.

The main causes of limitation for the three age groups shown in table H are remarkably similar to the leading causes shown in table F. In

Table H. Leading causes of activity limitation (main cause), by age: United States, 1969-70

Age and main cause of activity limitation	Percent of limited persons with condition
<u>Under 45 years</u>	
Impairments of back or spine-----	9.7
Impairments of lower extremities and hips-----	7.9
Asthma, with or without hay fever-----	7.8
Heart conditions-----	5.8
Mental and nervous conditions-----	4.8
<u>45-64 years</u>	
Heart conditions-----	16.3
Arthritis and rheumatism-----	12.2
Impairments of back or spine-----	6.6
Impairments of lower extremities and hips-----	4.9
Other musculoskeletal disorders-----	4.2
<u>65 years and over</u>	
Heart conditions-----	16.9
Arthritis and rheumatism-----	16.1
Hypertension without heart involvement-----	4.7
Impairments of lower extremities and hips-----	4.2
Other conditions of circulatory system-----	2.9

NOTE: Percentages refer to number of persons with condition per 100 limited persons. For instance, 9.7 percent of the 7,293,000 limited persons under 45 years of age reported impairments of back or spine as the main cause of limitation.

Table J. Number of persons limited in major activity and percent distribution by duration of limitation according to degree and age: United States, July 1959-June 1960 and 1969-70

Year, degree of limitation, and age	Persons limited <sup>1</sup>		Duration of limitation		
	Number in thousands	Per cent	Less than 1 year	1-4 years	5 years or more
<u>1969-70</u>		Percent distribution			
<u>Unable to carry on major activity<sup>2</sup></u>					
All ages-----	5,685	100.0	11.2	38.4	44.2
Under 17 years-----	116	100.0	*	50.9	30.2
17-44 years-----	671	100.0	21.0	31.9	39.3
45-64 years-----	1,820	100.0	15.5	41.2	38.0
65 years and over-----	3,079	100.0	6.6	37.7	49.4
<u>Limited in amount or kind of major activity<sup>2</sup></u>					
All ages-----	12,302	100.0	9.8	40.4	43.1
Under 17 years-----	841	100.0	12.0	42.2	32.9
17-44 years-----	2,962	100.0	13.4	38.8	41.7
45-64 years-----	4,608	100.0	9.5	39.8	44.7
65 years and over-----	3,892	100.0	6.8	41.9	44.4
<u>JULY 1959-JUNE 1960</u>					
<u>Unable to carry on major activity<sup>2</sup></u>					
All ages-----	3,919	100.0	18.9	34.4	40.2
Under 17 years-----	141	100.0	31.9	31.9	32.6
17-44 years-----	447	100.0	35.8	17.0	41.4
45-64 years-----	1,019	100.0	26.4	38.2	30.5
65 years and over-----	2,311	100.0	11.6	36.3	44.7
<u>Limited in amount or kind of major activity<sup>2</sup></u>					
All ages-----	9,654	100.0	14.2	38.2	42.5
Under 17 years-----	397	100.0	21.4	42.3	32.5
17-44 years-----	2,441	100.0	19.0	34.7	41.3
45-64 years-----	3,579	100.0	14.2	36.7	45.4
65 years and over-----	3,237	100.0	9.7	42.1	41.4

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

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

most instances relatively few of the leading causes of limitation were secondary causes.

### DURATION OF LIMITATION

Each person who reported limitation of activity of any degree was asked how long he had been limited to that degree. For instance, a person who reported that he was unable to work reported the length of time he had been unable to work and did not include any time he may have been limited in the amount or kind of work. However, if a person was limited in amount or kind of work, but earlier in this period of disability had been unable to work at all, it is probable that the duration of present limitation included the entire time he had been either partly or entirely limited.

Information about duration of limitation of activity is presented in tables J, 21, and 22. In table J a summary of some of the findings for 1969 and 1970 can be compared with data for July 1959-June 1960. (More complete data for the earlier study were published in *Health Statistics*, Series B, No. 31.)<sup>7</sup> Table J shows that the percentages of persons with limitation of major activity lasting less than 1 year have declined for each age group. The proportions of persons unable to carry on major activity with duration of 1-4 years have risen for persons under 45 years of age, but the percentages were very similar for older people. Among those who were limited in

amount or kind of major activity, the proportions were about the same for the two time periods. The age-specific percentages of persons with limitations lasting 5 or more years were quite similar in both periods.

Table 21 shows that the proportions of persons with limitations of any degree were about the same for males and females. Table 22 shows that for persons with limitation affecting major activity about half of the limited persons had the limitation for less than 5 years. However, only two out of each five persons with limitation not in major activity were limited for less than 5 years. This reduced proportion may be accounted for by the relatively large number (16.5 percent) of persons who did not state how long the limitation had lasted: The proportion of unknown duration for the lesser degree of limitation was about twice as large as the percentage of unknown duration for the two degrees of limitation affecting major activity.

### EXTENT OF BED DISABILITY IN A YEAR

Table 23 shows the percentages of persons with limitation of activity who were required to stay in bed 1 or more days during the year prior to interview by main and secondary causes of limitation. Information about the number of bed days in the past year was collected during 1969 for all conditions causing limitation. Similar information is not available for 1970. This table may be compared with data for July 1961-June 1963 in Series 10, No. 17 (table 22 in that report). Examination of both tables indicates relatively little change in bed-stays for chronic conditions causing limitation.

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<sup>7</sup>U.S. National Health Survey: Duration of limitation of activity due to chronic conditions, United States, July 1959-June 1960. *Health Statistics*. PHS Pub. No. 584-B31. Public Health Service. Washington, D.C., Jan. 1962.



## LIST OF DETAILED TABLES

		Page
Table 1.	1. Total population and average number and percent distribution of persons by activity limitation status due to chronic conditions, according to sex and age: United States, 1969-70-----	17
	2. Total population and average number of persons by activity limitation status due to chronic conditions, family income, and age: United States, 1969-70-----	18
	3. Percent distribution of persons by activity limitation status due to chronic conditions, according to family income and age: United States, 1969-70-----	19
	4. Total population and average number and percent distribution of persons by activity limitation status due to chronic conditions, according to color and age: United States, 1969-70-----	20
	5. Total population and average number of persons by activity limitation status due to chronic conditions, family income, color, and age: United States, 1969-70----	21
	6. Percent distribution of persons by activity limitation status due to chronic conditions, according to family income, color, and age: United States, 1969-70-----	22
	7. Population 17 years and over and average number of persons by activity limitation status due to chronic conditions, educational attainment, and age: United States, 1969-70-----	23
	8. Percent distribution of persons 17 years and over by activity limitation status due to chronic conditions, according to educational attainment and age: United States, 1969-70-----	24
	9. Total population and average number of persons by activity limitation status due to chronic conditions, usual activity status, and age: United States, 1969-70---	25
	10. Percent distribution of persons by activity limitation status due to chronic conditions, according to usual activity status and age: United States, 1969-70-----	26
	11. Total population and average number of persons by activity limitation status due to chronic conditions, geographic region, and age: United States, 1969-70-----	27
	12. Percent distribution of persons by activity limitation status due to chronic conditions, according to geographic region and age: United States, 1969-70-----	28
	13. Total population and average number of persons by activity limitation status due to chronic conditions, place of residence, and age: United States, 1969-70-----	29
	14. Percent distribution of persons by activity limitation status due to chronic conditions, according to place of residence and age: United States, 1969-70-----	30
	15. Average number and percent distribution of persons with limitation of activity by selected chronic conditions causing limitation, according to degree of limitation: United States, 1969-70-----	31
	16. Average number of persons with limitation of activity by selected chronic conditions causing limitation, sex, and age: United States, 1969-70-----	32
	17. Percent distribution of persons with limitation of activity by selected chronic conditions causing limitation according to sex and age: United States, 1969-70--	33
	18. Average number and percent distribution of persons with limitation of activity by the chronic condition reported as the <u>main cause</u> of limitation, according to degree of limitation: United States, 1969-70-----	34

LIST OF DETAILED TABLES—Con.

	Page
Table 19. Average number of persons with limitation of activity by the chronic condition reported as the <u>main cause</u> of limitation, sex, and age: United States, 1969-70--	35
20. Percent distribution of persons with limitation of activity by the chronic condition reported as the <u>main cause</u> of limitation, according to sex and age:United States, 1969-70-----	36
21. Average number and percent distribution of persons with limitation of activity due to chronic conditions by duration of limitation, according to sex and age: United States, 1969-70-----	37
22. Average number and percent distribution of persons with limitation of activity due to chronic conditions by duration of limitation, according to degree of limitation and age: United States, 1969-70-----	38
23. Number and percent distribution of persons with limitation of activity by number of days of bed disability in past 12 months due to selected chronic conditions causing limitation: United States, 1969-----	39

Table 1. Total population and average number and percent distribution of persons by activity limitation status due to chronic conditions, according to sex and age: United States, 1969-70

[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 population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>Both sexes</u>					
Average number of persons in thousands					
All ages-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>Male</u>					
All ages-----	95,631	83,891	2,616	5,022	4,102
Under 17 years-----	33,983	32,934	492	500	57
17-44 years-----	34,084	31,193	1,059	1,375	458
45-64 years-----	19,523	15,410	733	1,950	1,430
65 years and over-----	8,040	4,353	332	1,197	2,157
<u>Female</u>					
All ages-----	103,005	91,508	2,634	7,280	1,583
Under 17 years-----	32,807	32,065	342	341	59
17-44 years-----	37,912	35,300	811	1,587	213
45-64 years-----	21,499	17,626	826	2,657	390
65 years and over-----	10,788	6,517	655	2,695	921
<u>Both sexes</u>					
Percent distribution					
All ages-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>Male</u>					
All ages-----	100.0	87.7	2.7	5.3	4.3
Under 17 years-----	100.0	96.9	1.4	1.5	0.2
17-44 years-----	100.0	91.5	3.1	4.0	1.3
45-64 years-----	100.0	78.9	3.8	10.0	7.3
65 years and over-----	100.0	54.1	4.1	14.9	26.8
<u>Female</u>					
All ages-----	100.0	88.8	2.6	7.1	1.5
Under 17 years-----	100.0	97.7	1.0	1.0	0.2
17-44 years-----	100.0	93.1	2.1	4.2	0.6
45-64 years-----	100.0	82.0	3.8	12.4	1.8
65 years and over-----	100.0	60.4	6.1	25.0	8.5

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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

Table 2. Total population and average number of persons by activity limitation status due to chronic conditions, family income, and age: United States, 1969-70

[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]

Family income and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All incomes<sup>2</sup></u>		Average number of persons in thousands			
All ages-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>Less than \$3,000</u>					
All ages-----	21,476	15,248	894	3,153	2,181
Under 17 years-----	4,817	4,615	72	113	*
17-44 years-----	5,614	4,847	211	372	184
45-64 years-----	4,117	2,326	215	916	661
65 years and over-----	6,928	3,461	396	1,752	1,319
<u>\$3,000-\$4,999</u>					
All ages-----	21,712	17,968	645	1,913	1,186
Under 17 years-----	6,948	6,703	113	113	*
17-44 years-----	6,621	5,905	180	389	148
45-64 years-----	4,242	3,026	160	663	393
65 years and over-----	3,901	2,334	193	748	626
<u>\$5,000-\$6,999</u>					
All ages-----	30,086	26,872	726	1,766	721
Under 17 years-----	10,515	10,239	111	148	*
17-44 years-----	11,237	10,331	275	511	120
45-64 years-----	6,033	4,878	231	681	242
65 years and over-----	2,302	1,424	109	426	342
<u>\$7,000-\$9,999</u>					
All ages-----	40,439	37,171	915	1,822	530
Under 17 years-----	15,329	14,967	179	159	*
17-44 years-----	15,839	14,794	384	594	67
45-64 years-----	7,622	6,370	270	784	197
65 years and over-----	1,649	1,040	81	285	243
<u>\$10,000-\$14,999</u>					
All ages-----	45,084	41,849	1,039	1,772	423
Under 17 years-----	16,663	16,248	208	187	*
17-44 years-----	18,301	17,124	460	645	72
45-64 years-----	8,805	7,627	302	727	149
65 years and over-----	1,314	850	69	213	182
<u>\$15,000 or more</u>					
All ages-----	27,547	25,564	691	1,038	254
Under 17 years-----	8,886	8,691	103	84	*
17-44 years-----	10,661	10,064	270	291	36
45-64 years-----	6,958	6,126	272	496	64
65 years and over-----	1,041	684	47	166	144

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

<sup>2</sup>Includes unknown income.

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

Table 3. Percent distribution of persons by activity limitation status due to chronic conditions, according to family income and age: United States, 1969-70

[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]

Family income and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All incomes<sup>2</sup></u>		Percent distribution			
All ages-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>Less than \$3,000</u>					
All ages-----	100.0	71.0	4.2	14.7	10.2
Under 17 years-----	100.0	95.8	1.5	2.3	*
17-44 years-----	100.0	86.3	3.8	6.6	3.3
45-64 years-----	100.0	56.5	5.2	22.2	16.1
65 years and over-----	100.0	50.0	5.7	25.3	19.0
<u>\$3,000-\$4,999</u>					
All ages-----	100.0	82.8	3.0	8.8	5.5
Under 17 years-----	100.0	96.5	1.6	1.6	*
17-44 years-----	100.0	89.2	2.7	5.9	2.2
45-64 years-----	100.0	71.3	3.8	15.6	9.3
65 years and over-----	100.0	59.8	4.9	19.2	16.0
<u>\$5,000-\$6,999</u>					
All ages-----	100.0	89.3	2.4	5.9	2.4
Under 17 years-----	100.0	97.4	1.1	1.4	*
17-44 years-----	100.0	91.9	2.4	4.5	1.1
45-64 years-----	100.0	80.9	3.8	11.3	4.0
65 years and over-----	100.0	61.9	4.7	18.5	14.9
<u>\$7,000-\$9,999</u>					
All ages-----	100.0	91.9	2.3	4.5	1.3
Under 17 years-----	100.0	97.6	1.2	1.0	*
17-44 years-----	100.0	93.4	2.4	3.8	0.4
45-64 years-----	100.0	83.6	3.5	10.3	2.6
65 years and over-----	100.0	63.1	4.9	17.3	14.7
<u>\$10,000-\$14,999</u>					
All ages-----	100.0	92.8	2.3	3.9	0.9
Under 17 years-----	100.0	97.5	1.2	1.1	*
17-44 years-----	100.0	93.6	2.5	3.5	0.4
45-64 years-----	100.0	86.6	3.4	8.3	1.7
65 years and over-----	100.0	64.7	5.3	16.2	13.9
<u>\$15,000 or more</u>					
All ages-----	100.0	92.8	2.5	3.8	0.9
Under 17 years-----	100.0	97.8	1.2	0.9	*
17-44 years-----	100.0	94.4	2.5	2.7	0.3
45-64 years-----	100.0	88.0	3.9	7.1	0.9
65 years and over-----	100.0	65.7	4.5	15.9	13.8

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

<sup>2</sup>Includes unknown income.



Table 4. Total population and average number and percent distribution of persons by activity limitation status due to chronic conditions, according to color and age: United States, 1969-70

[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]

Color and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>Total</u>					
Average number of persons in thousands					
All ages-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>White</u>					
All ages-----	174,149	153,651	4,786	10,898	4,813
Under 17 years-----	56,431	54,923	719	692	97
17-44 years-----	63,312	58,523	1,712	2,558	519
45-64 years-----	37,099	30,067	1,431	4,090	1,511
65 years and over-----	17,307	10,138	923	3,559	2,687
<u>All other</u>					
All ages-----	24,487	21,747	464	1,404	872
Under 17 years-----	10,360	10,077	115	149	*
17-44 years-----	8,684	7,970	158	404	152
45-64 years-----	3,922	2,968	128	518	309
65 years and over-----	1,521	732	64	333	392
Percent distribution					
<u>Total</u>					
All ages-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>White</u>					
All ages-----	100.0	88.2	2.7	6.3	2.8
Under 17 years-----	100.0	97.3	1.3	1.2	0.2
17-44 years-----	100.0	92.4	2.7	4.0	0.8
45-64 years-----	100.0	81.0	3.9	11.0	4.1
65 years and over-----	100.0	58.6	5.3	20.6	15.5
<u>All other</u>					
All ages-----	100.0	88.8	1.9	5.7	3.6
Under 17 years-----	100.0	97.3	1.1	1.4	*
17-44 years-----	100.0	91.8	1.8	4.7	1.8
45-64 years-----	100.0	75.7	3.3	13.2	7.9
65 years and over-----	100.0	48.1	4.2	21.9	25.8

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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

Table 5. Total population and average number of persons by activity limitation status due to chronic conditions, family income, color, and age: United States, 1969-70

[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]

Family income, color, and age	Total popula- tion	With no limita- tion of activi- ty	With limita- tion, but not in major ac- tivity <sup>1</sup>	With limita- tion in amount or kind of ma- jor ac- tivity <sup>1</sup>	Unable to carry on major ac- tivity <sup>1</sup>
<u>LESS THAN \$5,000</u>		Average number of persons in thousands			
<u>Total</u>					
All ages-----	43,188	33,216	1,538	5,066	3,367
Under 17 years-----	11,765	11,318	185	226	37
17-44 years-----	12,235	10,751	391	760	332
45-64 years-----	8,359	5,352	374	1,580	1,053
65 years and over-----	10,829	5,795	589	2,500	1,945
<u>White</u>					
All ages-----	32,815	24,575	1,276	4,224	2,740
Under 17 years-----	7,240	6,939	118	155	*
17-44 years-----	9,169	8,066	318	560	226
45-64 years-----	6,689	4,275	304	1,275	835
65 years and over-----	9,717	5,296	536	2,234	1,651
<u>All other</u>					
All ages-----	10,372	8,641	262	842	627
Under 17 years-----	4,525	4,379	66	71	*
17-44 years-----	3,066	2,686	73	201	106
45-64 years-----	1,669	1,077	70	304	218
65 years and over-----	1,112	499	52	266	294
<u>\$5,000 OR MORE</u>					
<u>Total</u>					
All ages-----	143,155	131,456	3,371	6,399	1,929
Under 17 years-----	51,393	50,144	601	578	71
17-44 years-----	56,038	52,313	1,389	2,041	294
45-64 years-----	29,417	25,001	1,075	2,689	653
65 years and over-----	6,307	3,998	306	1,091	911
<u>White</u>					
All ages-----	130,809	119,917	3,200	5,942	1,749
Under 17 years-----	46,256	45,122	557	512	66
17-44 years-----	51,052	47,605	1,319	1,870	258
45-64 years-----	27,487	23,362	1,027	2,513	585
65 years and over-----	6,014	3,829	297	1,048	840
<u>All other</u>					
All ages-----	12,346	11,539	171	457	180
Under 17 years-----	5,138	5,022	44	66	*
17-44 years-----	4,986	4,708	70	171	36
45-64 years-----	1,930	1,640	47	176	67
65 years and over-----	293	169	*	43	71

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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

Table 6. Percent distribution of persons by activity limitation status due to chronic conditions, according to family income, color, and age: United States, 1969-70

[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]

Family income, color, and age	Total popula- tion	With no limita- tion of activ- ity	With limita- tion, but not in major ac- tivity <sup>1</sup>	With limita- tion in amount or kind of ma- jor ac- tivity <sup>1</sup>	Unable to carry on major ac- tivity <sup>1</sup>
<u>LESS THAN \$5,000</u>					
<u>Total</u>					
All ages-----	100.0	76.9	3.6	11.7	7.8
Under 17 years-----	100.0	96.2	1.6	1.9	0.3
17-44 years-----	100.0	87.9	3.2	6.2	2.7
45-64 years-----	100.0	64.0	4.5	18.9	12.6
65 years and over-----	100.0	53.5	5.4	23.1	18.0
<u>White</u>					
All ages-----	100.0	74.9	3.9	12.9	8.3
Under 17 years-----	100.0	95.8	1.6	2.1	*
17-44 years-----	100.0	88.0	3.5	6.1	2.5
45-64 years-----	100.0	63.9	4.5	19.1	12.5
65 years and over-----	100.0	54.5	5.5	23.0	17.0
<u>All other</u>					
All ages-----	100.0	83.3	2.5	8.1	6.0
Under 17 years-----	100.0	96.8	1.5	1.6	*
17-44 years-----	100.0	87.6	2.4	6.6	3.5
45-64 years-----	100.0	64.5	4.2	18.2	13.1
65 years and over-----	100.0	44.9	4.7	23.9	26.4
<u>\$5,000 OR MORE</u>					
<u>Total</u>					
All ages-----	100.0	91.8	2.4	4.5	1.3
Under 17 years-----	100.0	97.6	1.2	1.1	0.1
17-44 years-----	100.0	93.4	2.5	3.6	0.5
45-64 years-----	100.0	85.0	3.7	9.1	2.2
65 years and over-----	100.0	63.4	4.9	17.3	14.4
<u>White</u>					
All ages-----	100.0	91.7	2.4	4.5	1.3
Under 17 years-----	100.0	97.5	1.2	1.1	0.1
17-44 years-----	100.0	93.2	2.6	3.7	0.5
45-64 years-----	100.0	85.0	3.7	9.1	2.1
65 years and over-----	100.0	63.7	4.9	17.4	14.0
<u>All other</u>					
All ages-----	100.0	93.5	1.4	3.7	1.5
Under 17 years-----	100.0	97.7	0.9	1.3	*
17-44 years-----	100.0	94.4	1.4	3.4	0.7
45-64 years-----	100.0	85.0	2.4	9.1	3.5
65 years and over-----	100.0	57.7	*	14.7	24.2

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 7. Population 17 years and over and average number of persons by activity limitation status due to chronic conditions, educational attainment, and age: United States, 1969-70

[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]

Education and age	Total population 17 years and over	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All educational groups<sup>2</sup></u>		Average number of persons in thousands			
All ages 17 years and over-----	131,846	110,399	4,416	11,461	5,570
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>Less than 5 years</u>					
All ages 17 years and over-----	5,618	3,079	249	1,140	1,151
17-44 years-----	1,033	766	36	111	120
45-64 years-----	1,992	1,233	94	365	300
65 years and over-----	2,593	1,080	119	664	731
<u>5-8 years</u>					
All ages 17 years and over-----	24,197	17,482	923	3,564	2,228
17-44 years-----	6,307	5,503	150	477	177
45-64 years-----	10,135	7,628	391	1,418	698
65 years and over-----	7,754	4,350	381	1,669	1,354
<u>9-11 years</u>					
All ages 17 years and over-----	26,368	22,466	830	2,297	774
17-44 years-----	15,759	14,477	410	712	160
45-64 years-----	7,893	6,296	278	1,008	311
65 years and over-----	2,716	1,694	142	577	303
<u>12 years</u>					
All ages 17 years and over-----	44,241	39,579	1,272	2,666	724
17-44 years-----	28,661	26,793	680	1,057	131
45-64 years-----	12,740	10,873	448	1,124	294
65 years and over-----	2,840	1,913	143	485	299
<u>13-15 years</u>					
All ages 17 years and over-----	16,267	14,511	570	939	247
17-44 years-----	11,208	10,503	333	330	42
45-64 years-----	3,849	3,220	153	379	96
65 years and over-----	1,210	788	84	229	109
<u>16 years or more</u>					
All ages 17 years and over-----	13,047	11,735	496	648	169
17-44 years-----	8,211	7,727	241	231	*
45-64 years-----	3,781	3,290	170	261	60
65 years and over-----	1,055	718	84	156	97

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

<sup>2</sup>Includes unknown education.

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

Table 8. Percent distribution of persons 17 years and over by activity limitation status due to chronic conditions, according to educational attainment and age: United States, 1969-70

[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]

Education and age	Total population 17 years and over	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All educational groups<sup>2</sup></u>		Percent distribution			
All ages 17 years and over-----	100.0	83.7	3.3	8.7	4.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>Less than 5 years</u>					
All ages 17 years and over-----	100.0	54.8	4.4	20.3	20.5
17-44 years-----	100.0	74.2	3.5	10.7	11.6
45-64 years-----	100.0	61.9	4.7	18.3	15.1
65 years and over-----	100.0	41.7	4.6	25.6	28.2
<u>5-8 years</u>					
All ages 17 years and over-----	100.0	72.2	3.8	14.7	9.2
17-44 years-----	100.0	87.3	2.4	7.6	2.8
45-64 years-----	100.0	75.3	3.9	14.0	6.9
65 years and over-----	100.0	56.1	4.9	21.5	17.5
<u>9-11 years</u>					
All ages 17 years and over-----	100.0	85.2	3.1	8.7	2.9
17-44 years-----	100.0	91.9	2.6	4.5	1.0
45-64 years-----	100.0	79.8	3.5	12.8	3.9
65 years and over-----	100.0	62.4	5.2	21.2	11.2
<u>12 years</u>					
All ages 17 years and over-----	100.0	89.5	2.9	6.0	1.6
17-44 years-----	100.0	93.5	2.4	3.7	0.5
45-64 years-----	100.0	85.3	3.5	8.8	2.3
65 years and over-----	100.0	67.4	5.0	17.1	10.5
<u>13-15 years</u>					
All ages 17 years and over-----	100.0	89.2	3.5	5.8	1.5
17-44 years-----	100.0	93.7	3.0	2.9	0.4
45-64 years-----	100.0	83.7	4.0	9.8	2.5
65 years and over-----	100.0	65.1	6.9	18.9	9.0
<u>16 years or more</u>					
All ages 17 years and over-----	100.0	89.9	3.8	5.0	1.3
17-44 years-----	100.0	94.1	2.9	2.8	*
45-64 years-----	100.0	87.0	4.5	6.9	1.6
65 years and over-----	100.0	68.1	8.0	14.8	9.2

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

<sup>2</sup>Includes unknown education.

Table 9. Total population and average number of persons by activity limitation status due to chronic conditions, usual activity status, and age: United States, 1969-70

[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]

Usual activity and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
	Average number of persons in thousands				
All activities-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
Preschool (Under 6 years)-----	21,883	21,480	...	338	64
School-age (6-16 years)-----	44,907	43,520	834	502	51
Usually going to school (17 years and over)---	10,044	9,514	413	114	*
Usually working (17 years and over)-----	71,947	65,023	2,034	4,601	288
17-44 years-----	42,026	39,277	970	1,691	88
45-64 years-----	27,035	23,489	946	2,439	160
65 years and over-----	2,886	2,257	119	470	40
Usually keeping house (female, 17 years and over)-----	37,995	30,706	1,572	5,445	272
17-44 years-----	17,868	16,377	443	1,012	35
45-64 years-----	11,496	8,861	559	1,972	104
65 years and over-----	8,631	5,468	570	2,461	133
Retired (45 years and over)-----	7,808	3,336	280	989	3,202
45-64 years-----	1,404	369	*	108	898
65 years and over-----	6,404	2,967	251	881	2,304
Other activity (17 years and over)-----	4,052	1,819	117	312	1,804
17-44 years-----	2,129	1,383	50	148	547
45-64 years-----	1,038	277	*	86	656
65 years and over-----	885	159	47	78	600

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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

Table 10. Percent distribution of persons by activity limitation status due to chronic conditions, according to usual activity status and age: United States, 1969-70

[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]

Usual activity and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
	Percent distribution				
All activities-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
Preschool (under 6 years)-----	100.0	98.2	...	1.5	0.3
School-age (6-16 years)-----	100.0	96.9	1.9	1.1	0.1
Usually going to school (17 years and over)--	100.0	94.7	4.1	1.1	*
Usually working (17 years and over)-----	100.0	90.4	2.8	6.4	0.4
17-44 years-----	100.0	93.5	2.3	4.0	0.2
45-64 years-----	100.0	86.9	3.5	9.0	0.6
65 years and over-----	100.0	78.2	4.1	16.3	1.4
Usually keeping house (female, 17 years and over)-----	100.0	80.8	4.1	14.3	0.7
17-44 years-----	100.0	91.7	2.5	5.7	0.2
45-64 years-----	100.0	77.1	4.9	17.2	0.9
65 years and over-----	100.0	63.4	6.6	28.5	1.5
Retired (45 years and over)-----	100.0	42.7	3.6	12.7	41.0
45-64 years-----	100.0	26.3	*	7.7	64.0
65 years and over-----	100.0	46.3	3.9	13.8	36.0
Other activity (17 years and over)-----	100.0	44.9	2.9	7.7	44.5
17-44 years-----	100.0	65.0	2.3	7.0	25.7
45-64 years-----	100.0	26.7	*	8.3	63.2
65 years and over-----	100.0	18.0	5.3	8.8	67.8

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 11. Total population and average number of persons by activity limitation status due to chronic conditions, geographic region, and age: United States, 1969-70

[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]

Geographic region and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All regions</u>	Average number of persons in thousands				
All ages-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>Northeast</u>					
All ages-----	48,900	43,454	1,194	2,946	1,306
Under 17 years-----	15,636	15,232	191	191	*
17-44 years-----	17,433	16,198	406	667	163
45-64 years-----	10,788	8,964	365	1,060	399
65 years and over-----	5,043	3,060	233	1,028	722
<u>North Central</u>					
All ages-----	55,493	49,471	1,434	3,296	1,292
Under 17 years-----	19,183	18,705	225	226	*
17-44 years-----	19,692	18,186	545	818	143
45-64 years-----	11,308	9,320	399	1,217	372
65 years and over-----	5,310	3,259	265	1,035	750
<u>South</u>					
All ages-----	61,402	53,479	1,588	4,075	2,260
Under 17 years-----	20,878	20,306	259	268	46
17-44 years-----	22,515	20,784	529	944	257
45-64 years-----	12,275	9,467	480	1,558	770
65 years and over-----	5,734	2,922	321	1,304	1,187
<u>West</u>					
All ages-----	32,841	28,994	1,034	1,985	828
Under 17 years-----	11,093	10,757	160	156	*
17-44 years-----	12,357	11,325	391	532	108
45-64 years-----	6,650	5,284	315	773	279
65 years and over-----	2,741	1,629	169	524	419

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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



Table 12. Percent distribution of persons by activity limitation status due to chronic conditions, according to geographic region and age: United States, 1969-70

[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]

Geographic region and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All regions</u>		Percent distribution			
All ages-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>Northeast</u>					
All ages-----	100.0	88.9	2.4	6.0	2.7
Under 17 years-----	100.0	97.4	1.2	1.2	*
17-44 years-----	100.0	92.9	2.3	3.8	0.9
45-64 years-----	100.0	83.1	3.4	9.8	3.7
65 years and over-----	100.0	60.7	4.6	20.4	14.3
<u>North Central</u>					
All ages-----	100.0	89.1	2.6	5.9	2.3
Under 17 years-----	100.0	97.5	1.2	1.2	*
17-44 years-----	100.0	92.4	2.8	4.2	0.7
45-64 years-----	100.0	82.4	3.5	10.8	3.3
65 years and over-----	100.0	61.4	5.0	19.5	14.1
<u>South</u>					
All ages-----	100.0	87.1	2.6	6.6	3.7
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.3	2.3	4.2	1.1
45-64 years-----	100.0	77.1	3.9	12.7	6.3
65 years and over-----	100.0	51.0	5.6	22.7	20.7
<u>West</u>					
All ages-----	100.0	88.3	3.1	6.0	2.5
Under 17 years-----	100.0	97.0	1.4	1.4	*
17-44 years-----	100.0	91.6	3.2	4.3	0.9
45-64 years-----	100.0	79.5	4.7	11.6	4.2
65 years and over-----	100.0	59.4	6.2	19.1	15.3

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 13. Total population and average number of persons by activity limitation status due to chronic conditions, place of residence, and age: United States, 1969-70

[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]

Place of residence and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All areas</u>					
Average number of persons in thousands					
All ages-----	198,636	175,399	5,250	12,302	5,685
Under 17 years-----	66,790	65,000	834	841	116
17-44 years-----	71,996	66,493	1,870	2,962	671
45-64 years-----	41,022	33,035	1,559	4,608	1,820
65 years and over-----	18,828	10,870	987	3,892	3,079
<u>All SMSA</u>					
All ages-----	129,756	115,572	3,382	7,592	3,210
Under 17 years-----	43,071	41,911	529	559	73
17-44 years-----	48,169	44,544	1,267	1,944	415
45-64 years-----	26,947	22,148	981	2,805	1,013
65 years and over-----	11,568	6,969	606	2,284	1,710
<u>Central city of SMSA</u>					
All ages-----	58,774	51,770	1,506	3,759	1,739
Under 17 years-----	18,393	17,850	224	275	43
17-44 years-----	21,645	19,946	531	930	237
45-64 years-----	12,563	10,227	430	1,344	562
65 years and over-----	6,174	3,746	321	1,209	897
<u>Not central city of SMSA</u>					
All ages-----	70,982	63,802	1,876	3,833	1,471
Under 17 years-----	24,678	24,060	305	283	30
17-44 years-----	26,524	24,598	735	1,014	178
45-64 years-----	14,384	11,921	551	1,462	451
65 years and over-----	5,395	3,223	285	1,075	812
<u>Outside SMSA—nonfarm</u>					
All ages-----	60,507	52,620	1,643	4,046	2,198
Under 17 years-----	20,888	20,319	273	258	38
17-44 years-----	21,423	19,732	551	913	226
45-64 years-----	11,911	9,189	495	1,495	732
65 years and over-----	6,286	3,381	323	1,380	1,202
<u>Outside SMSA—farm</u>					
All ages-----	8,373	7,207	225	664	277
Under 17 years-----	2,831	2,771	32	*	*
17-44 years-----	2,404	2,218	52	105	30
45-64 years-----	2,164	1,698	83	308	75
65 years and over-----	973	520	59	228	167

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

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

Table 14. Percent distribution of persons by activity limitation status due to chronic conditions, according to place of residence and age: United States, 1969-70

[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]

Place of residence and age	Total population	With no limitation of activity	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
<u>All areas</u>		Percent distribution			
All ages-----	100.0	88.3	2.6	6.2	2.9
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.4	2.6	4.1	0.9
45-64 years-----	100.0	80.5	3.8	11.2	4.4
65 years and over-----	100.0	57.7	5.2	20.7	16.4
<u>All SMSA</u>					
All ages-----	100.0	89.1	2.6	5.9	2.5
Under 17 years-----	100.0	97.3	1.2	1.3	0.2
17-44 years-----	100.0	92.5	2.6	4.0	0.9
45-64 years-----	100.0	82.2	3.6	10.4	3.8
65 years and over-----	100.0	60.2	5.2	19.7	14.8
<u>Central city of SMSA</u>					
All ages-----	100.0	88.1	2.6	6.4	3.0
Under 17 years-----	100.0	97.0	1.2	1.5	0.2
17-44 years-----	100.0	92.2	2.5	4.3	1.1
45-64 years-----	100.0	81.4	3.4	10.7	4.5
65 years and over-----	100.0	60.7	5.2	19.6	14.5
<u>Not central city of SMSA</u>					
All ages-----	100.0	89.9	2.6	5.4	2.1
Under 17 years-----	100.0	97.5	1.2	1.1	0.1
17-44 years-----	100.0	92.7	2.8	3.8	0.7
45-64 years-----	100.0	82.9	3.8	10.2	3.1
65 years and over-----	100.0	59.7	5.3	19.9	15.1
<u>Outside SMSA--nonfarm</u>					
All ages-----	100.0	87.0	2.7	6.7	3.6
Under 17 years-----	100.0	97.3	1.3	1.2	0.2
17-44 years-----	100.0	92.1	2.6	4.3	1.1
45-64 years-----	100.0	77.1	4.2	12.6	6.1
65 years and over-----	100.0	53.8	5.1	22.0	19.1
<u>Outside SMSA--farm</u>					
All ages-----	100.0	86.1	2.6	7.9	3.3
Under 17 years-----	100.0	97.9	1.1	*	*
17-44 years-----	100.0	92.3	2.2	4.4	1.2
45-64 years-----	100.0	78.5	3.8	14.2	3.5
65 years and over-----	100.0	53.4	6.1	23.4	17.2

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 15. Average number and percent distribution of persons with limitation of activity by selected chronic conditions causing limitation, according to degree of limitation: United States, 1969-70

[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]

Selected chronic conditions	All degrees of activity limitation	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>	All degrees of activity limitation	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
	Average number of persons in thousands <sup>2</sup>				Percent distribution <sup>3</sup>			
Persons limited in activity---	23,237	5,250	12,302	5,685	100.0	100.0	100.0	100.0
Tuberculosis, all forms-----	156	*	76	55	0.7	*	0.6	1.0
Malignant neoplasms-----	358	30	174	153	1.5	0.6	1.4	2.7
Benign and unspecified neoplasms---	204	*	120	58	0.9	*	1.0	1.0
Diabetes-----	865	147	442	276	3.7	2.8	3.6	4.9
Mental and nervous conditions-----	1,033	170	489	374	4.4	3.2	4.0	6.6
Heart conditions-----	3,609	445	1,915	1,249	15.5	8.5	15.6	22.0
Cerebrovascular disease-----	604	43	166	395	2.6	0.8	1.3	6.9
Hypertension without heart involvement-----	1,059	156	667	235	4.6	3.0	5.4	4.1
Varicose veins-----	169	39	100	*	0.7	0.7	0.8	*
Hemorrhoids-----	44	*	*	*	0.2	*	*	*
Other conditions of circulatory system-----	694	120	335	239	3.0	2.3	2.7	4.2
Chronic bronchitis-----	219	46	111	61	0.9	0.9	0.9	1.1
Emphysema-----	566	43	202	321	2.4	0.8	1.6	5.6
Asthma, with or without hay fever---	1,010	344	517	148	4.3	6.6	4.2	2.6
Hay fever, without asthma-----	149	90	53	*	0.6	1.7	0.4	*
Chronic sinusitis-----	105	35	55	*	0.5	0.7	0.4	*
Other conditions of respiratory system-----	451	80	220	151	1.9	1.5	1.8	2.7
Peptic ulcer-----	320	51	160	110	1.4	1.0	1.3	1.9
Hernia-----	434	73	274	88	1.9	1.4	2.2	1.5
Other conditions of digestive system-----	589	104	296	189	2.5	2.0	2.4	3.3
Diseases of kidney and ureter-----	243	46	144	53	1.0	0.9	1.2	0.9
Other conditions of genitourinary system-----	357	51	224	82	1.5	1.0	1.8	1.4
Arthritis and rheumatism-----	3,265	474	1,934	857	14.1	9.0	15.7	15.1
Other musculoskeletal disorders-----	914	218	559	137	3.9	4.2	4.5	2.4
Visual impairments-----	1,115	303	439	373	4.8	5.8	3.6	6.6
Hearing impairments-----	431	214	164	53	1.9	4.1	1.3	0.9
Paralysis, complete or partial-----	817	112	283	422	3.5	2.1	2.3	7.4
Impairments (except paralysis) of back or spine-----	1,613	386	990	237	6.9	7.4	8.0	4.2
Impairments (except paralysis and absence) of upper extremities and shoulders-----	431	151	223	57	1.9	2.9	1.8	1.0
Impairments (except paralysis and absence) of lower extremities and hips-----	1,551	560	693	299	6.7	10.7	5.6	5.3

<sup>1</sup>Major activity refers to ability to work, keep house, or engage in school or preschool activities.

<sup>2</sup>Summations of conditions causing limitation may be greater than the number of persons limited because a person can report more than one condition as a cause of his limitation; on the other hand, they may be less because only selected conditions are shown.

<sup>3</sup>Percentages may add to more than 100 because a person can report more than one condition as a cause of his limitation; on the other hand, they may add to less than 100 because only selected conditions are shown.

Table 16. Average number of persons with limitation of activity by selected chronic conditions causing limitation, sex, and age: United States, 1969-70

[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]

Selected chronic conditions	Both sexes				Male				Female			
	All ages	under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
Persons limited in activity-----	23,237	7,293	7,987	7,958	11,740	3,940	4,113	3,686	11,498	3,353	3,873	4,271
Tuberculosis, all forms----	156	50	76	30	94	*	54	*	62	31	*	*
Malignant neoplasms-----	358	54	178	125	161	*	80	63	197	36	98	62
Benign and unspecified neoplasms-----	204	86	72	45	63	*	*	*	141	67	46	*
Diabetes-----	865	115	396	354	356	59	157	140	509	56	238	215
Mental and nervous conditions-----	1,033	389	403	241	477	188	192	97	556	200	212	144
Heart conditions-----	3,609	461	1,520	1,628	1,937	216	917	804	1,672	245	603	824
Cerebrovascular disease----	604	*	206	376	335	*	127	197	270	*	79	179
Hypertension without heart involvement-----	1,059	132	416	510	351	51	152	147	708	81	264	363
Varicose veins-----	169	33	93	43	47	*	*	*	122	31	66	*
Hemorrhoids-----	44	*	*	*	*	*	*	*	*	*	*	*
Other conditions of circulatory system-----	694	114	242	338	324	47	126	151	370	67	115	188
Chronic bronchitis-----	219	91	66	62	138	48	40	50	81	43	*	*
Emphysema-----	566	31	252	282	455	*	201	238	111	*	51	44
Asthma, with or without hay fever-----	1,010	595	260	154	574	343	133	98	435	252	127	56
Hay fever, without asthma--	149	100	35	*	76	59	*	*	73	41	*	*
Chronic sinusitis-----	105	40	44	*	51	*	*	*	55	*	*	*
Other conditions of respiratory system-----	451	157	143	152	307	95	104	108	144	61	38	44
Peptic ulcer-----	320	79	157	84	218	52	106	60	102	*	51	*
Hernia-----	434	81	188	165	268	54	110	104	166	*	78	61
Other conditions of digestive system-----	589	147	213	230	259	67	101	91	330	79	112	139
Diseases of kidney and ureter-----	243	105	70	69	94	39	*	*	150	66	41	42
Other conditions of genitourinary system-----	357	129	126	102	118	*	38	59	239	108	88	43
Arthritis and rheumatism---	3,265	321	1,254	1,691	1,096	122	442	532	2,170	199	812	1,159
Other musculoskeletal disorders-----	914	353	421	140	436	194	192	50	478	159	228	90
Visual impairments-----	1,115	259	302	554	623	188	178	257	492	70	125	297
Hearing impairments-----	431	211	101	119	267	140	64	63	165	71	38	56
Paralysis, complete or partial-----	817	279	254	284	470	168	146	156	347	111	108	128
Impairments (except paralysis) of back or spine-----	1,613	771	622	220	859	410	363	86	754	361	258	134
Impairments (except paralysis and absence) of upper extremities and shoulders-----	431	196	156	80	285	145	105	35	146	50	50	45
Impairments (except paralysis and absence) of lower extremities and hips-----	1,551	648	480	423	887	449	281	157	664	199	199	266

<sup>1</sup>Summations of conditions causing limitation may be greater than the number of persons limited because a person can report more than one condition as a cause of his limitation; on the other hand, they may be less because only selected conditions are shown.

Table 17. Percent distribution of persons with limitation of activity by selected chronic conditions causing limitation according to sex and age: United States, 1969-70

[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]

Selected chronic conditions	Both sexes				Male				Female			
	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
Persons limited in activity-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tuberculosis, all forms-----	0.7	0.7	1.0	0.4	0.8	*	1.3	*	0.5	0.9	*	*
Malignant neoplasms-----	1.5	0.7	2.2	1.6	1.4	*	1.9	1.7	1.7	1.1	2.5	1.5
Benign and unspecified neoplasms-----	0.9	1.2	0.9	0.6	0.5	*	*	*	1.2	2.0	1.2	*
Diabetes-----	3.7	1.6	5.0	4.4	3.0	1.5	3.8	3.8	4.4	1.7	6.1	5.0
Mental and nervous conditions-----	4.4	5.3	5.0	3.0	4.1	4.8	4.7	2.6	4.8	6.0	5.5	3.4
Heart conditions-----	15.5	6.3	19.0	20.5	16.5	5.5	22.3	21.8	14.5	7.3	15.6	19.3
Cerebrovascular disease-----	2.6	*	2.6	4.7	2.9	*	3.1	5.3	2.3	*	2.0	4.2
Hypertension without heart involvement-----	4.6	1.8	5.2	6.4	3.0	1.3	3.7	4.0	6.2	2.4	6.8	8.5
Varicose veins-----	0.7	0.5	1.2	0.5	0.4	*	*	*	1.1	0.9	1.7	*
Hemorrhoids-----	0.2	*	*	*	*	*	*	*	*	*	*	*
Other conditions of circulatory system-----	3.0	1.6	3.0	4.2	2.8	1.2	3.1	4.1	3.2	2.0	3.0	4.4
Chronic bronchitis-----	0.9	1.2	0.8	0.8	1.2	1.2	1.0	1.4	0.7	1.3	*	*
Emphysema-----	2.4	0.4	3.2	3.5	3.9	*	4.9	6.5	1.0	*	1.3	1.0
Asthma, with or without hay fever-----	4.3	8.2	3.3	1.9	4.9	8.7	3.2	2.7	3.8	7.5	3.3	1.3
Hay fever, without asthma-----	0.6	1.4	0.4	*	0.6	1.5	*	*	0.6	1.2	*	*
Chronic sinusitis-----	0.5	0.5	0.6	*	0.4	*	*	*	0.5	*	*	*
Other conditions of respiratory system-----	1.9	2.2	1.8	1.9	2.6	2.4	2.5	2.9	1.3	1.8	1.0	1.0
Peptic ulcer-----	1.4	1.1	2.0	1.1	1.9	1.3	2.6	1.6	0.9	*	1.3	*
Hernia-----	1.9	1.1	2.4	2.1	2.3	1.4	2.7	2.8	1.4	*	2.0	1.4
Other conditions of digestive system-----	2.5	2.0	2.7	2.9	2.2	1.7	2.5	2.5	2.9	2.4	2.9	3.3
Diseases of kidney and ureter-----	1.0	1.4	0.9	0.9	0.8	1.0	*	*	1.3	2.0	1.1	1.0
Other conditions of genitourinary system-----	1.5	1.8	1.6	1.3	1.0	*	0.9	1.6	2.1	3.2	2.3	1.0
Arthritis and rheumatism-----	14.1	4.4	15.7	21.2	9.3	3.1	10.7	14.4	18.9	5.9	21.0	27.1
Other musculoskeletal disorders-----	3.9	4.8	5.3	1.8	3.7	4.9	4.7	1.4	4.2	4.7	5.9	2.1
Visual impairments-----	4.8	3.6	3.8	7.0	5.3	4.8	4.3	7.0	4.3	2.1	3.2	7.0
Hearing impairments-----	1.9	2.9	1.3	1.5	2.3	3.6	1.6	1.7	1.4	2.1	1.0	1.3
Paralysis, complete or partial-----	3.5	3.8	3.2	3.6	4.0	4.3	3.5	4.2	3.0	3.3	2.8	3.0
Impairments (except paralysis) of back or spine-----	6.9	10.6	7.8	2.8	7.3	10.4	8.8	2.3	6.6	10.8	6.7	3.1
Impairments (except paralysis and absence) of upper extremities and shoulders-----	1.9	2.7	2.0	1.0	2.4	3.7	2.6	0.9	1.3	1.5	1.3	1.1
Impairments (except paralysis and absence) of lower extremities and hips-----	6.7	8.9	6.0	5.3	7.6	11.4	6.8	4.3	5.8	5.9	5.1	6.2

<sup>1</sup>Percentages may add to more than 100 because a person can report more than one condition as a cause of his limitation; on the other hand, they may add to less than 100 because only selected conditions are shown.

Table 18. Average number and percent distribution of persons with limitation of activity by the chronic condition reported as the main cause of limitation, according to degree of limitation: United States, 1969-70

[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]

Selected chronic conditions	All degrees of activity limitation	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>	All degrees of activity limitation	With limitation, but not in major activity <sup>1</sup>	With limitation in amount or kind of major activity <sup>1</sup>	Unable to carry on major activity <sup>1</sup>
	Average number of persons in thousands				Percent distribution			
Persons limited in activity-----	23,237	5,250	12,302	5,685	100.0	100.0	100.0	100.0
Tuberculosis, all forms-----	114	*	53	37	0.5	*	0.4	0.7
Malignant neoplasms-----	297	*	142	127	1.3	*	1.2	2.2
Benign and unspecified neoplasms-----	165	*	95	48	0.7	*	0.8	0.8
Diabetes-----	523	124	294	105	2.3	2.4	2.4	1.8
Mental and nervous conditions-----	839	150	385	303	3.6	2.9	3.1	5.3
Heart conditions-----	3,071	405	1,680	986	13.2	7.7	13.7	17.3
Cerebrovascular disease-----	355	*	92	241	1.5	*	0.7	4.2
Hypertension without heart involvement-----	781	136	498	147	3.4	2.6	4.0	2.6
Varicose veins-----	125	35	73	*	0.5	0.7	0.6	*
Hemorrhoids-----	*	*	*	*	*	*	*	*
Other conditions of circulatory system-----	498	102	232	164	2.1	1.9	1.9	2.9
Chronic bronchitis-----	144	37	80	*	0.6	0.7	0.7	*
Emphysema-----	428	37	160	231	1.8	0.7	1.3	4.1
Asthma, with or without hay fever-----	863	327	451	85	3.7	6.2	3.7	1.5
Hay fever, without asthma-----	127	86	38	*	0.5	1.6	0.3	*
Chronic sinusitis-----	63	*	31	*	0.3	*	0.3	*
Other conditions of respiratory system-----	353	70	175	107	1.5	1.3	1.4	1.9
Peptic ulcer-----	221	47	117	58	1.0	0.9	1.0	1.0
Hernia-----	305	60	202	44	1.3	1.1	1.6	0.8
Other conditions of digestive system-----	358	82	190	86	1.5	1.6	1.5	1.5
Diseases of kidney and ureter-----	159	36	103	*	0.7	0.7	0.8	*
Other conditions of genitourinary system-----	240	39	158	43	1.0	0.7	1.3	0.8
Arthritis and rheumatism-----	2,520	419	1,537	564	10.8	8.0	12.5	9.9
Other musculoskeletal disorders-----	751	199	471	80	3.2	3.8	3.8	1.4
Visual impairments-----	546	188	208	150	2.3	3.6	1.7	2.6
Hearing impairments-----	327	192	114	*	1.4	3.7	0.9	*
Paralysis, complete or partial-----	532	104	213	215	2.3	2.0	1.7	3.8
Impairments (except paralysis) of back or spine-----	1,409	354	872	183	6.1	6.7	7.1	3.2
Impairments (except paralysis and absence) of upper extremities and shoulders-----	352	136	181	34	1.5	2.6	1.5	0.6
Impairments (except paralysis and absence) of lower extremities and hips-----	1,296	512	565	219	5.6	9.8	4.6	3.9
Condition not specified:								
Old age (65 years and over)-----	1,177	168	673	336	5.1	3.2	5.5	5.9
Other-----	288	53	185	50	1.2	1.0	1.5	0.9

<sup>1</sup> Major activity refers to ability to work, keep house, or engage in school or preschool activities.

Table 19. Average number of persons with limitation of activity by the chronic condition reported as the main cause of limitation, sex, and age: United States, 1969-70

[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]

Selected chronic conditions	Both sexes				Male				Female			
	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
	Average number of persons in thousands											
Persons limited in activity-----	23,237	7,293	7,987	7,958	11,740	3,940	4,113	3,686	11,498	3,353	3,873	4,271
Tuberculosis, all forms----	114	41	52	*	69	*	38	*	45	*	*	*
Malignant neoplasms-----	297	48	149	99	130	*	66	47	166	31	83	52
Benign and unspecified neoplasms-----	165	80	54	32	53	*	*	*	113	62	33	*
Diabetes-----	523	95	249	180	217	54	92	71	306	40	157	109
Mental and nervous conditions-----	839	348	323	168	395	168	157	70	444	180	166	98
Heart conditions-----	3,071	422	1,303	1,346	1,668	195	793	681	1,403	228	510	666
Cerebrovascular disease----	355	*	115	226	201	*	74	120	154	*	41	107
Hypertension without heart involvement-----	781	101	309	372	250	34	109	107	531	66	200	265
Varicose veins-----	125	*	69	*	34	*	*	*	91	*	49	*
Hemorrhoids-----	*	*	*	*	*	*	*	*	*	*	*	*
Other conditions of circulatory system-----	498	91	173	234	236	33	94	109	262	58	79	125
Chronic bronchitis-----	144	68	42	35	89	36	*	30	55	32	*	*
Emphysema-----	428	*	191	213	352	*	155	185	76	*	36	*
Asthma, with or without hay fever-----	863	569	196	98	488	331	98	59	375	238	98	39
Hay fever, without asthma--	127	91	*	*	67	55	*	*	60	36	*	*
Chronic sinusitis-----	63	*	*	*	31	*	*	*	32	*	*	*
Other conditions of respiratory system-----	353	134	103	116	239	80	78	82	114	54	*	34
Peptic ulcer-----	221	67	106	48	147	45	66	36	74	*	40	*
Hernia-----	305	71	142	93	198	47	85	66	107	*	57	*
Other conditions of digestive system-----	358	119	127	112	149	51	57	41	209	68	70	71
Diseases of kidney and ureter-----	159	89	34	36	54	32	*	*	105	57	*	*
Other conditions of genitourinary system-----	240	98	85	57	71	*	*	34	169	84	62	*
Arthritis and rheumatism---	2,520	267	974	1,279	830	105	324	401	1,690	162	650	878
Other musculoskeletal disorders-----	751	314	338	99	361	168	157	35	390	146	181	63
Visual impairments-----	546	196	149	201	343	143	91	110	203	54	58	91
Hearing impairments-----	327	182	76	69	198	120	47	31	129	62	*	38
Paralysis, complete or partial-----	532	244	169	119	312	148	93	72	219	96	76	47
Impairments (except paralysis) of back or spine-----	1,409	711	526	171	763	381	312	69	646	330	214	102
Impairments (except paralysis and absence) of upper extremities and shoulders-----	352	174	121	57	237	129	83	*	114	45	38	31
Impairments (except paralysis and absence) of lower extremities and hips-----	1,296	576	388	332	749	396	229	124	547	181	158	208
Condition not specified:												
Old age (65 years and over)-----	1,177	...	...	1,177	606	...	...	606	572	...	...	572
Other-----	288	77	148	63	124	32	71	*	164	45	77	42



Table 20. Percent distribution of persons with limitation of activity by the chronic condition reported as the main cause of limitation, according to sex and age: United States, 1969-70  
 [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 I]

Selected chronic conditions	Both sexes				Male				Female			
	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over	All ages	Under 45 years	45-64 years	65 years and over
Persons limited in activity-----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tuberculosis, all forms-----	0.5	0.6	0.7	*	0.6	*	0.9	*	0.4	*	*	*
Malignant neoplasms-----	1.3	0.7	1.9	1.2	1.1	*	1.6	1.3	1.4	0.9	2.1	1.2
Benign and unspecified neoplasms-----	0.7	1.1	0.7	0.4	0.5	*	*	*	1.0	1.8	0.9	*
Diabetes-----	2.3	1.3	3.1	2.3	1.8	1.4	2.2	1.9	2.7	1.2	4.1	2.6
Mental and nervous conditions-----	3.6	4.8	4.0	2.1	3.4	4.3	3.8	1.9	3.9	5.4	4.3	2.3
Heart conditions-----	13.2	5.8	16.3	16.9	14.2	4.9	19.3	18.5	12.2	6.8	13.2	15.6
Cerebrovascular disease-----	1.5	*	1.4	2.8	1.7	*	1.8	3.3	1.3	*	1.1	2.5
Hypertension without heart involvement-----	3.4	1.4	3.9	4.7	2.1	0.9	2.7	2.9	4.6	2.0	5.2	6.2
Varicose veins-----	0.5	*	0.9	*	0.3	*	*	*	0.8	*	1.3	*
Hemorrhoids-----	*	*	*	*	*	*	*	*	*	*	*	*
Other conditions of circulatory system-----	2.1	1.2	2.2	2.9	2.0	0.8	2.3	3.0	2.3	1.7	2.0	2.9
Chronic bronchitis-----	0.6	0.9	0.5	0.4	0.8	0.9	*	0.8	0.5	1.0	*	*
Emphysema-----	1.8	*	2.4	2.7	3.0	*	3.8	5.0	0.7	*	0.9	*
Asthma, with or without hay fever-----	3.7	7.8	2.5	1.2	4.2	8.4	2.4	1.6	3.3	7.1	2.5	0.9
Hay fever, without asthma-----	0.5	1.2	*	*	0.6	1.4	*	*	0.5	1.1	*	*
Chronic sinusitis-----	0.3	*	*	*	0.3	*	*	*	0.3	*	*	*
Other conditions of respiratory system-----	1.5	1.8	1.3	1.5	2.0	2.0	1.9	2.2	1.0	1.6	*	0.8
Peptic ulcer-----	1.0	0.9	1.3	0.6	1.3	1.1	1.6	1.0	0.6	*	1.0	*
Hernia-----	1.3	1.0	1.8	1.2	1.7	1.2	2.1	1.8	0.9	*	1.5	*
Other conditions of digestive system-----	1.5	1.6	1.6	1.4	1.3	1.3	1.4	1.1	1.8	2.0	1.8	1.7
Diseases of kidney and ureter-----	0.7	1.2	0.4	0.5	0.5	0.8	*	*	0.9	1.7	*	*
Other conditions of genitourinary system-----	1.0	1.3	1.1	0.7	0.6	*	*	0.9	1.5	2.5	1.6	*
Arthritis and rheumatism-----	10.8	3.7	12.2	16.1	7.1	2.7	7.9	10.9	14.7	4.8	16.8	20.6
Other musculoskeletal disorders-----	3.2	4.3	4.2	1.2	3.1	4.3	3.8	0.9	3.4	4.4	4.7	1.5
Visual impairments-----	2.3	2.7	1.9	2.5	2.9	3.6	2.2	3.0	1.8	1.6	1.5	2.1
Hearing impairments-----	1.4	2.5	1.0	0.9	1.7	3.0	1.1	0.8	1.1	1.8	*	0.9
Paralysis, complete or partial-----	2.3	3.3	2.1	1.5	2.7	3.8	2.3	2.0	1.9	2.9	2.0	1.1
Impairments (except paralysis) of back or spine-----	6.1	9.7	6.6	2.1	6.5	9.7	7.6	1.9	5.6	9.8	5.5	2.4
Impairments (except paralysis and absence) of upper extremities and shoulders-----	1.5	2.4	1.5	0.7	2.0	3.3	2.0	*	1.0	1.3	1.0	0.7
Impairments (except paralysis and absence) of lower extremities and hips-----	5.6	7.9	4.9	4.2	6.4	10.1	5.6	3.4	4.8	5.4	4.1	4.9
Condition not specified:												
Old age (65 years and over)-	5.1	...	...	14.8	5.2	...	...	16.4	5.0	...	...	13.4
Other-----	1.2	1.1	1.9	0.8	1.1	0.8	1.7	*	1.4	1.3	2.0	1.0

Table 21. Average number and percent distribution of persons with limitation of activity due to chronic conditions by duration of limitation, according to sex and age: United States, 1969-70

[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	Persons limited in activity <sup>1</sup>	Duration of limitation			Persons limited in activity <sup>1</sup>	Duration of limitation		
		Less than 1 year	1-4 years	5 years or more		Less than 1 year	1-4 years	5 years or more
<u>Both sexes</u>	Average number of persons in thousands				Percent distribution			
All ages-----	23,237	2,237	8,857	10,097	100.0	9.6	38.1	43.5
Under 17 years-----	1,790	219	684	654	100.0	12.2	38.2	36.5
17-44 years-----	5,503	660	1,979	2,359	100.0	12.0	36.0	42.9
45-64 years-----	7,987	833	3,077	3,436	100.0	10.4	38.5	43.0
65 years and over-----	7,958	525	3,118	3,648	100.0	6.6	39.2	45.8
<u>Male</u>								
All ages-----	11,740	1,066	4,384	5,265	100.0	9.1	37.3	44.8
Under 17 years-----	1,049	124	397	387	100.0	11.8	37.8	36.9
17-44 years-----	2,891	311	1,034	1,275	100.0	10.8	35.8	44.1
45-64 years-----	4,113	431	1,593	1,767	100.0	10.5	38.7	43.0
65 years and over-----	3,686	200	1,360	1,836	100.0	5.4	36.9	49.8
<u>Female</u>								
All ages-----	11,498	1,171	4,473	4,832	100.0	10.2	38.9	42.0
Under 17 years-----	741	95	286	267	100.0	12.8	38.6	36.0
17-44 years-----	2,612	349	945	1,084	100.0	13.4	36.2	41.5
45-64 years-----	3,873	402	1,483	1,669	100.0	10.4	38.3	43.1
65 years and over-----	4,271	325	1,758	1,812	100.0	7.6	41.2	42.4

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

Table 22. Average number and percent distribution of persons with limitation of activity due to chronic conditions by duration of limitation, according to degree of limitation and age: United States, 1969-70

[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]

Degree of limitation and age	Persons limited in activity <sup>1</sup>	Duration of limitation			Persons limited in activity <sup>1</sup>	Duration of limitation		
		Less than 1 year	1-4 years	5 years or more		Less than 1 year	1-4 years	5 years or more
<u>Unable to carry on major activity<sup>2</sup></u>	Average number of persons in thousands				Percent distribution			
All ages-----	5,685	639	2,185	2,512	100.0	11.2	38.4	44.2
Under 17 years-----	116	*	59	35	100.0	*	50.9	30.2
17-44 years-----	671	141	214	264	100.0	21.0	31.9	39.3
45-64 years-----	1,820	282	749	691	100.0	15.5	41.2	38.0
65 years and over-----	3,079	204	1,162	1,522	100.0	6.6	37.7	49.4
<u>Limited in amount or kind of major activity<sup>2</sup></u>								
All ages-----	12,302	1,204	4,964	5,302	100.0	9.8	40.4	43.1
Under 17 years-----	841	101	355	277	100.0	12.0	42.2	32.9
17-44 years-----	2,962	397	1,149	1,236	100.0	13.4	38.8	41.7
45-64 years-----	4,608	440	1,832	2,060	100.0	9.5	39.8	44.7
65 years and over-----	3,892	266	1,629	1,729	100.0	6.8	41.9	44.4
<u>Limited, but not in major activity<sup>2</sup></u>								
All ages-----	5,250	394	1,708	2,284	100.0	7.5	32.5	43.5
Under 17 years-----	834	106	269	342	100.0	12.7	32.3	41.0
17-44 years-----	1,870	122	616	859	100.0	6.5	32.9	45.9
45-64 years-----	1,559	111	496	685	100.0	7.1	31.8	43.9
65 years and over-----	987	55	327	397	100.0	5.6	33.1	40.2

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

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

Table 23. Number and percent distribution of persons with limitation of activity by number of days of bed disability in past 12 months due to selected chronic conditions causing limitation: United States, 1969

[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]

Selected chronic conditions	Conditions causing limitation <sup>1</sup>	Days of bed disability in past 12 months			Conditions causing limitation <sup>1</sup>	Days of bed disability in past 12 months		
		No days	1-30 days	31 days or more		No days	1-30 days	31 days or more
	Number of persons in thousands				Percent distribution			
Tuberculosis, all forms-----	166	106	*	*	100.0	63.9	*	*
Malignant neoplasms-----	342	121	106	97	100.0	35.4	31.0	28.4
Benign and unspecified neoplasms-----	181	72	67	*	100.0	39.8	37.0	*
Diabetes-----	823	584	135	68	100.0	71.0	16.4	8.3
Mental and nervous conditions-----	993	670	192	94	100.0	67.5	19.3	9.5
Heart conditions-----	3,543	2,178	827	437	100.0	61.5	23.3	12.3
Cerebrovascular disease-----	592	243	94	94	100.0	41.0	15.9	15.9
Hypertension without heart involvement-----	1,014	758	194	*	100.0	74.8	19.1	*
Varicose veins-----	153	102	*	*	100.0	66.7	*	*
Hemorrhoids-----	*	*	*	*	100.0	*	*	*
Other conditions of circulatory system-----	720	500	126	61	100.0	69.4	17.5	8.5
Chronic bronchitis-----	175	88	56	*	100.0	50.3	32.0	*
Emphysema-----	541	339	102	73	100.0	62.7	18.9	13.5
Asthma, with or without hay fever---	987	545	356	59	100.0	55.2	36.1	6.0
Hay fever, without asthma-----	140	97	*	*	100.0	69.3	*	*
Chronic sinusitis-----	59	*	*	*	100.0	*	*	*
Other conditions of respiratory system-----	373	216	97	*	100.0	57.9	26.0	*
Peptic ulcer-----	320	193	92	*	100.0	60.3	28.8	*
Hernia-----	416	306	71	*	100.0	73.6	17.1	*
Other conditions of digestive system-----	571	283	169	95	100.0	49.6	29.6	16.6
Diseases of kidney and ureter-----	243	119	84	*	100.0	49.0	34.6	*
Other conditions of genitourinary system-----	360	207	104	*	100.0	57.5	28.9	*
Arthritis and rheumatism-----	3,373	2,542	531	254	100.0	75.4	15.7	7.5
Other musculoskeletal disorders-----	986	629	249	89	100.0	63.8	25.3	9.0
Visual impairments-----	1,133	789	60	*	100.0	69.6	5.3	*
Hearing impairments-----	402	357	*	*	100.0	88.8	*	*
Paralysis, complete or partial-----	769	509	69	83	100.0	66.2	9.0	10.8
Impairments (except paralysis) of back or spine-----	1,564	1,022	407	106	100.0	65.3	26.0	6.8
Impairments (except paralysis and absence) of upper extremities and shoulders-----	437	327	61	*	100.0	74.8	14.0	*
Impairments (except paralysis and absence) of lower extremities and hips-----	1,546	1,147	203	134	100.0	74.2	13.1	8.7

<sup>1</sup>Includes persons with unknown number of days.

## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### Background of This Report

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

The Health Interview Survey utilizes a questionnaire which obtains information on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued which cover one or more of the specific topics. The present report is based on data collected in household interviews during 1969 and 1970.

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

#### Statistical Design of the Health Interview Survey

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

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

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

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

Area segments which are defined geographically.

List segments, using 1960 census registers as the frame.

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

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

The usual HIS sample consists of approximately 8,000 segments which yield a probability sample of about 134,000 persons in 42,000 interviewed households in a year. However, the first quarter of 1970 contained a sample reduction of 7 full weeks of interviewing due to budgetary restrictions, whereas the remaining quarters each contained the full 13 weeks. During the 45 weeks in 1970 the sample was composed of approximately 37,000 households containing about 116,000 persons living at the time of the interview. Comparability with previous annual estimates is not affected by the reduced sample since the weighting procedure employed by the Health Interview Survey adjusts for the missing weeks although the sampling errors are somewhat higher for 1970 estimates. Thus for 1969 and 1970 the sample comprised about 79,000 households containing about 250,000 persons.

Descriptive material on data collection, field procedures, and questionnaire development in the HIS has been published<sup>8</sup> as well as a detailed description of the sample design<sup>9</sup> and a report on the estimation procedure and the

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

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

method used to calculate sampling errors of estimates derived from the survey.<sup>10</sup>

*Collection of data.*—Field operations for the survey are performed by the U.S. Bureau of the Census under specifications established by the National Center for Health Statistics. In accordance with these specifications the Bureau of the Census participates in survey planning, selects the sample, and conducts the field interviewing as an agent of NCHS. The data are coded, edited, and tabulated by NCHS.

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

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

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

first-stage and poststratified ratio adjustments take the form of multiplication factors applied to the weight of each elementary unit (person, household, condition, and hospitalization).

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

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

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

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

## General Qualifications

*Nonresponse.*—Data were adjusted for nonresponse by a procedure which imputes to persons in a household which was not interviewed the characteristics of persons in households in the same segment which were interviewed. The total noninterview rate was about 5 percent—1 percent was refusal, and the remainder was primarily due to the failure to find an eligible respondent at home after repeated calls.

*The interview process.*—The statistics presented in this report are based on replies obtained in interviews with persons in the sample households. For children and for adults not present in the home at the time of the interview, the information was obtained from a related household member such as a spouse or the mother of a child.

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

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

*Population figures.*—Some of the published tables include population figures for specified categories. Except for certain overall totals by

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

### Reliability of Estimates

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

As in any survey, the results are also subject to reporting and processing errors and errors due to nonresponse. To the extent possible, these types of errors were kept to a minimum by methods built into survey procedures. Although it is very difficult to measure the extent of bias in the Health Interview Survey, a number of studies have been conducted to study this problem. The results have been published in several reports.<sup>11-14</sup>

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<sup>11</sup> National Center for Health Statistics: Health interview responses compared with medical records. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 7. Public Health Service. Washington. U.S. Government Printing Office, July 1965.

<sup>12</sup> National Center for Health Statistics: Comparison of hospitalization reporting in three survey procedures. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 8. Public Health Service. Washington. U.S. Government Printing Office, July 1965.

<sup>13</sup> National Center for Health Statistics: Interview data on chronic conditions compared with information derived from medical records. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 23. Public Health Service. Washington. U.S. Government Printing Office, May 1967.

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the standard error also reflects part of the variation which arises in the measurement process. It does not include estimates of any biases which might be in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error and about 99 out of 100 that it would be less than 2½ times as large.

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

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

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

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<sup>14</sup> National Center for Health Statistics: The influence of interviewer and respondent psychological and behavioral variables on the reporting in household interviews. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 26. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1968.



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

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

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

- Type A.* Statistics on prevalence and incidence for which the period of reference in the questionnaire is 12 months.
- Type B.* Incidence-type statistics for which the period of reference in the questionnaire is 2 weeks.
- Type C.* Statistics for which the reference period is 6 months.

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

*General rules for determining relative sampling errors.*—The “guide” on page 45, together with the following rules, will enable the reader to determine approximate relative standard errors from the charts for estimates presented in this report.

- Rule 1. *Estimates of aggregates:* Approximate relative standard errors for estimates of aggregates such as the number of persons with a given characteristic are obtained from appropriate curves on page 46. The number of persons in the total U.S. population or in an age-sex-color class of the total population is adjusted to official Bureau of the Census figures and is not subject to sampling error.
- Rule 2. *Estimates of percentages in a percent distribution:* Relative standard errors for percentages in a percent distribution of a total are obtained from appropriate curves on pages 47, 48. For values which do not fall on one of the curves present-

ed in the chart, visual interpolation will provide a satisfactory approximation.

- Rule 3. *Estimates of rates where the numerator is a subclass of the denominator:* This rule applies for prevalence rates or where a unit of the numerator occurs, with few exceptions, only once in the year for any one unit in the denominator. For example, in computing the rate of visual impairments per 1,000 population, the numerator consisting of persons with the impairment is a subclass of the denominator, which 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 P4AN-M. Rates per 1,000, or on any other base, must first be converted to rates per 100; then the percentage chart will provide the relative standard error per 100.
- Rule 4. *Estimates of rates where the numerator is not a subclass of the denominator:* This rule applies where a unit of the numerator often occurs more than once for any one unit in the denominator. For example, in the computation of the number of persons injured per 100 currently employed persons per year, it is possible that a person in the denominator could have sustained more than one of the injuries included in the numerator. Approximate relative standard errors for rates of this kind may be computed as follows:
  - (a) Where the denominator is the total U.S. population or includes all persons in one or more of the age-sex-color groups of the total population, the relative error of the rate is equivalent to the relative error of the numerator, which can be obtained directly from the appropriate chart.
  - (b) In other cases the relative standard error of the numerator and of the denominator can be obtained from

the appropriate curve. Square each of these relative errors, add the resulting values, and extract the square root of the sum. This procedure will result in an upper bound on the standard error and often will overstate the error.

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

$$d = X_1 - X_2$$

### 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:

is

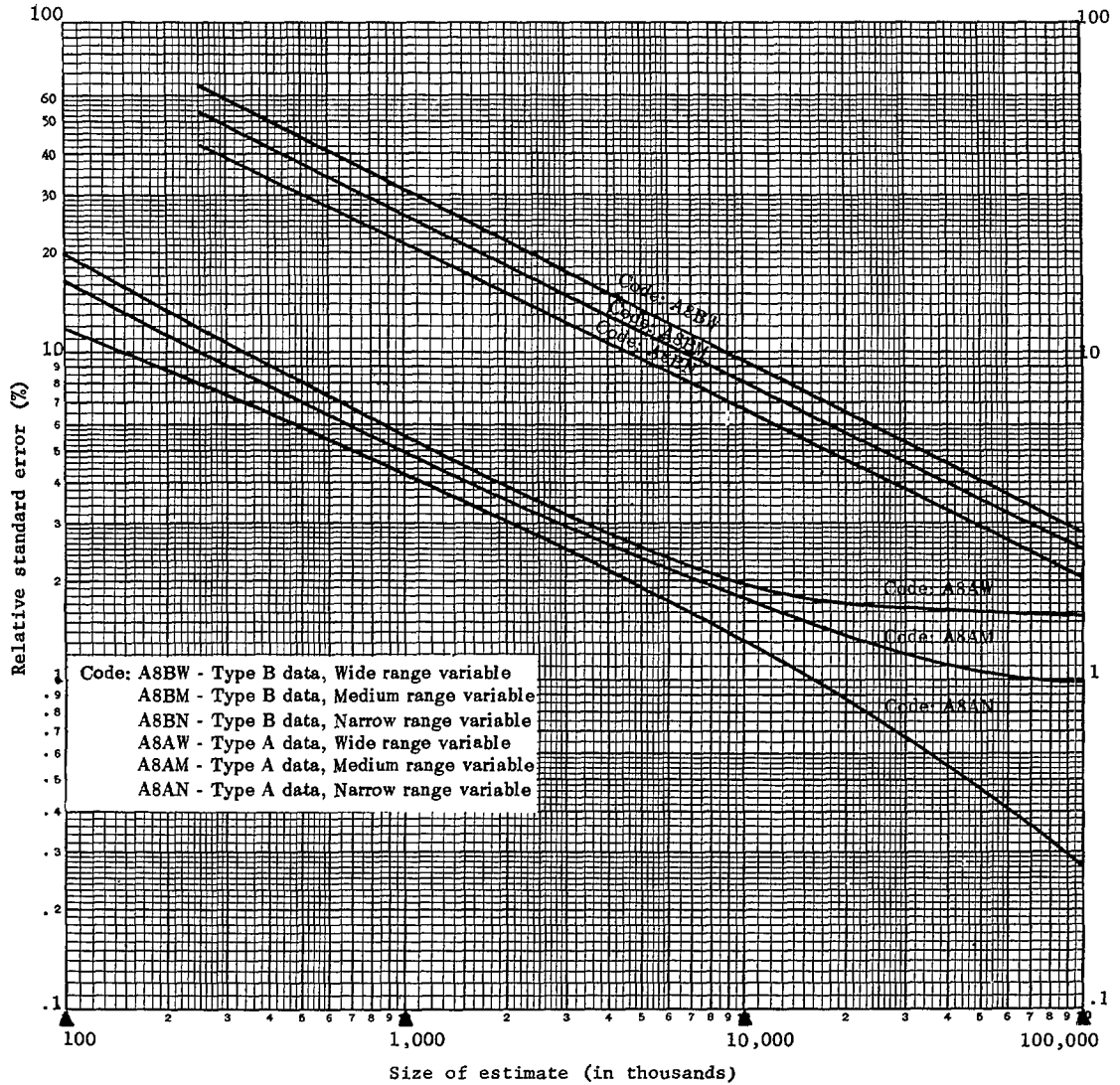
$$\sigma_d = \sqrt{(X_1 V_{x1})^2 + (X_2 V_{x2})^2}$$

where  $X_1$  is the estimate for class 1,  $X_2$  is the estimate for class 2, and  $V_{x1}$  and  $V_{x2}$  are the relative errors of  $X_1$  and  $X_2$  respectively. This formula will represent the actual standard error quite accurately for the difference between separate and uncorrelated characteristics although it is only a rough approximation in most other cases. The relative standard error of each estimate involved in such a difference can be determined by one of the four rules above, whichever is appropriate.

(1) A = aggregate, P = percentage; (2) the number of calendar quarters of data collection; (3) the type of statistic as described on page 44 and (4) the range of the statistic as described on pages 43 and 44.

Statistic	Use:		
	Rule	Code	On page
Number of:			
Persons in the U.S. population or in any age-sex-color category thereof . . . . .		Not subject to sampling error	
Persons with limitation of activity and mobility by characteristic . . . . .	1	ABAN	46
Persons in any other population group . . . . .	1	ABAN	46
Chronic conditions, by type . . . . .	1	ABAN	46
Percentage distribution of:			
Persons with limitation of activity and mobility by characteristic . . . . .	2	P8AN-M	47
Persons with bed disability days in past year . . . . .	2	P4AN-M	48
Chronic conditions, by type . . . . .	2	P8AN-M	47
Number of chronic conditions per person in the U.S. population or any age-sex-color group thereof . . . . .	4(a)	ABAM	46
Number of chronic conditions per person in any other population group . . . . .	4(b)	{ Numer.: ABAM Denom.: ABAN	46 46

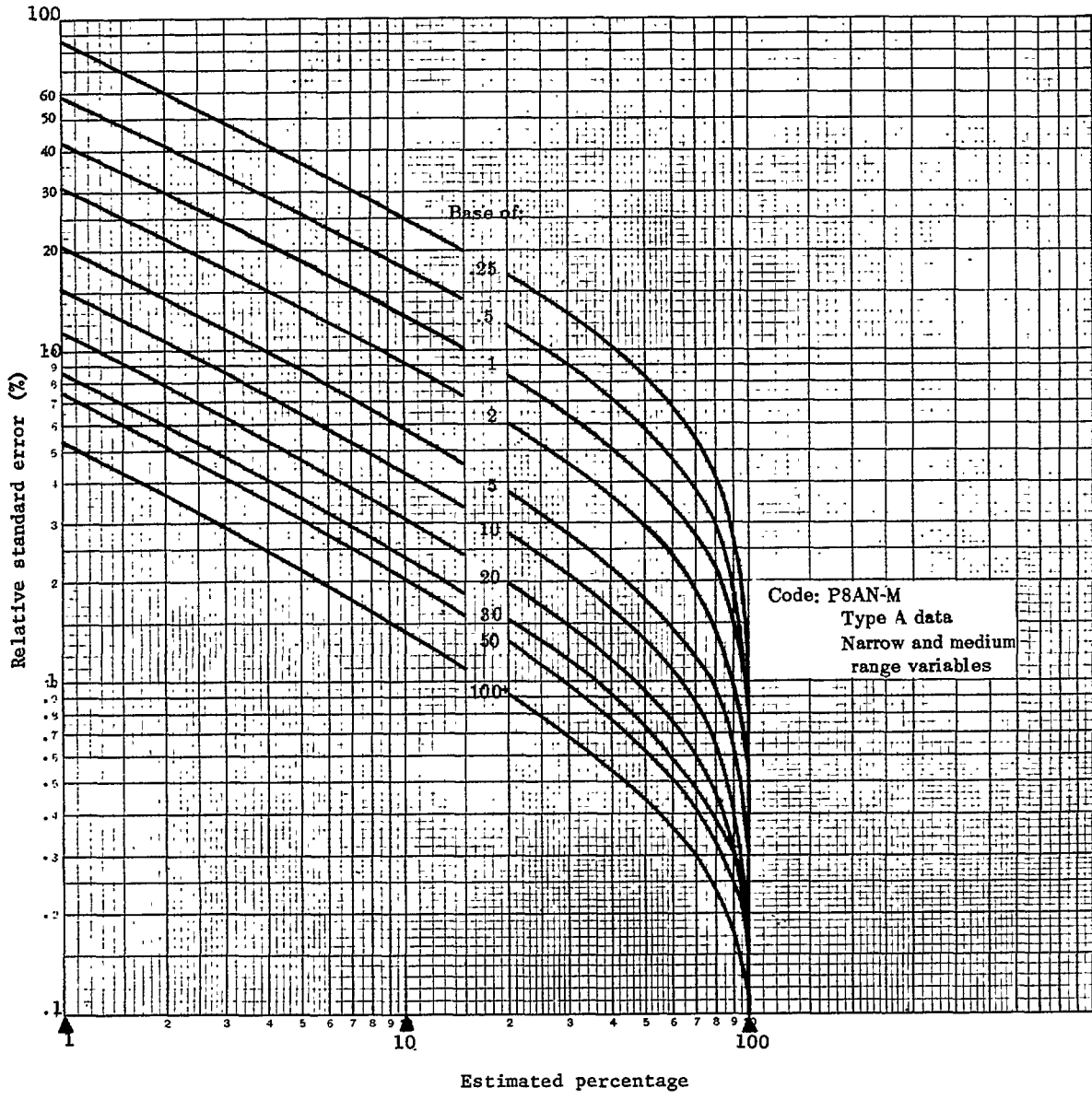
Relative standard errors for aggregates based on eight quarters of data collection  
for data of all types and ranges



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 error of 930,000 (9.3 percent of 10,000,000).

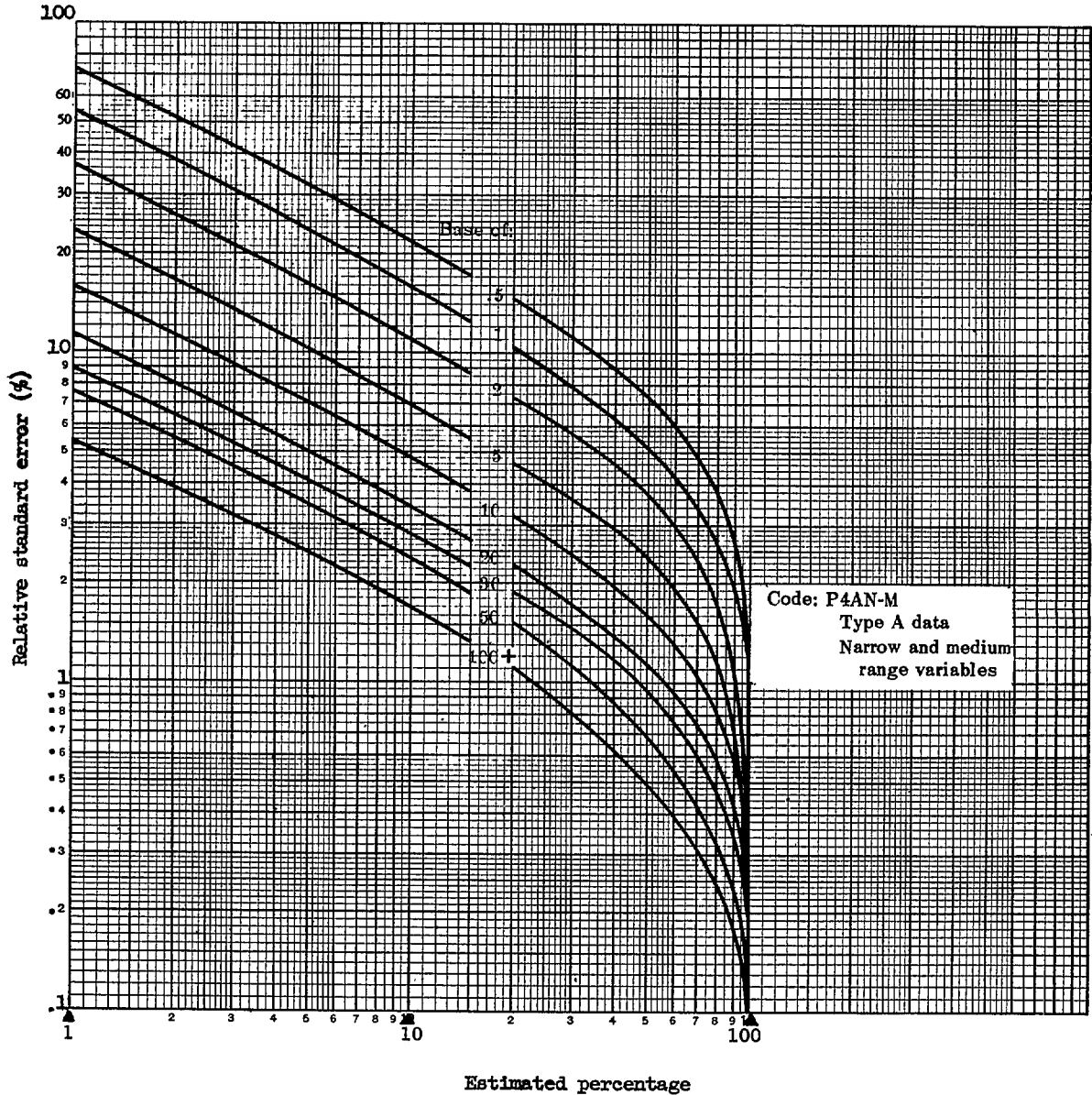
Relative standard errors for percentages based on eight quarters of data collection  
for type A data, Narrow and Medium range

(Base of percentage shown on curves in millions)

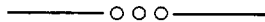


Example of use of chart: An estimate of 20 percent (on scale at bottom of chart) based on an estimate of 10,000,000 has a relative standard error of 2.8 percent (read from the scale at the left side of the chart), the point at which the curve for a base of 10,000,000 intersects the vertical line for 20 percent. The standard error in percentage points is equal to 20 percent X 2.8 percent or 0.56 percentage points.

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



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



## APPENDIX II

### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

#### Terms Relating to Conditions

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

Conditions except impairments are classified by type according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*,<sup>15</sup> with certain modifications adopted to make the code more suitable for household interview survey.

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

<sup>15</sup> National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

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

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

tional impairment and etiology. The impairment classification is shown in *Vital and Health Statistics*, Series 10, No. 48.

*Chronic condition groups.*—The 30 condition groups shown in this report and the International Classification code numbers used are listed in figure I.

*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.

Condition Causing Activity Limitation	International Classification Code Number
Tuberculosis, all forms . . . . .	010-018
Malignant neoplasms . . . . .	140-209
Benign and unspecified neoplasms . . . . .	210-239
Diabetes . . . . .	250
Mental and nervous conditions . . . . .	290-304, 305.0, 305.3, 305.5, 305.6, 306-309, 780.6, 781.5, 785.6, 786.2, 790.0, 790.2
Heart conditions . . . . .	390-398, 402, 404, 410-429, 782.1, 782.2, 782.4
Cerebrovascular disease . . . . .	430-438
Hypertension without heart involvement . . . . .	400, 401, 403
Varicose veins . . . . .	454, 456
Hemorrhoids . . . . .	455
Other conditions of circulatory system . . . . .	440-453, 457, 458, 782.0, 782.3, 782.5-9
Chronic bronchitis . . . . .	490, 491
Emphysema . . . . .	492
Asthma, with or without hay fever . . . . .	493
Hay fever, without asthma . . . . .	507
Chronic sinusitis . . . . .	503
Other conditions of respiratory system . . . . .	470-486, 500-502, 504-506, 508-519, 783
Peptic ulcer . . . . .	531-534
Hernia . . . . .	550-553
Other conditions of digestive system . . . . .	520.3, 520.4, 520.6-521.5, 521.7-523, 525-530, 535-543, 560-577, 784, 785.0-785.5, 785.7, 785.8
Diseases of kidney and ureter . . . . .	581-584, 590-593
Other conditions of genitourinary system . . . . .	594-611, 613-629, 786.0, 786.1, 786.3-786.7, 789
Arthritis and rheumatism . . . . .	710-716, 717.0, 717.1, 717.9, 718
Other musculoskeletal disorders . . . . .	720-723, 725, 728-732, 733.0, 733.2, 733.3, 733.6, 733.9, 734
Visual impairments . . . . .	} See definition of impairment.
Hearing impairments . . . . .	
Paralysis, complete or partial . . . . .	
Impairments (except paralysis) of back or spine . . . . .	
Impairments (except paralysis and absence) of upper extremities and shoulders . . . . .	
Impairments (except paralysis and absence) of lower extremities and hips . . . . .	
Condition not specified:	
Old age	
Other	

Figure I

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

### Terms Relating to Disability

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

1. *Persons unable to carry on major activity for their group* (major activity refers to ability to work, keep house, or engage in school or preschool activities)

Preschool children:

Inability to take part in ordinary play with other children.

School-age children:

Inability to go to school.

Housewives:

Inability to do any housework.

Workers and all other persons:

Inability to work at a job or business.

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

Preschool children:

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

School-age children:

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

Housewives:

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

Workers and all other persons:

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

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

Preschool children:

Not classified in this category.

School-age children:

Not limited in going to school but limited in participation in athletics or other extracurricular activities.

Housewives:

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

Workers and all other persons:

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

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



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

### Demographic Terms

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

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

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

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

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

*Education of individual.*—Each person aged 17 years or older is classified by education in terms of the highest grade of school completed.

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

The categories of usual activity used in this report for persons aged 17 years and over are *usually working, usually going to school, usually keeping house, retired, and other activity*. For several reasons these categories are not comparable with somewhat similarly named categories in official Federal labor force statistics. First, the responses concerning usual activity are accepted without detailed questioning since the objective of the question is not to estimate the numbers of persons in labor force categories but to identify crudely certain population groups which may have differing health problems. Second, the figures represent the usual activity status over the period of an entire year, whereas official labor force statistics relate to a much shorter period, usually 1 week. Third, the minimum age for usually working persons is 17 in the Health Interview Survey, and the official labor force categories include all persons aged 14 or older. Finally, in the definitions of specific categories which follow, certain marginal groups are classified differently to simplify procedures.

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

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

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

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

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

*Geographic region.*—For the purpose of classifying the population by geographic area, the States are grouped into four regions. These regions, which correspond to those used by the U.S. Bureau of the Census, are shown in figure II.

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

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

The definition of an individual SMSA involves two considerations: first, a city or cities of specified population which constitute the central city and identify the county in which it is located as the central county; second, economic and social relationships with contiguous counties (except in New England) which are metropolitan in character so that the periphery of the specific metropolitan area may be determined. SMSA's are not limited by State boundaries. In New England

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

Figure II

SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1960 census and does not include any subsequent additions or changes.

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

lation of 25,000. An exception occurs where two cities have contiguous boundaries and constitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

*Farm and nonfarm residence.*—The population residing outside SMSA's is subdivided into the farm population, which comprises all non-SMSA residents living on farms, and the nonfarm population, which comprises the remaining outside SMSA population. The farm population includes persons living on places of 10 acres or more from which sales of farm products amounted to \$50 or more during the previous 12 months or

on places of less than 10 acres from which sales of farm products amounted to \$250 or more during the preceding 12 months. Other persons living outside an SMSA were classified as non-farm if their household paid rent for the house but their rent did not include any land used for farming.

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



### APPENDIX III

## PROBE QUESTIONS ON LIMITATION OF ACTIVITY, 1970

Ages 17+	<p>17a. What was --- doing most of the past 12 months - (For males): working or doing something else? If "something else," ask: (For females): keeping house, working or doing something else?</p> <p>b. What was --- doing? If 45+ years and was not "working," "keeping house," or "going to school," ask:</p> <p>c. Is --- retired?</p> <p>d. If "Retired," ask: Did he retire because of his health?</p>	17. and 18.	<p>1 <input type="checkbox"/> Working (22a)</p> <p>2 <input type="checkbox"/> Keeping house (22b)</p> <p>3 <input type="checkbox"/> Retired, health (21)</p> <p>4 <input type="checkbox"/> Retired, other (21)</p> <p>5 <input type="checkbox"/> Going to school (24)</p> <p>6 <input type="checkbox"/> 17+ something else (21)</p> <p>7 <input type="checkbox"/> 6-16 something else (23)</p>
Ages 6 - 16	<p>18a. What was --- doing most of the past 12 months - going to school or doing something else? If "something else," ask:</p> <p>b. What was --- doing?</p>		
Ages under 6			<p>0 <input type="checkbox"/> 1-5 yrs. (19)</p> <p>0 <input type="checkbox"/> Under 1 (20)</p>
	19a. Is --- able to take part at all in ordinary play with other children?	19a.	Y                      1 N (26)
	b. Is he limited in the kind of play he can do because of his health?	b.	2 Y (26)                      N
	c. Is he limited in the amount of play because of his health?	c.	2 Y (26)                      N (25)
	20a. Is --- limited in any way because of his health?	20a.	Y                      5 N (NP)
	b. In what way is he limited?	b.	_____ (26)
	21a. Does --- health now keep him from working?	21a.	1 Y (26)                      N
	b. Is he limited in the kind of work he could do because of his health?	b.	2 Y (26)                      N
	c. Is he limited in the amount of work he could do because of his health?	c.	2 Y (26)                      N
	d. Is he limited in the kind or amount of other activities because of his health?	d.	3 Y (26)                      N (25)
	22a. Does --- now have a job?	22a.	Y (22c)                      N
	b. In terms of health, is --- able to (work - keep house) at all?	b.	Y                      1 N (26)
	c. Is he limited in the kind of (work - housework) he can do because of his health?	c.	2 Y (26)                      N
	d. Is he limited in the amount of (work - housework) he can do because of his health?	d.	2 Y (26)                      N
	e. Is he limited in the kind or amount of other activities because of his health?	e.	3 Y (26)                      N (25)
	23. In terms of health would --- be able to go to school?	23.	Y                      1 N (26)
	24a. Does (would) --- have to go to a certain type of school because of his health?	24a.	2 Y (26)                      N
	b. Is he (would he be) limited in school attendance because of his health?	b.	2 Y (26)                      N
	c. Is he limited in the kind or amount of other activities because of his health?	c.	3 Y (26)                      N (25)
	25a. Is --- limited in ANY WAY because of a disability or health?	25a.	4 Y                      5 N (NP)
	b. In what way is he limited? Record limitation, not condition	b.	_____
	26. About how long has he <span style="font-size: 1.2em;">{</span> been limited in --- been unable to --- had to go to a certain type of school? <span style="font-size: 1.2em;">}</span>	26.	000 <input type="checkbox"/> Less than 1 month
			1 ___ Mos.      2 ___ Yrs.
	27a. What (other) condition causes this limitation?	27a.	Enter condition in item C and ask b <input type="checkbox"/> Old age only (NP)
	If "old age" only, ask: Is this limitation caused by any specific condition?		
	b. Is this limitation caused by any other condition?	b.	Y (Reask a and b)                      N
	If 2+ conditions reported in Q. 27a, ask:		
	c. Which of these conditions would you say is the MAIN cause of his limitation?	c.	<input type="checkbox"/> Only 1 condition _____ Enter main condition



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