

# **Prevalence of Selected Chronic Digestive Conditions**

## **United States - July-December 1968**

Statistics on prevalence of chronic digestive conditions by measures of impact of the conditions and selected demographic characteristics. Based on data collected in the Health Interview Survey during the period July-December 1968.

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

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**SYMBOLS**

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

# PREVALENCE OF SELECTED CHRONIC DIGESTIVE CONDITIONS

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## Introduction

This report on chronic digestive conditions is the first of a new series of reports on the prevalence of selected chronic conditions based on data collected as a part of the Health Interview Survey. Estimates of the prevalence of chronic diseases or impairments have been made from information reported in the Health Interview Survey since its inception in July of 1957. Since that time efforts have been made to improve the quality of the data on the prevalence of chronic conditions. Chronic conditions reported in interviews may be described as those of which the respondent is aware and which he is willing to report to an interviewer. The diagnostic accuracy of reported conditions is dependent on the information the attending physician has passed on to the family or, in the absence of medical attention, on the previous medical experience or education of the family.

Prior to 1968 in the Health Interview Survey an attempt was made to obtain data on all chronic conditions that respondents had had during the 12-month period before the date of the interview; checklists of about 40 to 50 chronic conditions and impairments were used. Beginning in 1968 the procedure was changed, and data were obtained only for chronic conditions within one system of conditions each year (although data on all conditions causing long term limitations of activity, disability days, and physician visits were still obtained). In 1968 respondents were read a list of 25 conditions, the majority of which were digestive conditions (see

question 16a, appendix III). A more detailed discussion of basic changes made in 1968 can be found in *Vital and Health Statistics*, Series 2, Number 48.

The reported conditions were coded to the Seventh Revision of the International Classification of Diseases, and the digestive conditions were further collapsed into the 10 chronic digestive condition groups shown in table A.

With the exception of several reports made in the early years of the Health Interview Survey,<sup>1-6</sup> data on the prevalence of specific chronic diseases from the survey have not been published. It was felt that the new procedures with the more extensive checklist of specific conditions would result in more complete reporting of chronic diseases. Also, under the new procedures more detailed information was obtained about each of the reported chronic conditions in terms of the impact on the individual. Because of these changes in the questionnaire design, comparisons of the prevalence data shown here with earlier published or unpublished estimates would be misleading in many instances. However, the estimates of the prevalence of hernias and ulcers, which are based on very similar questions, have not changed markedly over the 11 years of the survey.

Methodological studies have shown that chronic conditions are generally underreported in interview surveys. Respondents in health interviews tend to report conditions of which they are aware and which they are willing to report to the interviewer. Reporting is better for those conditions which have made a significant impact

Table A. Prevalence of selected chronic digestive conditions reported in health interviews, rate per 1,000 persons, percent of conditions by measures of impact, and duration of disability days in past year: United States, July-December 1968

	Chronic condition and ICD code	Prevalence	
		Number in thousands	Rate per 1,000 persons
1	Ulcer of stomach and duodenum-----540-542	3,360	17.2
2	Hernia of abdominal cavity-----560,561	3,191	16.3
3	Functional and symptomatic upper gastrointestinal disorder-----544,784.0-784.3,784.5,784.6,784.8	2,564	13.1
4	Gallbladder condition-----584-586	2,013	10.3
5	Chronic enteritis and ulcerative colitis-----572	1,827	9.3
6	Gastritis and duodenitis-----543	1,691	8.6
7	Frequent constipation-----573.0	4,654	23.8
8	Intestinal condition <sup>1</sup> -----573.1-573.3,785.4	820	4.2
9	Liver condition-----580-583	284	1.4
10	Stomach trouble N.O.S-----...	520	2.7

<sup>1</sup>Includes "intestinal or bowel trouble" not otherwise specified (N.O.S.).

on the affected individual and his family. Conditions that are severe or costly or require treatment tend to be better reported than conditions having lesser impact. For instance a condition which has caused limitation of activity, visits to the doctor, or days in bed is more likely to be reported in the interview than a condition which has little or no impact on the person.

The last section of this report summarizes several of the methodological studies of completeness of reporting chronic conditions in health interviews which have been conducted in the Health Interview Survey.

Because methodological studies show that chronic conditions having greater impact are better reported, published data on chronic conditions other than physical impairments have been restricted in recent years to those causing limitation of activity or mobility. In Series 10 of *Vital*

*and Health Statistics* detailed information on the causes of limitation have been presented in reports numbered 17, 51, 61, and 80.

Methodological studies have also indicated that inclusion of a checklist of descriptive condition titles as part of the interview questionnaire will increase the probability that a respondent will recognize the terms and report those of which he is aware.

The data in this report will be presented in two parts. The first presents prevalence estimates of the selected chronic digestive conditions along with several measures of impact such as long and short term disability, medical attention, and degree to which the conditions bother the person. The second section presents a series of charts and tables on the distribution of the digestive conditions by selected demographic characteristics.

Table A. Prevalence of selected chronic digestive conditions reported in health interviews, rate per 1,000 persons, percent of conditions by measures of impact, and duration of disability days in past year: United States, July-December 1968—Con.

Percent of conditions--				Disability days				
Causing limitation of activity	With 1 or more bed-days in past year	With doctor ever seen	With 1 or more physician visits in past year	Restricted-activity days per condition per year	Bed-days per condition per year	Bed-days per bed-disabling condition per year	Work-loss days per condition per year	
10.9	24.6	97.9	58.9	18.0	6.3	25.7	2.2	1
16.0	24.3	91.9	55.8	16.9	4.9	20.3	1.9	2
*	8.1	70.4	36.4	7.3	2.2	27.5	*	3
7.1	36.7	96.0	61.8	19.8	8.7	23.7	1.2	4
6.4	20.0	93.3	54.1	13.2	3.9	19.7	1.2	5
*	17.9	83.1	50.7	8.5	3.3	18.3	*	6
*	2.6	70.0	32.5	2.5	0.5	19.3	*	7
7.7	17.3	94.0	56.0	15.6	5.6	32.4	1.6	8
19.4	33.8	96.1	65.8	23.2	8.0	23.7	*	9
10.6	21.9	86.2	54.0	16.1	3.8	17.5	*	10

## SOURCE AND LIMITATIONS OF THE DATA

The estimates presented in this report were derived from responses to household interviews conducted in a probability sample of the civilian noninstitutionalized population of the United States. The sample is designed so that interviews are conducted each week throughout the year. During 1968 the sample was composed of approximately 42,000 households in which 134,000 persons were residing at the time of the interview. Data in this report are based on interviews conducted in approximately 21,000 households during the period from July to December 1968.

A description of the design of the survey, the methods used in estimation, and general qualifications of the data obtained from the surveys is presented in appendix I. Since the esti-

mates 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" and to the sampling error charts. 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.

Certain terms used in this publication are defined in appendix II.

Appendix III illustrates the portions of the questionnaire which were used to obtain information about chronic digestive conditions. The full questionnaire used in 1968 is illustrated in appendix III of the Current Estimates report for 1968 (Series 10, Number 60).

In addition to the limitations of the data on the prevalence of chronic conditions reported in health interviews explained in the introduction, it should be pointed out that the restriction of the survey to the civilian population not confined to institutions affects the estimated prevalence. The omission of the institutionalized population reduces the prevalence estimates since the proportion of persons with chronic conditions in institutions is high.<sup>a</sup>

## PREVALENCE AND IMPACT OF CHRONIC DIGESTIVE CONDITIONS

Estimates of the number of persons in the civilian noninstitutionalized population with selected chronic digestive diseases based on data from health interviews is shown in table A. The most commonly reported condition is frequent constipation; it is followed by ulcer of the stomach and duodenum and hernia of the abdominal cavity.<sup>b</sup> There are an estimated 3,360,000 cases of ulcer and 3,191,000 cases of hernia. The prevalence of digestive conditions varies considerably by age and sex, as shown in table 1. While the figures shown in this report are estimates of the number of cases of the selected diseases, they can generally be interpreted as the number of people with the specific conditions since very rarely do

respondents report more than one condition in any one of the 10 categories shown.<sup>c</sup>

The term prevalence means the number of some item existing at a given point of time; this term is usually stated as point-prevalence. Another definition of prevalence in use is the average number of some items existing during a specified interval of time. The latter definition is the one used for the Health Interview Survey. Conditions reported in the interview as being present during the past 12 months were counted as chronic if they were on the list of those conditions always considered chronic regardless of onset or if they had their onset more than 3 months prior to the week of interview and lasted more than 3 months. The chronic conditions reported in this manner are all assumed to be present at a given point in time and therefore approximate point-prevalence.

<sup>c</sup>The estimates of the prevalence of the 10 digestive conditions presented in this report are estimates of the number of cases in each disease category, with no attempt to account for persons who have more than one digestive condition. A summation of the 10 chronic digestive conditions categories indicate an estimated 20,924,000 conditions among the civilian noninstitutionalized population. However, this should not be interpreted as 21 million persons with these conditions since persons can have several digestive diseases at one time. The following figures show the estimated number of persons with one or more of the 10 digestive conditions by age:

	Number
All ages . . . . .	17,061,000
Under 17 years . . . . .	1,014,000
17-44 years . . . . .	5,263,000
45-64 years . . . . .	6,176,000
65 years and over . . . . .	4,609,000

<sup>a</sup>Some indication of the prevalence of digestive conditions among the institutionalized population may be obtained from the report "Prevalence of Chronic Conditions and Impairments among Residents of Nursing and Personal Care Homes, United States, May-June 1964" (Series 12, Number 8). The survey for this study covered an estimated 554,000 persons in the institutional population. An estimated 17.6 persons per 1,000 residents were reported to have ulcer of the stomach or duodenum, 35.5 per 1,000 had hernia of the abdominal cavity, and 124.4 per 1,000 residents had other chronic conditions of the digestive system.

<sup>b</sup>In addition to the data shown in this report, there were an estimated 744,000 "other chronic digestive diseases," based on responses to the checklist of digestive conditions that could not be coded to the disease categories shown in this report. These include appendicitis, diseases of the esophagus, diseases of the pancreas, and other digestive diseases reported in response to the checklist. However, these should not be interpreted as all the other existing digestive diseases.

Both the estimate of 21 million selected digestive conditions and 17 million persons with selected digestive conditions have a severe shortcoming since they combine conditions with a wide range of diagnostic accuracy, severity, and impact. For example, the estimate of 17 million persons combines together persons with frequent constipation, 30 percent of whom have never seen a doctor for their condition, with persons who have severe ulcers or hernias. Because of this shortcoming, further analysis of persons with digestive diseases will not be presented here. However, researchers who would like estimates of the number of persons with specific combinations of digestive conditions should contact the Division of Health Interview Statistics directly.

Figures on the overall prevalence of selected chronic digestive conditions do not reflect the wide range of severity or level of impact of the various conditions. Table A presents data on the impact of each of the digestive conditions, that is, the proportion of the conditions that caused limitation of activity, resulted in 1 or more bed-days or physician visits during the previous year, or had ever been medically attended and the number of restricted-activity and bed-days per condition per year. While frequent constipation is the most commonly reported digestive condition, it has the lowest level of impact with virtually no limitation of activity, less than 3 percent of these conditions causing bed-disability, and 30 percent of them never having been medically attended. On the other hand, liver conditions have a very low prevalence but a high level of impact. Almost 20 percent of the

liver conditions caused limitation of activity, one-third caused bed-disability, and two-thirds were medically attended in the past year. With the exception of functional upper gastrointestinal disorders and constipation (which are most easily self-diagnosed), most digestive conditions had been attended by a doctor at some time and one-half to two-thirds of the conditions were medically attended during the preceding year. In fact, it should probably be assumed that virtually all persons who reported such conditions as ulcer, hernia, gallbladder, or liver conditions had seen a doctor at some time about it. Conditions with no reported medical attention can probably be attributed to an unknown answer on the part of a proxy respondent or a misunderstanding of the questions on whether a doctor had ever been seen. Table B shows the proportion of persons with the se-

Table B. Prevalence of selected chronic digestive conditions reported in health interviews and percent distribution of conditions by number of times doctor was seen in past 12 months: United States, July-December 1968

Selected chronic condition <sup>1</sup>	Prevalence in thousands	Number of physician visits					Un-known
		Total	None	1	2-4	5 or more	
		Percent distribution					
Ulcer of stomach and duodenum-----	3,360	100.0	36.4	17.1	23.7	18.2	4.6
Hernia of abdominal cavity-----	3,191	100.0	31.9	20.1	25.4	10.4	12.3
Functional and symptomatic upper gastrointestinal disorder-----	2,564	100.0	29.8	14.1	15.2	7.0	33.9
Gallbladder condition-----	2,013	100.0	30.1	17.2	25.2	19.5	8.1
Chronic enteritis and ulcerative colitis-----	1,827	100.0	34.5	18.2	22.6	13.4	11.4
Gastritis and duodenitis-----	1,691	100.0	29.9	17.0	20.6	13.2	19.4
Frequent constipation-----	4,654	100.0	33.1	13.4	12.8	6.3	34.4
Intestinal condition-----	820	100.0	34.3	19.5	20.4	16.2	9.8
Liver condition-----	284	100.0	28.5	*	*	33.5	*
Stomach trouble N.O.S-----	520	100.0	26.0	12.3	17.1	24.6	20.0

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

lected digestive conditions who had seen a doctor only once, two to four times, or five or more times during the preceding 12 months.

Five different measures of disability are shown in table A for each of the chronic digestive conditions. The most severe measure is the percent of conditions causing long term limitation of activity. These are conditions which result in inability to carry on the usual activity for one's age-sex group such as working, keeping house, or going to school, restriction in the kind or amount of usual activity, or restriction in relation to other activities (civic, church, or recreational). Among the specific digestive conditions, hernias and liver conditions result in the highest levels of limitation of activity, with 16.0 and 19.4 percent of these conditions, respectively, causing some form of long term limitation. Table A also presents data on short term disability

such as restricted-activity days and bed-disability days (see appendix II for definitions). Bed-disability days are included in the total number of restricted-activity days. The number of restricted-activity and bed-disability days per condition per year are based on the 2-week recall questions (questions 10-14, Detailed Condition Questions, appendix III), while the data on the percent of persons with 1 or more bed-days and the more detailed data on bed-disability shown in table C are based on 12-month recall questions (question 24, Detailed Condition Questions, appendix III). Most of the digestive conditions are not bed-disabling. About one-third of the liver and gallbladder conditions and one-quarter of hernias and ulcers resulted in some bed-disability during the year. While there was a wide range in the proportion of conditions that were bed-disabling, the average number of

Table C. Prevalence of selected chronic digestive conditions reported in health interviews and percent distribution of conditions by number of bed-days in the past 12 months: United States, July-December 1968

Selected chronic condition <sup>1</sup>	Prevalence in thousands	Number of bed-days					
		Total	None	1-7	8-14	15-30	31 or more
		Percent distribution					
Ulcer of stomach and duodenum-----	3,360	100.0	75.4	12.7	4.9	3.6	3.4
Hernia of abdominal cavity-----	3,191	100.0	75.7	12.6	6.3	2.9	2.6
Functional and symptomatic upper gastrointestinal disorder-----	2,564	100.0	91.9	5.3	*	*	*
Gallbladder condition-----	2,013	100.0	63.3	15.2	10.1	8.0	3.5
Chronic enteritis and ulcerative colitis-----	1,827	100.0	80.1	11.9	2.8	*	2.8
Gastritis and duodenitis-----	1,691	100.0	82.1	12.2	*	*	*
Frequent constipation-----	4,654	100.0	97.4	1.7	*	*	*
Intestinal condition-----	820	100.0	82.7	11.3	*	*	*
Liver condition-----	284	100.0	66.5	*	*	*	*
Stomach trouble N.O.S-----	520	100.0	78.3	14.6	*	*	*

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

Table D. Prevalence of selected chronic digestive conditions reported in health interviews and percent of conditions by whether ever hospitalized or surgically treated or now under medical treatment recommended by doctor: United States, July-December 1968

Selected chronic condition <sup>1</sup>	Prevalence in thousands	Percent of conditions for which—		
		Ever hospitalized	Ever had surgery	Now under treatment or medication recommended by a doctor
		Percent		
Ulcer of stomach and duodenum-----	3,360	40.6	6.9	61.1
Hernia of abdominal cavity-----	3,191	34.4	26.9	18.6
Functional and symptomatic upper gastrointestinal disorder-----	2,564	8.0	*	31.7
Gallbladder condition-----	2,013	38.8	19.8	37.3
Chronic enteritis and ulcerative colitis-----	1,827	27.4	5.0	45.5
Gastritis and duodenitis-----	1,691	16.8	*	43.0
Frequent constipation-----	4,654	3.9	1.9	38.2
Intestinal condition-----	820	21.8	6.2	47.1
Liver condition-----	284	34.2	*	45.4
Stomach trouble N.O.S-----	520	24.8	*	40.0

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

bed-days per bed-disabling condition generally ranged between 20 and 30 days per year. Thus, while less than 3 percent of the cases of frequent constipation were bed-disabling, the average number of days in bed for these cases was about the same for hernia, for which 25 percent of the cases had bed-disability.

Another indication of the seriousness of digestive conditions is whether or not the person had been hospitalized, had had surgery for a given condition, or were being treated for the condition by a doctor. With the exception of functional and symptomatic upper gastrointestinal disorders and frequent constipation, for which there is very little hospitalization, approximately 20 to 40 percent of the digestive cases

had been hospitalized at some time (table D). In addition, surgery was performed in about 20 percent of the reported gallbladder cases and about 27 percent of the hernias. Although hospitalization occurred in about 40 percent of the ulcer cases, surgery was performed in only about 7 percent of all the stomach and duodenal ulcer cases. The highest level of current treatment was among the ulcer cases, with 61 percent under treatment recommended by a doctor, and the lowest rate of treatment was about 18 percent for hernia cases. About a third to a half of all other chronic digestive diseases were under medical treatment.

A more subjective method of describing the impact of chronic conditions is to determine

Table E. Prevalence of selected chronic digestive conditions reported in health interviews as causing bother and percent distribution of conditions by frequency of bother: United States, July-December 1968

Selected chronic condition <sup>1</sup>	Prevalence in thousands	Frequency of bother					Un-known
		Total	All the time	Some of the time	Other	Never	
		Percent distribution					
Ulcer of stomach and duodenum-----	3,360	100.0	11.2	71.9	4.4	12.0	*
Hernia of abdominal cavity-----	3,191	100.0	9.7	48.8	2.9	37.2	*
Functional and symptomatic upper gastrointestinal disorder-----	2,564	100.0	10.4	83.5	2.3	*	*
Gallbladder condition-----	2,013	100.0	7.9	61.5	2.8	26.6	*
Chronic enteritis and ulcerative colitis-----	1,827	100.0	9.4	69.5	3.4	16.1	*
Gastritis and duodenitis-----	1,691	100.0	10.8	80.0	*	6.2	*
Frequent constipation-----	4,654	100.0	26.4	65.3	3.3	3.9	1.1
Intestinal condition-----	820	100.0	11.7	69.6	*	14.6	*
Liver condition-----	284	100.0	23.6	47.9	*	21.8	*
Stomach trouble N. O. S-----	520	100.0	15.2	77.9	*	*	*

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

Table F. Prevalence of selected chronic digestive conditions reported in health interviews as causing bother and percent distribution of conditions by degree condition bothers person: United States, July-December 1968

Selected chronic condition <sup>1</sup>	Prevalence in thousands	Degree condition bothers persons							Other
		Total	Bothered					Never bothered	
			All both-erations	Great deal	Some	Very little	Un-known		
		Percent distribution							
Ulcer of stomach and duodenum-----	3,360	100.0	87.2	29.8	40.7	14.9	1.8	12.0	*
Hernia of abdominal cavity-----	3,191	100.0	61.5	13.5	31.0	15.4	*	37.2	*
Functional and symptomatic upper gastrointestinal disorder-----	2,564	100.0	95.9	20.8	51.9	21.5	*	*	*
Gallbladder condition-----	2,103	100.0	72.4	26.1	32.0	13.1	*	26.6	*
Chronic enteritis and ulcerative colitis-----	1,827	100.0	82.0	24.5	38.5	16.5	*	16.1	*
Gastritis and duodenitis-----	1,691	100.0	92.7	27.9	46.1	17.4	*	6.2	*
Frequent constipation-----	4,654	100.0	94.9	20.4	50.1	22.5	1.8	3.9	1.1
Intestinal condition-----	820	100.0	83.0	28.3	38.4	15.2	*	14.6	*
Liver condition-----	284	100.0	75.4	33.5	28.9	*	*	21.8	*
Stomach trouble N.O.S-----	520	100.0	95.8	30.8	50.2	12.1	*	*	*

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

Table G. Number of selected chronic digestive conditions reported in health interviews as causing bother and percent distribution by degree condition bothers person:United States, July-December 1968

Selected chronic condition <sup>1</sup>	Number in thousands	Degree condition bothers person				
		Total	Great deal	Some	Very little	Un-known
		Percent distribution				
Ulcer of stomach and duodenum-----	2,931	100.0	34.2	46.6	17.1	2.1
Hernia of abdominal cavity-----	1,962	100.0	22.0	50.4	25.1	*
Functional and symptomatic upper gastro-intestinal disorder-----	2,460	100.0	21.7	54.1	22.4	*
Gallbladder condition-----	1,458	100.0	36.0	44.2	18.0	*
Chronic enteritis and ulcerative colitis-----	1,498	100.0	29.9	47.0	20.1	*
Gastritis and duodenitis-----	1,568	100.0	30.1	49.7	18.8	*
Frequent constipation-----	4,416	100.0	21.5	52.8	23.7	1.9
Intestinal condition-----	681	100.0	34.1	46.3	18.4	*
Liver condition-----	214	100.0	44.4	38.3	*	*
Stomach trouble N.O.S-----	498	100.0	32.1	52.4	12.7	*

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

how often and how much people are bothered by their conditions. Respondents were asked the following questions about their specific digestive conditions: "How often does this condition bother you—all of the time, often, once in a while, or never?" and "When it does bother you, are you bothered a great deal, some, or very little?" Table E shows the frequency with which people were bothered by their conditions; for example, about 12 percent of the persons with ulcers were never bothered by their condition. Table F classifies these data by the degree to which people are bothered by their condition. Again, using ulcer as an example, we can see that about 30 percent of the people with this condition were bothered by it and were bothered a great deal. Finally, table G shows data only for those persons who were bothered and by the degree to which they were bothered; thus among

those persons who were bothered by ulcers, about 34 percent were bothered a great deal.

#### PREVALENCE OF DIGESTIVE DISEASE BY DEMOGRAPHIC CHARACTERISTICS

This section of the report presents data on the prevalence of the digestive diseases by selected demographic variables including age, sex, color, geographic region, place of residence, usual activity, annual family income, and education of head of family. Tables 2 through 11 show these data for each of the condition groups, and figures 1 to 6 summarize the prevalence data for some of the demographic variables. While data are shown in the figures and detailed tables for each of the digestive disease groups, the text will not discuss each category separately.

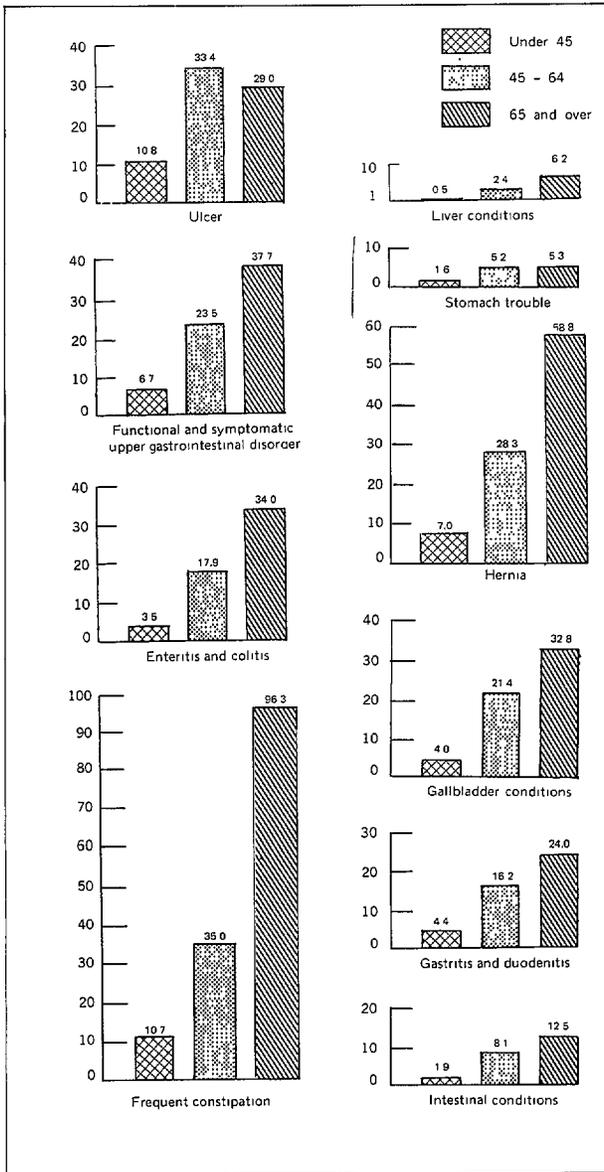


Figure 1. Prevalence of selected chronic digestive conditions by age.

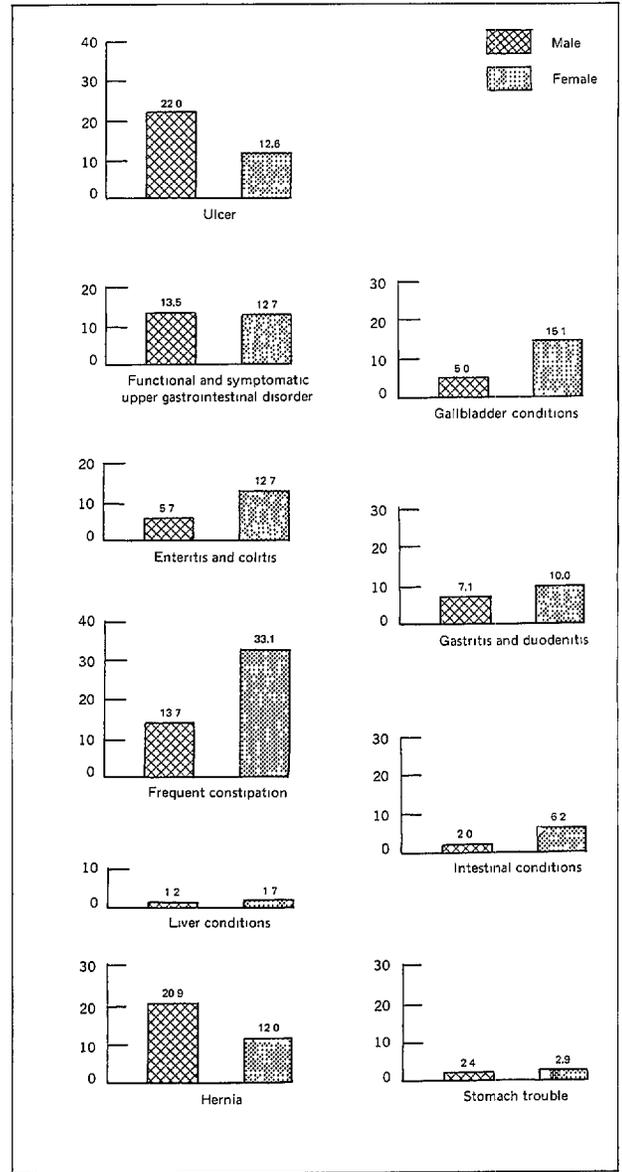


Figure 2. Prevalence of selected chronic digestive conditions by sex.

The selected chronic digestive diseases discussed here are usually more prevalent among the older population than among younger persons (figure 1). The major exception is that ulcers were most common among persons 45 to 64 years of age. While there is a consistent pattern of these conditions increasing with ad-

vancing age, there is no pattern in the prevalence rate of these digestive conditions by sex. Males had higher rates of ulcers and hernias, while females had higher rates of gallbladder trouble, enteritis and colitis, and frequent constipation (see figure 2). White persons reported higher prevalence rates of ulcers and hernias than did

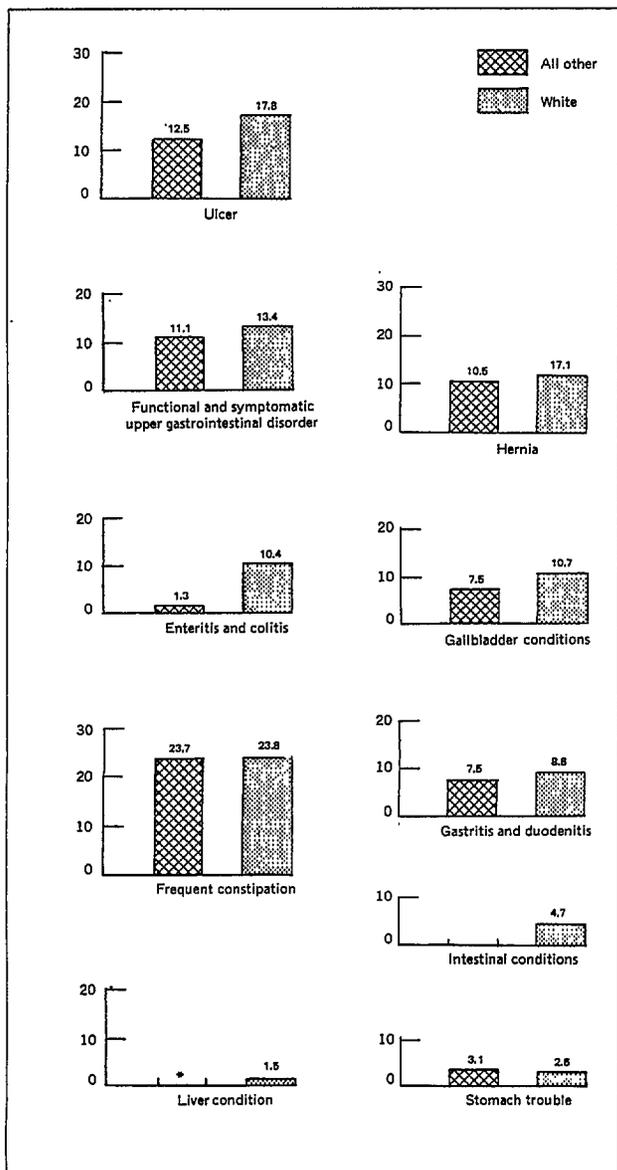


Figure 3. Prevalence of selected chronic digestive conditions by color.

all other persons, while the prevalence of the other digestive conditions is about the same for the two color groups (figure 3).

In general, persons with low family income reported more chronic digestive disease than persons with high family income (figure 4). The

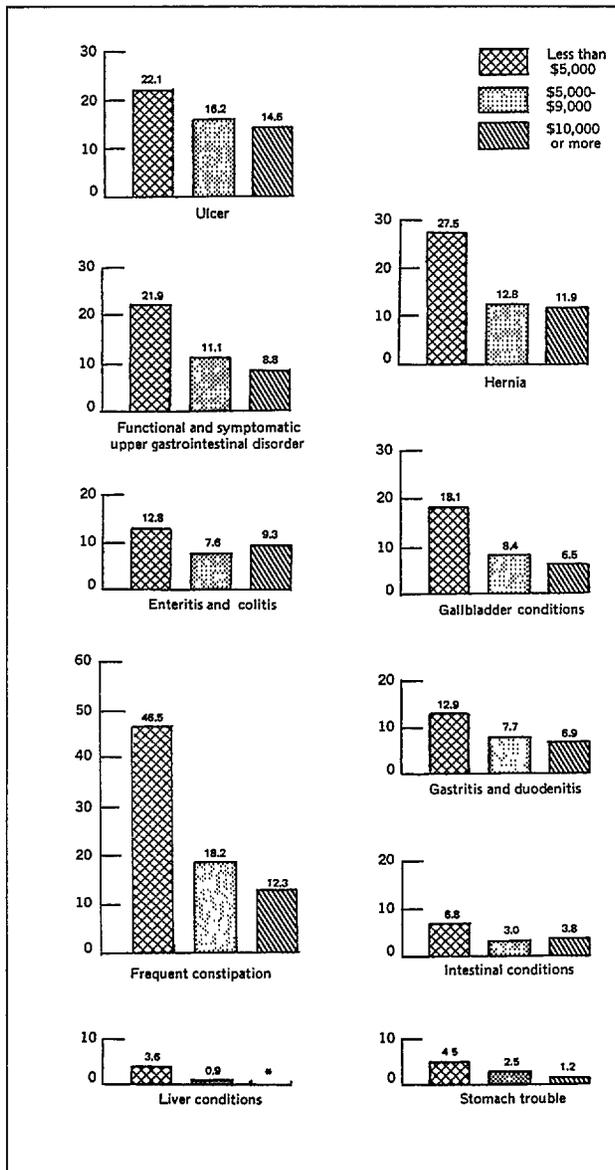


Figure 4. Prevalence of selected chronic digestive conditions by family income.

detailed tables show that this is not solely because of the high proportion of older persons in the low income categories. A similar, but not as strong a pattern is found when these digestive diseases are shown by education of the head of family. Persons in families where the head has

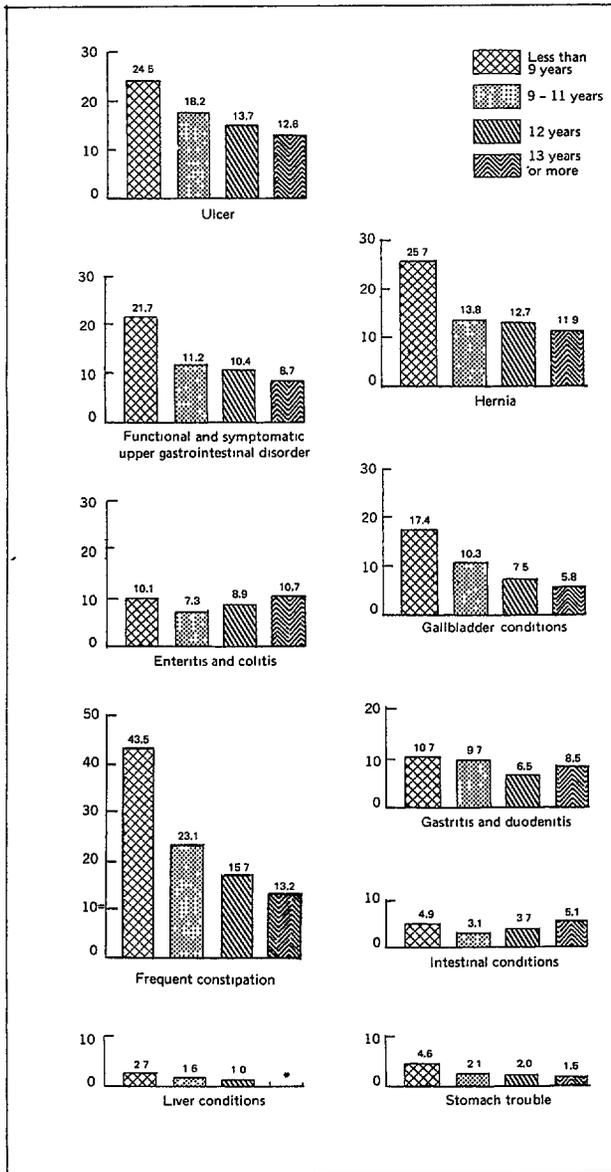


Figure 5. Prevalence of selected chronic digestive conditions by education of head of family.

less than a high school education tend to have the highest prevalence rates of chronic digestive diseases (figure 5).

The category "functional and symptomatic upper gastrointestinal disorders" contains a number of ill-defined symptoms such as indi-

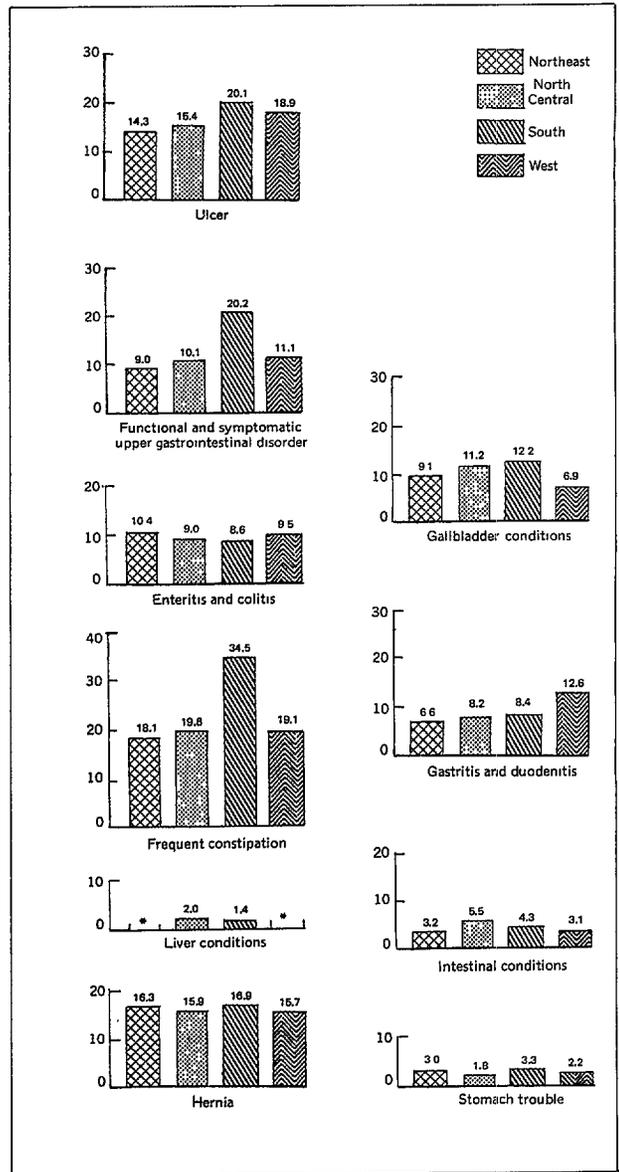


Figure 6. Prevalence of selected chronic digestive conditions by geographic region.

gestion, persistent vomiting, loss of appetite, and heartburn. The unusually high rate of these disorders in the South Region may reflect regional differences in terminology, which in turn could affect the medical classification of the reported conditions or symptoms (figure 6). Regional dif-

ferences in terminology may also explain the high rate of gastritis and duodenitis in the West Region.

### REPORTING CHRONIC CONDITIONS IN INTERVIEWS

Throughout the existence of the Health Interview Survey efforts have been made to determine the reliability of data produced by the survey and to implement improved methods of data collection. Because of problems in the collection of data on prevalence of chronic conditions, methodological studies have been undertaken to determine the extent of underreporting. One of these studies was a record-check study conducted in 1961-62 for the Health Interview Survey by the Stanford Research Institute to determine how well chronic conditions reported in health interviews compare with those noted in medical records prepared during each visit to a physician during a

year. This particular record-check study was conducted among a sample of members of the Southern California Region of the Kaiser Foundation Health Plan, a large prepayment medical plan providing medical services through the Southern California Permanente Medical Group (SCPMG). In this study, records were made of each patient encounter at SCPMG during the study year. Following the end of the year these sample persons were interviewed by trained interviewers. The results of this prospective study have been reported in two methodological reports from the National Center for Health Statistics, *Vital and Health Statistics*, Series 2, Numbers 23 and 57.

The second of these reports shows the number of conditions in the medical record compared to the number of conditions reported in the interview for persons who stated that they used no medical services other than those of SCPMG. Table H summarizes these findings for chronic digestive conditions. The prevalence of

Table H. Chronic digestive conditions reported in medical records of the Southern California Permanente Medical Group during 1961 and 1962 and whether or not reported in a household interview

Chronic condition	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	Condi- tions re- ported in medi- cal record	Condi- tions re- ported in in- ter- view	Condi- tions re- ported in in- ter- view and record	Condi- tions re- ported in record but not in inter- view	Condi- tions re- ported in in- ter- view but not in record	Per- cent of condi- tions in record re- ported in in- ter- view	Ratio of re- ported in inter- view to re- ported on record
						<u>col. C</u> <u>col. A</u>	<u>col. B</u> <u>col. A</u>
Ulcer of stomach and duodenum-----	111	112	67	44	45	60.4	1.01
Hernia of abdominal cavity--	78	67	40	38	27	51.3	0.86
Gallbladder condition-----	27	34	23	4	11	85.2	1.26
Other digestive conditions--	267	198	130	137	68	48.7	0.74

conditions noted in the patient encounter forms is presented in the column entitled "Conditions Reported in Medical Record," and the prevalence of conditions reported in the health interviews is presented in the column labeled "Conditions Reported in Interview." Other columns show matches and nonmatches for these conditions. Column F indicates the percent of conditions in the medical record that were reported in the interview, and column G shows the ratio of conditions reported in the interview to those reported in the medical record. However, column B presents figures similar to the prevalence estimates from the regular Health Interview Survey.

While the level of underreporting is high for most digestive conditions, the net differences are balanced out to some extent by overreporting of digestive diseases. It is quite possible that a person did not mention a specific digestive condition at any time in a patient encounter during the study year. It is also conceivable that a person could have a chronic digestive condition present in the year prior to interview and have it under control so it would not require a physician visit during the year.

An earlier record-check study conducted at the Health Insurance Plan of Greater New York in 1963 and reported in Series 2, Number 7, showed the following percentages of conditions in the medical records that were reported in interviews:

	Percent of conditions on records reported in interviews	Ratio of conditions reported on interviews to those reported on records
Ulcer . . . . .	60.0	.91
Hernia . . . . .	54.4	1.17
Diseases of gallbladder . .	66.7	1.00
Other digestive conditions .	23.9	.47

Comparison of these findings suggests some improvement in the reporting of gallbladder and other digestive diseases in the later record-check study over that of the first one. Since the early study, refinements have been made in questionnaire design and interviewer training to stimulate memory recall so as to enable the respondent to report more information. Other methodological reports discussing some of these points are Numbers 26, 41, 45, and 48 in Series 2.



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Table 1. Number of selected chronic digestive conditions except cured reported in health interviews and number per 1,000 population, by sex and age: United States, July-December 1968

[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 selected chronic digestive condition <sup>1</sup>	All ages	Under 17 years	17-44 years	45-64 years	65 years and over	All ages	Under 17 years	17-44 years	45-64 years	65 years and over
<u>Both sexes</u>	Number of conditions in thousands					Number of conditions per 1,000 population				
Ulcer of stomach and duodenum-----	3,360	57	1,424	1,344	535	17.2	0.9	20.3	33.4	29.0
Hernia of abdominal cavity----	3,191	287	677	1,142	1,084	16.3	4.3	9.6	28.3	58.8
Functional and symptomatic upper gastrointestinal disorder-----	2,564	89	832	948	695	13.1	1.3	11.9	23.5	37.7
Gallbladder condition-----	2,013	*	531	863	605	10.3	*	7.6	21.4	32.8
Chronic enteritis and ulcerative colitis-----	1,827	62	416	721	627	9.3	0.9	5.9	17.9	34.0
Gastritis and duodenitis-----	1,691	71	527	651	442	8.6	1.1	7.5	16.2	24.0
Frequent constipation-----	4,654	388	1,082	1,409	1,775	23.8	5.8	15.4	35.0	96.3
Intestinal conditions-----	820	57	204	328	231	4.2	0.9	2.9	8.1	12.5
Liver conditions-----	284	*	66	98	115	1.4	*	0.9	2.4	6.2
Stomach trouble N.O.S.-----	520	*	180	208	97	2.7	*	2.6	5.2	5.3
<u>Male</u>										
Ulcer of stomach and duodenum-----	2,077	*	877	865	304	22.0	0.9	26.5	45.0	38.4
Hernia of abdominal cavity----	1,970	211	465	653	641	20.9	6.2	14.1	34.0	80.9
Functional and symptomatic upper gastrointestinal disorder-----	1,277	50	479	490	257	13.5	1.5	14.5	25.5	32.4
Gallbladder condition-----	474	*	105	226	137	5.0	*	3.2	11.8	17.3
Chronic enteritis and ulcerative colitis-----	537	*	165	235	106	5.7	*	5.0	12.2	13.4
Gastritis and duodenitis-----	672	*	217	278	140	7.1	*	6.6	14.5	17.7
Frequent constipation-----	1,290	190	229	376	495	13.7	5.6	6.9	19.6	62.5
Intestinal conditions-----	190	*	64	67	*	2.0	*	1.9	3.5	4.4
Liver conditions-----	112	*	*	*	*	1.2	*	*	2.2	5.8
Stomach trouble N.O.S.-----	230	*	75	101	*	2.4	*	2.3	5.3	5.3
<u>Female</u>										
Ulcer of stomach and duodenum-----	1,284	*	547	480	231	12.6	*	14.7	22.8	22.0
Hernia of abdominal cavity----	1,221	76	212	489	443	12.0	2.3	5.7	23.2	42.2
Functional and symptomatic upper gastrointestinal disorder-----	1,288	*	353	458	438	12.7	*	9.5	21.7	41.7
Gallbladder condition-----	1,539	*	426	637	468	15.1	*	11.5	30.2	44.6
Chronic enteritis and ulcerative colitis-----	1,290	*	251	486	521	12.7	*	6.8	23.1	49.6
Gastritis and duodenitis-----	1,019	*	309	373	301	10.0	*	8.3	17.7	28.7
Frequent constipation-----	3,364	198	854	1,032	1,280	33.1	6.0	23.0	49.0	121.9
Intestinal conditions-----	630	*	141	261	196	6.2	*	3.8	12.4	18.7
Liver conditions-----	172	*	*	55	68	1.7	*	*	2.6	6.5
Stomach trouble N.O.S.-----	290	*	105	107	55	2.9	*	2.8	5.1	5.2

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

Table 2. Prevalence of ulcer of stomach and duodenum reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
	Number in thousands	Rate per 1,000 population			
Total <sup>1</sup> -----	3,360	17.2	10.8	33.4	29.0
<u>Sex</u>					
Male-----	2,077	22.0	13.5	45.0	38.4
Female-----	1,284	12.6	8.2	22.8	22.0
<u>Color</u>					
White-----	3,063	17.8	11.3	33.5	29.8
All other-----	298	12.5	7.7	32.6	*
<u>Geographic region</u>					
Northeast-----	689	14.3	7.7	28.4	27.3
North Central-----	839	15.4	10.0	30.2	22.3
South-----	1,216	20.1	12.5	43.0	29.8
West-----	617	18.9	13.4	29.1	46.0
<u>Place of residence</u>					
SMSA-----	2,003	15.9	10.3	30.1	27.3
Outside SMSA					
Nonfarm-----	1,134	18.9	12.1	37.5	29.9
Farm-----	224	22.4	9.2	48.3	*
<u>Usual activity</u>					
Under 17 years-----	57	0.9	0.9	...	...
Usually working-----	2,063	29.7	25.9	35.4	32.3
Usually keeping house (female only)-----	769	20.0	16.5	23.5	22.4
Retired-----	294	40.4	...	55.6	37.5
Other activity <sup>2</sup> -----	177	13.0	6.7	64.5	*
<u>Education of head of family</u>					
Less than 9 years-----	1,244	24.5	12.1	44.2	32.7
9-11 years-----	638	18.2	12.9	33.5	28.9
12 years-----	814	13.7	9.8	25.9	27.4
13 years or more-----	599	12.6	9.7	25.2	*
<u>Family income</u>					
Less than \$5,000-----	1,052	22.1	12.3	45.2	27.4
\$5,000-\$9,999-----	1,287	16.2	11.1	31.8	34.7
\$10,000 or more-----	856	14.6	9.7	28.3	30.6

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

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

Table 3. Prevalence of hernia reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
			Rate per 1,000 population		
Total <sup>1</sup> -----	3,191	16.3	7.0	28.3	58.8
<u>Sex</u>					
Male-----	1,970	20.9	10.1	34.0	80.9
Female-----	1,221	12.0	4.1	23.2	42.2
<u>Color</u>					
White-----	2,939	17.1	6.9	29.9	61.0
All other-----	251	10.5	8.1	13.3	33.9
<u>Geographic region</u>					
Northeast-----	784	16.3	6.9	29.9	48.4
North Central-----	871	15.9	6.0	23.2	68.8
South-----	1,024	16.9	7.2	31.3	61.2
West-----	511	15.7	8.4	29.1	51.6
<u>Place of residence</u>					
SMSA-----	1,927	15.3	6.9	26.8	55.4
Outside SMSA					
Nonfarm-----	1,056	17.6	7.3	29.8	65.0
Farm-----	207	20.7	7.9	37.7	58.8
<u>Usual activity</u>					
Under 17 years-----	287	4.3	4.3	...	...
Usually working-----	1,290	18.6	11.1	26.5	51.0
Usually keeping house (female only)-----	839	21.8	8.2	26.6	43.9
Retired-----	576	79.2	...	56.5	83.6
Other activity <sup>2</sup> -----	198	14.5	6.7	56.6	59.8
<u>Education of head of family</u>					
Less than 9 years-----	1,308	25.7	7.5	36.1	64.1
9-11 years-----	483	13.8	6.7	27.6	45.8
12 years-----	754	12.7	6.9	24.1	56.6
13 years or more-----	563	11.9	6.8	22.2	52.4
<u>Family income</u>					
Less than \$5,000-----	1,309	27.5	7.8	40.5	65.6
\$5,000-\$9,999-----	1,015	12.8	6.7	26.7	51.4
\$10,000 or more-----	702	11.9	7.2	23.1	43.8

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

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

Table 4. Prevalence of functional and symptomatic upper gastrointestinal disorders reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Rate per 1,000 population		
			Under 45 years	45-64 years	65 years and over
	Number in thousands	Rate per 1,000 population			
Total <sup>1</sup> -----	2,564	13.1	6.7	23.5	37.7
<u>Sex</u>					
Male-----	1,277	13.5	7.9	25.5	32.4
Female-----	1,288	12.7	5.6	21.7	41.7
<u>Color</u>					
White-----	2,298	13.4	7.1	22.5	37.8
All other-----	266	11.1	4.5	33.6	36.6
<u>Geographic region</u>					
Northeast-----	431	9.0	5.3	11.9	26.9
North Central-----	550	10.1	4.3	19.0	31.3
South-----	1,222	20.2	9.8	40.4	57.0
West-----	361	11.1	6.8	19.7	30.3
<u>Place of residence</u>					
SMSA-----	1,473	11.7	6.5	19.8	34.2
Outside SMSA					
Nonfarm-----	954	15.9	7.4	31.0	44.9
Farm-----	138	13.8	*	27.0	*
<u>Usual activity</u>					
Under 17 years-----	89	1.3	1.3	...	...
Usually working-----	1,199	17.3	14.8	20.6	21.9
Usually keeping house (female only)-----	858	22.3	10.2	26.2	42.3
Retired-----	267	36.7	...	41.7	35.7
Other activity <sup>2</sup> -----	152	11.1	*	45.3	54.3
<u>Education of head of family</u>					
Less than 9 years-----	1,102	21.7	7.7	32.2	47.3
9-11 years-----	393	11.2	6.3	20.5	33.9
12 years-----	615	10.4	6.8	22.1	20.4
13 years or more-----	411	8.7	6.1	13.5	30.3
<u>Family income</u>					
Less than \$5,000-----	1,042	21.9	6.4	38.5	46.5
\$5,000-\$9,999-----	881	11.1	7.6	21.5	23.9
\$10,000 or more-----	517	8.8	5.9	16.4	*

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

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

Table 5. Prevalence of gallbladder condition reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
	Number in thousands	Rate per 1,000 population			
Total <sup>1</sup> -----	2,013	10.3	4.0	21.4	32.8
<u>Sex</u>					
Male-----	474	5.0	1.6	11.8	17.3
Female-----	1,539	15.1	6.2	30.2	44.6
<u>Color</u>					
White-----	1,833	10.7	4.2	21.4	32.7
All other-----	180	7.5	2.6	21.4	33.9
<u>Geographic region</u>					
Northeast-----	439	9.1	4.6	17.5	20.0
North Central-----	614	11.2	3.8	25.5	33.2
South-----	735	12.2	4.2	26.5	42.9
West-----	225	6.9	2.9	11.2	34.3
<u>Place of residence</u>					
SMSA-----	1,131	9.0	3.8	18.1	28.5
Outside SMSA					
Nonfarm-----	748	12.5	4.4	26.9	40.4
Farm-----	134	13.4	3.2	30.7	34.9
<u>Usual activity</u>					
Under 17 years-----	*	*	*	...	...
Usually working-----	687	9.9	5.9	14.8	20.8
Usually keeping house (female only)-----	1,078	28.0	14.9	34.8	46.5
Retired-----	131	18.0	...	16.4	18.3
Other activity <sup>2</sup> -----	103	7.5	*	43.6	*
<u>Education of head of family</u>					
Less than 9 years-----	886	17.4	4.9	30.4	35.4
9-11 years-----	360	10.3	5.1	18.9	37.4
12 years-----	447	7.5	3.5	18.0	28.9
13 years or more-----	275	5.8	3.1	13.6	19.7
<u>Family income</u>					
Less than \$5,000-----	860	18.1	4.0	38.6	36.0
\$5,000-\$9,999-----	665	8.4	4.5	19.0	26.2
\$10,000 or more-----	384	6.5	3.4	14.0	27.5

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

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

Table 6. Prevalence of enteritis and colitis reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total Prevalence	All ages	Under 45 years	45-64 years	65 years and over
	Number in thousands	Rate per 1,000 population			
Total <sup>1</sup> -----	1,827	9.3	3.5	17.9	34.0
<u>Sex</u>					
Male-----	537	5.7	2.9	12.2	13.4
Female-----	1,290	12.7	4.0	23.1	49.6
<u>Color</u>					
White-----	1,795	10.4	3.9	19.5	36.6
All other-----	*	*	*	*	*
<u>Geographic region</u>					
Northeast-----	503	10.4	3.7	19.0	36.2
North Central-----	494	9.0	3.6	18.5	27.3
South-----	520	8.6	3.8	14.0	34.1
West-----	310	9.5	2.5	22.4	44.8
<u>Place of residence</u>					
SMSA-----	1,243	9.9	3.7	18.4	38.8
Outside SMSA					
Nonfarm-----	517	8.6	3.2	17.1	29.6
Farm-----	67	6.7	*	*	*
<u>Usual activity</u>					
Under 17 years-----	62	0.9	0.9	...	...
Usually working-----	648	9.3	5.9	14.0	*
Usually keeping house (female only)-----	932	24.2	9.4	26.3	52.5
Retired-----	144	19.8	...	*	18.8
Other activity <sup>2</sup> -----	*	*	*	*	*
<u>Education of head of family</u>					
Less than 9 years-----	514	10.1	2.4	16.0	24.0
9-11 years-----	256	7.3	3.0	15.3	28.1
12 years-----	529	8.9	3.1	20.9	51.3
13 years or more-----	507	10.7	5.3	20.1	59.1
<u>Family income</u>					
Less than \$5,000-----	606	12.8	2.6	17.9	33.4
\$5,000-\$9,999-----	607	7.6	3.1	18.2	36.0
\$10,000 or more-----	546	9.3	4.7	20.1	39.2

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

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

Table 7. Prevalence of gastritis and duodenitis reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
			Rate per 1,000 population		
Total <sup>1</sup> -----	1,691	8.6	4.4	16.2	24.0
<u>Sex</u>					
Male-----	672	7.1	3.8	14.5	17.7
Female-----	1,019	10.0	4.9	17.7	28.7
<u>Color</u>					
White-----	1,512	8.8	4.4	16.0	23.6
All other-----	179	7.5	3.8	17.2	*
<u>Geographic region</u>					
Northeast-----	320	6.6	3.7	9.1	20.7
North Central-----	450	8.2	3.6	16.8	22.5
South-----	509	8.4	4.2	18.8	18.8
West-----	411	12.6	6.7	22.2	45.2
<u>Place of residence</u>					
SMSA-----	1,117	8.9	4.9	15.3	25.4
Outside SMSA					
Nonfarm-----	507	8.5	3.6	18.5	22.2
Farm-----	67	6.7	*	*	*
<u>Usual activity</u>					
Under 17 years-----	71	1.1	1.1	...	...
Usually working-----	742	10.7	7.9	14.2	18.3
Usually keeping house (female only)-----	676	17.6	9.8	20.5	29.9
Retired-----	144	19.8	...	*	20.2
Other activity <sup>2</sup> -----	56	4.1	*	*	*
<u>Education of head of family</u>					
Less than 9 years-----	544	10.7	3.0	17.1	23.9
9-11 years-----	339	9.7	4.8	19.2	31.6
12 years-----	386	6.5	3.6	14.8	19.8
13 years or more-----	402	8.5	6.0	14.3	25.6
<u>Family income</u>					
Less than \$5,000-----	613	12.9	3.4	21.8	28.8
\$5,000-\$9,999-----	608	7.7	4.6	16.8	18.6
\$10,000 or more-----	408	6.9	4.7	13.1	*

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

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

Table 8. Prevalence of frequent constipation reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
	Number in thousands	Rate per 1,000 population			
Total <sup>1</sup> -----	4,654	23.8	10.7	35.0	96.3
<u>Sex</u>					
Male-----	1,290	13.7	6.2	19.6	62.5
Female-----	3,364	33.1	15.0	49.0	121.9
<u>Color</u>					
White-----	4,089	23.8	10.3	33.7	96.5
All other-----	565	23.7	13.3	46.7	94.3
<u>Geographic region</u>					
Northeast-----	871	18.1	7.8	24.0	73.6
North Central-----	1,073	19.6	8.1	29.0	79.4
South-----	2,086	34.5	15.8	53.7	137.8
West-----	625	19.1	9.7	28.8	85.9
<u>Place of residence</u>					
SMSA-----	2,633	20.9	10.4	29.9	83.3
Outside SMSA					
Nonfarm-----	1,792	29.9	12.0	45.1	122.4
Farm-----	230	23.0	6.5	40.6	81.7
<u>Usual activity</u>					
Under 17 years-----	388	5.8	5.8	...	...
Usually working-----	1,304	18.8	13.3	24.2	46.7
Usually keeping house (female only)-----	2,160	56.1	24.9	53.3	125.4
Retired-----	522	71.7	...	61.4	73.8
Other activity <sup>2</sup> -----	221	48.5	15.5	69.1	124.7
<u>Education of head of family</u>					
Less than 9 years-----	2,213	43.5	14.6	52.3	115.1
9-11 years-----	809	23.1	12.8	35.2	90.5
12 years-----	932	15.7	8.8	26.8	76.1
13 years or more-----	626	13.2	8.8	18.5	59.1
<u>Family income</u>					
Less than \$5,000-----	2,209	46.5	14.2	59.3	115.9
\$5,000-\$9,999-----	1,447	18.2	11.2	33.1	67.5
\$10,000 or more-----	724	12.3	7.9	20.2	58.1

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

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

Table 9. Prevalence of intestinal conditions reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
Total <sup>1</sup> -----	820	4.2	1.9	8.1	12.5
<u>Sex</u>					
Male-----	190	2.0	1.3	3.5	*
Female-----	630	6.2	2.5	12.4	18.7
<u>Color</u>					
White-----	802	4.7	2.2	8.6	13.4
All other-----	*	*	*	*	*
<u>Geographic region</u>					
Northeast-----	156	3.2	2.3	5.1	*
North Central-----	302	5.5	1.9	10.1	20.8
South-----	261	4.3	1.9	10.4	9.9
West-----	102	3.1	*	*	*
<u>Place of residence</u>					
SMSA-----	513	4.1	2.1	7.3	12.0
Outside SMSA					
Nonfarm-----	270	4.5	1.8	10.0	12.6
Farm-----	*	*	*	*	*
<u>Usual activity</u>					
Under 17 years-----	57	0.9	0.9	...	...
Usually working-----	248	3.6	2.1	5.5	*
Usually keeping house (female only)-----	417	10.8	5.2	13.7	18.7
Retired-----	*	*	...	*	*
Other activity <sup>2</sup> -----	51	3.7	*	*	*
<u>Education of head of family</u>					
Less than 9 years-----	248	4.9	*	7.9	11.5
9-11 years-----	108	3.1	*	*	*
12 years-----	219	3.7	2.0	8.9	*
13 years or more-----	242	5.1	3.0	10.0	20.5
<u>Family income</u>					
Less than \$5,000-----	323	6.8	*	12.4	16.3
\$5,000-\$9,999-----	238	3.0	1.7	7.4	*
\$10,000 or more-----	225	3.8	2.8	6.4	9.2

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

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

Table 10. Prevalence of liver conditions reported in health interviews and rate per 1,000 population, by selected demographic characteristics: United States, July-December 1968

[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]

Characteristic	Total prevalence in thousands	Rate per 1,000 population
Total <sup>1</sup> -----	284	1.4
<u>Age</u>		
Under 45 years-----	72	0.5
45-64 years-----	98	2.4
65 years and over-----	115	6.2
<u>Sex</u>		
Male-----	112	1.2
Female-----	172	1.7
<u>Color</u>		
White-----	252	1.5
All other-----	*	*
<u>Geographic region</u>		
Northeast-----	*	*
North Central-----	111	2.0
South-----	87	1.4
West-----	*	*
<u>Place of residence</u>		
SMSA-----	198	1.6
Outside SMSA		
Nonfarm-----	81	1.4
Farm-----	*	*
<u>Usual activity</u>		
Under 17 years-----	*	*
Usually working-----	75	1.1
Usually keeping house (female only)-----	119	3.1
Retired-----	59	8.1
Other activity <sup>2</sup> -----	*	*
<u>Education of head of family</u>		
Less than 9 years-----	137	2.7
9-11 years-----	56	1.6
12 years-----	58	1.0
13 years or more-----	*	*
<u>Family income</u>		
Less than \$5,000-----	169	3.6
\$5,000-\$9,999-----	70	0.9
\$10,000 or more-----	*	*

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

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

Table 11. Prevalence of stomach trouble reported in health interviews and rate per 1,000 population, by selected demographic characteristics and age: United States, July-December 1968

[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]

Characteristic	Total prevalence	All ages	Under 45 years	45-64 years	65 years and over
Total <sup>1</sup> -----	520	2.7	1.6	5.2	5.3
<u>Sex</u>					
Male-----	230	2.4	1.2	5.3	*
Female-----	290	2.9	1.8	5.1	5.2
<u>Color</u>					
White-----	446	2.6	1.4	5.2	5.3
All other-----	75	3.1	*	*	*
<u>Geographic region</u>					
Northeast-----	145	3.0	2.0	5.4	*
North Central-----	101	1.8	*	*	*
South-----	202	3.3	2.2	4.8	9.0
West-----	72	2.2	*	*	*
<u>Place of residence</u>					
SMSA-----	323	2.6	1.7	4.6	4.8
Outside SMSA					
Nonfarm-----	169	2.8	1.4	6.5	*
Farm-----	*	*	*	*	*
<u>Usual activity</u>					
Under 17 years-----	*	*	*	...	...
Usually working-----	207	3.0	2.5	3.8	*
Usually keeping house (female only)-----	162	4.2	2.9	5.8	*
Retired-----	73	10.0	...	*	*
Other activity <sup>2</sup> -----	*	*	*	*	*
<u>Education of head of family</u>					
Less than 9 years-----	236	4.6	2.3	7.5	7.4
9-11 years-----	75	2.1	*	*	*
12 years-----	117	2.0	1.4	*	*
13 years or more-----	71	1.5	*	*	*
<u>Family income</u>					
Less than \$5,000-----	213	4.5	2.5	8.8	5.8
\$5,000-\$9,999-----	195	2.5	1.7	4.6	*
\$10,000 or more-----	69	1.2	*	*	*

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

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

Table 12. Number of persons in civilian noninstitutional population by age and selected demographic characteristics: United States, July-December 1968

[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]

Characteristic	All ages	Under 45 years	45-64 years	65 years and over
	Number in thousands			
Total <sup>1</sup> -----	195,889	137,165	40,298	18,426
<u>Sex</u>				
Male-----	94,302	67,161	19,217	7,924
Female-----	101,587	70,004	21,081	10,502
<u>Color</u>				
White-----	172,030	118,615	36,462	16,952
All other-----	23,860	18,550	3,836	1,474
<u>Geographic region</u>				
Northeast-----	48,141	32,411	10,892	4,838
North Central-----	54,631	37,911	11,155	5,566
South-----	60,474	42,937	11,993	5,543
West-----	32,643	23,906	6,258	2,479
<u>Place of residence</u>				
SMSA-----	125,935	88,650	26,133	11,152
Outside SMSA				
Nonfarm-----	59,937	42,028	11,724	6,185
Farm-----	10,017	6,487	2,441	1,089
<u>Usual activity</u>				
Under 17 years-----	66,990	66,990	...	...
Usually working-----	69,470	40,380	26,308	2,783
Usually keeping house (female only)-----	38,507	18,217	11,621	8,669
Retired-----	7,276	...	1,222	6,054
Other activity <sup>2</sup> -----	13,646	11,578	1,148	920
<u>Education of head of family</u>				
Less than 9 years-----	50,853	27,770	13,529	9,555
9-11 years-----	35,007	25,370	7,041	2,596
12 years-----	59,402	45,372	10,852	3,179
13 years or more-----	47,468	36,839	8,090	2,538
<u>Family income</u>				
Less than \$5,000-----	47,526	27,316	9,200	11,010
\$5,000-\$9,999-----	79,393	60,276	15,146	3,972
\$10,000 or more-----	58,771	43,721	13,087	1,963

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

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

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

## APPENDIX I

### TECHNICAL NOTES ON METHODS

#### Background of This Report

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

The Health Interview Survey utilizes a questionnaire which obtains information on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued which cover one or more of the specific topics. The present report is based on data collected in household interviews during July-December 1968.

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

#### Statistical Design of the Health Interview Survey

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

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

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

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

Area segments which are defined geographically.

List segments, using 1960 census registers as the frame.

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

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

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

Descriptive material on data collection, field procedures, and questionnaire development in the HIS has been published<sup>7</sup> as well as a detailed description of the sample design<sup>8</sup> and a report on the estimation procedure and the method used to calculate sampling errors of estimates derived from the survey.<sup>9</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 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

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NOTE: The list of references follows the text.

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.

*Explanation of hospital recall.*—The survey questionnaire uses a 12-month-recall period for hospitalizations. That is, the respondent is asked to report hospitalizations which occurred during the 12 months prior to the week of interview. Information is also obtained as to the date of entry into the hospital and duration of stay. Analysis of this information, and also the results of special studies, has shown that there is an increase in underreporting of hospitalizations with increase in time interval between the discharge and the interview. Exclusive of the hospital experience of decedents, the net underreporting with a 12-month recall is in the neighborhood of 10 percent, but underreporting of discharges within 6 months of the week of interview is estimated to be less than 5 percent. For this reason hospital discharge data in this report are based on hospital discharges reported to have occurred within 6 months of the week of interview. Since the interviews were evenly distributed according to weekly probability samples throughout any interviewing year, no seasonal bias was introduced by doubling the 6-month-recall data to produce an annual estimate for that year of interviewing. Doubling the 6-month data in effect imputes to the entire year preceding the interview the rate of hospital discharges actually observed during the 6 months prior to interview. However, estimates of the number of persons with hospital episodes (as opposed to estimates of the number of hospital discharges)

are based on 12-month recall data since a person's 12-month experiences cannot be obtained by doubling his most recent 6-month experience.

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

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

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

which these are based have been rounded to the nearest thousand.

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

### Reliability of Estimates

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

As in any survey, the results are also subject to reporting and processing errors and errors due to nonresponse. To the extent possible, these types of errors were kept to a minimum by methods built into survey procedures. Although it is very difficult to measure the extent of bias in the Health Interview Survey, a number of studies have been conducted to study this problem. The results have been published in several reports.<sup>10-14</sup>

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

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

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

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

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

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

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

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

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

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NOTE: The list of references follows the text.

*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 34, 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 35. The number of persons in the total U.S. population or in an age-sex-color class of the total population is adjusted to official Bureau of the Census figures and is not subject to sampling error.

**Rule 2.** *Estimates of percentages in a percent distribution:* Relative standard errors for percentages in a percent distribution of a total are obtained from appropriate curves on page 36. For values which do not fall on one of the curves presented in the chart, visual interpolation will provide a satisfactory approximation.

**Rule 3.** *Estimates of rates where the numerator is a subclass of the denominator:* This rule applies for prevalence rates or where a unit of the numerator occurs, with few exceptions, only once in the year for any one unit in the denominator. For example, in computing the rate of visual impairments per 1,000 population, the numerator consisting of persons with the impairment is a subclass of the denominator, which 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 P2AN-M. Rates

per 1,000, or on any other base, must first be converted to rates per 100; then the percentage chart will provide the relative standard error per 100.

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

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

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

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

$$d = X_1 - X_2$$

is

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

where  $X_1$  is the estimate for class 1,  $X_2$  is the estimate for class 2, and  $V_{x_1}$  and  $V_{x_2}$  are the relative errors of  $X_1$  and  $X_2$  respectively. This formula will represent the actual standard error quite accurately for the difference between

separate and uncorrelated characteristics although it is only a rough approximation in most other cases. The relative standard error of each estimate involved in such a difference can be determined by one of the four rules above, whichever is appropriate.

### Guide to Use of Relative Standard Error Charts

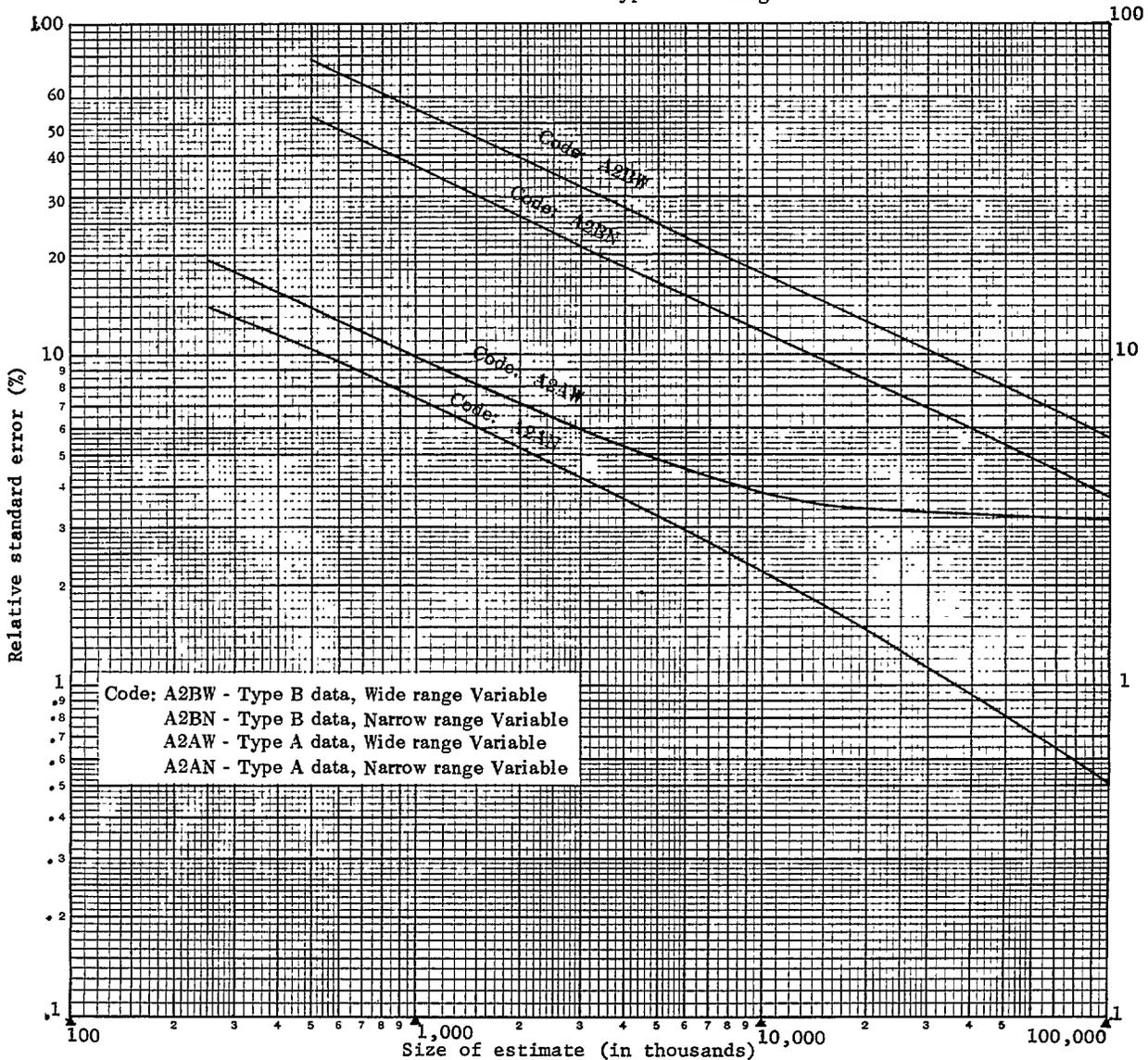
The code shown below identifies the appropriate curve to be used in estimating the relative standard error of the statistic described. The four components of each code describe the statistic as follows:

(1) A = aggregate, P = percentage; (2) the number of calendar quarters of data collection; (3) the type of statistic as described on page 32; and (4) the range of the statistic as described on page 32.

Statistic	Use:		
	Rule	Code	on page
Number of:			
Persons in the U.S. population or total number in any age-sex-color category . . . . .		Not subject to sampling error	
Persons in any other population group . . . . .	1	A2AN	35
Selected chronic conditions . . . . .	1	A2AN	35
Rates per 1,000 persons per year:			
Selected chronic conditions . . . . .	3	P2AN-M	36
Rates per condition per year:			
Restricted-activity days or bed-days . . . . .	4(b)	{ Numer.: A2BW Demon.: A4AN	35 37
Percent distribution of:			
Conditions by bed-days and physician visits . . . . .	2	P2AN-M	36
Conditions by other measures of impact . . . . .	2	P2AN-M	36



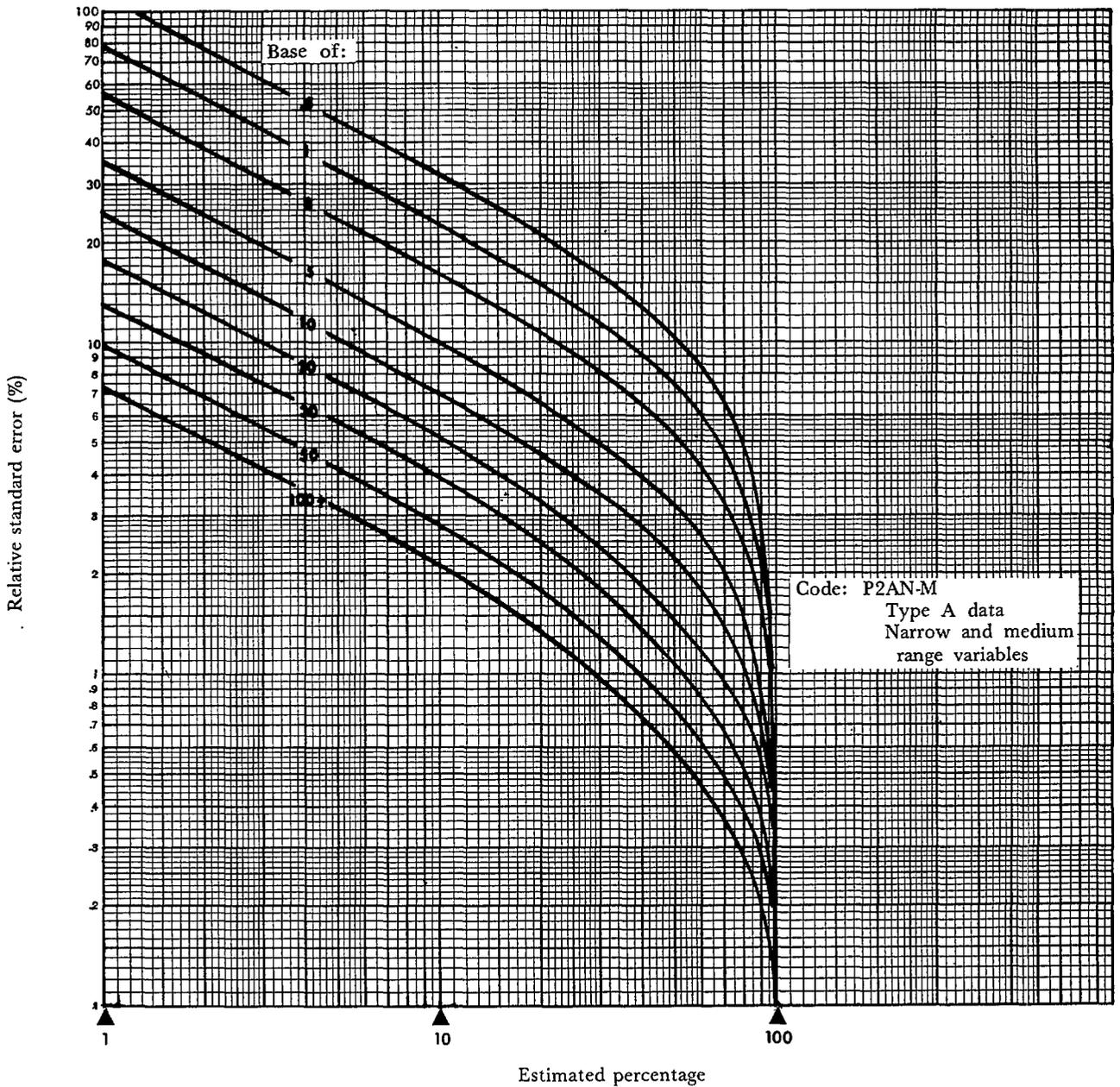
Relative standard errors for aggregates based on two quarters of data collection for data of various types and ranges



Example of use of chart: An aggregate of 2,000,000 (on scale at bottom of chart) for a Narrow range Type A statistic (code: A2AN) has a relative standard error of 5.2 percent, read from scale at left side of chart, or a standard error of 104,000 (5.2 percent of 2,000,000). For a Wide range Type B statistic (code: A2BW), an aggregate of 6,000,000 has a relative error of 22.2 percent or a standard error of 1,332,000 (22.2 percent of 6,000,000).

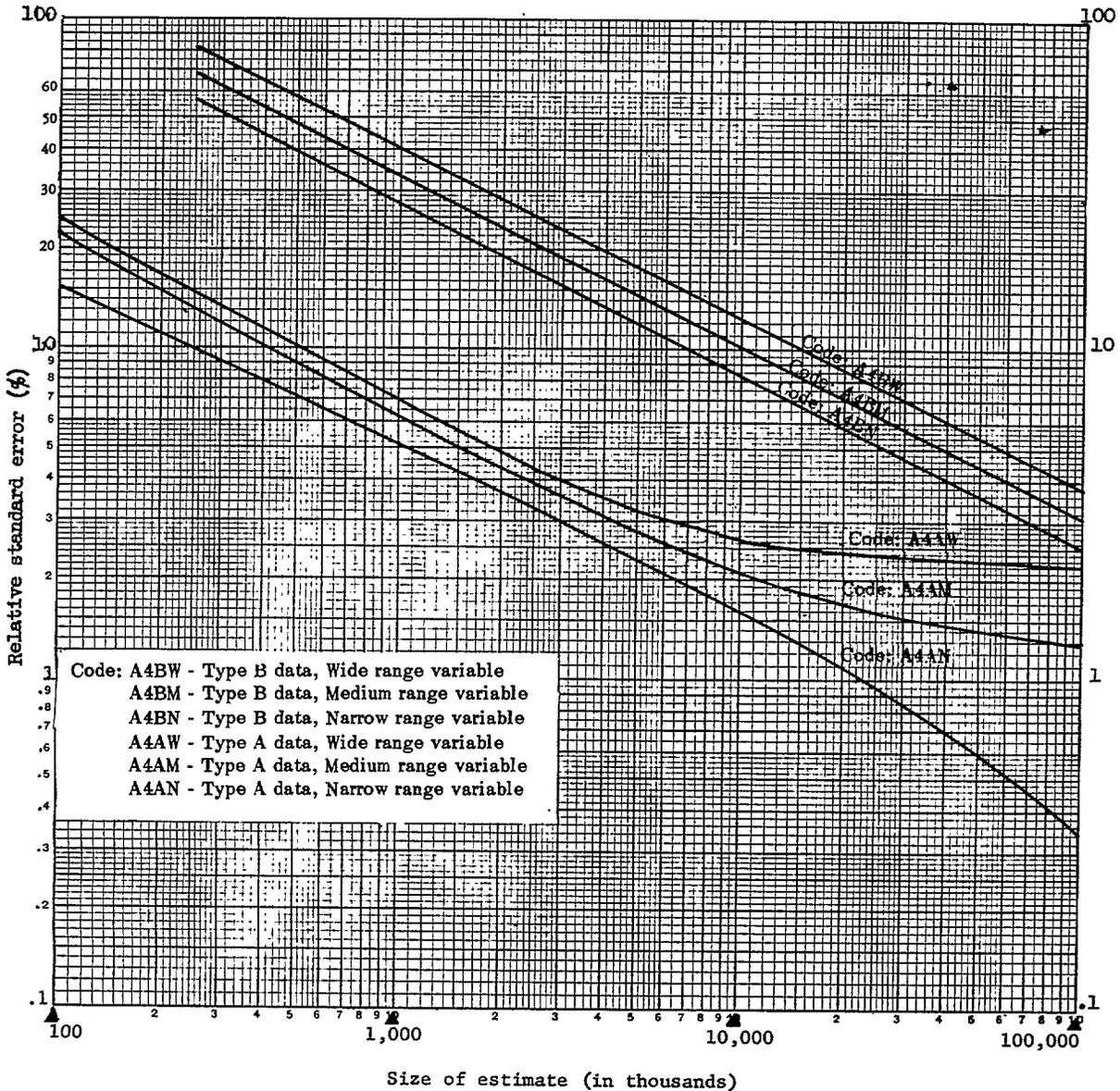
Relative standard errors for percentages based on two quarters of data collection for type A data. Narrow and Medium range

(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 4.6 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 4.6 percent or 0.92 percentage points.

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



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

## 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 *Seventh Revision of the International Classification of Diseases*,<sup>15</sup> with certain modifications adopted to make the code more suitable for a household interview survey.

*Acute condition.*—An acute condition is defined as a condition which has lasted less than 3 months and which has involved either medical attention or restricted activity. Because of the procedures used to estimate incidence, the acute conditions included in this report are the conditions which had their onset during the 2 weeks prior to the interview week and which involved either medical attention or restricted activity during that 2-week period. However, certain

conditions are always classified as chronic regardless of onset (see list under the definition of chronic condition.)

*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.

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

---

NOTE: The list of references follows the text.

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

*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.

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

*Persons with chronic conditions.*—The estimated number of persons with chronic conditions is based on the number of persons who at the time of the interview were reported to have one or more chronic conditions.

### Terms Relating to Disability

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

*Disability day.*—Short-term disability days are classified according to whether they are days of restricted activity, bed days, hospital days, work-loss days, or school-loss days. All hospital days are, by definition, days of bed disability; all days of bed disability are, by definition, days of

restricted activity. The converse form of these statements is, of course, not true. Days lost from work and days lost from school are special terms which apply to the working and school-age populations only, but these too are days of restricted activity. Hence "days of restricted activity" is the most inclusive term used to describe disability days.

*Restricted-activity day.*—A day of restricted activity is one on which a person cuts down on his usual activities for the whole of that day because of an illness or an injury. The term "usual activities" for any day means the things that the person would ordinarily do on that day. For children under school age, usual activities depend on whatever the usual pattern is for the child's day, which will in turn be affected by the age of the child, weather conditions, and so forth. For retired or elderly persons, usual activities might consist of almost no activity, but cutting down on even a small amount for as much as a day would constitute restricted activity. On Sundays or holidays, usual activities are the things the person usually does on such days—going to church, playing golf, visiting friends or relatives, or staying at home and listening to the radio, reading, looking at television, and so forth. Persons who have permanently reduced their usual activities because of a chronic condition might not report any restricted-activity days during a 2-week period. Therefore absence of restricted-activity days does *not* imply normal health.

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

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

*Bed-disability day.*—A day of bed disability is one on which a person stays in bed for all or most of the day because of a specific illness or injury. All or most of the day is defined as more

than half of the daylight hours. All hospital days for inpatients are considered to be days of bed disability even if the patient was not actually in bed at the hospital.

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

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

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

Preschool children:

Inability to take part in ordinary play with other children.

School-age children:

Inability to go to school.

Housewives:

Inability to do any housework.

Workers and all other persons:

Inability to work at a job or business.

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

Preschool children:

Limited in amount or kind of play with other children, e.g., need special rest

periods, cannot play strenuous games, or cannot play for long periods at a time.

School-age children:

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

Housewives:

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

Workers and all other persons:

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

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

Preschool children:

Not classified in this category.

School-age children:

Not limited in going to school but limited in participation in athletics or other 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)

## Terms Relating to Hospitalization

*Hospital.*—For this survey a hospital is defined as any institution meeting one of the fol-

lowing criteria: (1) named in the listing of hospitals in the current Guide Issue of *Hospitals*, the Journal of the American Hospital Association, (2) named in the listing of hospitals in the Directories of the American Osteopathic Hospital Association, or (3) named in the annual inventory of non-Federal hospitals submitted by the States to the Health Care Facilities Service, Health Services and Mental Health Administration, in conjunction with the Hill-Burton program.

*Short-stay hospital.*—A short-stay hospital is one in which the type of service provided by the hospital is general; maternity; eye, ear, nose, and throat; children's; or osteopathic; or it may be the hospital department of an institution.

### Terms Relating to Physician Visits

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

Physician visits for services provided on a mass basis are not included in the tabulations. A service received on a mass basis is defined as any service involving only a single test (e.g., test for diabetes) or a single procedure (e.g., smallpox vaccination) when this single service was administered identically to all persons who were at the place for this purpose. Hence obtaining a chest X-ray in a tuberculosis chest X-ray trailer is not included as a physician visit. However, a special chest X-ray given in a physician's office or in an outpatient clinic is considered a physician visit.

Physician visits to hospital inpatients are not included.

If a physician is called to a house to see more than one person, the call is considered a separate physician visit for each person about whom the physician was consulted.

A physician visit is associated with the person about whom the advice was sought, even if that person did not actually see or consult the physician. For example, if a mother consults a physician about one of her children, the physician visit is ascribed to the child.

*Interval since last physician visit.*—The interval since the last physician visit is the length of time prior to the week of interview since a physician was last consulted in person or by telephone for treatment or advice of any type whatever. A physician visit to a hospital inpatient may be counted as the last time a physician was seen.

### Demographic Terms

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

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

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

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

*Education.*—The categories of education status show the years of school completed. Only years completed in regular schools, where persons are given a formal education, are included. A "regular" school is one which advances a person toward an elementary or high school diploma or a college, university, or professional school degree. Thus education in vocational, trade, or business schools outside the regular

school system is not counted in determining the highest grade of school completed.

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

*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 1.

*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 char-

<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 I.

acter so that the periphery of the specific metropolitan area may be determined. SMSA's are not limited by State boundaries. In New England SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1960 census and does not include any subsequent additions or changes.

*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.

*Currently employed.*—Persons 17 years of age and over who reported that at any time during the 2-week period covered by the interview they either worked at or had a job or business are currently employed. Current employment includes paid work as an employee of someone else; self-employment in business, farming, or professional practice; and unpaid work in a family business or farm. Persons who were temporarily absent from a job or business because of a temporary illness, vacation, strike, or bad weather are considered as currently employed if they expected to work as soon as the particular event causing the absence no longer existed.

Free-lance workers are considered currently employed if they had a definite arrangement with one employer or more to work for pay according to a weekly or monthly schedule, either full time or part time.

Excluded from the currently employed population are persons who have no definite employment schedule but work only when their services are needed. Also excluded from the currently employed population are (1) persons receiving revenue from an enterprise but not participating in its operation, (2) persons doing housework or charity work for which they receive no pay, (3) seasonal workers during the portion of the year they were not working, and (4) persons who were not working, even though having a job or business, but were on layoff or looking for work.

The number of currently employed persons estimated from the Health Interview Survey (HIS) will differ from the estimates prepared from the Current Population Survey (CPS) of the U.S. Bureau of the Census for several reasons. In addition to sampling variability they include three primary conceptual differences, namely: (1) HIS estimates are for persons 17 years of age and

over; CPS estimates are for persons 16 years of age and over. (2) HIS uses a 2-week reference period, while CPS uses a 1-week reference period. (3) HIS is a continuing survey with separate samples taken weekly; CPS is a monthly sample taken for the survey week which includes the 12th of the month.



**APPENDIX III. PROBE QUESTIONS AND CONDITION PAGES USED TO OBTAIN  
INFORMATION ABOUT CHRONIC DIGESTIVE CONDITIONS**

		WASHINGTON USE		
		BD	TLD	RAD
<p>(This survey is being conducted to collect information on the Nation's health. I will ask about visits to doctors and dentists, illness in the family, and other health related items.) (HAND CALENDAR)</p> <p>The first few questions refer to the past two weeks, that is, the 2 weeks outlined in red on that calendar, beginning Monday, _____, and ending this past Sunday, _____.</p>				
5a.	During those two weeks, did --- stay in bed because of any illness or injury?	<input type="checkbox"/> Yes (5b) <input type="checkbox"/> No		
b.	During that two-week period, how many days did --- stay in bed all or most of the day?	_____ days } If age: } 17+ (5c) } 6 - 16 (5d) } Under 6 (5f)		
c.	During those two weeks, how many days did illness or injury keep --- from work? (For females): not counting work around the house.	_____ WL days } Item C <input type="checkbox"/> None		
d.	During those two weeks, how many days did illness or injury keep --- from school?	_____ SL days (5e) <input type="checkbox"/> None (5f)		
If BOTH bed days AND work or school loss days, ask: e. On how many of these --- days lost from { work school } did --- stay in bed all or most of the day?		_____ days } 5f <input type="checkbox"/> None		
f.	(NOT COUNTING the day(s) { in bed lost from work lost from school } ) Were there any (other) days during the past 2 weeks that --- had to cut down on the things he usually does because of his health?	<input type="checkbox"/> Yes (5g) <input type="checkbox"/> No (6)		
g.	(Again, not counting the day(s) { in bed lost from work lost from school } ) How many days did he have to cut down for as much as a day?	_____ days (6a) <input type="checkbox"/> None (6)		
If 1+ days in Q. 5, ask 6; otherwise go to next person. 6a. What condition caused --- to { stay in bed miss work miss school cut down } during the past 2 weeks?		6a. Enter condition in item C ask 6b		
b.	Did any other condition cause him to { stay in bed miss work miss school cut down } during that period?	<input type="checkbox"/> Yes (6c) <input type="checkbox"/> No (NP)		
c.	What condition?	6c. Enter conditions in item C Reask 6b		

**CONDITION PROBE QUESTIONS**

<p>9a. Has anyone in the family been a patient in a hospital during the past 2 weeks? <input type="checkbox"/> Yes (9b and c) <input type="checkbox"/> No (11)</p> <p>b. Who was this? — Mark "In hospital" box in person's column.</p> <p>c. During the past 2 weeks, was anyone else a patient in a hospital? <input type="checkbox"/> Yes (Reask 9b and c) <input type="checkbox"/> No (10)</p>		
<p>If "In hospital," ask: 10a. For what condition was -- in the hospital?</p> <p>b. While -- was in the hospital did he talk to a doctor about any other condition?</p> <p>c. What condition?</p>	<p>9b. <input type="checkbox"/> In hospital (Item C)</p> <p>10a.</p> <p>b.</p> <p>c.</p>	<p>Enter condition in item C</p> <p><input type="checkbox"/> Yes (10c) <input type="checkbox"/> No (NP)</p> <p>Enter condition in item C Reask 10b and c</p>
<p>11. During the past 2 weeks (the 2 weeks outlined in red on that calendar) how many times has -- seen a medical doctor? (Do not count the doctors he saw while he was in the hospital.)</p>	<p>11.</p>	<p><input type="checkbox"/> None ____ Number of visits } (NP)</p>
<p>(Besides those visits) 12a. During that 2-week period has anyone in the family been to a doctor's office or clinic for shots, X-rays, tests, or examinations? <input type="checkbox"/> Yes (12b and c) <input type="checkbox"/> No (13)</p> <p>b. Who was this? — Mark "Doctor visit" box in person's column.</p> <p>c. Anyone else? <input type="checkbox"/> Yes (12b and c) <input type="checkbox"/> No (12d) If "Doctor visit," ask:</p> <p>d. How many times did -- visit the doctor during that period?</p>	<p>12b.</p> <p>d.</p>	<p><input type="checkbox"/> Doctor visit</p> <p>____ Number of visits (NP)</p>
<p>13a. During that period, did anyone in the family get any medical advice from a doctor over the telephone? <input type="checkbox"/> Yes (13b and c) <input type="checkbox"/> No (14)</p> <p>b. Who was the phone call about? — Mark "Phone call" box in person's column.</p> <p>c. Any calls about anyone else? <input type="checkbox"/> Yes (13b and c) <input type="checkbox"/> No (13d) If "Phone call," ask:</p> <p>d. How many telephone calls were made to get medical advice about --?</p>	<p>13b.</p> <p>d.</p>	<p><input type="checkbox"/> Phone call</p> <p>____ Number of calls (NP)</p>
<p>Make entry from Q.'s 11 – 13 in DV box for all persons. Ask Q. 14a for each person with visits in DV box. 14a. For what condition did -- see or talk to a doctor during the past 2 weeks?</p> <p>b. Did -- see or talk to a doctor about any specific condition?</p> <p>c. What condition?</p> <p>d. During that period, did -- see or talk to a doctor about any other condition?</p> <p>e. During the past 2 weeks was -- sick because of her pregnancy?</p> <p>f. What was the matter? — Anything else?</p>	<p>14a.</p> <p>b.</p> <p>c.</p> <p>d.</p> <p>e.</p> <p>f.</p>	<p><input type="checkbox"/> Condition (Item C THEN 14d) <input type="checkbox"/> Pregnancy (14e) <input type="checkbox"/> No condition (14b)</p> <p><input type="checkbox"/> Yes (14c) <input type="checkbox"/> No (NP)</p> <p>Enter condition in item C and ask 14d</p> <p><input type="checkbox"/> Yes (14c) <input type="checkbox"/> No (NP)</p> <p><input type="checkbox"/> Yes (14f) <input type="checkbox"/> No (NP)</p> <p>Enter condition in item C (NP)</p>

CONDITION PROBE QUESTIONS

Now I'm going to read a list of conditions;  
 16a. During the past 12 months, has anyone in the family (you, your --, etc.) had any of the following conditions –

If "Yes," ask b and c

b. Who was this? – Enter name of condition and letter of line where reported in appropriate persons column(s) in item C.

c. During the past 12 months has anyone else had . . . ?

	Yes	No
A. Gallstones?		
B. Any other gallbladder trouble?		
C. Hemorrhoids or piles?		
D. Cirrhosis of the liver?		
E. Fatty liver?		
F. Hepatitis?		

During the past 12 months has anyone in the family had – If "Yes," ask b and c	Yes	No	During the past 12 months has anyone in the family had – If "Yes," ask b and c	Yes	No	During the past 12 months has anyone in the family had – If "Yes," ask b and c	Yes	No
G. Yellow jaundice?			N. Gastritis?			U. Frequent constipation?		
H. Any other liver trouble?			O. Frequent indigestion?			V. Any other bowel trouble?		
I. Diabetes?			P. Any other stomach trouble?			W. Any other intestinal trouble?		
J. Any disease of the pancreas?			Q. Enteritis?			X. Cancer of the stomach, colon or rectum?		
K. Ulcer?			R. Diverticulitis?			Y. During the past 12 months has anyone in the family had any other condition of the digestive system? If "Yes," ask: Who was this? – What is the condition? (Enter in item C)		
L. Hernia or rupture?			S. Colitis?					
M. A disease of the esophagus?			T. Spastic colon?					

**CONDITION PROBE QUESTIONS**

Ages 17 +	17a. What was -- doing MOST OF THE PAST 12 MONTHS (For males): working or doing something else? (For females): keeping house, working or doing something else? If "something else," ask: b. What was -- doing? If 45+ years and was not "working," "keeping house" or "going to school," ask: c. Is -- retired?	17. and 18. 1 <input type="checkbox"/> Working (22) 2 <input type="checkbox"/> Keeping house (22) 3 <input type="checkbox"/> Retired (21) 4 <input type="checkbox"/> Going to school (24) 5 <input type="checkbox"/> 17+ something else (21) 6 <input type="checkbox"/> 6-16 something else (23)
Ages 6 - 16	18a. What was -- doing MOST OF THE PAST 12 MONTHS -- going to school or doing something else? If "something else," ask: b. What was -- doing?	
Ages 1 - 5	19a. Is -- able to take part at all in ordinary play with other children? b. Is he limited in the kind of play he can do because of his health? c. Is he limited in the amount of play because of his health?	19a. <input type="checkbox"/> Yes (19b) <input type="checkbox"/> No (25) b. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (19c) c. 2 <input type="checkbox"/> Yes (25) 4 <input type="checkbox"/> No (NP)
Ages Under 1 yr.	20a. Is -- limited in any way because of his health? b. In what way is he limited?	20a. <input type="checkbox"/> Yes (20b) 4 <input type="checkbox"/> No (NP) b. _____ (25)
	21a. Does -- health keep him from working? b. Is he limited in the kind of work he COULD do because of his health? c. Is he limited in the amount of work he COULD do because of his health? d. Is he limited in the kind or amount of other activities because of his health?	21a. 1 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (21b) b. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (21c) c. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (21d) d. 3 <input type="checkbox"/> Yes (25) 4 <input type="checkbox"/> No (NP)
	22a. In terms of health, is -- PRESENTLY able to (work - keep house) at all? b. Is he limited in the kind of (work - housework) he can do because of his health? c. Is he limited in the amount of (work - housework) he can do because of his health? d. Is he limited in the kind or amount of other activities because of his health?	22a. <input type="checkbox"/> Yes (22b) 1 <input type="checkbox"/> No (25) b. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (22c) c. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (22d) d. 3 <input type="checkbox"/> Yes (25) 4 <input type="checkbox"/> No (NP)
	23. In terms of health, would -- be able to go to school?	23. <input type="checkbox"/> Yes (24a) 1 <input type="checkbox"/> No (25)
	24a. Does (would) -- have to go to a certain type of school because of his health? b. Is he (would he be) limited in school attendance because of his health? c. Is he limited in the kind or amount of other activities because of his health?	24a. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (24b) b. 2 <input type="checkbox"/> Yes (25) <input type="checkbox"/> No (24c) c. 3 <input type="checkbox"/> Yes (25) 4 <input type="checkbox"/> No (NP)
	25a. What condition causes this limitation? If "old age," ask: Is this limitation caused by any specific condition? b. Is this limitation caused by any other conditions? c. What conditions? If 2+ conditions reported in 25, ask: d. Which of these conditions would you say is the MAIN cause of his limitation?	25a. Enter condition in item C and ask 25b <input type="checkbox"/> Old age only (NP) b. <input type="checkbox"/> Yes (25c) <input type="checkbox"/> No (25d) c. Enter condition in item C and reask 25b and c <input type="checkbox"/> Only one condition d. Enter main condition
	FOOTNOTES:	

CONDITION PROBE QUESTIONS

<p>26a. Has -- been in a hospital at any time since a year ago?</p> <p>b. How many times was -- in a hospital since a year ago?</p>	<p>26a. <input type="checkbox"/> Yes (26b) <input type="checkbox"/> No (Item C)</p> <p>b. ___ Times (Item C)</p>
<p>27a. Has anyone in the family been in a nursing home, convalescent home or similar place since a year ago? <input type="checkbox"/> Yes (27b) <input type="checkbox"/> No (28)</p> <p>b. Who was this? - Mark "Yes" in person's column. For each "Yes" marked, ask:</p> <p>c. During that period, how many times was -- in a nursing home or similar place?</p>	<p>27b. <input type="checkbox"/> Yes</p> <p>c. ___ Times (Item C)</p>
<p>For each child 1 year old or under, ask:</p> <p>28a. When was -- born? If on or after the date stamped in 26, ask 28b.</p> <p>b. Was -- born in a hospital? If "Yes" and no hospitalizations entered in his and/or mother's column, enter "1" in 26 and item C. If "Yes" and a hospitalization is entered for the mother and/or baby, ask 28c.</p> <p>c. Is this hospitalization included in the number you gave me for --? If "No," correct entries in Q. 26 and item C for mother and/or baby.</p>	<p>28a. Month   Day   Year</p> <p>b. <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>c. <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

CONDITION PROBE QUESTIONS

<b>CONDITION 1</b>		1. Person number _____		
Enter person number and "name of condition" and ask question 2.		Name of condition _____		
Ask for all conditions.		2. Did -- ever at any time talk to a doctor about his . . . ?	1 <input type="checkbox"/> Yes    2 <input type="checkbox"/> No	
Examine "Name of condition" entry in item 1 and mark.		<input type="checkbox"/> Accident or injury (4) <input type="checkbox"/> Condition on Card C (9) <input type="checkbox"/> Neither (3a)		
If "Doctor talked to," ask: _____ If "Doctor not talked to," record adequate description of condition or illness.		3a. What did the doctor say it was? Did he give it a medical name?	<b>WASHINGTON USE</b> Question No. _____	
Do not ask for Cancer.		b. What was the cause of . . . ? <input type="checkbox"/> Accident or injury (4)	Condition diag. code _____	
If the entry includes the words: Asthma    "Allment" Cyst        "Attack" Growth     "Condition" Measles    "Defect" Rupture    "Disease" Tumor      "Disorder" Ulcer       "Trouble"		} Ask: _____	c. What kind of . . . is it?	Number of this condition _____
For ALLERGY OR STROKE, ask:			d. How does the ALLERGY (STROKE) affect him?	1 <input type="checkbox"/> Chronic    2 <input type="checkbox"/> Acute
For any entry that includes the words: Abscess    Inflammation Ache(except headache)    Neuralgia Bleeding    Neuritis Blood clot    Pain Boll         Palsy Cancer       Paralysis Cramps (except menstrual)    Rupture Cyst         Sore Damage      Soreness Growth       Tumor Hemorrhage    Ulcer Infection     Varicose veins Weak Weakness		} Ask: _____	e. What part of the body is affected?	Total conditions _____
			Show the following detail: Ear or eye . . . one or both Head . . . . . skull, scalp, face Back . . . . . upper, middle, lower Arm . . . . . shoulder, upper, elbow, lower, wrist, hand; one or both Leg . . . . . hip, upper, knee, lower, ankle, foot; one or both	Accident - 1st injury 1 <input type="checkbox"/> Yes    2 <input type="checkbox"/> No
FILL QUESTIONS 4-8 FOR ALL ACCIDENTS OR INJURIES				
4a. Did the accident happen during the past 2 years or before that time? <input type="checkbox"/> During past 2 years (4b) <input type="checkbox"/> Before 2 years (5a)		6a. Was a car, truck, bus, or other motor vehicle involved in the accident in any way? 1 <input type="checkbox"/> Yes (6b)    2 <input type="checkbox"/> No (7)		
b. When did the accident happen? Enter month and year: Mark one box. Month _____ Year _____ <input type="checkbox"/> Last week <input type="checkbox"/> Week before <input type="checkbox"/> 2 weeks - 3 months <input type="checkbox"/> 3-12 months <input type="checkbox"/> 1-2 years		b. Was more than one vehicle involved? <input type="checkbox"/> Yes <input type="checkbox"/> No c. Was it (either one) moving at the time? 1 <input type="checkbox"/> Yes    2 <input type="checkbox"/> No		
Ask for all accidents or injuries: 5a. At the time of the accident what part of the body was hurt? What kind of injury was it? Anything else?		7. Where did the accident happen? 1 <input type="checkbox"/> At home (inside house) 2 <input type="checkbox"/> At home (adjacent premises) 3 <input type="checkbox"/> Street and highway (includes roadway) 4 <input type="checkbox"/> Farm 5 <input type="checkbox"/> Industrial place (includes premises) 6 <input type="checkbox"/> School (includes premises) 7 <input type="checkbox"/> Place of recreation and sports, except at school 8 <input type="checkbox"/> Other (Specify the place where accident happened) _____		
Part(s) of body _____ Kind of injury _____		8. Was -- at work at his job or business when the accident happened? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> While in Armed Services 4 <input type="checkbox"/> Under 17 at time of accident		
If accident happened BEFORE 3 months, ask: b. What part of the body is affected now? How is his -- affected? Is he affected in any other way?				
Part(s) of body _____ Present effects _____				

DETAILED CONDITION QUESTIONS

Mark for all conditions	9. <input type="checkbox"/> Not an eye cond. (10a) <input type="checkbox"/> First eye cond. (9a)	9a. Can -- see well enough to read ordinary newspaper print with glasses? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Under 6 (10a) <input type="checkbox"/> Not first eye cond. (10a)		
10a. During the past two weeks, did his . . . cause him to cut down on the things he usually does?		<input type="checkbox"/> Yes <input type="checkbox"/> No (15a)	
b. Did he have to cut down for as much as a day?		<input type="checkbox"/> Yes <input type="checkbox"/> No (15a)	
11. How many days did he have to cut down during that 2-week period?		___ Days	
12. During that 2-week period, how many days did his . . . keep him in bed all or most of the day?		___ Days 00 <input type="checkbox"/> None	
13. Ask if 6 - 16 years: How many days did his . . . keep him from school during that 2-week period?		___ Days (15a) 00 <input type="checkbox"/> None (15a)	
14. Ask if 17+ years: How many days did his . . . keep him from work during that 2-week period? (For females): not counting work around the house?		___ Days 00 <input type="checkbox"/> None	
15a. When did he first notice his . . . ? - Was it during the past 3 months or before that time?		<input type="checkbox"/> During 3 mos. (15b) <input type="checkbox"/> More than 3 mos. ago (16)	
b. Did he first notice it during the past two weeks or before that time?		<input type="checkbox"/> Past 2 weeks (15c) 4 <input type="checkbox"/> More than 2 wks. ago (AA)	
c. Which week, last week or the week before?		1 <input type="checkbox"/> Last week 2 <input type="checkbox"/> Wk before (AA)	
16. Did -- first notice it during the past 12 months or before that time?		5 <input type="checkbox"/> 3-12 months 6 <input type="checkbox"/> More than 12 mos. ago	
AA	Continue if $\left\{ \begin{array}{l} \text{reported in probe Q. 16} \\ \text{reported in probe Q. 25} \\ \text{on Card D} \end{array} \right\}$ Otherwise, go to next condition		
INTERVIEWER CHECK ITEM		<input type="checkbox"/> "Yes" in question 2 (18) <input type="checkbox"/> "No" in question 2 (17)	
17. During the past 12 months what did -- do or take for his . . . ? Anything else? Write in _____		(2d)	
18. After -- first noticed something was wrong, how long was it before he talked to a doctor about it? (Estimate is acceptable)		0 <input type="checkbox"/> Discovered by doctor (20) 2 ___ Days 4 ___ Months 3 ___ Weeks 5 ___ Years	
19. Before -- talked to a doctor about his . . . , what did he do or take for this condition? Anything else? Write in _____			
20a. Does -- NOW take any medicine or treatment for his . . . ?		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No (21)	
b. Was any of this medicine or treatment recommended by a doctor?		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
21. Has he EVER had surgery for this condition?		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
22. Has he EVER been hospitalized for this condition?		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
23. During the past 12 months, about how many times has -- seen or talked to a doctor about his . . . ?		___ Times 000 <input type="checkbox"/> None	
24. About how many days during the past 12 months, has this condition kept him in bed all or most of the day?		___ Days 000 <input type="checkbox"/> None	
25a. How often does his . . . bother him - all of the time, some of the time, or never? (Mark one box)		If bothered at all, ask 25b. If not bothered, go to 25c.	
1 <input type="checkbox"/> All the time (25b) 2 <input type="checkbox"/> Some time (25b) 0 <input type="checkbox"/> Never (25c) 3 <input type="checkbox"/> Other _____ (Specify)			
b. When it does bother him, is he bothered a great deal, some, or very little? (Mark one box)			
1 <input type="checkbox"/> Great deal (NC) 2 <input type="checkbox"/> Some (NC) 3 <input type="checkbox"/> Very little (NC) 4 <input type="checkbox"/> Other (Specify) _____ (NC)			
c. Does -- still have his . . . ?		1 <input type="checkbox"/> Yes (Next condition) <input type="checkbox"/> No (25d)	
d. Is this condition completely cured or is it under control?		2 <input type="checkbox"/> Cured (25e) 3 <input type="checkbox"/> Und. cont. (Next cond.) 4 <input type="checkbox"/> Other (Specify) (Next Cond.)	
e. About how long did -- have this condition before it was cured?		0 <input type="checkbox"/> Less than one month ___ Months ___ Years	

DETAILED CONDITION QUESTIONS

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