#### VITAL and HEALTH STATISTICS

DATA FROM THE NATIONAL HEALTH SURVEY

PROPERTY OF THE PUBLICATIONS BRANCH EDITORIAL LIBRARY

# Prescribed and Nonprescribed Medicines

Type and Use of Medicines
United States - July 1964 - June 1965

Statistics on the number and percentage distributions of acquisitions of prescribed medicine, cost per purchased acquisition of prescribed medicine, cost per person of prescribed and of nonprescribed medicine, and distribution of costs of nonprescribed medicines by place of purchase, by age, sex, and type or use of medicine. Based on data collected in household interviews during July 1964-June 1965.

Washington, D. C.

October 1967

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
John W. Gardner
Secretary

Public Health Service William H. Stewart Surgeon General



Public Health Service Publication No. 1000-Series 10-No. 39

#### NATIONAL CENTER FOR HEALTH STATISTICS

FORREST E. LINDER, Ph.D., Director
THEODORE D. WOOLSEY, Deputy Director
OSWALD K. SAGEN, Ph.D., Assistant Director for State Relations
WALT R. SIMMONS, M.A., Statistical Advisor
PHILIP S. LAWRENCE, Sc.D., Planning Officer
ALICE M. WATERHOUSE, M.D., Medical Consultant
JAMES E. KELLY, D.D.S., Dental Advisor
LOUIS R. STOLCIS, M.A., Executive Officer
DONALD GREEN, Information Officer

#### DIVISION OF HEALTH INTERVIEW STATISTICS

ELIJAH L. WHITE, AM., Director

ROBERT R. FUCHSBERG, Chief Survey Methods Branch

GERALDINE A. GLEESON, Chief. Analysis and Reports Branch

#### COOPERATION OF THE BUREAU OF THE CENSUS

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

In accordance with specifications established by the National Health Survey, the Bureau of the Census, under a contractual arrangement, participates in most aspects of survey planning, selects the sample, collects the data, and carries out certain parts of the statistical processing.

# CONTENTS

	Page
Introduction	1
Source and Limitations of the Data	1
Prescribed Medicine	4
Classification	4
Number and Cost of Acquisitions	7
Cost Per Person	
Nonprescribed Medicine	13
Classification	13
Cost and Place of Purchase	14
Detailed Tables	15
Appendix I. Technical Notes on Methods	35
Background of This Report	35
Statistical Design of the Health Interview Survey	35
General Qualifications	36
Reliability of Estimates	36
Guide to Use of Relative Standard Error Charts	37
Appendix II. Definitions of Certain Terms Used in This Report	41
Terms Relating to Acquisition and Cost of Medicines	41
Demographic Term	41

IN THIS REPORT statistics are presented on the types and uses of prescribed and nonprescribed medicines. Prescribed medicines are classified by the condition for which prescribed, when possible, and average costs are shown per person in the population and per acquisition. An acquisition was counted each time a prescription was filled or refilled for an individual during a specified period. Nonprescribed medicines are classified by the type of medicine. Average costs per person in the population and the distribution of costs of nonprescribed medicines by place of purchase are presented.

These data were collected by the Health Interview Survey during July 1964-June 1965 in household interviews of a sample of the civilian, non-institutional population of the United States. An earlier report, "Cost and Acquisition of Prescribed and Nonprescribed Medicines, United States, July 1964-June 1965, "(Vital and Health Statistics, Series 10, No. 33), provided information on the differentials in costs of medicine according to demographic characteristics of the population.

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.	*

### PRESCRIBED AND NONPRESCRIBED MEDICINES

#### TYPE AND USE OF MEDICINES

Alice J. Alderman, Division of Health Interview Statistics

#### INTRODUCTION

The Health Interview Survey (HIS) collected data on prescribed and nonprescribed medicines during July 1964-June 1965. An earlier report, "Cost and Acquisition of Prescribed and Nonprescribed Medicines," describes costs of prescribed and nonprescribed medicines and acquisitions of prescribed medicines distributed by various demographic variables. Essentially the same measures of cost and acquisition are included in this report but they are applied to subgroups of medicines, classified according to conditions for which the medicine was prescribed or according to type of medicine. Characteristics of the population are limited to age and sex.

Classification into medicine subgroups was somewhat experimental since this was the first attempt made by HIS to provide this particular type of statistic. Also, it was difficult to arrive at a classification which would be useful to readers and yet based on information which household respondents could be expected to report with reasonable accuracy (i.e., information which did not require a high degree of specialized medical knowledge).

# SOURCE AND LIMITATIONS OF THE DATA

The information contained in this publication is derived from household interviews conducted by the Health Interview Survey in cooperation with the U.S. Bureau of the Census in a probability sample of the civilian, noninstitutional population of the

United States. The sample is designed so that interviews are conducted during every week of the year. During the 52-week period July 1964-June 1965, the sample was composed of approximately 42,000 households containing about 134,000 persons living at the time of the interview.

A description of the design of the survey, of the methods used in estimation, and of general qualifications of the data obtained from surveys is presented in Appendix I. Since estimates shown in this report are based on a sample of the population rather than on the entire population, they are subject to sampling error. Therefore, particular attention should be paid to the section entitled "Reliability of Estimates." Sampling errors for most of the estimates are of relatively low magnitude. However, where an estimated number or the numerator or the denominator of a rate or percentage is small, the sampling error may be high. Charts of relative sampling errors are shown in Appendix I.

The entire questionnaire used during this year of data collection is illustrated in the publication, "Current Estimates from the Health Interview Survey, United States, July 1964-June 1965" (Vital and Health Statistics, Series 10, No. 25). The questions about prescribed and nonprescribed medicines and the form of the tables on which responses about each medicine were recorded are shown in figure 1 of this report. Card J. on which are listed various kinds of nonprescribed medicines, was given to the respondent as an aid in recalling recent purchases of this type of medicine.

Pain relievers, such as aspirin, headache powders, etc.

Remedies for colds and other respiratory conditions, such as cough medicine, nose drops or sprays, etc.

Medicine for digestive conditions or upsets, such as antacids, laxatives, etc.

Remedies for skin or muscular conditions, such as ointments, salves, liniments, etc.

Medicines for eye, ear, or nose conditions

Vitamins

Tonics or blood builders

First aid items

Antiseptics

Allergy remedies

Nonprescription tranquilizers, sleeping pills, or "stay awake" pills

Any other nonprescription medicines

Although the estimates presented in this report represent annual expenditures for prescribed and nonprescribed medicines, these data are derived in household interviews by asking about the acquisition of such medicines during the 2-week period prior to the week of interview. These data are then expanded to represent an annual estimate. This weighting procedure is described in Appendix I. The 2-week-recall period was used to reduce memory bias in the reporting of acquisitions of medicines.

Past experience has indicated that two of the factors usually related to the ability of a household respondent to report a particular phenomenon are: (1) the impact of that phenomenon on the household in question and, (2) the length of the recall period involved. Hospital experiences of family members usually have a relatively strong

impact on the household and are therefore readily remembered and reported in the household interview even when the hospitalization occurred many months prior to the interview. However, when the impact of a phenomenon on the household is relatively weak, as is probable of the acquisition of medicines, it is beneficial to shorten the period of recall. While this reduction tends to aid recall and the reporting of certain events, the reduced number of events elicited for the shortened reference period increases sampling error. Considering these two offsetting factors and the context of the questionnaire, 2 weeks was chosen as the estimated optimum recall period, based on previous studies relating to the reporting of acute illness and the utilization of physician services. However, since the optimum recall period varies with the particular item under study, more research is required and will continue to be of interest to the Health Interview Survey.

The period of collection of these data should be emphasized. The drug field is dynamic, therefore, some drugs have entered while others have left the market, and prices have changed since these data were collected.

Some of the terms used in this report have specialized meanings for purposes of the survey. The classifications of prescribed and of nenprescribed medicines are explained in these sections. Further definitions of terms can be found in Appendix II.

The demographic variables of age and sex describe either the persons for whom medic ne was prescribed or the family members who were either users or potential users of nonprescribed medicine.

Numerators of rates of cost per person (tables 14-18) were inflated to include approximation of unknown cost. The cost was unknown for about 9.8 percent of the acquisitions of prescribed medicine and for about 9.5 percent of the records of nonprescribed medicine. For each of the average costs per person computed, the number of purchases or records with unknown cost was multiplied by the respective average (per purchase or record) known cost and added to the known cost to form the numerator. (In instances where nonprescribed medicine was purchased for the use of more than one family member, the cost was divided, and a separate record was created

Г			3,,,,-					
1	Now I have some questions about purch	nases of medicine. First,	I want to ask	you about medicines prescribed by	y a doctor			
16.	a. LAST WEEK OR THE WEEK BEFOR	RE, did anyone in the fom	ily buy or obtai	in any kind of medicine prescribed	l by a doctor?			
	Yes If "Yes," ask:	No (Go to Q. t	7)					
	b. What is the name of the medicine? ( ask: What condition is it for? Then			Table P. If name is unknown, en	ter "DK" in column	(a) and		
	c. LAST WEEK OR THE WEEK BEFOR	RE, did anyone buy or obto	ain any OTHER	R medicine prescribed by a doctor	?			
	Yes (Re-ask Q. 16b)	No (Fill remain	ning columns of	f Table P for each medicine report	ted)			
-			·				<u> </u>	
	Turn to Card J, and ask:							
17.	e. LAST WEEK OR THE WEEK BEFOR prescribed by a doctor? This (Show	RE, did anyone in the fam Card J) is a list of SOME	ily buy or obtai of the items i	in any medicine NOT n which we are interested.				
	Yes	☐ No (Go tọ Q. 1	8)			INI	ERVIEWER:	
	If "Yes," ask:						pairmen ts" or nditions" on C	
	b. What is the name of the medicine? (	Enter name or kind of me	dicine in colum	n (a) of Table NP.)			rted in question	
	c. LAST WEEK OR THE WEEK BEFOR	RE, did anyone buy or obt	ain any OTHE	R medicine NOT prescribed by a d	loctor?		7, should be ca to Table I if t	
	Yes (Re-ask Q. 17b)		•	Table NP for each medicine repo			ot already appe	
ŀ								
	I. P - PRESCRIBED MEDICINES						_	
Line No.	Name of medicine (If name is unknown enter "DK"	What condition is	the for?	Who was it prescribed for? (Enter column number	Which week was the LAST WEEK — or	the WEEK	How much d	
اقا	in col. (a) and ask col. (b).)	(ъ)		of person) (c)	BEFORE LAST? (d		Dollars	Cents
1				•	☐ Last week ☐ Before 2 weeks (S	Week before	s	i
Tal	IN NP - NONPRESCRIBED MEDICINE	S						
Line No.	Name of medicine (If name is unknown, enter the kind of medicine)	What is the generally used for by this family?	Which mem- bers of the family use the? (Enter col. nos.	Which week was the bought, LAST WEEK or the WEEK BEFORE LAST?	, How much did it cost?	Where w	as 11 bought?	
1	(a)	(b)	of peragna) (c)	(d)	Dollars (Cents		(f)	
1				Last week Week befor	e _	Drug store Grocery store Mail order hou	Other (	Specity)

Figure 1. Questionnaire items relating to purchases of medicine.

for each user; therefore, the number of records is equal to the number of users rather than the number of acquisitions of nonprescribed medicine.) For other tables, such as cost per purchased acquisition, only known cost was used.

Because of basic differences in the acquisition of prescribed and nonprescribed medicines, estimates for the two types of medicines are presented in separate tables. In most cases, medicines are prescribed in the treatment of a specific illness and are taken by an individual; less frequently medicines are prescribed for general symptoms, such as pain or fever. For this reason, the primary classification of prescribed medicine is basically the conditions for which medicine is taken with residual groups consisting of symptoms or types of medicine.

On the other hand, nonprescribed medicines are more frequently acquired for general usage, often for the needs of an entire family. Unlike a prescribed medicine, which is usually taken for a specific condition, a nonprescribed medicine may be used for various kinds of conditions or symptoms. For example, aspirin may be used for headaches, respiratory illnesses, pain, or fever, either by a single individual or by several members of a family. Therefore, the type of medicine has been used in the basic classification of nonprescribed medicine, with residual groups comprised of the type of conditions for which the medicine was taken.

Since prescribed and nonprescribed were classified differently specific categories of them are not comparable. For example, prescribed

vitamins were classified as "vitamins" only when the condition or symptom for which they were prescribed, such as pregnancy or a skin condition, was not reported. However, all nonprescribed medicines reported as vitamins were classified as "vitamins."

#### PRESCRIBED MEDICINE

#### Classification

The various categories of prescribed medicines are probably best defined by a description of classification procedures. The classification of prescribed medicines shown in the detailed tables 1-9 and 14-16 of this report consists of 26 mutually exclusive categories (summarized versions of this classification appear in tables 10-13). Both the name of the medicine and the condition for which it was prescribed were asked in the interview (fig. 1). When possible the medicines were classified by the condition or symptom for which prescribed for reasons explained above and because respondents could provide this type of information more often than they could identify the actual type of medicine.

In the collected data, a relevant condition was reported for about 79 percent of the reported prescriptions; an additional 12 percent of the reported prescriptions were classified by the symptom which was being treated, leaving approximately 9 percent of the total with no associated condition or symptom reported. Most of these remaining medicines with unknown use, about 8 percent of the total prescriptions, were classed by the kind of medicine, leaving about 1 percent of the total for which the condition, symptom, or kind of medicine was unknown.

These unknown kinds of medicines were combined with other classes of medicine that were *not* selected to be shown individually. This combination is shown as the 'all other' class. Most of the classes which *are* shown individually in the tables are essentially diagnostic groups which were given priority in classification (table A) and therefore should include all of the prescriptions for which the respective diagnoses were reported. The symptom 'pain' as used in these tables describes only prescriptions for headaches

plus prescriptions for pain for which no condition was reported; therefore, the amounts shown represent a minimum of medicines prescribed for pain. Similarly, the estimates for "vitamins" and "sedatives, tranquilizers, or stimulants" are minimal because medicines of this kind were allocated to these categories only when no condition or symptom was reported.

The classification was derived partly from conventional diagnostic classifications1 and partly from a convenient categorizing of the actual data collected. It was necessary to assign ranks of priority order to the three types of information so that an acquisition would be included in only one of the mutually exclusive classes when more than one type of information was reported. Priority order I in table A indicates that if the condition for which a medicine was prescribed was reported, it was classified to the condition. Symptoms were assigned second priority; therefore, if only the symptom and the type of medicine (priority order III) were reported, the prescription was classified to the symptom. It was necessary in some instances to include symptoms and medicine types within some of the broad categories which are essentially diagnostic; for this reason the priority order assigned to subgroups within such categories varies. This assignment of symptoms and medicine types to those broad diagnostic classes was done because the symptoms or medicine types seemed to be appropriate subgroups of those diagnostic categories. The variability of priority order within these broad diagnostic categories means that the broad categories include all prescriptions with the appropriate conditions reported (assigned first priority) plus some with no condition reported (assigned lower priority). For the latter, it was assumed that if conditions had been reported for them most of these medicines would have been classified to the same broad categories as those to which they actually were classified for this report. Thus, even though priorities are mixed, the diagnostic categories generally represent estimates which are maximum in terms of classification of known data.

<sup>&</sup>lt;sup>1</sup>It was not practical to collect detailed information about these conditions which would be necessary for ICD (International Classification of Diseases) classification. Therefore, these categories are not identical to ICD categories.

Table A. Priority order and percent distribution of acquisitions of prescribed medicine, by category for which prescribed: United States, July 1964-June 1965

Category for which prescribed	Priority order <sup>1</sup>	Percent distri- bution
Total	• • •	100.0
Asthma-hay fever	I	2.7
Other allergies	I	2.5
Thyroid conditions	I	1.6
Diabetes	I	3.1
Eye or ear conditions	I	3.8
Heart conditions (with or without high blood pressure)	I	5.9
High blood pressure	I	6.8
Other disorders of circulatory system:		
Low blood pressure	I	0.3 0.3
Arteriosclerosis	İ	0.5
Phlebitis	Ī	0.1
Blood-thinning medicines (condition not mentioned)All other diseases of the circulatory system	III	0.2
Anemia and other blood conditions:	1	0.9
Anemia (iron deficiency, low blood count, blood too thin)	ı	1.5
All other diseases of the blood and blood-forming organs	Ī	0.1
Peptic ulcers	I	2.2
Other digestive system conditions:		
Gallbladder conditions Diarrhea	I I	0.6
Constipation (or laxatives reported)	II	0.5 0.6
Heartburn, gas on stomach, indigestion and other stomach upsets.		
or nervous stomachStomach conditions other than peptic ulcer or the preceding	II	1.8
class of symptoms	I	0.7
Intestinal disorders other than diarrhea or constipation	Ī	0.8
All other digestive conditions	I	0.7
	I	3.4
Colds, coughs, throat conditions, and influenza	I	15.3
Other respiratory conditions:	I	0.6
Pneumonia or pleurisyEmphysema	Ī	0.3
Virus, not otherwise specified	Ĩ	1.5
All other diseases of the respiratory system	Ι	0.4
Kidney conditions	I	1.5
Other genitourinary conditions:	_ [	
Menstrual disorders	I	0.4
Other female genital conditions	Ī	0.7 0.6
All other genitourinary conditions	Ĩ	1.2
Skin conditions:		
Fungus infections (ringworm)	I	0.3 2.8
Tener Tient Vollage VIII	- 1	40

Table A. Priority order and percent distribution of acquisitions of prescribed medicine, by category for which prescribed: United States, July 1964-June 1965—Con.

Category for which prescribed	Priority order <sup>1</sup>	Percent distri- bution
Arthritis and other disorders of bones and joints: Arthritis, rheumatism or gout	I `	3.0 0.5
Injuries	I	1.8
Conditions of pregnancy or delivery	I	1.4
Mental illness and epilepsy:  Epilepsy "Nerves" and "nervous trouble" Other mental and psychoneurotic disorders, excluding nervous stomach	I	0.6 6.4 0.2
Weight problems	ī	1.8
Pain: Headaches Pain	I	0.9
Vitamins	III	2.1
Sedatives, tranquilizers, or stimulants	III	1.7
All other: Dental and postoperative conditions, excluding delivery; and childhood diseases	 I	10.4
All other diseases of the nervous system and sense organs; all other infective and parasitic diseases; and neoplasms, tumors, and growths	I II	(an ain ags
Tonics, hormones, contraceptives, diuretics, or muscle relaxants	III	
All other symptoms or conditions or types of medicine	• • •	
Unknown	• • •	ميت هنا هين

<sup>&</sup>lt;sup>1</sup>Priority I= Condition for which medicine was prescribed.

II= Symptom for which medicine was prescribed.

III= Type of medicine prescribed.

The following discussion may help to clarify or to emphasize information presented in table A. Eye and ear conditions were combined for convenience in classifying, even though they are not closely related medically. Blood-thinning medicines were classed as medicines for circulatory disorders when no condition was reported because it was felt that the lay term, blood thinners, would most frequently mean anticoagulants which are used to prevent intravascular thrombosis. Influenza was included with colds, coughs, and throat conditions because these terms are frequently confused; because of confusion of terms,

virus, not otherwise specified, was also included with other respiratory conditions. Although epilepsy is usually classified as a disease of the nervous system rather than as an emotional disorder or mental illness, it was combined with mental illness in this report. Epilepsy comprises only a small proportion of this category however (table A). The same priority in classification was given to "weight problems" and to "headaches" as to the more conventional condition classes. Dental conditions were included in the category, "all other," rather than with digestive system conditions.

#### Number and Cost of Acquisitions

An acquisition of prescribed medicine was counted in the sample each time a medicine was actually obtained by a prescription or by a refill of a prescription. Medicine specifically prescribed for two persons was counted as two acquisitions. The number of acquisitions is not an estimate of the actual amount of medicine obtained since, of course, dosage varies with prescriptions. It is an estimate of the frequency with which prescriptions were filled or refilled.

About 15 percent of these medicines were prescribed for "colds... influenza" (tables A, 1, and 2). Adding prescriptions for asthma-hay fever, sinus, and bronchial, and other respiratory conditions to this estimate increases the proportion of acquisitions that were for illnesses with respiratory manifestations to about one-fourth of the total acquisitions. This sum may be somewhat inaccurate in that it *excludes* the class, "other allergies" (some of which no doubt were respiratory) and *includes* influenza and unspecified virus. Prescriptions were filled frequently also for circulatory disorders, mental illness and epilepsy, and digestive system conditions.

Of the total prescriptions, 9.3 percent was provided free of cost to the user, and this proportion varied little by condition group (table 1). About 4.0 percent were obtained free from a physician, and the remaining 5.3 percent were obtained free from other sources. Medications obtained directly from a physician were classified as free when there was no known addition to the regular fee for the physician's services. Medicines obtained free from other sources include those provided without charge by agencies such as charitable and welfare organizations and governmental facilities. Medicines obtained under insurance or other prepaid arrangement were classified as purchased.

About 80.9 percent of the total acquisitions were purchased with cost known and about 9.8 percent were purchased with cost unknown. In comparison with other conditions, the proportion of medicines prescribed for injuries which were purchased with known cost was relatively low. This reflects a slightly higher proportion obtained free (samples of medicines such as antiseptics may often be given) and a substantially higher

proportion with cost unknown. Perhaps, since an injury is a one-time occurrence, the cost of medicine for it is less likely to be remembered than the cost of medicine for a condition associated with repetitive purchases of medicine. Also, the emergency nature of many injuries may distract attention from monetary matters.

Estimates of the frequency with which prescriptions were purchased for age-sex groups of the population are presented in tables 2, 4, and 5, with a percent distribution in table 3. Numbers of acquired purchases rather than rates are shown because denominators corresponding to some of the condition classes (i.e., persons who had the respective conditions or symptoms) were not available. Also, it was felt that these gross estimates would be useful to some consumers of the data. If a per capita type of estimate is preferred, appropriate age-sex population data are given in table 20.

Some conditions for which medicine was prescribed with relatively high frequency were selected for table B (which is derived from tables 2-5) as examples of age and sex patterns of medicine usage. The proportion of purchases for treatment of the selected circulatory conditions increased with age as would be expected (assuming that prevalence or incidence of morbidity has some direct relation to frequency of purchases of prescriptions) on the basis of the increase with longevity in the prevalence of such major chronic illnesses and the simultaneous decrease in incidence of acute conditions. The pattern of decrease with age in the sex ratio of acquisitions associated with these circulatory conditions among adults may reflect an earlier death of men than of women afflicted with these diseases. However, these age differences are within the range of sampling variability. The consistency between age patterns for heart conditions and high blood pressure may be more than coincidental. however.

About a third of the acquisitions purchased for persons under age 25 were for the treatment of colds, coughs, throat conditions, and influenza. The proportion of acquisitions for these ailments decreased with age. Prescriptions in this category were purchased with similar frequency for males and females in the youngest age interval.

The proportion prescribed for mental illness was lowest at the extremes of the age scale, especially for young people. The variability by age in sex ratios of purchased acquisitions for mental illness and epilepsy is within the range of sampling variability.

The average price per prescription is presented in tables 6-8. The amount of this average cost is influenced by: (1) the actual amount of medicine contained in the prescription or acquisition; and (2) the expensiveness of the medicine per se. These two variables are confounded in the data.

The average price per prescription for males and females under 25 years was less than that for older persons. For total males and for total females, the average estimated price per prescription was \$3.60. Even though the average costs of medicines for the treatment of various conditions are somewhat dependent on the quantity per prescription, conditions are grouped in the following classification according to the average amount spent per acquisition. They are listed below in the order of magnitude of the average cost.

Average cost per purchased acquisition

Condition for which prescribed

\$2.70-\$2.80----Thyroid conditions

Colds, coughs, throat conditions,
and influenza

\$3.00-\$3.30---- Sedatives, tranquilizers, or stimulants (condition not reported)

Allergies other than asthma-hay fever

Digestive system conditions other than peptic ulcers
Vitamins (condition not reported)
Asthma-hay fever
Eye or ear conditions
Peptic ulcers
Sinus and bronchial conditions
Conditions of pregnancy or delivery

\$3.60-\$4.00---- Injuries
Skin conditions
Pain (condition not reported)
Blood conditions (anemia, etc.)
Other respiratory conditions
Heart conditions (with or without high blood pressure)
Mental illness and epilepsy
Weight problems

\$4.20-\$4.70---- Circulatory conditions other than
heart conditions or high blood
pressure
Arthritis and other disorders of
bones and joints
Diabetes
Kidney and other genitourinary
conditions
High blood pressure

The quantity of medicine per acquisition that is prescribed for long-term chronic conditions may be greater than that for other medicines since, assuming all other things to be equal, it would seem desirable for the physician to prescribe larger quantities at a time.

The greater expense per prescription for older persons can be explained to some extent by the decrease with age in the percent of acquisitions prescribed for 'colds, ... 'a relatively inexpensive class, accompanied by an increase with age in the percent of acquisitions prescribed for circulatory conditions, arthritis and other disorders of bones and joints, and diabetes, diseases for which individual prescriptions are more expensive. The proportion of medicines prescribed for mental illness and epilepsy, another relatively expensive category, was also greatest for persons aged 25 years and over. It should be noted that prescriptions purchased for "colds, . . . " and for diabetes were also more expensive on the average for persons aged 25 years and over than they were for young people. In general, prescriptions for the individual condition classes were more expensive for adults (i.e., 25 years and over) but not uniformly so, and not to as high a degree as that noted for total conditions. Thus, the increase with advancing age in the average cost of total prescriptions reflects both a higher prevalence among older people of condi-

Table B. Percent distribution and sex ratios of purchased acquisitions, by condition for which prescribed according to age: United States, July 1964-June 1965

All ages		Under 25 years		25-44 years		45-64 years		65+ years	
Per- cent	SR	Per- cent	SR	Per- cent	SR	Per- cent	SR	Per- cent	SR
100.0	0.61	100.0	0.82	100.0	0.43	100.0	0.62	100.0	0.56
6.0 6.9	0.90 0.46	*	*	1.5	* 0.80			14.5 14.8	0.84 0.35
5.6 14.9 7.2	0.59 0.90 0.38	34.7 2.6	1.07 0.70	5.8 10.9 10.5	0.65 0.54 0.35	8.0 10.0	0.85	7.4 4.0 6.0	0.45 0.57 0.30 0.62
	Per- cent 100.0 6.0 6.9 5.6 14.9	Per-cent SR  100.0 0.61  6.0 0.90 6.9 0.46 5.6 0.59 14.9 0.90 7.2 0.38	Per-cent SR Per-cent  100.0 0.61 100.0  6.0 0.90 * 6.9 0.46 * 5.6 0.59 3.4  14.9 0.90 34.7 7.2 0.38 2.6	Percent SR Percent SR  100.0 0.61 100.0 0.82  6.0 0.90 * * * 6.9 0.46 * * 5.6 0.59 3.4 0.71  14.9 0.90 34.7 1.07 7.2 0.38 2.6 0.70	Percent SR Percent SR Percent SR Percent SR 100.0 0.61 100.0 0.82 100.0 6.9 0.46 * * 1.5 6.9 0.46 * * 2.2 5.6 0.59 3.4 0.71 5.8 14.9 0.90 34.7 1.07 10.9 7.2 0.38 2.6 0.70 10.5	Percent SR Percent SR Percent SR  100.0 0.61 100.0 0.82 100.0 0.43  6.0 0.90 * * 1.5 * 2.2 0.80  6.9 0.46 * * 2.2 0.80  5.6 0.59 3.4 0.71 5.8 0.65  14.9 0.90 34.7 1.07 10.9 0.54  7.2 0.38 2.6 0.70 10.5 0.35	Percent cent         SR         Percent         SR         100.0	Percent cent         SR         Percent         SR         Percent cent         SR         20.00.0         0.6	Percent         SR         100.0         100.0         <

<sup>&</sup>lt;sup>1</sup>Sex ratio (SR) is ratio of male to female number of acquisitions for that age-condition category.

tions which require treatment with medicines which are expensive per acquisition and a greater expense per prescription for adults for medicines prescribed for many of the individual condition classes.

As a supplement to information on average costs, tables 9-13 include data on the distribution of purchased acquisitions of prescribed medicine by cost for the various age groups of the population. Again it is emphasized that the unit of medicine used is an acquisition which is not a standard quantity of medicine. The age intervals, which are not precisely the same as those presented elsewhere in this report, were chosen either because they comprise more estimates which meet standards of reliability or they reveal age differences. The percent distribution by cost of medicine for each condition class shown in tables 9-13 is based on the column labeled "purchased acquisitions with known cost."

About 77.3 percent of the purchased acquisitions for which the price was known cost less than \$5.00 each (table 9). In table C the percent of prescription acquisitions costing \$5.00 or more are presented in ascending order according to condition class. This ordering should be interpreted as a general positioning of medicines on a

scale rather than as a definite ranking, since the true values may differ from these estimates because of inaccurate responses or sampling error.

Data in table D indicate that the distribution of acquisitions by cost for persons younger than 15 years differs from that for older persons. Although the age intervals are not identical, the statement that the distribution of purchased prescriptions by cost among young persons is weighted at the less expensive extreme is consistent with the earlier finding that the average cost per purchase was less for persons under 25 years.

This age difference in distribution of total purchases by cost reflects (as it did in the average cost per purchase) these factors: (1) an age difference for many of the individual condition categories which is smaller than but similar to that for the total condition categories; and, (2) a high proportion of the kinds of conditions which are treated with inexpensive acquisitions among children.

The variation in the cost of medicine by age, even for the treatment of conditions in the same general category, is exemplified in table E. These data show that prescriptions for "colds,..." were generally inexpensive for the youngest group.

Table C. Percent of purchased acquisitions of prescribed medicine which cost \$5.00 or more, by condition for which prescribed: United States, July 1964-June 1965

Pe	Percent
	condi- tion class
Thyroid conditions————————————————————————————————————	10.8 12.4 13.9 15.4 15.9 16.6 18.6 21.5 23.4 23.8 24.6 26.2 26.3 30.7 31.8 37.2 37.7

<sup>&</sup>lt;sup>1</sup>Condition not reported.

Table D. Percent distribution of purchased acquisitions with known cost of prescribed medicines, by cost according to age: United States, July 1964-June 1965

	Purchased acquisitions with known cost						
Age	Total	Under \$2.00	\$2.00- \$2.99	\$3.00~ \$4.99	\$5.00 and over		
	Percent distribution						
All ages	100.0	26.0	22.5	28.8	22.7		
Under 15 years	100.0	41.8	24.7	24.5	9.0		
15-44 years	100.0	24.0	24.5	29.0	22.4		
45-64 years	100.0	21.1	20.3	30.8	27.9		
65 years and over	100.0	22.2	20.8	29.4	27.7		

Table E. Percent distribution of purchased acquisitions with known cost of medicines prescribed for colds, coughs, throat conditions, and influenza, by cost according to age: United States, July 1964-June 1965

	Purchased acquisitions with known cost						
Age	Total	Under \$2.00	\$2.00- \$2.99	\$3.00- \$4.99	\$5.00 and over		
	Percent distribution						
All ages	100.0	38.6	22.4	25.1	13.8		
Under 15 years	100.0 100.0 100.0 100.0	46.8 27.9 30.1 29.7	23.2 19.7 21.8 27.9	21.9 28.5 29.3 30.1	8.1 23.9 18.8 12.3		

Although the distribution shown in table E indicates a higher cost of prescriptions for "colds, ..." for older persons, those medicines are still relatively inexpensive for older persons (for those aged 45 years and over) in comparison with prescriptions for the treatment of other conditions among persons 45 years and over.

#### Cost Per Person

The estimated per capita expenditure for prescribed medicines during the year is used as a measure of the comparative expenditures for medicine because it allows the presentation of more comprehensible estimates than the millions of dollars represented in the total volume of expense (tables 14-16). To produce estimates showing the costs of medicines on a comparative basis, the populations used as denominators for the per capita amounts shown in these tables are the same for each condition class, varying only by age and sex. The feasibility of basing the average cost of medicines for specific conditions on the number of persons experiencing the condition is discussed later. Inflation of the numerator to include unknown cost is explained in the section. Source and Limitations of the Data.

The largest amounts were estimated to have been spent on medicines prescribed for heart

conditions with or without high blood pressure; high blood pressure; mental illness and epilepsy, and for colds, coughs, throat conditions, and influenza. The relatively large expenditure for prescriptions for circulatory and mental conditions reflects the high frequency of acquisition as well as the high average cost per acquisition. Prescriptions for colds, coughs, throat conditions, and influenza were acquired at a comparatively low average cost but because of the frequency with which these medicines were acquired, the per capita expense was higher for this condition category than for any of the others.

Per capita expenditure on total prescriptions increased with age, reflecting more an age difference in volume of per capita acquisitions than in cost per prescription. This expenditure pattern was most pronounced, in terms of differences between extremes of the age scale, for medicines prescribed for the following conditions: diabetes. disorders of the circulatory system, arthritis and other disorders of bones and joints, and mental illness and epilepsy. Such an age pattern was not uniform among condition groups. For example, the greatest per capita expenditure on prescriptions for colds, coughs, throat conditions, and influenza was found among children. While costper prescription for "colds, . . . " was least for young people, per capita frequency of acquisition of prescriptions for colds was greatest for this age group. The number of acquisitions per person per year by age were as follows:

All ages	0.6
Under 15 years	1.1
15-24 years	0.4
25-44 years	0.4
45-64 years	0.5
65 years and over	0.4

The above rates are shown only for explanatory purposes—they are based on the totalcivilian, noninstitutional population, and are therefore not limited to persons who experienced these respiratory illnesses.

The per capita expenditure rate for males was less than that for females, especially for persons 25-44 years of age. Contributing to this difference were the selected conditions shown below:

Cost per male per year	Cost per female per year
\$9.20	\$18.40
0.10	0.60
0.10	0.50
0.20	1.30
•••	0.80
0.90	2,20
0.30	0.90
	male per year \$9.20 0.10 0.10 0.20 0.90

Some conditions were mentioned earlier as having involved relatively high expenditures on prescribed medicines for the combined sexes.

Rates of expenditures for these conditions were estimated to have been as follows for each sex:

Condition	Cost per male per year	Cost per female per year
Heart conditions	\$1.10 0.90	\$1.CO 1.EO
Colds, coughs, throat conditions, and influenza Mental illness and	1.70	1.50
epilepsy	0.70	1.70

The rate of acquisitions of medicines prescribed for high blood pressure and for mental illness and epilepsy was much higher for females than for males.

It is recognized that users of the data who are interested in the cost of medicines for specific diseases would prefer to have average costs based on persons with the disease. By using prevalence and incidence estimates derived from interview survey data, it is possible to obtain rough estimates of the cost of medicine for some of the condition categories. These categories are limited to those which include either all chronic or all acute conditions. Since no attempt was made during the interview to establish the time of onset of conditions for which medicine was obtained. only categories including conditions which are by nature, chronic or acute, are appropriate for this procedure. For example, an estimate cannot be made for eye or ear conditions because both acute and chronic conditions are included in this category; it is possible to compute estimates for diabetes because all conditions in the category are chronic, and for injuries because all inclusions are acute.

Table F shows approximate average costs per condition for a selected list of chronic and acute conditions. For chronic conditions, the amount shown in table F is equivalent to the annual amount spent for medicine prescribed for a par-

Table F. Prevalence of selected chronic conditions, and incidence of selected acute conditions, by number of conditions and estimated average cost of purchased acquisitions of prescribed medicine per condition: United States, July 1964-June 1965

Chronic and acute conditions	Number of conditions in thousands	Average cost
Chronic conditions  Asthma-hay fever	Prevalence 14,375 4,901 2,385 14,007 3,546 16,709	\$32.00
Acute conditions	Incidence	Per condition
Colds, coughs, throat conditions and influenzaConditions of pregnancy or deliveryInjuries	210,346 1,803 56,352	\$ 2.00 \$20.00 \$ 1.00

ticular condition by a person with that condition (i.e., includes only that part of his expense associated with the condition under consideration).

The incidence of acute conditions, as defined in the Health Interview Survey, consists of conditions which received medical attention or resulted in restricted activity. Therefore, some of the conditions on which the average cost shown in table F was based were not actually treated with prescribed medicine. Likewise, the prevalence of chronic conditions shown in the table was not limited to those for which prescribed medicines were used.

#### NONPRESCRIBED MEDICINE

#### Classification

Expenditures for nonprescribed medicines were classified when possible by the type of medicine purchased. The type of medicine, rather than the condition treated, was emphasized because individual acquisitions of nonprescribed medicines are often used for multiple purposes, in contrast to medicines prescribed by a physician which are usually intended for the treatment of a specific condition. Also, nonprescribed medicines

are somewhat more likely to be used to treat symptoms rather than the causative condition; moreover, the causative condition is less likely to be known in the case of nonprescribed medicine than of prescribed since a physician may not have been consulted in the former case.

Both the name of the medicine and its general use were requested of the respondent (fig. 1). This information, when possible, was classified to one of the following categories: aspirin and aspirin compounds; combinations of aspirin and antacids; rubbing alcohol, etc.; petroleum jelly; vitamins; laxatives (or constipation reported); contraceptives; first-aid supplies; mouthwashes and gargles (other than for colds); items used for feminine hygiene; iron preparations (anemia or tired blood reported); sleep inducers; stay awake pills; weight control; tonics; salt tablets; motion or air sickness; diet or food supplements. The above categories were assigned highest priority in classification because the intention was to classify nonprescribed medicines by type of medicine. Some of these categories were not selected to be shown in the detailed tables, however, because they probably do not describe valid estimates since the reporting of them was somewhat arbitrary. Among them are "medicines" which respondents may not have been inclined to report (e.g., rubbing alcohol, petroleum jelly, contraceptives, mouthwashes, items used for feminine hygiene) because they were not specifically listed on Card J, because their inclusion as medicine is debatable, and/or because they are items which some persons consider too personal to report. A few other categories were not presented in the detailed tables because the estimates did not meet standards of reliability.

When reports of nonprescribed medicine were not classifiable by type, they were classified according to the condition or symptom for which they were generally used by the family making the acquisition. Many of these categories (e.g., preparations for respiratory conditions, not elsewhere classified) also appear in the detailed tables.

#### Cost and Place of Purchase

The types of nonprescribed medicine for which expenditure per person was greatest were aspirin and aspirin compounds, vitamins, and preparations for respiratory conditions, not elsewhere classified (table 17). The cost of medicines, from which the rates shown in tables 17 and 18 were computed, were classified according to the age and sex of the users or potential users of the medicine. When more than one member of a family used or probably would use a particular medicine, its cost was allocated equally among them. The rates are based on the total populations in the various age-sex categories, presented in table 20.

Expenditure per person on aspirin and aspirin compounds, laxatives, and preparations for digestive system conditions (not elsewhere classified) increased with age. The patterns of increase, as shown in figure 2, indicate that the expenditures do not increase at a uniform rate for these conditions. On the basis of those age-specific estimates which met standards of reliability (table 17), per capita expenditure on preparations for arthritis and muscular conditions (not elsewhere classified) also increased to some extent with age.

While the expenditure per female was higher than that per male in several of the medicine classes, the sex differential in the cost of non-prescribed medicines was less marked than the differences by age.

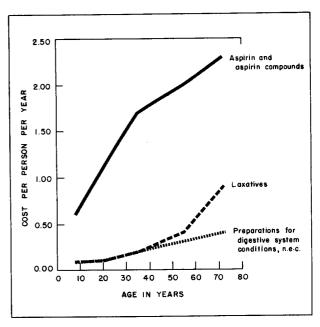


Figure 2. Cost of nonprescribed medicine per person per year, by selected types of medicine and age.

At least two-thirds of the amount spent for each of 8 of the 12 categories shown in table 19, were estimated to have been spent in drug stores. Relatively large proportions of the expenditures for aspirins and aspirin compounds and for aspirin and antacid combinations were spent in grocery stores. Relatively small proportions of the amounts spent on vitamins, preparations for skin conditions, and for arthritis and muscular conditions were spent in grocery stores. Other places of purchase included department stores, mail order houses, door-to-door salesmen, and all other unclassified places of purchase. The place from which nonprescribed medicine was obtained was unknown for about 0.9 percent of the aggregate known expenditure on all nonprescribed medicines. A comparatively high percent (about 27.1 percent) of the amount spent on nonprescribed vitamins was spent in places other than those reported as drug or grocery stores. The 27.1 percent consisted of 6.4 percent in department stores, 4.1 percent from door-to-door salesmen, 5.5 percent from mail order houses, 10.5 percent from other places, and 0.5 percent from unknown places.

#### **DETAILED TABLES**

		PRESCRIBED MEDICINES BY CONDITION FOR WHICH PRESCRIBED	
		Number of Acquisitions by Type of Acquisition, Age, and Sex	Page
ľable	1.	Number of acquisitions of prescribed medicine and percent distribution, by type of acquisition according to condition for which prescribed: United States, July 1964-June 1965	17
	2.	Number of purchased acquisitions of prescribed medicine, by condition for which prescribed and age: United States, July 1964-June 1965	18
	3.	Percent distribution of purchased acquisitions of prescribed medicine, by condition for which prescribed according to age: United States, July 1964-June 1965-	19
	4.	Number of purchased acquisitions of prescribed medicine for males, by condition for which prescribed and age: United States, July 1964-June 1965	20
	5.	Number of purchased acquisitions of prescribed medicine for females, by condition for which prescribed and age: United States, July 1964-June 1965	21
		Cost per Acquisition by Age and Sex	
	6.	Cost per purchased acquisition of prescribed medicine, by condition for which prescribed and age: United States, July 1964-June 1965	22
	7.	Cost per purchased acquisition of prescribed medicine for males, by condition for which prescribed and age: United States, July 1964-June 1965	23
	8.	Cost per purchased acquisition of prescribed medicine for females, by condition for which prescribed and age: United States, July 1964-June 1965	24
		Number of Acquisitions by Age and Cost	
	9.	Number of purchased acquisitions of prescribed medicine and percent distribution, by cost according to condition for which prescribed: United States, July 1964-June 1965	25
	10.	Number of purchased acquisitions of prescribed medicine and percent distribution for persons under 15 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965	26
	11.	Number of purchased acquisitions of prescribed medicine and percent distribution for persons 15-44 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965	26
	12.	Number of purchased acquisitions of prescribed medicine and percent distribution for persons 45-64 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965	27
	13.	Number of purchased acquisitions of prescribed medicine and percent distribution for persons 65 years of age and over, by cost according to condition for which prescribed: United States, July 1964-June 1965	28

#### DETAILED TABLES - Con.

Page

34

		Cost per Person by Age and Sex
Table	14.	Cost of prescribed medicine per person per year, by condition for which prescribed and age: United States, July 1964-June 1965
	15.	Cost of prescribed medicine per male per year, by condition for which prescribed and age: United States, July 1964-June 1965
	16.	Cost of prescribed medicine per female per year, by condition for which prescribed and age: United States, July 1964-June 1965
		NONPRESCRIBED MEDICINES BY SELECTED TYPE OF MEDICINE
	17.	Cost of nonprescribed medicine per person per year, by selected type of medicine and age: United States, July 1964-June 1965
	18.	Cost of nonprescribed medicine per person per year, by sex, selected type of medicine, and age: United States, July 1964-June 1965
	19.	Percent distribution of cost of nonprescribed medicine, by place of purchase according to selected type of medicine: United States, July 1964-June 1965
		POPULATION
	20.	Population used in computing rates shown in this publication, by age and sex: United States, July 1964-June 1965

Table 1. Number of acquisitions of prescribed medicine and percent distribution, by type of acquisition according to condition for which prescribed: United States, July 1964-June 1965

		Type of acquisition			
Condition for which prescribed	Total acquisi-		Purchased		
	tions	Free	Cost known	Cost unknown	
	Number in thousands	Percent distributio		tion	
All conditions	879,832	9.3	80.9	9.8	
Asthma-hay fever	23,408	9.5	81.8	8.7	
Other allergies	22,097	6.2	83.4	10.4	
Thyroid conditions	14,216	*	85.2	10.9	
Diabetes	27,254	7.3	87.7	4.9	
Eye or ear conditions	33,433	11.3	80.8	7.9	
Heart conditions (with or without high blood pressure)	52,021	8.1	82.3	9.6	
High blood pressure	59,902	7.4	85.1	7.4	
Other disorders of circulatory system	20,214	7.1	85.6	7.3	
Anemia and other blood conditions	14,415	*	86.7	*	
Peptic ulcers	19,743	*	88.0	6.6	
Other digestive system conditions	49,814	9.7	79.7	10.6	
Sinus and bronchial conditions	30,236	7.9	82.0	10.1	
Colds, coughs, throat conditions, and influenza	134,978	11.8	74.9	13.3	
Other respiratory conditions	24,279	9.6	78.1	12.3	
Kidney conditions	12,988	*	78.7	12.3	
Other genitourinary conditions	25,704	7.0	84.6	8.5	
Skin conditions	27,091	8.4	83.3	8.3	
Arthritis and other disorders of bones and joints	31,158	11.2	77.8	11.0	
Injuries	15,557	13.8	67.3	18.9	
Conditions of pregnancy or delivery	12,266	10.4	80.5	*	
Mental illness and epilepsy	63,155	9.2	84.9	5.9	
Weight problems	15,512	9.5	80.4	10.1	
Condition not reported:		İ			
Pain	25,940	9.9	79.9	10.3	
Vitamins	18,456	13.0	78.5	8.5	
Sedatives, tranquilizers, or stimulants	14,719	8.7	83.2	*	
All other	91,276	9.5	80.4	10.1	

Table 2. Number of purchased acquisitions of prescribed medicine, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over
	Number of purchased acquisitions in thousands				
All conditions	798,180	215,368	170,312	232,484	180,016
Asthwa-hay fever	21,194	7,832	4,303	5,708	3,352
Other allergies	20,735	9,276	4,800	5,298	1,361
Thyroid conditions	13,661	1,749	5,969	4,428	1,516
Diabetes	25,255	2,091	3,138	10,841	9,185
Eye or ear conditions	29,656	13,437	3,132	6,829	6,257
Heart conditions (with or without high blood pressure)	47,800	*	2,570	18,718	26,102
High blood pressure	55,448	*	3,741	24,754	26,576
Other disorders of circulatory system	18,784	1,555	2,884	5,871	8,475
Anemia and other blood conditions	13,635	3,355	3,783	3,542	2,955
Peptic ulcers	18,678	*	7,010	7,988	3,111
Other digestive system conditions	44,977	7,381	9,874	14,473	13,249
Sinus and bronchial conditions	27,850	9,383	8,757	6,791	2,918
Colds, coughs, throat conditions, and influenza	119,085	74,742	18,604	18,609	7,130
Other respiratory conditions	21,952	10,512	3,513	4,171	3,756
Kidney conditions	11,817	2,482	2,664	3,765	2,906
Other genitourinary conditions	23,908	4,373	8,085	7,928	3,522
Skin conditions	24,824	12,219	5,265	4,447	2,894
Arthritis and other disorders of bones and joints	27,669	*	4,248	12,220	10,700
Injuries	13,408	3,783	4,210	3,773	1,643
Conditions of pregnancy or delivery	10,996	5,127	5,834	*	
Mental illness and epilepsy	57,352	5,514	17,895	23,203	10,741
Weight problems	14,032	2,687	7,102	3,729	*
Condition not reported:					
Pain	23,384	2,320	9,169	7,720	4,175
Vitamins	16,059	7,088	1,805	3,422	3,744
Sedatives, tranquilizers, or stimulants-	13,436	1,307	2,360	4,918	4,851
All other	82,586	25,302	19,600	19,302	18,382

Table 3. Percent distribution of purchased acquisitions of prescribed medicine, by condition for which prescribed according to age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over	
	Percent distribution					
All conditions	100.0	100.0	100.0	100.0	100.0	
Asthma-hay fever	2.7	3.6	2.5	2.5	1.9	
Other allergies	2.6	4.3	2.8	2.3	0.8	
Thyroid conditions	1.7	0.8	3.5	1.9	0.8	
Diabetes	3.2	1.0	1.8	4.7	5.1	
Eye or ear conditions	3.7	6.2	1.8	2.9	3.5	
Heart conditions (with or without high blood pressure)	6.0	*	1.5	8.1	14.5	
High blood pressure	6.9	*	2.2	10.6	14.8	
Other disorders of circulatory system	2.4	0.7	1.7	2.5	4.7	
Anemia and other blood conditions	1.7	1.6	2.2	1.5	1.6	
Peptic ulcers	2.3	*	4.1	3.4	1.7	
Other digestive system conditions	5.6	3.4	5.8	6.2	7.4	
Sinus and bronchial conditions	3.5	4.4	5.1	2.9	1.6	
Colds, coughs, throat conditions, and influenza	14.9	34.7	10.9	8.0	4.0	
Other respiratory conditions	2.8	4.9	2.1	1.8	2.1	
Kidney conditions	1.5	1.2	1.6	1.6	1.6	
Other genitourinary conditions	3.0	2.0	4.7	3.4	2.0	
Skin conditions	3.1	5.7	3.1	1.9	1.6	
Arthritis and other disorders of bones and joints	3.5	*	2.5	5.3	5.9	
Injuries	1.7	1.8	2.5	1.6	0.9	
Conditions of pregnancy or delivery	1.4	2.4	3.4	*	•••	
Mental illness and epilepsy	7.2	2.6	10.5	10.0	6.0	
Weight problems	1.8	1.2	4.2	1.6	*	
Condition not reported:						
Pain	2.9	1.1	5.4	3.3	2.3	
Vitamins	2.0	3.3	1.1	1.5	2.1	
Sedatives, tranquilizers, or stimulants-	1.7	0.6	1.4	2.1	2.7	
All other	10.3	11.7	11.5	8.3	10.2	

Table 4. Number of purchased acquisitions of prescribed medicine for males, by condition for which prescribed and age: United States, July 1964-June 1965

Data are based on household interviews of the civilian, populational population. The survey design, convert evaluations and interviews of the civilian, populations are based on household interviews of the civilian, populational population.

	1	T	<del> </del>	<del></del>	Г
Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over
	Number	of purchase	d acquisit	Lons in the	ousands
All conditions	301,321	97,123	50,992	88,636	64,570
Asthma-hay fever	10,426	4,251	1,480	2,985	1,710
Other allergies	8,284	4,356	1,791	1,770	*
Thyroid conditions	1,557	*	*	*	*
Diabetes	10,358	*	1,485	4,463	3,373
Eye or ear conditions	13,922	7,679	1,537	2,741	1,965
Heart conditions (with or without high blood pressure)	22,701	*	*	9,919	11,879
High blood pressure	17,494	*	1,668	8,816	6,860
Other disorders of circulatory system	7,799	*	*	2,760	3,593
Anemia and other blood conditions	3,095	*	*	*	*
Peptic ulcers	11,268	*	4,417	4,736	1,780
Other digestive system conditions	16,673	3,057	3,895	5,628	4,093
Sinus and bronchial conditions	10,255	4,084	2,484	2,705	*
Colds, coughs, throat conditions, and influenza	56,309	38,627	6,531	8,555	2,596
Other respiratory conditions	11,486	5,068	1,292	2,158	2,968
Kidney conditions	3,750	*	*	1,389	*
Other genitourinary conditions	3,702	*	*	*	1,580
Skin conditions	10,853	5,552	1,737	2,138	1,426
Arthritis and other disorders of bones and joints	9,373	*	1,705	4,013	3,518
Injuries	7,053	2,484	2,272	1,588	*
Conditions of pregnancy or delivery					
Mental illness and epilepsy	15,861	2,265	4,683	6,459	2,454
Weight problems	2,621	*	1,543	*	*
Condition not reported:			,		
Pain	8,100	*	3,337	2,593	1,371
Vitamins	6,380	3,066	*	1,210	1,372
Sedatives, tranquilizers, or stimulants-	5,019	*	*	2,064	1,699
All other	26,983	10,406	3,681	6,737	6,160

Table 5. Number of purchased acquisitions of prescribed medicine for <u>females</u>, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over
,	Number of purchased acquisitions in thousands				
All conditions	496,858	118,244	119,320	143,848	115,446
Asthma-hay fever	10,768	3,581	2,823	2,723	1,641
Other allergies	12,452	4,919	3,009	3,529	*
Thyroid conditions	12,104	1,497	5,368	3,904	1,335
Diabetes	14,896	*	1,653	6,378	5,812
Eye or ear conditions	15,734	5,758	1,595	4,089	4,292
Heart conditions (with or without high blood pressure)	25,098	*	1,666	8,800	14,224
High blood pressure	37,954	*	2,073	15,937	19,716
Other disorders of circulatory system	10,985	*	2,080	3,110	4,882
Anemia and other blood conditions	10,541	2,166	3,478	2,701	2,196
Peptic ulcers	7,410	*	2,593	3,252	1,331
Other digestive system conditions	28,304	4,324	5,978	8,845	9,156
Sinus and bronchial conditions	17,594	5,299	6,273	4,086	1,935
Colds, coughs, throat conditions, and influenza	62,776	36,115	12,072	10,054	4,535
Other respiratory conditions	10,466	5,444	2,221	2,013	*
Kidney conditions	8,066	2,064	1,790	2,375	1,837
Other genitourinary conditions	20,206	4,104	7,403	6,756	1,942
Skin conditions	13,972	6,667	3,528	2,308	1,468
Arthritis and other disorders of bones and joints	18,296	*	2,543	8,207	7,183
Injuries	6,356	1,299	1,938	2,185	*
Conditions of pregnancy or delivery	10,996	5,127	5,834	*	•••
Mental illness and epilepsy	41,492	3,248	13,212	16,745	8,287
Weight problems	11,411	2,387	5,559	3,058	*
Condition not reported:					
Pain	15,284	1,521	5,831	5,127	2,804
Vitamins	9,679	4,023	*	2,212	2,372
Sedatives, tranquilizers, or stimulants-	8,417	*	1,808	2,854	3,153
All other	55,603	14,896	15,919	12,566	12,222

Table 6. Cost per purchased acquisition of prescribed medicine, by condition for which prescribed and age: United States, July 1964-June 1965

		1	r			
Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over	
	Cost per purchased acquisition					
All conditions	\$3.60	\$2.80	\$3.70	\$4.10	\$4.00	
Asthma-hay fever	3.30	2.90	3.30	3.70	3.10	
Other allergies	3.10	2.70	3.10	3.40	3.80	
Thyroid conditions	2.70	2.20	2.90	2.70	2.30	
Diabetes	4.40	2.30	3.80	4.40	4.90	
Eye or ear conditions	3.30	3.10	3.50	3.60	3.60	
Heart conditions (with or without high blood pressure)	4.00	*	3.90	4.40	3.80	
High blood pressure	4.70	*	4.60	4.70	4.70	
Other disorders of circulatory system	4.20	4.20	3.90	4.20	4.20	
Anemia and other blood conditions	3.90	3.30	3.70	4.40	4.10	
Peptic ulcers	3.30	*	3.50	3.10	3.40	
Other digestive system conditions	3.10	2,20	3.40	3.50	3.00	
Sinus and bronchial conditions	3.30	2.80	3.30	3.80	3.70	
Colds, coughs, throat conditions, and influenza	2.80	2.50	3.60	3.20	3.10	
Other respiratory conditions	3.90	3.20	3.80	4.50	5.00	
Kidney conditions	4.50	4.20	5.00	4.60	4.20	
Other genitourinary conditions	4.50	3.80	4.30	5.00	5.00	
Skin conditions	3.70	3.40	4.00	4.20	3.70	
Arthritis and other disorders of bones and joints	4.30	*	4.50	4.30	4.20	
Injuries	3.60	3.00	3.90	4.00	3.50	
Conditions of pregnancy or delivery	3.30	3.30	3.40	*		
Mental illness and epilepsy	4.00	3.30	4.10	4.00	4.00	
Weight problems	4.00	3.80	3.90	4.20	*	
Condition not reported:					-	
Pain	3.80	3.00	3.60	4.10	3.90	
Vitamins	3.20	2.30	3.80	3.70	4.20	
Sedatives, tranquilizers, or stimulants-	3.00	*	3.30	3.10	2.80	
All other	3.60	2.50	3.80	4.40	4.00	

Table 7. Cost per purchased acquisition of prescribed medicine for <u>males</u>, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over	
	Cost per purchased acquisition					
All conditions	\$3.60	\$2.70	\$3.90	\$4.20	\$4.10	
Asthma-hay fever	3.30	2.90	2.90	4.10	3.30	
Other allergies	3.10	2.70	3.30	3.40	*	
Thyroid conditions	3.40	*	*	*	*	
Diabetes	4.70	*	4.30	4.60	5.90	
Eye or ear conditions	3.30	3.20	3.30	3.60	3.70	
Heart conditions (with or without high blood pressure)	4.30	*.	*	4.80	3.80	
High blood pressure	4.80	*	4.50	5.20	4.40	
Other disorders of circulatory system	4.20	*	*	4.10	4.60	
Anemia and other blood conditions	3.70	*	*	*	*	
Peptic ulcers	3.30	*	3.60	3.00	3.60	
Other digestive system conditions	3.20	2.30	3.70	3.60	3.10	
Sinus and bronchial conditions	3.40	2.70	3.20	4.40	*	
Colds, coughs, throat conditions, and influenza	2.80	2.50	3.90	3.40	3.00	
Other respiratory conditions	4.10	3.20	*	4.70	5.00	
Kidney conditions	5.00	*	*	*	*	
Other genitourinary conditions	5.30	*	*	*	5.00	
Skin conditions	3.90	3.60	4.10	4.50	4.10	
Arthritis and other disorders of bones and joints	4.50	*	5.50	4.40	4.20	
Injuries	3.20	2.60	3.80	*	*	
Conditions of pregnancy or delivery		•••	•••	• • •		
Mental illness and epilepsy	3.80	3.20	4.20	4.00	3.30	
Weight problems	4.10	*	3.70	*	*	
Condition not reported:						
Pain	3.80	*	3.90	3.70	4.10	
Vitamins	3.10	2.30	*	*	4.20	
Sedatives, tranquilizers, or stimulants-	3.00	*	*	3.30	3.00	
All other	3.40	2.40	3.70	4.10	4.20	

Table 8. Cost per purchased acquisition of prescribed medicine for <u>females</u>, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over		
	Cost per purchased acquisition						
All conditions	\$3.60	\$2.90	\$3.70	\$4.00	\$3.90		
Asthma-hay fever	3.20	3.00	3.40	3.30	2.90		
Other allergies	3.10	2.70	3.00	3.50	*		
Thyroid conditions	2.60	2.20	2.70	2.70	2.10		
Diabetes	4.10	*	3.30	4.40	4.40		
Eye or ear conditions	3.30	2.90	3.70	3.60	3.50		
Heart conditions (with or without high blood pressure)	3.80	*	3.80	4.00	3.80		
High blood pressure	4.60	*	4.60	4.50	4.70		
Other disorders of circulatory system	4.10	*	3.80	4.20	4.00		
Anemia and other blood conditions	3.90	3.30	3.60	4.50	4.30		
Peptic ulcers	3.20	*	3.30	3.20	3.00		
Other digestive system conditions	3.00	2.20	3.20	3.40	2.90		
Sinus and bronchial conditions	3.20	2.80	3.30	3.30	3.30		
Colds, coughs, throat conditions, and influenza	2.90	2.60	3.40	3.10	3.10		
Other respiratory conditions	3.60	3.20	3.70	4.30	*		
Kidney conditions	4.30	4.00	4.80	4.60	3.80		
Other genitourinary conditions	4.40	3.80	4.20	4.80	5.00		
Skin conditions	3.60	3.30	3.90	3.90	3.40		
Arthritis and other disorders of bones and joints	4.20	*	4.00	4.30	4.30		
Injuries	4.00	*	4.00	4.50	*		
Conditions of pregnancy or delivery	3.30	3.30	3.40	*	•••		
Mental illness and epilepsy	4.00	3.30	4.00	4.10	4.20		
Weight problems	4.00	3.70	4.00	4.20	*		
Condition not reported:		]					
Pain	3.80	3.10	3.50	4.30	3.80		
Vitamins	3.30	2.30	*	3.60	4.20		
Sedatives, tranquilizers, or stimulants-	2.90	*	3.60	2.90	2.70		
All other	3.70	2.60	3.80	4.60	4.00		

Table 9. Number of purchased acquisitions of prescribed medicine and percent distribution, by cost according to condition for which prescribed: United States, July 1964-June 1965

	Purchased	Purchased acquisi-	Cost					
Condition for which prescribed	acquisi- tions	tions with known cost	Under \$2.00	\$2.00- \$2.99	\$3.00- \$4.99	\$5.00- \$6.99	\$7.00 and over	
	Number in	thousands		Percent	distri	oution		
All conditions	798,180	712,166	26.0	22.5	28.8	13.4	9.3	
Asthma-hay fever	21,194	19,155	26.0	25.2	33.4	9.3	*	
Other allergies	20,735	18,430	33.4	20.6	29.1	11.8	*	
Thyroid conditions	13,661	12,107	44.2	22.8	22.2	*	*	
Diabetes	25,255	23,907	25.1	20.9	16.3	22.2	15.5	
Eye or ear conditions	29,656	27,026	23.9	26.7	33.6	10.2	5.6	
Heart conditions (with or without high blood pressure)	47,800	42,794	25.2	17.8	29.4	15.2	12.4	
High blood pressure	55,448	50,994	14.1	16.1	32.7	19.0	18.2	
Other disorders of circulatory system	18,784	17,312	20.3	19.1	29.8	18.3	12.5	
Anemia and other blood conditions	13,635	12,493	14.9	27.8	29.7	18.3	*	
Peptic ulcers	18,678	17,375	40.8	19.5	20.7	10.6	8.3	
Other digestive system conditions	44,977	39,690	34.4	22.1	26.8	11.0	5.6	
Sinus and bronchial conditions	27,850	24,788	28.4	28.9	24.1	11.6	7.0	
Colds, coughs, throat conditions, and influenza	119,085	101,095	38.6	22.4	25.1	9.4	4.4	
Other respiratory conditions	21,952	18,967	23.4	19.5	32.6	13.9	10.7	
Kidney conditions	11,817	10,225	13.8	19.6	34.8	15.4	16.4	
Other genitourinary conditions	23,908	21,735	9.9	21.6	34.6	18.7	15.3	
Skin conditions	24,824	22,580	24.8	22.8	30.9	11.8	9.7	
Arthritis and other disorders of bones and joints	27,669	24,252	18.4	19.4	31.9	15.6	14.6	
Injuries	13,408	10,465	23.5	21.2	31.9	14.9	*	
Conditions of pregnancy or delivery-	10,996	9,872	26.4	21.0	36.2	12.5	*	
Mental illness and epilepsy	57,352	53,619	21.4	21.3	31.0	15.3	11.1	
Weight problems	14,032	12,469	14.5	21.1	38.2	19.4	*	
Condition not reported:								
Pain	23,384	20,714	22.8	24.6	28.9	13.6	10.2	
Vitamins	16,059	14,490	27.1	26.9	29.4	10.6	*	
Sedatives, tranquilizers, or stimulants	13,436	12,248	35.4	26.9	25.3	*	*	
All other	82,586	73,365	22.9	28.6	27.7	12.0	8.8	

Table 10. Number of purchased acquisitions of prescribed medicine and percent distribution for persons under 15 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965

Condition for which	Purchased	Purchased acquisitions	Cost				
prescribed	acquisitions	1,000 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		\$2.00- \$2.99	\$3.00- \$4.99	\$5.00 and over	
	Number in	thousands	P	ercent d	listribut	ion	
All conditions	148,259	131,780	41.8	24.7	24.5	9.0	
Asthma-hay fever Other allergies Eye or ear conditions Sinus and bronchial conditions Colds, coughs, throat conditions, and influenza Other respiratory conditions Skin conditions Condition not reported: Vitamins	5,293 6,851 10,888 4,820 6,556 63,211 8,886 7,623 6,166 27,964	4,595 5,988 10,212 4,399 5,948 54,728 7,735 7,028 5,916 25,231	29.5 44.1 28.0 58.2 40.7 46.8 29.5 31.1 45.1 41.6	34.7 21.6 25.8 27.8 32.0 23.2 22.8 27.9 25.5 23.8	27.2 20.3 35.7 * * 21.9 34.7 29.6 28.3 23.5	** ** ** 8.1 * * * 11.1	

Table 11. Number of purchased acquisitions of prescribed medicine and percent distribution for persons 15-44 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965

Condition for which	Purchased	Purchased acquisitions	=	C	Cost	
prescribed	acquisitions	with known cost	Under \$2.00	\$2.00- \$2.99	\$3.00- \$4.99	\$5.00 and over
	Number in	thousands	F	ercent d	listribut	ion
All conditions	237,421	211,514	24.0	24.5	29.0	22.4
Asthma-hay fever—Other allergies—Thyroid conditions—Eye or ear conditions—Peptic ulcers—Other digestive system conditions—Sinus and bronchial conditions—Colds, coughs, throat conditions, and influenza—Genitourinary conditions—Skin conditions—Conditions of pregnancy or delivery——Mental illness and epilepsy—Weight problems——Condition not reported: Pain————All other————————————————————————————————————	6,841 7,224 7,421 5,681 7,578 12,434 11,585 30,135 15,503 9,861 10,962 20,642 9,264 10,998 71,292	6,174 6,069 6,635 5,137 7,279 10,873 10,176 24,883 14,239 8,863 9,872 19,608 8,179 9,766 63,761	24.4 33.2 42.9 * 40.3 31.5 24.6 27.9 11.6 20.0 26.4 21.5 16.0	27.0 * 25.0 30.6 21.7 19.1 29.1 19.7 23.5 21.3 21.0 20.9 20.0 24.3 29.6	33.5 26.2 28.5 35.0 29.5 36.2 31.1 36.8	** ** 17.9 15.9 20.1 23.9 29.9 29.2 16.4 26.5 27.2 22.5 23.0

Table 12. Number of purchased acquisitions of prescribed medicine and percent distribution for persons 45-64 years of age, by cost according to condition for which prescribed: United States, July 1964-June 1965

	Purchased	Purchased acquisi-			Cost		
Condition for which prescribed	acquisi- tions	tions with known cost	Under \$2.00	\$2.00-	\$3.00- \$4.99	\$5.00- \$6.99	\$7.00 and over
	Number in	thousands		Percent	distrib	oution	
All conditions	232,484	207,799	21.1	20.3	30.8	15.7	12.2
Diabetes	10,841	10,451	23.5	20.3	18.7	22.9	14.6
Eye or ear conditions	6,829	6,001	22.3	27.3	33.2	*	*
Heart conditions (with or without high blood pressure)	18,718	16,967	23.6	15.1	29.2	17.1	15.0
High blood pressure	24,754	22,742	12.4	17.1	34.7	16.8	19.0
Peptic ulcers	7,988	7,333	43.8	16.5	20.2	*	*
Other digestive system conditions	14,473	12,686	28.6	20.7	27.7	14.6	**
Sinus and bronchial conditions	6,791	6,036	23.1	25.4	26.3	*	*
Colds, coughs, throat conditions, and influenza	18,609	15,423	30.1	21.8	29.3	13.4	*
Genitourinary conditions	11,693	9,974	*	19.7	33.8	17.1	20.0
Arthritis and other disorders of bones and joints	12,220	10,686	16.0	21.1	31.8	18.1	13.0
Mental illness and epilepsy	23,203	21,857	19.2	21.2	30.9	16.2	12.5
Condition not reported:							
Pain	7,720	6,969	17.7	23.3	34.4	*	*
All other	68,643	60,675	20.1	20.9	33.3	15.4	10.3

Table 13. Number of purchased acquisitions of prescribed medicine and percent distribution for persons 65 years of age and over, by cost according to condition for which prescribed: United States, July 1964-June 1965

							=
	Purchased	Purchased acquisi-		-	Cost		
Condition for which prescribed	acquisi- tions	acquisi- tions with	Under \$2.00	\$2.00- \$2.99	\$3.00- \$4.99	\$5.00- \$6.99	\$7.00 and over
,	Number in	thousands		Percent	: distrib	oution	
All conditions	180,016	161,073	22.2	20.8	29.4	15.4	12.3
Diabetes	9,185	8,360	22.5	14.7	15.5	23.9	23.4
Eye or ear conditions	6,257	5,675	23.6	23.9	31.2	*	*
Heart conditions (with or without high blood pressure)	26,102	23,153	26.6	19.7	29.6	13.5	10.5
High blood pressure	26,576	24,655	15.7	14.5	31.5	21.0	17.3
Other disorders of the circulatory system	8,475	7,849	22.5	18.5	25.3	19.3	*
Digestive system conditions	16,361	14,493	34.5	23.8	24.5	12.0	ŧ
Colds, coughs, throat conditions, and influenza	7,130	6,061	29.7	27.9	30.1	*	٠.
Arthritis and other disorders of bones and joints	10,700	9,302	19.1	18.1	34.5	13.3	15.0
Mental illness and epilepsy	10,741	9,520	19.8	23.3	32.6	15.2	16
All other	58,489	52,005	19.6	23.6	30.8	14.2	11.8

Table 14. Cost of prescribed medicine per person per year, by condition for which prescribed and age: United States, July 1964-June 1965

	<del>-</del>	<del></del>			r	<del></del>
Condition for which prescribed	All ages	Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over
	Cost per person per year					
All conditions	\$15.40	\$6.40	\$8.10	\$14.00	\$24.60	\$41.40
Asthma-hay fever	0.40	0.30	0.30	0.30	0.60	0.60
Other allergies	0.30	0.30	0.20	0.30	0.50	0.30
Thyroid conditions	0.20	*	0.10	0.40	0.30	0.20
Diabetes	0.60	*	0.10	0.30	1.30	2.60
Eye or ear conditions	0.50	0.50	0.40	0.20	0.60	1.30
Heart conditions (with or without high blood pressure)	1.00	*	*	0.20	2.20	5.70
High blood pressure	1.40	*	*	0.40	3.10	7.10
Other disorders of circulatory system	0.40	*	0.20	0.30	0.60	2.10
Anemia and other blood conditions	0.30	0.10	0.10	0.30	0.40	0.70
Peptic ulcers	0.30	*	0.10	0.50	0.70	0.60
Other digestive system conditions	0.70	0.20	0.30	0.70	1.30	2.30
Sinus and bronchial conditions	0.50	0.30	0.40	0.60	0.70	0.60
Colds, coughs, throat conditions, and influenza	1.80	2.50	1.40	1.50	1.60	1.30
Other respiratory conditions	0.50	0.50	0.20	0.30	0.50	1.10
Kidney conditions	0.30	0.10	0.20	0.30	0.50	0.70
Other genitourinary conditions	0.60	0.10	0.40	0.80	1.00	1.00
Skin conditions	0.50	0.40	0.70	0.50	0.50	0.60
Arthritis and other disorders of bones and joints	0.60	*	0.10	0.40	1.40	2.60
Injuries	0.30	0.10	0.20	0.40	0.40	0.30
Conditions of pregnancy or delivery	0.20	*	0.60	0.40	*	•••
Mental illness and epilepsy	1.20	0.10	0.40	1.60	2.50	2.50
Weight problems	0.30	*	0.30	0.60	0.40	0.10
Condition not reported:			-			
Pain	0.50	*	0.20	0.70	0.80	1.00
Vitamins	0.30	0.20	0.10	0.20	0.30	0.90
Sedatives, tranquilizers, or stimulants	0.20	*	*	0.20	0.40	0.80
All other	1.60	0.60	1.10	1.60	2.20	4.30

Table 15. Cost of prescribed medicine per  $\underline{\text{male}}$  per year, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over			
	Cost per male per year							
All conditions	\$12.00	\$6.10	\$9.20	\$20.00	\$34.70			
Asthma-hay fever	0.40	0.30	0.20	0.70	0.80			
Other allergies	0.30	0.30	0.30	0.30	0.30			
Thyroid conditions	0.10	*	0.10	*	*			
Diabetes	0.50	0.10	0.30	1.10	2.60			
Eye or ear conditions	0.50	0.60	0.20	0.50	1.00			
Heart conditions (with or without high blood pressure)	1.10	*	0.20	2.60	6.00			
High blood pressure	0.90	*	0.40	2.50	3.90			
Other disorders of circulatory system	0.40	*	0.10	0.60	2.20			
Anemia and other blood conditions	0.10	0.10	0.10	0.20	0.40			
Peptic ulcers	0.40	*	0.70	0.80	0.80			
Other digestive system conditions	0.60	0.20	0.70	1.10	1.70			
Sinus and bronchial conditions	0.40	0.30	0.40	0.70	0.60			
Colds, coughs, throat conditions, and influenza	1.70	2.20	1.20	1.60	1.00			
Other respiratory conditions	0.50	0.40	0.30	0.60	2.00			
Kidney conditions	0.20	0.10	0.20	0.40	0.70			
Other genitourinary conditions	0.20	*	0.20	0.40	1.00			
Skin conditions	0.50	0.50	0.30	0.50	0.80			
Arthritis and other disorders of bones and joints	0.50	*	0.40	1.00	1.90			
Injuries	0.30	0.20	0.40	0.30	0.30			
Conditions of pregnancy or delivery	•••		•••					
Mental illness and epilepsy	0.70	0.20	0.90	1.40	1.10			
Weight problems	0.10	*	0.30	0.20	*			
Condition not reported:								
Pain	0.30	0.10	0.60	0.50	0.70			
Vitamins	0.20	0.20	0.10	0.30	0.80			
Sedatives, tranquilizers, or stimulants-	0.20	*	*	0.40	0.70			
All other	1.00	0.60	0.60	1.50	3.40			

Table 16. Cost of prescribed medicine per  $\underline{\text{female}}$  per year, by condition for which prescribed and age: United States, July 1964-June 1965

Condition for which prescribed	All ages	Under 25 years	25-44 years	45-64 years	65 years and over			
	Cost per female per year							
All conditions	\$18.60	\$7.70	\$18.40	\$29.00	\$46.70			
Asthma-hay fever	0.40	0.20	0.40	0.50	0.50			
Other allergies	0.40	0.30	0.40	0.60	0.30			
Thyroid conditions	0.30	0.10	0.60	0.50	0.30			
Diabetes	0.60	0.10	0.20	1.40	2.70			
Eye or ear conditions	0.50	0.40	0.30	0.70	1.50			
Heart conditions (with or without high blood pressure)	1.00	. *	0.30	1.80	5.50			
High blood pressure	1.80	*	0.40	3.60	9.70			
Other disorders of circulatory system	0.50	0.10	0.30	0.70	2.00			
Anemia and other blood conditions	0.40	0.20	0.50	0.60	1.00			
Peptic ulcers	0.30	*	0.40	0.50	0.40			
Other digestive system conditions	0.90	0.20	0.80	1.50	2.80			
Sinus and bronchial conditions	0.60	0.40	0.90	0.70	0.70			
Colds, coughs, throat conditions, and influenza	1.90	2.10	1.70	1.60	1.50			
Other respiratory conditions	0.40	0.40	0.30	0.40	0.40			
Kidney conditions	0.40	0.20	0.40	0.60	0.70			
Other genitourinary conditions	0.90	0.40	1.30	1.60	1.00			
Skin conditions	0.50	0.50	0.60	0.50	0.50			
Arthritis and other disorders of bones and joints	0.80	*	0.40	1.80	3.20			
Injuries	0.30	0.10	0.30	0.50	0,40			
Conditions of pregnancy or delivery	0.40	0.40	0.80	*				
Mental illness and epilepsy	1.70	0.30	2.20	3.40	3.60			
Weight problems	0.50	0.20	0.90	0.60	*			
Condition not reported:								
Pain	0.60	0.10	0.90	1.10	1.10			
Vitamins	0.30	0.20	0.20	0.40	1.00			
Sedatives, tranquilizers, or stimulants-	0.30	*	0.30	0.40	0.90			
All other	2.10	0.90	2.60	2.90	5.00			

Table 17. Cost of nonprescribed medicine per person per year, by selected type of medicine and age: United States, July 1964-June 1965

Selected type of medicine	All ages	Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over
·	Cost per person per year					
Aspirin and aspirin compounds	\$1.40	\$0.60	\$1.10	\$1.70	\$2.00	\$2.30
Combinations of aspirin and antacids	0.10	*	0.10	0.20	0.20	0.20
Vitamins	1.40	1.60	1.00	1.00	1.50	1.70
Laxatives	0.20	0.10	0.10	0.20	0.40	0.90
Iron preparations	0.10	*	0.10	0.10	0.10	0.20
Preparations for:						
Respiratory conditions, n.e.c	1.00	0.80	1.00	1.20	1.10	1.10
Asthma-hay fever	0.10	*	0.10	0.10	0.10	*
Peptic ulcers	0.10	*	*	0.10	0.10	0.10
Digestive system conditions, n.e.c	0.20	0.10	0.10	0.20	0.30	0.40
Skin conditions	0.20	0.20	0.30	0.10	0.10	0.20
Arthritis and muscular conditions, n.e.c	0.10	*	*	0.10	0.20	0.30
First-aid supplies	0.20	0.30	0.20	0.30	0.20	0.20

NOTE: n.e.c.=not elsewhere classified.

Table 18. Cost of nonprescribed medicine per person per year, by sex, selected type or medicine, and age: United States, July 1964-June 1965

on the total of the community of the community of the given in Appendix i.					
Sex and selected type of medicine	All ages	Under 25 years	25-44 years	45-64 years	65 years and over
<u>Male</u>	Cost per male per year				
Aspirin and aspirin compounds	\$1.20	\$ 0.70	\$1.40	\$1.60	\$2.00
Combinations of aspirin and antacids	0.10	*	0.20	0.20	*
Vitamins	1.30	1.40	0.90	1.30	1.80
Laxatives	0.20	0.10	0.10	0.30	0.70
Iron preparations	0.10	*	0.10	0.10	0.30
Preparations for respiratory conditions, n.e.c	1.00	0.90	1.20	1.20	1.30
Preparations for asthma-hay fever	0.10	*	0.10	0.10	*
Preparations for peptic ulcers	0.10	*	0.20	0.20	*
Preparations for digestive system conditions, n.e.c	0.20	0.10	0.30	0.30	0.40
Preparations for skin conditions	0.20	0.20	0.10	0.10	*
Preparations for arthritis and muscular conditions, n.e.c	0.10	*	*	0.20	0.30
First-aid supplies	0.30	0.30	0.30	0.20	0.20
<u>Female</u>		Cost per	female	per yea	ar
Aspirin and aspirin compounds	\$1.50	\$ 0.80	\$1.90	\$2.30	\$2.60
Combinations of aspirin and antacids	0.10	*	0.20	0.10	*
Vitamins	1.50	1.50	1.10	1.60	1.70
Laxatives	0.30	0.10	0.20	0.50	1.00
Iron preparations	0.10	*	0.20	0.10	0.20
Preparations for respiratory conditions, n.e.c	1.00	0.90	1.30	1.00	0.90
Preparations for asthma-hay fever	0.10	*	0.10	*	*
Preparations for peptic ulcers	*	*	0.10	*	*
Preparations for digestive system conditions, n.e.c	0.20	0.10	0.20	0.40	0.50
Preparations for skin conditions	0.20	0.20	0.20	0.20	0.20
Preparations for arthritis and muscular conditions,	0.10	*	0.10	0.20	0.40
First-aid supplies	0.20	0.20	0.30	0.20	*

NOTE: n.e.c. = not elsewhere classified.

Table 19. Percent distribution of cost of nonprescribed medicine, by place of purchase according to selected type of medicine: United States, July 1964-June 1965

	Place of purchase					
Selected type of medicine		Drug store	Grocery store	Other and unknown		
	P	ercent d	listributi	.on		
Aspirin and aspirin compounds	100.0 100.0 100.0 100.0 100.0 100.0 100.0	44.7 65.4	38.4 45.0 7.5 24.6 * 18.2 * * 19.0 7.5 11.6 26.7	27.1		

NOTE: n.e.c. = not elsewhere classified.

Table 20. Population used in computing rates shown in this publication, by age and sex: United States, July 1964-June 1965

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

Age	Both sexes	Male	Female
	Populati	on in the	ousands
All ages	188,430	91,311	97,119
Under 25 years	87,643 59,424 28,219 45,299 38,196 17,292	43,688 30,221 13,467 21,613 18,401 7,610	43,955 29,203 14,752 23,686 19,795 9,683

NOTE: For official population estimates for more general use, see Bureau of the Census reports on the civilian population of the United States in <u>Current Population Reports</u>: 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 Health Survey. It is based on information collected in a continuing nationwide sample of households in the Health Interview Survey, a major part of the program.

The Health Interview Survey utilizes a questionnaire which obtains, in addition to personal and demographic characteristics, information on illnesses, injuries, chronic conditions and impairments, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued which cover one or more of the specific topics. The present report is based on the consolidated sample for 52 weeks of interviewing ending June 1965.

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

#### Statistical Design of the Health Interview Survey

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

With no loss in general understanding, the remaining stages can be combined and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined in such a manner that each segment contains an expected nine households. A segment consists of a cluster of neighboring households or addresses. Two general types of seg-

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

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

Sample size and geographic detail.—The national sample plan for the 12-month period ending June 1965 included about 134,000 persons from 42,000 households in about 4,700 segments.

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

Collection of data. — Field operations for the household survey are performed by the Bureau of the Census under specifications established by the National Center for Health Statistics. In accordance with these specifications the Bureau of the Census selects the sample, conducts the field interviewing as an agent of the Center, and performs a manual editing and coding of the questionnaires. The Health Interview Survey, using Center electronic computers, carries out further editing and tabulates the edited data.

Estimating methods.—Each statistic produced by the survey—for example, the expenditure for nonprescribed medicine during a specified period—is the result of two stages of ratio estimation. In the first of these, the control factor is the ratio of the 1960 decennial population count to the 1960 estimated population in the National Health Survey's first-stage sample of PSU's.

These factors are applied for some 25 color-residence classes

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

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

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

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

#### General Qualifications

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

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

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information, the household respondent can, at best, pass on to the interviewer only the information the physician has given 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, althoughthese are not necessarily accurate to that detail. Devised statistics such as rates and percent distributions are computed after the estimates on which these are based have been rounded to the nearest thousand.

Population figures. -- Some of the published tables include population figures for specified categories. Except for certain overall totals by age and sex, which are adjusted to independent estimates, these figures are based on the sample of households in the National Health Survey. These are given primarily to provide denominators for rate computation, and for this purpose are more appropriate for use with the accompanying measures of health characteristics than other population data that may be available. In some instances these will permit users to recombine published data into classes more suitable to their spec. To needs. With the exception of the overall totals by age and sex, mentioned above, the population figures differ from corresponding figures (which are derived from different sources) published in reports of the Bureau of the Census. For population data for general use, see the official estimates presented in Bureau of the Census reports in the P-20, P-25, and P-60 series.

#### Reliability of Estimates

Since the estimates are based on a sample, they will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures. As in any survey, the results are also subject to measurement error.

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 lie in the data.

The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference would be less than twice the standard error and about 99 out of 100 that it would be less than 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. Included in this Appendix are charts

from which the relative standard errors can be determined for estimates shown in the report. A description of the classes of statistics used in the Health Interview Survey and general rules for determining relative sampling errors are presented in Appendix I of "Current Estimates," *Vital and Health Statistics*, Series 10, No. 25.

The following guide indicates the appropriate rules and charts to be used in deriving relative standard errors for estimates shown in this report.

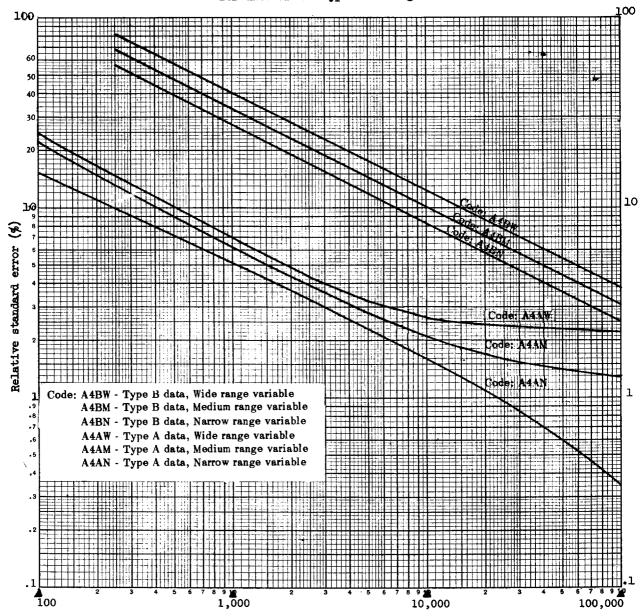
#### Guide to Use of Relative Standard Error Charts

The code shown below identifies the appropriate curve to be used in estimating the relative standard error of the statistic described. The four components of each code describe the statistic as follows: (1) A=

aggregate, P=percentage; (2) the number of calendar quarters of data collection; (3) the type of the statistic; and (4) the range of the statistic as described in *Vital and Health Statistics*, Series 10, No. 25.

	Use:							
Statistic	Rule	Code on	page					
Number of: Persons in the U.S. population or in any age-sex category thereof	Not subj	ect to sampling error						
Acquisitions of prescribed medicines	1	A4BM	38					
Cost of medicines	1	A4BW	38					
Cost of medicines: Per person in the U.S. population or in any age-sex category thereof	4(a) 4(b)	A4BW    Numer.: A4BW   Denom.: A4BM	38 38					
Percentage distribution of: Cost of medicines	2	P4BW	39					
Acquisitions of prescribed medicines	2	P4BN-M	40					

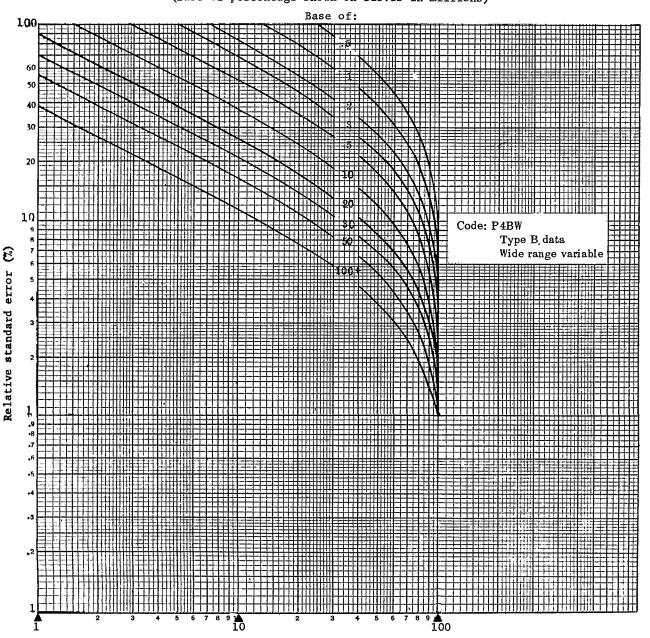
## Relative standard errors for aggregates based on four quarters of data collection for data of all types and ranges



Size of estimate (in thousands)

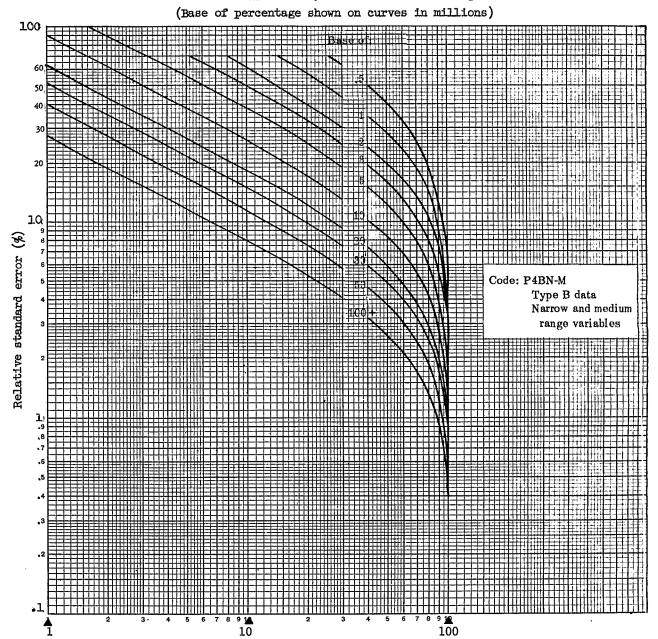
Example of use of chart: An aggregate of 2,000,000 (on scale at bottom of chart) for a Narrow range Type A statistic (code: A4AN) has a relative standard error of 3.6 percent, (read from scale at left side of chart), or a standard error of 72,000 (3.6 percent of 2,000,000). For a Wide range Type B statistic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

Relative standard errors for percentages based on four quarters of data collection for type B data, Wide range
(Base of percentage shown on curves in millions)



Estimated percentage

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 24.5 percent (read from 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 24.5 percent or 4.9 percentage points.



Estimated percentage

Example of use of chart: An estimate of 20 percent (on scale at bottom of chart) based or an estimate of 10,000,000 has a relative standard error of 17.0 percent (read from 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 17.0 percent or 3.4 percentage points.

#### APPENDIX II

#### DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

# Terms Relating to Acquisition and Cost of Medicines

In order to obtain accurate and complete information relating to the acquisition and cost of medicines, the reference period is limited to the 2-week period prior to interview. The collected data are then appropriately weighted to provide annual estimates for medicine items.

Prescribed medicine.—Prescribed medicine is defined as (1) any medicine obtained on a doctor's written prescription, (2) any medicine which has been prepared on the basis of a doctor's telephone call to a pharmacist, or (3) any medicine given by the doctor (or nurse) to the person to take home. Medicine obtained as a refill of a previous prescription is considered as prescribed medicine. Excluded are medicines and injections administered to the person in a medical facility.

Acquisition of prescribed medicine.—Each time the medicine is actually obtained on the basis of a prescription for a person, it is considered to be an acquisition. If the medicine was specifically prescribed for two persons, it would be counted as two acquisitions. Each time the prescription is refilled it is considered as a separate acquisition.

Cost per acquisition of prescribed medicine.—The amount paid (or to be paid) by the person, his family or friends, and any part paid by health insurance is recorded for each acquisition of medicine for each

person. If the medicine was obtained without cost, the source from which the medicine was obtained free of charge is recorded. If the medicine was obtained for two persons, half of the cost is allocated for each person. Similarly if the medicine was obtained twice for one person, half the total cost would be allocated per acquisition.

Nonprescribed medicine.—Nonprescribed medicine is defined as medicines obtained without a prescription. The term includes tonics, pills, salves, ointments, vitamins, first-aid items, and other medicines or medications.

Users of nonprescribed medicine.—For each nonprescribed medicine obtained, the persons in the family who used or might use the medicine are recorded.

Cost of nonprescribed medicine during period per user.—The amount paid (or to be paid) for a given type of nonprescribed medicine actually obtained during a period of time is allocated equally among each user (or potential user) of the medicine. Nonprescribed medicine obtained "free from doctor" (or other source) is recorded as having no cost.

#### Demographic Term

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

#### OUTLINE OF REPORT SERIES FOR VITAL AND HEALTH STATISTICS

#### Public Health Service Publication No. 1000

- Series 1. Programs and collection procedures.—Reports which describe the general programs of the National Center for Health Statistics and its offices and divisions, data collection methods used, definitions, and other material necessary for understanding the data.
- Series 2. Data evaluation and methods research.—Studies of new statistical methodology including: experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, contributions to statistical theory.
- Series 3. Analytical studies.—Reports presenting analytical or interpretive studies based on vital and health statistics, carrying the analysis further than the expository types of reports in the other series.
- Series 4. Documents and committee reports.—Final reports of major committees concerned with vital and health statistics, and documents such as recommended model vital registration laws and revised birth and death certificates.
- Series 10. Data from the Health Interview Survey.—Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, based on data collected in a continuing national household interview survey.
- Series 11. Data from the Health Examination Survey.—Data from direct examination, testing, and measurement of national samples of the population provide the basis for two types of reports: (1) estimates of the medically defined prevalence of specific diseases in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics; and (2) analysis of relationships among the various measurements without reference to an explicit finite universe of persons.
- Series 12. Data from the Institutional Population Surveys.—Statistics relating to the health characteristics of persons in institutions, and on medical, nursing, and personal care received, based on national samples of establishments providing these services and samples of the residents or patients.
- Series 13. Data from the Hospital Discharge Survey.—Statistics relating to discharged patients in short-stay hospitals, based on a sample of patient records in a national sample of hospitals.
- Series 20. Data on mortality.—Various statistics on mortality other than as included in annual or monthly reports—special analyses by cause of death, age, and other demographic variables, also geographic and time series analyses.
- Series 21. Data on natality, marriage, and divorce.—Various statistics on natality, marriage, and divorce other than as included in annual or monthly reports—special analyses by demographic variables, also geographic and time series analyses, studies of fertility.
- Series 22. Data from the National Natality and Mortality Surveys.—Statistics on characteristics of births and deaths not available from the vital records, based on sample surveys stemming from these records, including such topics as mortality by socioeconomic class, medical experience in the last year of life, characteristics of pregnancy, etc.

For a list of titles of reports published in these series, write to: Office of Information

Office of Information National Center for Health Statistics U.S. Public Health Service Washington, D.C. 20201