Vital and Health Statistics

Advance Data From Vital and Health Statistics: Numbers 61–70

Series 16: Compilations of Advance Data From Vital and Health Statistics No. 7

Data in this report from health and demographic surveys present statistics by age and other variables on ambulatory medical care; selected demographic characteristics of teenage wives and mothers; expected principal source of payment for hospital discharges; health practices among adults; and utilization of short-stay hospitals in the treatment of mental disorders. Estimates are based on the civilian noninstitutionalized population of the United States. These reports were originally published in 1980 and 1981.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Center for Health Statistics

Hyattsville, Maryland
December 1993
DHHS Publication No. (PHS) 94-1866

Suggested citation

National Center for Health Statistics. Advance data from vital and health statistics: nos 61–70. National Center for Health Statistics. Vital Health Stat 16(7). 1993.

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service Office of Health Research, Statistics, and Technology | Number 61 • September 26, 1980

Selected Demographic Characteristics of Teenage Wives and Mothers [a]

INTRODUCTION

In the United States in 1976, about 1,122,000 women 15-19 years of age were married, divorced, widowed, or separated; of these, 480,000 were mothers of at least one child. Another 332,000 women in this age group were never married mothers who had offspring living with them. The 1,122,000 ever married women 15-19 accounted for about 11 percent, and the 332,000 never married mothers, about 3 percent of the 10.4 million women 15-19 years of age in 1976.

This report provides the first and most recent national estimates of the current contraceptive practice and family background of teenage wives and mothers and their husbands. It also compares them with their counterparts 20-44 years of age in terms of these and other selected characteristics. These estimates are based on a special analysis of data from Cycle II of the National Survey of Family Growth (NSFG), conducted in 1976 by the National Center for Health Statistics.

A number of trends have prompted recent concern about teenage marriage and childbearing. These trends include the increasing number of women 15-19 years of age (a result of the high birth rate during the late 1950's), the increasing number of teenage marriages, and the increasing proportion of all births occurring to teenage mothers.

The U.S. Bureau of the Census has reported that the number of women 15-19 years of age increased by 57 percent from 1960 through 1976, from 6.6 million to 10.4 million. Reflecting this increase in the number of young women, the annual numbers of teenage marriages also increased over the same period.

However, the rates for teenage marriages and births did not increase. Data from the marriage registration system (table 1) show that of all brides marrying for the first time in 1976 about 38 percent (or 571,000) were under 20 years of age. In 1960 teenage brides had accounted for 48 percent (or 482,000) of all first marriages.

From 1940 through 1960, birth rates to women 15-19 years of age (births per 1,000 women 15-19) increased from 54.1 to 89.1. From 1960 through 1976, however, this rate decreased from 89.1 to 53.5, a 40 percent reduction, and approximately the 1940 level. Among women 20 years of age and older, however, birth rates declined even more from 1960 through 1976.[1] As a result of this differential decline and the increase in the number of women 15-19 years of age, births to teenage mothers accounted for 18 percent of all births in 1976, compared with 14 percent in 1960. Since 1976, the birth rates for women 15-19 have remained at about the same levels.

The data for this report were collected by means of personal interviews with a multistage area probability sample of women 15-44 years of age in the household population of the conterminous United States. Women were eligible for inclusion in the sample if they were currently married, previously married, or never married but with offspring presently living in the household. This report does not include the relatively small number of teenage mothers under 15 years of age.[2] Similarly, never married teenage mothers whose offspring were not living with them were

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[a]This report was prepared by Sara Millman, M.A., and William D. Mosher, Ph.D., Division of Vital Statistics.

Table 1. Number of first marriages and percent distribution by age of bride and age of groom at first marriage: United States, 1960 and 1976

Age	Bride		Groom	
	1976	1960	1976	1960
Number of first marriages in thousands	1,491	1,015	1,450	1,028
Age at first marriage	Percent distribution			
All ages	100.0	100.0	100.0	100.0
Under 18 years	11.9	15.1	2.1	1.8
18-19 years	26.4	32.4	15.4	15.2
20 years and over	61.6	52.5	82.5	83.0
20 years	12.1	11.0	10.9	9.1

SOURCES: National Center for Health Statistics: *Vital Statistics of the United States, 1960*, Vol. III, Marriage and Divorce. Public Health Service. Washington. U.S. Government Printing Office, 1964. table 2-6.

National Center for Health Statistics: First marriages, United States, 1968-1976, by B. F. Wilson and E. Hume. *Vital and Health Statistics*. Series 21-No. 35. DHEW Pub. No. (PHS) 79-1913. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1979, tables B and C and unpublished tabulations.

not included in the sample. (Approximately 7 percent of out-of-wedlock babies born to women aged 15-19 were not living with their mothers in 1976. The comparable figure for 1971 was about 14 percent. It should be noted, however, that these percents are based on only 148 cases in 1976 and 259 cases in 1971 and refer only to out-of-wedlock babies born from first conceptions. They should, therefore, be interpreted with some caution.[5])

From January through September 1976, 3,009 black women and 5,602 women of other races were interviewed in the NSFG. Of these, 448 women were 15-19 years of age. This report is based on information provided by these teenage women, of whom 193 were black and 255 were of races other than black. The information from these women was inflated to provide national estimates of these statistics. Because they are based on a sample, estimates from the NSFG are subject to sampling error. Further discussion of sampling error, comparisons with other data, and definitions of selected terms can be found in the Technical Notes.

The statistics on women 20-44 years of age are shown in this report only for purposes of comparison. Other groups could be used, but this group is convenient for the purposes of this report—principally, to highlight some of the characteristics of teenage wives and mothers. It should not necessarily be inferred that teenage marriage or childbearing is the only or the principal cause of differences between teenagers and the older women described. These differences may be the result of such things as their ages at interview or the social customs prevailing when they were married or when they had their children.

CHARACTERISTICS OF EVER MARRIED TEENAGE WOMEN AND THEIR HUSBANDS

Tables 2 and 3 present selected characteristics of the 1,122,000 ever married teenage women and their husbands and of the 30,725,000 ever married women 20-44 years of age and their current or last husbands, in the United States in 1976. (In this report, for convenience, the ever married teenage women are referred to as "teenage wives," although a very small proportion of them were no longer currently married at the time of interview. See Definitions of Terms.)

Table 2. Number of ever married women 15-44 years of age, by age and race, and percent distribution by selected characteristics, according to age and race: United States, 1976

Characteristic	15-44 years of age			15-19 years of age			20-44 years of age		
	All races[1]	White	Black	All races[1]	White	Black	All races[1]	White	Black
Number of women in thousands	31,847	27,929	3,314	1,122	982	109	30,725	26,947	3,205
	Percent distribution								
All women	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age									
15-17 years	0.6	0.6	*0.4	17.2	17.6	*13.3	...	...	...
18-19 years	2.9	2.9	2.9	82.8	82.4	86.7	...	...	...
20-24 years	17.5	17.7	16.7	...	...	...	18.1	18.3	17.3
25-29 years	23.4	23.5	21.2	...	...	...	24.3	24.4	21.9
30-44 years	55.6	55.3	58.8	...	...	...	57.6	57.3	60.7
Age at marriage									
Under 18 years	20.5	20.2	25.0	59.8	59.4	70.3	19.1	18.8	23.4
18-19 years	31.7	32.4	29.2	40.2	40.6	29.7	31.4	32.1	29.1
20-44 years	47.7	47.3	45.8	...	...	...	49.5	49.1	47.4
Age at first birth									
Under 18 years	11.2	9.4	27.6	26.3	23.8	54.4	10.7	8.8	26.6
18-19 years	19.5	19.3	23.0	16.2	16.9	*14.4	19.6	19.4	23.3
20-44 years	50.8	51.9	39.3	...	...	...	52.7	53.8	40.7
No live births	18.5	19.4	10.1	57.5	59.3	31.2	17.1	18.0	9.4
Timing of first birth									
Premarital birth	6.6	3.6	33.3	*8.4	*4.8	42.9	6.5	3.5	33.0
0-7 months after marriage	15.4	14.9	20.5	16.9	17.7	*14.0	15.3	14.8	20.7
8 months after marriage or more	59.4	62.0	35.9	17.4	18.4	*11.9	60.9	63.6	36.7
No live births	18.7	19.6	10.3	57.3	59.1	31.2	17.2	18.1	9.6
Children ever born									
None	18.4	19.4	10.0	57.2	59.0	31.2	17.0	17.9	9.2
1	20.6	20.1	22.9	34.5	34.0	47.1	20.0	19.6	22.0
2 or more	61.0	60.5	67.2	*8.2	*7.0	*21.8	63.0	62.4	68.7
Education									
0-11 years	24.5	23.0	36.5	52.6	53.8	46.2	23.5	21.8	36.2
12 years or more	75.5	77.0	63.5	47.4	46.2	53.8	76.5	78.2	63.8
Poverty level income									
Below poverty level income	9.2	7.0	28.2	14.6	12.2	39.8	9.0	6.8	27.8
Poverty level income and above	90.8	93.0	71.8	85.4	87.8	60.2	91.0	93.2	72.2
Labor force status									
In the labor force	51.3	50.5	59.7	41.3	41.4	33.6	51.7	50.8	60.6
Working	47.8	47.1	55.3	37.6	37.7	33.6	48.2	47.4	56.0
Unemployed or with a job but not at work	3.5	3.4	4.5	*3.7	*3.8	*0.0	3.5	3.4	4.6
Not in the labor force	48.7	49.5	40.3	58.7	58.6	66.4	48.3	49.2	39.4
In school	2.0	1.8	3.2	*5.9	*5.7	*9.4	1.9	1.7	2.9
Keeping house or other	46.7	47.7	37.1	52.8	52.9	57.0	46.5	47.5	36.4

See footnote at end of table.

Table 2. Number of ever married women 15-44 years of age, by age and race, and percent distribution by selected characteristics, according to age and race: United States, 1976—Con.

Characteristic	15-44 years of age			15-19 years of age			20-44 years of age		
	All races[1]	White	Black	All races[1]	White	Black	All races[1]	White	Black
	Percent distribution								
Receipt of Aid to Families With Dependent Children (AFDC)									
Received AFDC	7.1	5.4	20.4	9.4	*8.5	*19.8	7.0	5.3	20.4
Did not receive AFDC	92.9	94.6	79.6	90.6	91.5	80.2	93.0	94.7	79.6
Living arrangements at age 14									
Living with both parents	76.7	79.1	56.5	56.3	58.3	50.1	77.4	79.8	56.7
Living with one or neither parent	23.3	20.9	43.5	43.7	41.7	49.9	22.6	20.2	43.3
Current contraceptive status									
Sterile	29.6	30.2	26.5	*1.8	*1.7	*3.2	30.7	31.3	27.3
Pregnant, post partum	6.1	6.2	5.5	14.5	15.0	*14.1	5.8	5.9	5.2
Seeking pregnancy	5.6	5.3	6.3	*7.7	*5.9	*11.3	5.5	5.3	6.1
Other nonuser	10.7	9.7	18.5	*6.9	*6.5	*12.0	10.8	9.8	18.8
Oral contraceptive pill	22.7	23.0	21.6	50.7	51.6	48.2	21.7	22.0	20.7
Intrauterine device	6.6	6.5	7.1	*6.5	*6.3	*9.1	6.6	6.5	7.1
Other methods	18.6	19.1	14.5	12.0	13.0	*2.1	18.9	19.3	14.9

[1]Includes white, black, and other races.

NOTE: Statistics in tables 2, 3, and 4 are based on a sample of the household population of the conterminous United States. See Technical Notes for estimates of sampling variability and definitions of selected terms.

About 5 of 6 (83 percent) of the teenage wives were 18-19 years of age. Only 17 percent were 15-17 years of age. Table 2 shows that about 31 percent of ever married women 20-44 years of age had their first child before the age of 20. The differences described in this report between ever married teenagers and ever married women 20-44 would probably be larger if women who had first married or had had their first child as teenagers were excluded from the age group 20-44. For an analysis of differences in fertility after the teen years between women who had a teenage birth and women who did not, and a review of the literature on some other differences between teenage mothers and other women, see reference 4.

Living arrangements of the respondent at age 14 may be viewed as an indicator of the stability of her family life while she was growing up. By this indicator the family background of teenage wives was more likely to have been unstable than that of other wives. About 44 percent of teenage ever married women, compared with only 23 percent of ever married women 20-44 years of age, were living with only one or neither parent at age 14. A report by the U.S. Bureau of the Census indicates that about 21 percent of persons 10-17 years of age were living with only one or neither parent in 1976.[5]

Although only 17 percent of teenage wives were under 18 years of age, about 53 percent had not completed high school by the date of the interview. This suggests that the education of some of the teenage wives was interrupted or terminated by marriage or childbearing.[6] Teenage wives were significantly less likely to have completed high school than wives aged 20-44: 47 percent of teenage wives and 77 percent of wives 20-44 had completed 12 years of education by the date of interview.

Teenage wives were significantly more likely than wives aged 20-44 to have had no births (57 percent compared with 17 percent) or only one birth (34 percent compared with 20 percent) by the date of interview. Teenage wives were also significantly more likely to be preg-

Table 3. Number of ever married women 15-44 years of age, by age and race, and percent distribution by selected characteristics of their current or last husband, according to age and race: United States, 1976

Characteristic of husband	15-44 years of age			15-19 years of age			20-44 years of age		
	All races[1]	White	Black	All races[1]	White	Black	All races[1]	White	Black
Number of women in thousands	31,847	27,929	3,314	1,122	982	109	30,725	26,947	3,205
	Percent distribution								
All women	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age at wife's first marriage									
Under 18 years	3.2	3.1	4.8	*8.4	*8.9	*5.4	3.0	2.9	4.7
18-19 years	17.7	18.0	17.6	32.9	33.3	33.5	17.2	17.4	17.0
20-24 years	54.0	54.7	48.5	49.6	49.5	42.3	54.1	54.9	48.8
25 years and over	25.1	24.2	29.1	9.1	*8.3	*18.8	25.7	24.7	29.5
Occupation									
Professional, managerial, sales, clerical, and kindred	41.4	43.9	19.6	14.8	15.0	*17.3	42.4	45.0	19.7
Craft, operatives, labor, transportation, farm labor, service, and kindred	53.5	52.5	61.4	85.1	84.9	82.7	52.3	51.3	60.7
Never worked	5.1	3.5	19.0	*0.1	*0.1	*0.0	5.3	3.7	19.7
Education									
0-11 years	24.1	23.1	34.6	33.9	35.0	*28.3	23.7	22.6	34.8
12 years or more	75.9	76.9	65.4	66.1	65.0	71.7	76.3	77.4	65.2
Living arrangements at age 14									
Living with both parents	77.3	78.5	66.9	70.3	70.1	77.8	77.6	78.8	66.5
Living with one or neither parent	22.7	21.5	33.1	29.7	29.9	*22.2	22.4	21.2	33.5

[1]Includes white, black, and other races.

NOTE: Statistics in tables 2, 3, and 4 are based on a sample of the household population of the conterminous United States. See Technical Notes for estimates of sampling variability and definitions of selected terms.

nant or post partum at the date of interview than wives 20-44 years of age (15 percent compared with 6 percent).

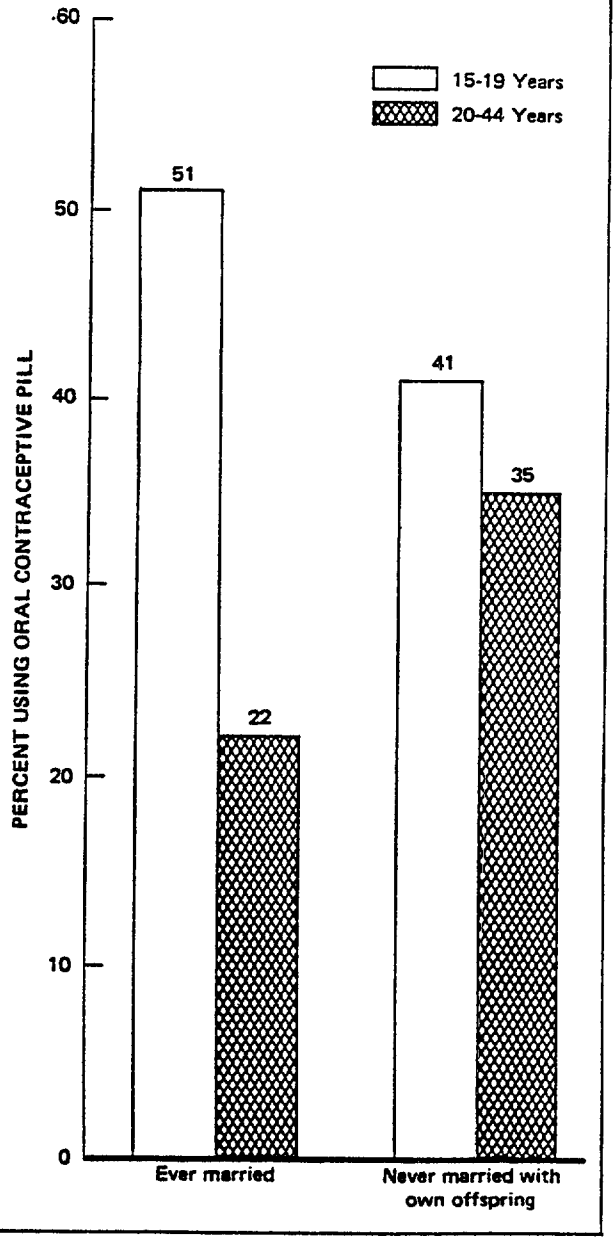
Teenage wives were *not* significantly more likely than wives 20-44 years of age to have had a premarital birth (8 percent compared with 7 percent). Similarly, the teenage wives were *not* significantly more likely to have had a premarital conception: the proportion of wives whose first birth occurred within 7 months of marriage was 17 percent for teenage wives and 15 percent for the women 20-44 years of age, not a significant difference.

About 15 percent of ever married teenage women were living in households with below poverty level incomes, compared with about 9 percent of ever married women 20-44 years of age. This difference, although statistically significant, should be interpreted with caution (see "Definitions of Terms"). Ever married women 15-19 were less likely to be in the labor force than ever married women 20-44 (41 percent compared with 52 percent). The ever married teenagers were not, however, significantly more likely to be receiving Aid to Families With Dependent Children (AFDC) than those 20-44 (9 percent compared with 7 percent).

Ever married teenagers were much more likely to be using the oral contraceptive pill at the date of the interview than ever married

women 20-44 (51 percent compared with 22 percent—figure 1). Because use of the pill requires a doctor's prescription and medical followup, the high percent of teenage wives using the pill may be related to a finding in an earlier report that teenage wives were more likely than other wives to have had a recent family planning visit.[7] In that report, the place where the most recent family planning visit occurred was classified as either "with own physician" or at an "organized medical service" (clinic or other place). The teenage wives were more likely than other wives to have had their most recent family planning visit at an organized medical service. Table 2 indicates that there was no significant difference between teenage and other ever married women in the percents trying to become pregnant or using the intrauterine device (IUD). Teenage wives were less likely than the ever married women 20-44 to be using contraceptive methods other than the pill and IUD (12 percent compared with 19 percent).

Figure 1. PERCENT OF WOMEN 15-44 YEARS OF AGE USING THE ORAL CONTRACEPTIVE PILL, BY AGE AND MARITAL STATUS: UNITED STATES, 1976



Statistics in table 2 show that a larger proportion of ever married black women had their first child at a relatively young age than white ever married women did. About 28 percent of black ever married women 15-44 had had their first birth before the age of 18 compared with about 9 percent of ever married white women. Similarly, overall and in both age groups, the percent of women with no birth by the date of interview was lower for black women than for white women.

The percent of ever married women who had a premarital birth was higher for black women among both teenagers and women 20-44 years of age. About 43 percent of black teenage wives and 5 percent of white teenage wives had a premarital birth. A recent study of teenage pregnancy may help to explain the larger percent of black ever married women than white ever married women who had a premarital birth (table 2). That study found that black single teenage women were more likely than white single teenage women to become premaritally pregnant, and much less likely than white single teenagers to marry before the outcome of a premarital pregnancy (see tables 1-3 of reference 3).

Selected characteristics of the husbands of teenage and other ever married women are shown in table 3. About 41 percent of the husbands of teenage wives were also teenagers at the wife's first marriage. Another 50 percent were 20-24 years of age; only 9 percent were 25 years of age or older. The data on the occupation of the

wife's current or last husband show that 85 percent of the husbands of teenage wives were in "blue collar" occupations—craft, operatives, labor, transportation, farm labor, service, and kindred. This compares with 52 percent of the husbands of wives 20-44 years of age. Only 47 percent of teenage wives (table 2), but 66 percent of their husbands (table 3), had finished high school by the date of interview. This large difference may be explained in part by the older age of their husbands, but it may also reflect the wives' lower levels of educational attainment, or longer delays in completing high school. About 56 percent of teenage wives were living with both parents at the age of 14, compared with 70 percent of their husbands. Thus teenage wives were less likely than their husbands to have finished high school by the date of the interview and less likely to have come from two-parent households.

CHARACTERISTICS OF SINGLE (NEVER MARRIED) MOTHERS

From 1960 through 1976, the number of out-of-wedlock births in the United States increased from about 224,000 to 468,000, a 109-percent increase (see table 5 of reference 1). One important reason for this increase was the rising number of young women during this period. Another was a widespread postponement of marriage. A third factor was an increase in the rate of out-of-wedlock births. The out-of-wedlock birth rate (out-of-wedlock births per 1,000 unmarried women 15-44 years of age) rose from 21.6 to 24.7 from 1960 through 1976, a 14-percent increase.[1] For unmarried women 15-19 years of age, however, this rate increased 57 percent, from 15.3 in 1960 to 24.0 in 1976.[8] The rates for 1977 and 1978 were about the same as in 1976.

If a woman has had an out-of-wedlock birth, has kept the baby, and has never married, she is classified in this report as single with her own offspring living in the household. Table 4 shows selected characteristics of the estimated 332,000 single (never married) mothers 15-19 years of age and the 739,000 single mothers 20-44 years of age who had offspring living with them in 1976. The single mothers were younger than the ever married women. About 65 percent of the single mothers were under 25 years of age compared with only 21 percent of ever married women.

Table 4 shows that 67 percent of the 332,000 single teenage mothers and 70 percent of the 739,000 single mothers 20-44 years of age were black women. So black women accounted for a larger percent of single mothers than of the general population. This difference appears to reflect different outcomes of out-of-wedlock pregnancies among white and black teenagers as much as any difference in the chances of becoming pregnant in the first place. One recent study of teenage pregnancy revealed that black single teenage women were more likely than white single teenage women to become single mothers through a combination of five factors: a higher percent of black teenage women had had intercourse; a higher percent of black sexually active women had had a premarital first pregnancy; a lower percent of black premaritally pregnant women had married before the baby was born; a lower percent of black women had married soon after a premarital birth; and a larger percent of black than white teenage mothers had kept their babies.[5]

As mentioned previously, the living arrangements of the respondent at age 14 may be viewed as an indicator of the stability of her family life during her youth. About 42 percent of single mothers were living with only one or neither parent at age 14, compared with 23 percent of ever married women. Only about 1 in 5 (19 percent) single teenage mothers had finished high school by the date of interview, although 3 in 5 (61 percent) were 18 or 19 years of age at that date. This suggests that for many of these young women, motherhood interrupted their education.[6]

Table 4 also indicates that about 79 percent of single teenage mothers in 1976 had their first birth before the age of 18, compared with 29 percent of single mothers 20-44 years of age, 26 percent of teenage wives, and 11 percent of ever married women aged 20-44 years. The high proportion of very early first births for single teenage mothers probably reflects two facts: first, teenage mothers cannot by definition include any women whose first births occurred after age 19, so the proportion with a birth before 17 is higher. Secondly, on reaching the age of 18 and the completion of high school,

Table 4. Number of never married women 15-44 years of age who have their own offspring living with them and percent distribution by selected characteristics, according to age: United States, 1976

Characteristic	Age		
	15-44	15-19	20-44
Number of women in thousands..	1,071	332	739
	Percent distribution		
All women[1]	100.0	100.0	100.0
Race			
White	29.7	31.4	28.9
Black	69.3	67.3	70.3
Age			
15-17 years	12.1	39.0	...
18-19 years	18.9	61.0	...
20-24 years	34.2	...	49.6
25-29 years	16.1	...	23.3
30-44 years	18.7	...	27.1
Age at first birth			
Under 18 years	44.3	79.4	28.6
18-19 years	25.8	*20.6	28.2
20-44 years	29.8	...	43.2
Children ever born			
1	62.8	85.4	52.6
2 or more	37.2	*14.6	47.4
Education			
0-11 years	56.6	81.4	45.3
12 years or more	43.4	*18.6	54.7

Characteristic	Age		
	15-44	15-19	20-44
Poverty level income	Percent distribution—Con.		
Below poverty level income	61.0	56.3	62.9
Poverty level income and above	39.0	43.7	37.1
Labor force status			
In the labor force	30.1	*14.7	37.0
Working	26.6	*13.1	32.7
Unemployed or with a job but not at work	*3.5	*1.6	*4.3
Not in the labor force	69.9	85.3	63.0
In school	12.4	28.4	*5.2
Keeping house or other	57.5	56.9	57.7
Receipt of Aid to Families With Dependent Children (AFDC)			
Received AFDC	70.3	75.9	67.7
Did not receive AFDC	29.7	24.1	32.3
Living arrangements at age 14			
Living with both parents	57.8	49.1	61.7
Living with one or neither parent	42.2	50.9	38.3
Current contraceptive status			
Sterile	*7.9	*1.3	*10.9
Pregnant, post partum	*7.3	*14.0	*4.3
Seeking pregnancy	...	...	...
Other nonuser	27.8	28.1	27.6
Oral contraceptive pill	36.5	40.9	34.6
Intrauterine device	12.0	*10.8	12.5
Other methods	*8.5	*4.8	*10.2

[1]Includes white, black, and other races.

NOTE: Statistics in tables 2, 3, and 4 are based on a sample of the household population of the conterminous United States. See Technical Notes for estimates of sampling variability and definitions of selected terms.

women marry at a sharply increased rate;[9] thus many single teenage mothers may eventually marry, perhaps after they complete their education. They would therefore not be classified as single mothers at some later time, but rather as ever married women with a premarital birth.

Single mothers (table 4) were much more likely than ever married women (table 2) to be receiving AFDC (70 percent compared with 7 percent) and to have incomes below the poverty level (61 percent compared with 9 percent). Overall and in both age groups, single mothers were less likely than ever married women to be in the labor force. In addition, the teenage single mothers were less likely than single mothers 20-44 to be in the labor force.

About 41 percent of teenage single mothers and 35 percent of those 20-44 years of age were using the oral contraceptive pill at the date of interview (figure 1). This difference was not statistically significant.

REFERENCES

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[7]National Center for Health Statistics: Use of family planning services by currently married women 15-44 years of age: United States, 1973 and 1976, by G. E. Hendershot. *Advance Data From Vital and Health Statistics,* No. 45. DHEW Pub. No. (PHS) 79-1250. Public Health Service. Hyattsville, Md. Feb. 7, 1979.

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SYMBOLS

Data not available	---
Category not applicable	...
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

TECHNICAL NOTES

RELIABILITY OF ESTIMATES

Because the National Survey of Family Growth (NSFG) is a sample of the household population of the conterminous United States rather than a complete count, the estimates in tables 2-4 are subject to sampling variability. To calculate the standard error of an aggregate number or percent, the appropriate estimates of A and B from table I are used in the equations

$$SE_{(N')} = (A + B/N')^{1/2} \times N', \text{ and}$$

$$SE_{(P')} = [B \times P' \times (100 - P')/X']^{1/2},$$

where N' is the number of women, P' is the percent, and X' is the number of women in the denominator of the percent. Statements in the text of this report were tested using a 2-tailed t-test with 40 degrees of freedom. The relative standard error is the ratio of the standard error to the statistic being estimated. In this report, numbers and percents that have a relative standard error that is greater than 25 percent of the estimate itself are considered unreliable. They are marked with an asterisk to caution the user but may be combined to make other types of comparisons of greater precision. Details of the procedure used to estimate standard errors can be found in "National Survey of Family Growth, Cycle I: Sample Design, Estimation Procedures, and Variance Estimation," *Vital and Health Statistics*, Series 2, No. 76, January 1978. A similar report is in preparation for Cycle II.

In Cycle II of the NSFG, missing data items were not imputed, and percent distributions are based on cases with known data.

The NSFG estimates of numbers of ever married women 15-19 years of age, ever married women 15-19 years of age who had ever had a live birth, and never married (single) women 15-19 years of age living with their own offspring are in close agreement with estimates from other sources. In "Fertility of American Women: June 1976 " (*Current Population Reports*, Series P-20, No. 308, June 1977, table 43), the U.S. Bureau of the Census estimated a total of 1,125,000 ever married women 15-19 years of age, and of these, 505,000 were estimated to have had at least one child. Researchers at The Johns Hopkins University have provided an estimate of 311,000 never married (single) women 15-19 years of age living with their own offspring. This unpublished estimate is based on a 1976 sample survey of women 15-19 years of age in the noninstitutional population of the conterminous United States. None of these estimated numbers is significantly different from the NSFG estimate.

Table I. Estimates of A and B for relative standard error curves, by marital status and race: National Survey of Family Growth, Cycle II

Marital status and race	A	B
Ever married		
All races	0.0001700390	6,486.5185
White	0.0000422037	7,111.5185
Black	-0.0004520643	2,848.2362
Never married with own offspring and ever married		
All races	-0.0001926913	6,494.6569
White	-0.0002362857	6,892.2852
Black	-0.0004813358	2,698.6043

DEFINITIONS OF TERMS

Demographic Terms

Age.—In this report, "teenager" refers to a woman 15-19 years of age at the date of interview.

Marital status.—Persons are classified by marital status as married, widowed, divorced, separated, or never married. Married, widowed, divorced, and separated women are referred to as "ever married." For convenience, ever married women 15-19 years of age are also referred to as "teenage wives" since all but 7 percent of sampled ever married teenage women (19 cases)

were currently married at the survey date. Never married women with offspring living in the household were included in the sample and classified separately in table 4.

Poverty level.—The poverty index ratio was calculated by dividing the total family income by the weighted average threshold income of nonfarm families with the head under 65 years of age based on the poverty levels shown in U.S. Bureau of the Census, *Current Population Reports,* Series P-60, No. 106, "Money Income in 1975 of Families and Persons in the United States," table A-3. Poverty level was not ascertained for 35 percent of sampled teenage mothers or for 18 percent of sampled teenage wives. Because missing data on income may be nonrandomly distributed with respect to other variables, small differences by poverty level income should be interpreted with great caution. "Below poverty level income" refers to a total family income that is less than the poverty threshold, while "poverty level income and above" refers to a total family income that equals or exceeds that threshold.

Receipt of Aid to Families With Dependent Children.—Respondents were asked, "Did you or any members of your family living here receive income in the past 12 months from . . . welfare payments for aid to your dependent children?" Respondents who replied "yes" were classified as having received AFDC.

Labor force status.—Respondents were asked "Last week were you working full-time, part-time, going to school, keeping house, or what?" "In the labor force" includes those working full- or part-time; those with a job but not at work because of temporary illness, vacation, strike, or maternity leave; and those unemployed, laid off, or looking for work. "Not in labor force" includes those in school, those keeping house, and those engaged in other activities not in the labor force. This classification gives priority to working over other activities. For example, women who were both working and attending school, or working and keeping house, were classified as working.

Current Contraceptive Status

Sterile.—A woman (or couple) was classified as sterile if she reported that it was impossible for her to have a baby. Most of the women (or couples) classified as sterile have had sterilizing operations (see *Advance Data* No. 36).

Seeking pregnancy.—A currently married woman was classified as seeking pregnancy if she reported that she was not using a contraceptive method at the time of interview because she wanted to become pregnant. Never married mothers and widowed, divorced, and separated women were not asked if they were trying to become pregnant.

Post partum.—A woman (or couple) was classified as post partum if she reported that she was not currently using a contraceptive method, that she was not seeking pregnancy, and that her last pregnancy had terminated within 2 months before the date she was interviewed.

Other nonusers.—Women (or couples) who reported that they were currently using no contraceptive method and were not sterile, pregnant, post partum, or seeking pregnancy were classified here.

Method users.—A woman (or couple) who reported use of a contraceptive method other than a surgical sterilization at the date of interview was classified according to the specific method used. For a detailed classification of currently married women by specific contraceptive methods, see *Advance Data* No. 36.

Related Data

More extensive definitions of terms can be found in previous reports based on Cycle II of the NSFG—for example, see *Advance Data* Nos. 36, 43, 45, 55, and 56.

advancedata
FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service Office of Health Research, Statistics, and Technology | Number 62 • October 31, 1980

Expected Principal Source of Payment for Hospital Discharges: United States, 1977[a]

INTRODUCTION

This report presents statistics based on data collected through the National Hospital Discharge Survey, a continuous survey conducted by the National Center for Health Statistics since 1965. In 1977 data were abstracted from the face sheets of medical records of approximately 224,000 patients discharged from 423 short-stay non-Federal hospitals. These data were used to produce estimates of hospital utilization by an estimated 35.9 million inpatients (excluding newborn infants) in the United States.

From 1968 through 1970, information on hospital charges from a subsample of the National Hospital Discharge Survey (NHDS) sample was collected.[1] No information on charges or source of payment was collected from 1971 through 1976. In 1977, however, data on a patient's expected (in contrast with actual) principal source of payment and other expected sources of payment were collected from the face sheets of all medical records in the NHDS sample. Statistics in this report reflect only the patient's principal expected source of payment. The survey form used to collect these data is reproduced in a previous publication of the National Center for Health Statistics.[2]

There is an obvious but important limitation to these data: the expected payment source recorded on the face sheet of the medical record may not have been the actual source of payment. For example, a patient admitted to a hospital following an automobile accident may have cited Blue Cross as the expected source of payment when, in fact, an automobile insurance company ultimately made restitution. Also, because of the manner in which this variable was collected, there is no way to determine the charge for the hospital stay or what proportions of the hospital stay and medical services provided were covered by the principal expected source of payment indicated.

HIGHLIGHTS

Private Insurance

Private health insurance, consisting of Blue Cross and other private or commercial insurance, was the principal expected source of payment for approximately 19.3 million discharges in 1977, or about 54 percent of all discharges (table 1). The average length of stay for patients using private insurance was 6.0 days compared

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[a]This report was prepared by Robert Pokras and Gloria Gardocki, Division of Health Resources Utilization Statistics.

[1]National Center for Health Statistics: Patient charges in short-stay hospitals, United States, 1968-1970, by M. Moien. *Vital and Health Statistics*. Series 13-No. 15. DHEW Pub. No. (HRA) 74-1766. Public Health Service. Washington. U.S. Government Printing Office, May 1974.

[2]National Center for Health Statistics: Inpatient utilization of short-stay hospitals, annual summary of the United States, 1977, by B. J. Haupt. *Vital and Health Statistics*. Series 13-No. 41. DHEW Pub. No. (PHS) 79-1792. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1979.

Table 1. Number and percent distribution of patients discharged from non-Federal short-stay hospitals by principal expected source of payment, age and sex of patient: United States, 1977

Sex and age	All expected sources of payment	Private insurance	Workmen's Compen-sation	Medi-care	Medic-aid	Other government payments	Self-pay	No charge	Other payments
	Number in thousands								
Both sexes									
All ages	35,902	19,325	663	8,954	2,936	1,110	2,338	91	486
Under 15 years	3,775	2,549	-	45	635	213	250	13	71
15-44 years	15,180	10,334	446	238	1,636	607	1,574	56	289
45-64 years	8,604	6,135	195	883	546	266	452	14	113
65 years and over	8,344	307	22	7,788	119	24	62	8	13
Male									
All ages	14,385	7,497	527	4,031	901	415	789	31	195
Under 15 years	2,137	1,444	-	23	362	124	139	8	37
15-44 years	4,553	3,091	362	124	306	160	405	11	95
45-64 years	4,042	2,807	153	499	184	120	216	7	56
65 years and over	3,653	155	12	3,385	49	11	29	5	7
Female									
All ages	21,518	11,828	136	4,923	2,035	695	1,549	60	291
Under 15 years	1,638	1,105	-	22	273	89	111	5	34
15-44 years	10,627	7,243	84	114	1,330	447	1,169	45	194
45-64 years	4,562	3,328	42	384	362	146	236	7	57
65 years and over	4,690	152	10	4,403	70	13	33	3	6
	Percent								
Both sexes									
All ages	100.0	53.8	1.8	24.9	8.2	3.1	6.5	0.3	1.4
Under 15 years	100.0	67.5	-	1.2	16.8	5.6	6.6	0.3	1.9
15-44 years	100.0	68.1	2.9	1.6	10.8	4.0	10.4	0.4	1.9
45-64 years	100.0	71.3	2.3	10.3	6.3	3.1	5.3	0.2	1.3
65 years and over	100.0	3.7	0.3	93.3	1.4	0.3	0.7	0.1	0.2
Male									
All ages	100.0	52.1	3.7	28.0	6.3	2.9	5.5	0.2	1.4
Under 15 years	100.0	67.6	-	1.1	16.9	5.8	6.5	0.4	1.7
15-44 years	100.0	67.9	7.9	2.7	6.7	3.5	8.9	0.2	2.1
45-64 years	100.0	69.4	3.8	12.4	4.6	3.0	5.3	0.2	1.4
65 years and over	100.0	4.2	0.3	92.7	1.3	0.3	0.8	0.1	0.2
Female									
All ages	100.0	55.0	0.6	22.9	9.5	3.2	7.2	0.3	1.4
Under 15 years	100.0	67.4	-	1.3	16.7	5.4	6.7	0.3	2.1
15-44 years	100.0	68.2	0.8	1.1	12.5	4.2	11.0	0.4	1.8
45-64 years	100.0	73.0	0.9	8.4	7.9	3.2	5.2	0.2	1.2
65 years and over	100.0	3.2	0.2	93.9	1.5	0.3	0.7	0.1	0.1

Table 2. Number and percent distribution of days of care and average length of stay for patients discharged from non-Federal short-stay hospitals by principal expected source of payment: United States, 1977

Days of care	All expected sources of payment	Principal expected source of payment							
		Blue Cross and other private insurance	Workmen's Compensation	Medicare	Medicaid	Other government payments	Self-pay	No charge	Other payments
Number in thousands.....	262,407	115,616	4,742	100,354	19,261	6,662	12,097	610	3,065
Percent distribution.....	100.0	44.1	1.8	38.2	7.3	2.5	4.6	0.2	1.2
Average length of stay.....	7.3	6.0	7.3	10.9	6.6	6.1	5.2	6.8	6.4

with 7.3 days for all patients (table 2). This difference is partially a function of the age of these patients. That is, average length of stay increases with age, and the average age of patients using private insurance was 35.5 years, while the average age of all patients was just over 40 years (table 3). The shorter average length of stay means that a proportionately smaller number of days of care were used by these patients: while 54 percent of all discharges were covered by private insurance, only 45 percent of the total days of care in short-stay non-Federal hospitals were used by these patients.

The five most frequent first-listed diagnoses for patients using private insurance (table 4) were delivery (with or without mention of complication), malignant neoplasms, benign neoplasms, hypertrophy of tonsils and adenoids, and chronic ischemic heart disease. The diagnostic categories used to determine this ranking are discussed in the Technical Notes. Of the 3.33 million patients hospitalized for deliveries in the United States in 1977, 2.05 million (62 percent) listed Blue Cross or another private insurance plan as the principal expected source of payment. This large proportion of deliveries contributed in part to the shorter average length of stay of patients using private insurance, because a delivery generally results in a relatively short length of stay—from about 3 to 5 days.

Table 3. Private, public, and other expected sources of payment for patients discharged from non-Federal short-stay hospitals by total number of discharges, days of care, average length of stay, and age: United States, 1977

Item	All expected sources of payment	Expected source of payment		
		Private	Public	Self-pay, no charge, other
Total number of discharges in millions.....	35.9	19.3	13.7	2.9
Total days of care in millions.....	262.4	115.6	131.0	15.8
Average length of stay in days.....	7.3	6.0	9.4	5.5
Average age of patients in years...	40.6	35.5	58.8	31.8

Table 5 provides data on all-listed surgeries for inpatients, with a maximum of three procedures recorded on the NHDS survey form. The five most frequent surgical procedures (see Technical Notes for a discussion of surgical categories) performed for patients using private health insurance were diagnostic dilation and curettage of uterus, hysterectomy, tonsillectomy with or without adenoidectomy, bilateral ligation and division of fallopian tubes, and oophorectomy or salpingo-oophorectomy. Of these five procedures, four are female specific, and private insurance was the principal expected source of payment for more than 75 percent of each of them.

The numbers of males and females discharged were relatively similar in all age groups except 15-44 years (table 1). Of the discharges in this age group listing Blue Cross or other private insurance as the expected source of payment, more than twice as many were females as males. This was due to the large number of

Table 4. Number of discharges for the 5 most frequent diagnostic categories for patients discharged from non-Federal short-stay hospitals for each principal expected source of payment, and percent of all discharges with the diagnosis: United States, 1977

Most frequent diagnostic categories and ICDA codes	Number of discharges in thousands	Percent of all discharges
Private insurance		
Delivery with or without mention of complication 650-661	2,049	61.5
Malignant neoplasms 140-209	708	41.0
Benign neoplasms and neoplasms of unspecified nature 210-239	593	72.2
Hypertrophy of tonsils and adenoids 500	492	77.6
Chronic ischemic heart disease 412	410	32.1
Medicare		
Malignant neoplasms 140-209	827	47.8
Chronic ischemic heart disease 412	766	59.9
Cerebrovascular disease 430-438	456	71.4
Pneumonia, all forms 480-486	258	35.7
Cataract 374	245	70.4
Medicaid		
Delivery with or without mention of complication 650-661	411	12.3
Abortion (induced or spontaneous) 640-645	93	19.9
Malignant neoplasms 140-209	83	4.8
Pneumonia, all forms 480-486	80	11.1
Hypertrophy of tonsils and adenoids 500	76	12.0
Workmen's Compensation		
Displacement of intervertebral disc 725	74	18.7
Sprains and strains of back and neck 846-847	66	18.3
Lacerations and open wound (excluding eye, ear, and head) 874-907	37	15.7
Inguinal hernia 550,552	36	7.2
Dislocation without fracture 830-839	32	15.2
Other government payments		
Delivery with or without mention of complication 650-661	139	4.2
Alcoholism 303	46	9.8
Hypertrophy of tonsils and adenoids 500	33	5.2
Malignant neoplasms 140-209	33	1.9
Psychoses 290-299	33	8.0
Self-pay		
Delivery with or without mention of complication 650-661	613	18.4
Abortion (induced or spontaneous) 640-645	78	16.7
Alcoholism 303	76	16.1
Malignant neoplasms 140-209	56	3.2
Complications of pregnancy 630-634	56	16.2
Other payments		
Delivery with or without mention of complication 650-661	80	2.4
Malignant neoplasms 140-209	16	0.9
Alcoholism 303	17	3.6
Intracranial injury (including skull fracture) 850-854	12	3.1
Benign neoplasms and neoplasms of unspecified nature 210-239	11	1.3
No charge		
Delivery with or without mention of complication 650-661	26	0.8
Pneumonia, all forms 480-486	*4	0.6
Abortion (induced or spontaneous) 640-645	*3	0.6
Cholelithiasis 574	*2	0.4
Psychoses 290-299	*2	0.5

Table 5. Number of all-listed surgeries for the 5 most frequent surgical categories for patients discharged from non-Federal short-stay hospitals for each principal expected source of payment, and percent of all such surgeries performed: United States, 1977

Most frequent surgical categories and ICDA codes	Number of all-listed surgeries in thousands	Percent of all such surgeries
Private insurance		
Dilation and curettage of uterus, diagnostic 70.3	766	77.0
Hysterectomy 69.1-69.5	554	78.6
Tonsillectomy with or without adenoidectomy 21.1-21.2	479	77.6
Ligation and division of fallopian tubes, bilateral 68.5	440	75.2
Oophorectomy; salpingo-oophorectomy 67.2-67.5	353	77.1
Medicare		
Extraction of lens 14.4-14.6	249	70.1
Prostatectomy 58.1-58.3	214	71.6
Reduction of fracture with fixation 82.2	168	47.9
Cholecystectomy 43.5	115	25.8
Repair of inguinal hernia 38.2-38.3	110	20.6
Medicaid		
Dilation and curettage of uterus, diagnostic 70.3	89	8.9
Tonsillectomy with or without adenoidectomy 21.1-21.2	73	11.8
Ligation and division of fallopian tubes, bilateral 68.5	68	11.6
Cesarean section 77	52	11.4
Hysterectomy 69.1-69.5	45	6.4
Workmen's Compensation		
Repair of inguinal hernia 38.2-38.3	37	6.9
Neurosurgery 01-05	37	9.5
Operations on muscles, tendons, facia, and bursa 88-89	35	9.4
Excision of intervertebral cartilage (prolapsed disc) 86.4	34	20.5
Suture of skin or mucous membrane 92.5	19	9.8
Other government payments		
Tonsillectomy with or without adenoidectomy 21.1-21.2	33	5.3
Dilation and curettage of uterus, diagnostic 70.3	28	2.8
Ligation and division of fallopian tubes, bilateral 68.5	20	3.4
Hysterectomy 69.1-69.5	18	2.6
Cesarean section 77	17	3.7
Self-pay		
Cesarean section 77	70	15.4
Repair of laceration, obstetrical 78.2-78.3	50	18.4
Dilation and curettage of uterus, diagnostic 70.3	46	4.6
Ligation and division of fallopian tubes, bilateral 68.5	46	7.7
Dilation and curettage after delivery or abortion 78.1	43	14.8
Other payments		
Repair of laceration, obstetrical 78.2-78.3	12	4.4
Dilation and curettage of uterus, diagnostic 70.3	11	1.1
Hysterectomy 69.1-69.5	10	1.4
Cesarean section 77	10	2.2
Ligation and division of fallopian tubes, bilateral 68.5	8	1.4
No charge		
Cesarean section 77	*4	0.9
Hysterectomy 69.1-69.5	*2	0.2
Ligation and division of fallopian tubes 68.5	*2	0.3
Cholecystectomy 43.5	*2	0.4
Dilation and curettage after delivery or abortion 78.1	*2	0.7

females admitted for delivery and female-specific surgery.

Public Programs

Public programs for hospital care payments include Medicare, Medicaid, Workmen's Compensation, and other forms of government payments. Together these programs were listed as the principal expected source of payment for 13.7 million, or 38 percent, of all discharges (table 1). Of these, 66 percent were Medicare patients, 21 percent were Medicaid patients, 5 percent benefited from Workmen's Compensation, and 8 percent received other forms of government payments. While private insurance accounted for 54 percent of all discharges and only 45 percent of the total days of care, public health programs accounted for 38 percent of the total discharges and 49 percent of the total days of care. This disparity resulted from a greater average length of stay, 9.4 days, for patients covered by public programs. The longer average length of stay was itself due in great part to the fact that Medicare was the expected source of payment for 93 percent of all patients 65 years of age or over (table 1); as a result, the average age of patients covered by public programs was almost 59 years.

Because of their specific characteristics, the public programs showed considerable variability among the most frequent diagnoses and surgical procedures. The most obvious case was Workmen's Compensation, in which the five most frequent principal diagnostic conditions reflected injuries, accidents, and physical ailments related to the work environment (table 4). Likewise, the five most frequent surgical procedures covered by Workmen's Compensation reflected medical care provided for accidents and injuries (table 5). For Medicare, 3 of the 5 most frequent principal diagnoses reflected the age of the population using this program: chronic ischemic heart disease, cerebrovascular disease, and cataract. Medicare was the principal expected source of payment for 60, 71, and 70 percent, respectively, of all patients with these conditions. Also, 2 of the 5 most frequently performed surgical procedures, extraction of lens and prostatectomy, reflected the age of the Medicare population.

The most frequent diagnoses and surgical procedures for Medicaid and other government payments did not reflect as specific a class of patients as Workmen's Compensation and Medicare did. Rather, those patients covered by Medicaid and other government payments were more similar to patients covered by private insurance. Of the 5 most frequent diagnoses for Medicaid and other government payments, 3 (delivery, malignant neoplasms, and hypertrophy of tonsils and adenoids) were also among the 5 most frequent diagnoses for both Blue Cross and other commercial insurance (table 4). Also, of the 5 most frequent surgical procedures for Medicaid and other government payments, 4 were among the 5 most frequent surgeries performed for patients using private insurance. These were diagnostic dilation and curettage of uterus, bilateral ligation and division of fallopian tubes, tonsillectomy with or without adenoidectomy, and hysterectomy (table 5).

In the age by sex distribution in table 1, the most prominent sex difference in number of discharges was in the 15-44 years category. For each expected source of payment except Workmen's Compensation and Medicare there were more than twice as many female as male discharges in this age category. In the Medicare class, the number of discharges for females and males was quite similar (114,000 and 124,000, respectively), and, not unexpectedly, in the Workmen's Compensation class the sex difference was the reverse of that for other insurance sources: there were 362,000 males and 84,000 females discharged who were in the 15-44 years age group.

Self-Pay

More than 6 percent (2.3 million) of all patients expected to pay for their hospital care principally by themselves. Delivery, the leading diagnosis for this group (table 4), was the first-listed diagnosis for 26 percent of these patients. No other diagnosis accounted for more than 14 percent of the total number of discharges in any source of payment category except for no charge (as discussed below). The large proportion of self-pay patients admitted for delivery largely accounts for two other characteristics of the self-pay group: 67 percent were between the

ages 15-44 years, and the average length of stay for them was only 5.2 days (table 2).

No Charge

In 1977, an estimated 91,000 discharges (table 1) were not charged for approximately 610,000 days of care (table 2); this was only about two-tenths of 1 percent of all days of care in short-stay hospitals. When data in this category are broken down into most frequent diagnoses and surgical procedures, the frequencies have relative standard errors greater than 30 percent and consequently are too small to be considered reliable estimates. The only exception was the most frequent diagnosis—delivery with or without mention of complication—for which there were 26,000 no charge deliveries in 1977 that accounted for 29 percent of all no charge patients.

TECHNICAL NOTES

SOURCE OF DATA

The National Hospital Discharge Survey encompasses patients discharged from short-stay noninstitutional hospitals, exclusive of military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals with six beds or more and an average length of stay less than 30 days for all patients are included in the survey. Discharges of newborn infants are excluded from this report.

The universe of the survey consisted of 6,965 short-stay hospitals contained in the 1963 Master Facility Inventory of Hospitals and Institutions. New hospitals were sampled for inclusion into the survey in 1972, 1975, and 1977. In all, 535 hospitals were sampled in 1977. Of these hospitals, 68 refused to participate, and 44 were out of scope. The 423 participating hospitals provided approximately 224,000 medical records.

SAMPLE DESIGN

All hospitals with 1,000 beds or more in the universe of short-stay hospitals were selected with certainty in the sample. All hospitals with fewer than 1,000 beds were stratified, the primary strata being 24 size-by-region classes. Within each of these 24 primary strata, the allocation of the hospitals was made through a controlled selection technique so that hospitals in the sample would be properly distributed with regard to type of ownership and geographic division. Sample hospitals were drawn with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals.

Sample discharges were selected within the hospitals using the daily listing sheet of discharges as the sampling frame. These discharges were selected by a random technique, usually on the basis of the terminal digit or digits of the patient's medical record number, a number assigned when the patient was admitted to the hospital. The within-hospital sampling ratio for selecting sample discharges varied inversely with the probability of selection of the hospital.

SAMPLING ERRORS, NONRESPONSE, AND DATA EDITS

Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling variability. The relative standard errors presented in table I are obtained by dividing the standard error of the estimate by the estimate itself and are expressed as a percent of the estimate.

About 8.5 percent of the discharges sampled for the 1977 NHDS did not have information concerning source of payment on the face sheet of the medical record. Therefore, all frequency estimates in this report have been adjusted for nonresponse by assuming that nonresponses are distributed among the principal expected sources of payment in the same proportions as responses are. However, the ratio estimates of average length of stay and average age in tables 1 and 5 do not incorporate nonresponse data.

There were several edits performed on the raw data. When a principal expected source of payment was not indicated, but a single expected source of payment was listed as a secondary source of payment, the indicated secondary source of payment was assumed to be the principal expected source of payment. When Workmen's Compensation was listed in conjunction with other insurance sources, Workmen's Compensation was taken as the principal expected source of payment; and when Medicare was listed in conjunction with other insurance sources (except Workmen's Compensation),

Table I. Relative standard errors of estimates, by source of data

Size of estimate	First-listed diagnosis and number of discharges		All-listed surgeries	Days of care
	All principal expected sources of payment except self-pay	Self-pay only		
1,000	35.0	-	-	...
10,000	19.5	27.4	21.8	...
100,000	9.2	15.2	8.1	16.9
1,000,000	6.2	13.6	4.0	10.1
10,000,000	3.6	-	-	6.3
100,000,000	...	...	...	4.0
150,000,000	...	...	...	3.7

Medicare was taken as the principal expected source of payment.

DIAGNOSTIC AND SURGICAL CATEGORIES

The most frequent diagnostic and surgical categories in this report come from a grouping scheme devised by NHDS for reporting purposes.[3,4] For diagnoses, these categories are subsets of the 17 major diagnostic classes of the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*[5] (ICDA-8) and were developed to reduce the detail of ICDA-8 while retaining specificity of conditions. For this report, two changes in this grouping scheme were made: 1. deliveries without mention of complication (ICDA-8 code 650) and deliveries with mention of complication (ICDA-8 codes 651-661) were combined; and 2. neoplasms were categorized as malignant or benign without regard to site. For surgical procedures the categories used are subsets of the first 16 major surgical classes in ICDA-8 (biopsies are excluded). These surgical groups represent single surgical procedures or groups of associated surgical procedures that are performed frequently. In both diagnostic and surgical recoding schemes there are "other" categories that group diagnoses or surgeries into catch-all groups (e.g., "other abdominal surgery"). These categories were not used in determining the five most frequent diagnoses or surgeries.

DEFINITIONS

First-listed diagnosis.—The coded diagnosis identified as the principal diagnosis or else listed first on the face sheet of the medical record. The number of first-listed diagnoses is equivalent to the number of discharges.

All-listed operations.—All coded operations listed in positions 1-3 on the face sheet of the medical record exclusive of certain obstetrical procedures, diagnostic endoscopy and radiography, radiotherapy, and certain other treatments not generally considered as surgery.

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[3] National Center for Health Statistics: Inpatient utilization of short-stay hospitals by diagnosis, United States, 1974, by L. S. Glickman. *Vital and Health Statistics.* Series 13-No. 30. DHEW Pub. No. (HRA) 77-1783. Public Health Service. Washington. U.S. Government Printing Office, July 1977.

[4] National Center for Health Statistics: Surgical Operations in short-stay hospitals, United States, 1975, by A. L. Ranofsky. *Vital and Health Statistics.* Series 13.-No. 34. DHEW Pub. No. (PHS) 78-1785. Public Health Service. Washington. U.S. Government Printing Office, July 1977.

[5] National Center for Health Statistics: *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.* (PHS) Pub. No. 1693. Public Health Service. Washington. U.S. Government Printing Office, 1967.

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	*

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service Office of Health Research, Statistics, and Technology | Number 63 • November 3, 1980

Office Visits for Male Genitourinary Conditions: National Ambulatory Medical Care Survey: United States, 1977-78[1]

This report combines estimates from the 1977 and 1978 National Ambulatory Medical Care Surveys to describe office visits made by men who, over the 2-year period, sought treatment for problems of the genitourinary system. Conducted annually by the National Center for Health Statistics, the National Ambulatory Medical Care Survey (NAMCS) is a sample survey designed to explore the provision and utilization of ambulatory care in the offices of non-Federal, office-based physicians. (See the "Technical Notes" at the end of this report for information on the survey design and terminology.) Because the statistics used in this report are based on a sample rather than on the entire universe of office-based physicians, they are estimates only and are subject to sampling variability. Guidelines for judging the precision of the estimates may be found in the "Technical Notes." A premonitory note: any visit estimate that is under 340,000, or its percentage equivalent, is preceded by an asterisk, signifying that it exceeds a relative standard error of 30 percent.

A *genitourinary visit* is an office visit for which the principal diagnosis was a condition classified in the major diagnostic group "Diseases of the Genitourinary System" (diagnostic codes 580-629), according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).[2] Genitourinary visits are divided into two subgroups: a *urinary visit*, which is defined as a visit for which the principal diagnosis was a disease of the urinary system (ICDA subgroup 580-599), and a *genital visit*, which is defined as a visit for which the principal diagnosis was one of the conditions listed in the ICDA code range 600-629.

DATA HIGHLIGHTS

Over the 2-year span 1977-78, the male visit rate for genitourinary problems was estimated at 76 office visits per year for every 1,000 men in the population. As shown in tables 1 and 2, supplemented by figures 1 and 2, the genitourinary visit rate for men was modest compared with the corresponding visit rate for women. At an estimated 254 office visits per year per 1,000 women in the population, the female visit rate was over three times as great as the rate for males, chiefly due to the dramatic difference between the sexes in the visit rates for genital disorders. For genital problems, which unlike urinary problems, are sex-specific, the visit rate for women was 176 visits per year per 1,000 as opposed to 46 visits per year per 1,000 for men.

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[1]This report was prepared by Hugo Koch, Division of Health Resources Utilization Statistics.

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

The male genitourinary visit rate increased directly and steeply with advancing age (table 2 and figure 2). Male patients 65 years of age and over made 8 times as many urinary visits and 11 times as many genital visits as those under 25 years of age did.

Visits made for genital ailments by men outnumbered visits made for urinary problems in a ratio of about 3 to 2. Note in table 3 that the prostate is the organ requiring the most office treatment. The conditions of hyperplasia and prostatitis together account for 40 percent of all male genitourinary visits.

In a 1978 study of the national prevalence of urinary disease, women showed a higher rate for almost all urinary ailments than men did (36.4 urinary conditions per 1,000 women as opposed to 14.6 urinary conditions per 1,000 men). Only with calculus of the kidney and ureter was the prevalence among men (4.7 per 1,000) higher than among women (3.4 per 1,000).[3] The NAMCS findings in table 4 show the impact of prevalence on one treatment setting—the doctor's office. These findings suggest an average of about 2 office visits per year for every person who suffered from a urinary disease and faithfully reflect the female-male differences found in the prevalence study.

The majority (52 percent) of all male genitourinary visits were made to an office-based urologist (table 5). Men were especially prone to visit this specialist when they suffered from a genital ailment. It would be shortsighted, however, to underestimate the role played by the primary-care physician. Table 5 shows that nearly one-half of the visits by men for urinary ailments were made to physicians in the primary-care specialties of general and family practice and internal medicine.

When the male genitourinary ailment was a new condition (in about 1 of every 3 visits), it resulted in roughly 2 return visits during the course of a year (table 6). This finding is compatible with the earlier statistic derived from prevalence data. Referral of male patients was more than twice as common for genital disorders than it was for urinary disorders. The direction of this patient flow (from primary-care physician to urologist) underscores the prominence of this secondary-care provider in the treatment of male genital disease.

The NAMCS makes it possible to identify the patient's symptoms that are associated with the doctor's diagnosis. For male genitourinary visits, the leading 10 presenting symptoms in order of frequency were:

1. Frequency and urgency of urination.
2. Painful urination.

[3]Unpublished findings from the Health Interview Survey, 1978, a household survey conducted yearly by the National Center for Health Statistics.

Table 1. Number of all office visits and of genitourinary visits and visit rate per year per 1,000 members of the civilian noninstitutionalized population, by sex of patient and principal diagnostic condition: United States, 1977–78

Principal diagnostic condition and ICDA codes[1]	Both sexes		Male		Female	
	Number of visits in thousands	Number of visits per year per 1,000 population	Number of visits in thousands	Number of visits per year per 1,000 population	Number of visits in thousands	Number of visits per year per 1,000 population
All conditions, all visits.....	1,154,550	2,727	460,119	2,252	694,431	3,170
Diseases of the genito-urinary system 580-629	71,224	168	15,593	76	55,630	254
Diseases of the urinary system.....580-599	23,867	56	6,141	30	17,725	81
Diseases of the genital system.....600-629	47,357	112	[2]9,452	46	37,905	173

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Includes *312,000 visits for breast disease.

3. Other urinary dysfunctions (e.g., retention, hesitancy, large volume).
4. Symptoms of the scrotum and testes (e.g., pain, swelling, inflammation, growths, itching).
5. Prostate symptoms (e.g., swelling, infection).
6. Abnormalities of urine (e.g., presence of blood or pus, unusual color or odor).
7. Penile discharge.
8. Back symptoms.
9. Penis symptoms (e.g., pain, inflammation, swelling, growths).
10. Pain, site not referable to a specific body system (e.g., side or groin pain).

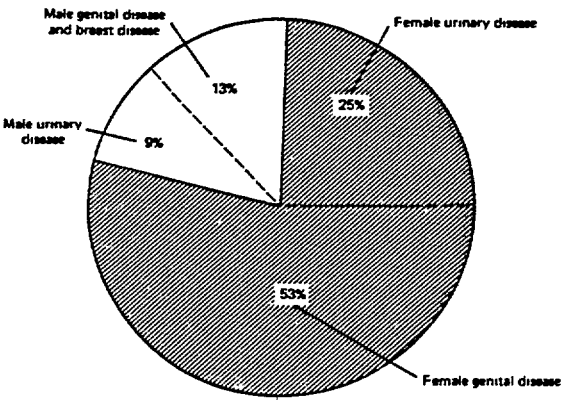
Table 7 explores the diagnostic procedures that were brought to bear on the presenting symptoms of male genitourinary disease. Predictably, the key diagnostic tool (applied in 2 of every 3 visits) was the laboratory test. A general examination was the exception, as it is throughout all male ambulatory care. The frequency of blood pressure checks during male genitourinary visits (22 percent) is primarily due to their

Table 2. Number of urinary and genital visits and visit rate per year per 1,000 members of the civilian noninstitutionalized population, by sex and age of patient: United States, 1977–78

Age of patient	Urinary visits (580-599)[1]		Genital visits (600-629)[1]	
	Male	Female	Male	Female
	Number in thousands			
All ages	6,141	17,725	[2]9,140	37,905
	Number per year per 1,000 population			
Total	30	81	45	173
Under 25 years	12	49	12	106
25-44 years	27	90	42	275
45-64 years	46	109	79	239
65 years and over	92	122	134	72

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.

Figure 1. PERCENT DISTRIBUTION OF ALL GENITOURINARY VISITS,[1] BY SEX OF PATIENT AND GENITOURINARY SUBGROUP: UNITED STATES, 1977–78



[1]Total of all genitourinary visits equals 71,223,523.

Figure 2. NUMBER OF URINARY AND GENITAL VISITS PER YEAR PER 1,000 MEMBERS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION, BY SEX OF PATIENT: UNITED STATES, 1977–78

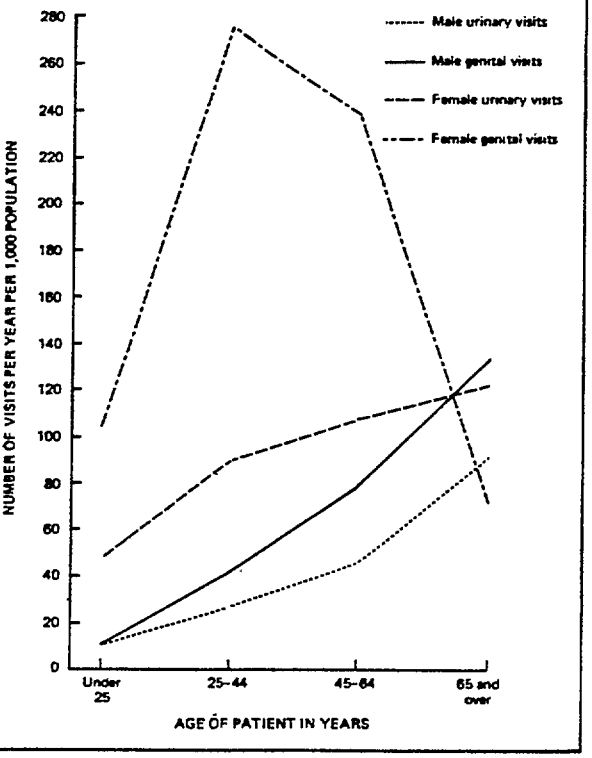


Table 3. Number and percent distribution of male genitourinary visits and visit rate per year per 1,000 male members of the civilian noninstitutionalized population, by principal diagnostic condition associated with visit: United States, 1977–78

Principal diagnostic condition associated with male genitourinary visit and ICDA codes[1]	Male genitourinary visits		
	Number in thousands	Percent distribution	Number per year per 1,000 male population
All male genitourinary diseases 580-607	[2]15,281	100.0	75
All diseases, male urinary system 580-599	6,141	40.2	30
Diseases of the kidney and ureter 580-593	1,909	12.5	9
Calculus of kidney and ureter 592	743	4.9	4
Residual: nephritis and nephrosis; infections of kidney; hydronephrosis; other diseases of kidney and ureter	1,166	7.6	6
Diseases of the bladder and urethra and other diseases of the urinary tract 594-599	4,232	27.7	21
Cystitis 595	782	5.1	4
Urethritis (nonvenereal) 597	803	5.3	4
Stricture of urethra 598	694	4.5	3
Residual: calculus; other diseases of the bladder and urinary tract	1,953	12.8	10
All diseases, male genital system 600-607	9,140	59.8	45
Hyperplasia of prostate 600	2,354	15.4	12
Prostatitis 601	3,810	24.9	19
Orchitis and epididymitis 604	779	5.1	4
Sterility 606	338	2.2	2
Residual: other prostate disease; hydrocele; redundant prepuce and phimosis; other diseases of male genital organs	1,859	12.2	9

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.

Table 4. Number of urinary visits and visit rate per year per 1,000 members of the civilian noninstitutionalized population, by sex of patient and principal diagnostic condition associated with visit: United States, 1977–78

Principal diagnostic condition associated with urinary visit and ICDA codes[1]	Male		Female	
	Number of visits in thousands	Number of visits per year per 1,000 population	Number of visits in thousands	Number of visits per year per 1,000 population
All diseases, urinary system 580-599	6,141	30	17,725	81
Diseases of the kidney and ureter 580-593	1,909	9	2,615	12
Calculus of kidney and ureter 592	743	4	445	2
Residual: nephritis and nephrosis; infections of kidney; hydronephrosis; other diseases of kidney and ureter	1,166	4	2,170	10
Diseases of the bladder and urethra and other diseases of the urinary tract 594-599	4,232	21	15,111	69
Cystitis 595	782	4	6,607	30
Urethritis (nonvenereal) 597	803	4	1,055	5
Stricture of urethra 598	694	3	1,777	8
Residual: calculus; other diseases of the bladder and urinary tract	1,953	10	5,672	26

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).

Table 5. Number and percent distribution of male genitourinary visits (with component subgroups), by specialty of physician visited: United States, 1977–78

Physician specialty	Male genitourinary visits		
	Total	Urinary visits (580-599)[1]	Genital visits (600-607)[1]
	Number in thousands		
All specialties	15,281	6,141	[2]9,140
	Percent distribution		
Total	100.0	100.0	100.0
Urology	51.6	36.0	62.2
General and family practice	28.3	35.8	23.2
Internal medicine	9.0	12.6	6.6
All other specialties[3]	11.1	15.6	8.0

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.
[3]Chiefly general surgery and pediatrics.

Table 6. Number and percent distribution of all male visits and of male genitourinary visits (with component subgroups), by prior-visit status and referral status of patient: United States, 1977–78

Prior-visit and referral status	All male visits	Male genitourinary visits		
		Total	Urinary visits (580-599)[1]	Genital visits (600-607)[1]
	Number in thousands			
Total	460,119	15,281	6,141	[2]9,140
	Percent distribution			
Total	100.0	100.0	100.0	100.0
Prior-visit status				
New patient (a)	16.4	17.6	13.8	20.2
Old patient	83.6	82.3	86.3	79.8
New problem (b)	24.9	16.9	22.1	13.5
Old problem (c)	58.7	65.4	64.2	66.3
New problem visit (a + b)	41.3	34.5	35.8	33.7
Return visit (c)	58.7	65.4	64.2	66.3
Referral status				
Referred by another physician	5.1	9.4	*5.3	12.1
Not referred by another physician	94.9	90.6	94.7	87.9

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.

relative rarity during genital visits. Symptoms of urinary disease, on the other hand, are much more likely to prompt a measurement of blood pressure, probably because a disorder of the urinary system can be more directly influenced by a circulatory malfunction. For example, with a suspected kidney disorder blood pressures were taken in 40 percent of the visits.

Table 7 also shows that physicians judged the average male urinary disorder to be markedly more serious in prognosis than the average male genital disorder.

The data in table 8 show that drug therapy was the treatment most frequently provided or ordered for male genitourinary conditions. Its use in 58 percent of male genitourinary visits exceeded its average application in all male office-based care. Data on disposition in the same table demonstrate that two-thirds of male genitourinary visits ended with the direction to return at a specified time. This directive is evidence of a need for continuing care that somewhat exceeds the average experience for the entire range of male visits. Also noteworthy is the finding that the frequency of hospital admission (in 5 percent of the visits), a relatively rare form of disposition for male genitourinary conditions, was still more than double the proportion found for the entire group of male visits.

Data on the duration of the visit reveal that the average personal encounter between the physician and the male patient with a genitourinary disease lasted about 14 minutes, not markedly different from the 15-minute average calculated for all male visits.

An additional 1,031,223 visits for which the principal diagnosis was a malignant neoplasm of the prostate were not included in the diagnostic scope of this report. An estimated 85 percent of these visits were made by men 65 years of age and over resulting in a visit rate for this condition of 47 per 1,000 members of the male population.

Table 7. Number and percent distribution of all male visits and of male genitourinary visits (with component subgroups), by selected diagnostic procedures and seriousness of condition: United States, 1977–78

Selected diagnostic procedures and seriousness of condition	All male visits	Male genitourinary visits		
		Total	Urinary visits (580-599)[1]	Genital visits (600-607)[1]
	Number in thousands			
Total	460,119	15,281	6,141	[2]9,140
	Percent distribution			
Total	100.0	100.0	100.0	100.0
Selected diagnostic procedures[3]				
None	11.4	6.4	7.1	6.0
Limited examination	59.0	58.1	59.2	57.3
General examination	21.7	18.9	18.6	19.2
Clinical lab test	18.2	62.1	63.6	61.0
X-ray	9.9	8.9	10.3	7.9
Endoscopy	1.1	3.4	*2.2	4.1
Blood pressure check	27.0	22.2	30.7	16.6
Seriousness of condition				
Serious and very serious	21.0	18.7	29.3	11.6
Slightly serious	32.9	38.1	36.9	38.9
Not serious	46.1	43.2	33.8	49.5

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.
[3]Will not add to 100.0 percent because more than 1 procedure was possible.

Table 8. Number and percent distribution of all male visits and of male genitourinary visits (with component subgroups), by selected therapeutic services ordered or provided and selected dispositions of visit: United States, 1977–78

Selected therapeutic services and dispositions of visit	All male visits	Male genitourinary visits		
		Total	Urinary visits (580-599)[1]	Genital visits (600-607)[1]
	Number in thousands			
Total	460,119	15,281	6,141	[2]9,140
	Percent distribution			
Total	100.0	100.0	100.0	100.0
Selected therapeutic services[3]				
None	18.9	19.7	13.9	23.5
Drugs (prescription or nonprescription)	51.2	57.7	61.1	55.4
Diet counseling	6.3	3.6	6.3	*1.8
Medical counseling	19.6	21.8	23.6	20.5
Physiotherapy	4.0	7.6	*0.7	12.2
Office surgery[4]	9.4	7.7	12.6	4.3
Selected dispositions of visit[3]				
No followup	13.2	4.8	*2.8	6.1
Return at specified time	57.6	65.9	67.1	65.1
Return if needed	23.1	19.9	21.3	18.9
Telephone followup planned	3.3	3.8	5.8	*2.5
Referred to other physician	2.6	4.5	4.0	4.9
Admitted to hospital	2.2	4.6	4.1	4.9

[1]Based on *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA-8).
[2]Excludes *312,000 visits for breast disease.
[3]Will not add to 100.0 percent because more than 1 service or more than 1 disposition of visit was possible.
[4]Any surgical procedure performed in the office during this visit, including suture of wounds; reduction of fractures; application or removal of casts; incision and draining of abscesses; and all irrigations, aspirations, dilatations, and excisions.

TECHNICAL NOTES

SOURCE OF DATA AND SAMPLE DESIGN

The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1977 and 1978. The target universe of NAMCS encompasses office visits within the conterminous United States made by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice. The National Opinion Research Center, under contract to the National Center for Health Statistics, was responsible for the survey's field operations.

The NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physicians' practices within PSU's, and patient visits within practices. For 1977-78 a sample of 6,007 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and American Osteopathic Association. The physician response rate for 1977-78 was 75.1 percent. Sampled physicians were asked to complete Patient Records for a systematic random sample of office visits taking place within their practice during a randomly assigned weekly reporting period. During 1977-78, 98,335 Patient Records were completed by sampled physicians, of which 1,567 involved a male genitourinary disease as the principal diagnosis.

SAMPLE ERRORS AND ROUNDING OF NUMBERS

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. 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. Relative standard errors of selected aggregate statistics are shown in tables I and II. The standard errors for estimated percentages of visits are shown in tables III and IV.

Estimates of office visits have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Percents were calculated on the basis of original, unrounded figures and will not necessarily agree precisely with percents calculated from rounded data.

Table I. Approximate relative standard errors of estimated number of office visits based on all physician specialties: NAMCS, 1977-78

Estimated number of office visits in thousands	Relative standard error in percent
500	24.9
1,000	17.7
2,000	12.7
5,000	8.3
10,000	6.2
20,000	4.8
50,000	3.8
100,000	3.3
500,000	3.0

Example of use of table: An aggregate of 35,000,000 visits has a relative standard error of 4.3 percent or a standard error of 1,505,000 visits (4.3 percent of 35,000,000).

Table II. Approximate relative standard errors of estimated number of office visits based on an individual physician specialty: NAMCS, 1977-78

Estimated number of office visits in thousands	Relative standard error in percent
500	27.0
1,000	19.6
2,000	14.5
5,000	10.3
10,000	8.5
20,000	7.4
50,000	6.7
100,000	6.4
200,000	6.3

Example of use of table: An aggregate of 7,500,000 visits has a relative standard error of 9.4 percent or a standard error of 705,000 visits (9.4 percent of 7,500,000).

Table III. Approximate standard errors of percent of estimated numbers of office visits based on all physician specialties: NAMCS, 1977–78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
500	2.5	5.4	7.4	9.9	11.4	12.4
1,000	1.7	3.8	5.3	7.0	8.0	8.8
2,000	1.2	2.7	3.7	5.0	5.7	6.2
5,000	0.8	1.7	2.3	3.1	3.6	3.9
10,000	0.6	1.2	1.7	2.2	2.5	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.2	0.5	0.7	1.0	1.1	1.2
100,000	0.2	0.4	0.5	0.7	0.8	0.9
500,000	0.1	0.2	0.2	0.3	0.4	0.4

Example of use of table: An estimate of 20 percent based on an aggregate of 15,000,000 visits has a standard error of 1.9 percent or a relative standard error of 9.5 percent (1.9 percent ÷ 20 percent).

Table IV. Approximate standard errors of percent of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977–78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
500	2.6	5.7	7.9	10.5	12.1	13.1
1,000	1.9	4.1	5.6	7.4	8.5	9.3
2,000	1.3	2.9	3.9	5.3	6.0	6.6
5,000	0.8	1.8	2.5	3.3	3.8	4.2
10,000	0.6	1.3	1.8	2.4	2.7	2.9
20,000	0.4	0.9	1.2	1.7	1.9	2.1
50,000	0.3	0.6	0.8	1.1	1.2	1.3
100,000	0.2	0.4	0.6	0.7	0.9	0.9
200,000	0.1	0.3	0.4	0.5	0.6	0.7

Example of use of table: An estimate of 50 percent based on an aggregate of 15,000,000 visits has a standard error of 2.5 percent or a relative standard error of 5 percent (2.5 percent ÷ 50 percent).

DEFINITIONS

Ambulatory patient.—An ambulatory patient is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Office.—An office is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

Visit.—A visit is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for seeking care and rendering health services.

Physician.—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in an office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

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	*

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service Office of Health Research, Statistics, and Technology | Number 64 • November 4, 1980

Health Practices Among Adults: United States, 1977[a]

A study of the relationship between personal health practices and health consequences was conducted in Alameda County, California, in 1965 by the Human Population Laboratory of the California State Department of Public Health.[1] Findings indicated a positive relationship between good health practices and physical health status. A 9-year followup study, examining mortality rates among the original sample of 6,928 adults, showed a strong inverse relationship between the total number of good health practices reported in 1965 and age-specific mortality rates.[2] Seven good health practices were identified in this study: (1) sleeping an average of 7-8 hours a night; (2) eating breakfast almost every day; (3) seldom, if ever, eating snacks; (4) controlling one's weight (weighing within 5 percent under and 19.9 percent over the desirable standard weight, if male, or weighing not more than 9.9 percent over the desirable standard weight, if female); (5) exercising: engaging in active sports, swimming, taking long walks, gardening, or doing physical exercises; (6) limiting alcohol consumption to less than five drinks at one sitting; and (7) never having smoked cigarettes. Persons reporting six or seven of these health practices were shown to have better health status and to live longer than persons reporting less than four of them.

In 1977 the National Health Interview Survey included a supplement designed to obtain data on the prevalence of seven preventive health practices among the noninstitutionalized U.S. population aged 20 years and over. The questions on health practices, modified somewhat from those of the Alameda County study, included (1) average number of hours of sleep per night; (2) frequency of eating breakfast; (3) frequency of eating snacks; (4) physical activity level relative to one's peers; (5) frequency and quantity of alcohol consumption; (6) smoking status (never smoked, former smoker, or current smoker) and amount smoked; and (7) body weight as compared with desirable body weight (weight for height). This report presents data on persons 20 years of age and over for these seven practices, by sex, race or ethnicity, age, income, and education.

SLEEPING

Data on sleeping practices are presented in table 1. Approximately two-thirds of the respondents reported getting an average of 7-8 hours of sleep a night, with about 2 in 10 reporting 6 hours of sleep or less. Nearly identical proportions of men and women reported sleeping 7-8 hours a night. Proportionately more men reported sleeping 6 hours or less, while proportionately more women reported sleeping 9 hours or more.

Slight differences in sleeping habits were found among white, black, and Hispanic respondents. About 68 percent of white respondents reported sleeping 7-8 hours a night, in contrast to about 61 percent of Hispanic respondents and 56 percent of black respondents.

EATING BREAKFAST

Estimates of breakfast-eating habits of the U.S. population are shown in table 2. A majority of persons (58.1 percent) reported eating breakfast every day, about 16 percent reported eating

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[a]This report was prepared by Charlotte A. Schoenborn, M.P.H., and Kathleen M. Danchik, Division of Analysis.

Table 1. Total population 20 years of age and over and percent distribution of persons 20 years of age and over by average number of hours of sleep a night, according to selected characteristics: United States, 1977

Characteristic	Total population 20 years of age and over[1]	Hours of sleep				
		Total[2]	6 or less	7	8	9 or more
	Number in thousands	Percent distribution				
All persons 20 years of age and over	139,959	100.0	21.7	27.9	37.8	12.5
Sex						
Male	65,798	100.0	23.3	29.8	35.8	11.1
Female	74,162	100.0	20.4	26.4	39.5	13.7
Race or ethnicity						
White	108,055	100.0	20.5	29.4	38.2	11.9
Black	13,544	100.0	28.2	21.2	34.3	16.2
Hispanic	6,192	100.0	24.5	19.5	41.3	14.7
Age						
20-34 years	51,230	100.0	20.2	28.9	38.2	12.6
35-44 years	23,106	100.0	21.9	31.2	37.7	9.2
45-54 years	23,190	100.0	23.0	31.5	36.8	8.8
55-64 years	20,166	100.0	22.8	25.4	38.6	13.3
65 years and over	22,266	100.0	22.7	21.2	37.5	18.6
Income						
Less than $5,000	18,020	100.0	27.0	20.4	35.2	17.3
$5,000-$9,999	25,965	100.0	21.4	24.4	38.6	15.5
$10,000-$14,999	26,564	100.0	21.4	28.8	38.9	10.9
$15,000-$24,999	34,630	100.0	20.8	31.7	37.8	9.7
$25,000 or more	21,679	100.0	19.3	33.6	38.0	9.2
Education of individual						
Less than 12 years	44,430	100.0	25.3	21.3	37.0	16.4
12 years	50,957	100.0	20.8	29.0	38.7	11.5
More than 12 years	42,349	100.0	19.1	33.8	37.7	9.3

[1] Includes unknowns.
[2] Excludes unknown hours of sleep.

breakfast sometimes, and about 26 percent said they never eat breakfast. There are almost no differences in this practice between men and women. A pattern emerges, however, with respect to age. The proportion of people eating breakfast every day increases steadily with advancing age, from about 42 percent for those 20-34 years of age to about 86 percent for those 65 years and over.

There are also differences in breakfast-eating habits according to race or ethnicity. About 60 percent of white respondents and about 56 percent of Hispanic respondents reported that they eat breakfast every day, while only 47 percent of black respondents reported regular breakfast-eating habits. Approximately 26 percent of black respondents and about 23 percent of Hispanic respondents reported that they sometimes eat breakfast, in contrast to 14.3 percent of white respondents. About equal proportions of black and white persons reported that they never eat breakfast (27.8 percent and 25.9 percent, respectively), compared with a smaller proportion of Hispanic persons (21.6 percent).

People in the lower income categories are relatively more likely to eat breakfast than those at the higher end of the income spectrum. Approximately 65 percent of those with incomes of less than $5,000 reported eating breakfast every day, while only about 53 percent of persons with incomes of $15,000-$24,999 reported similar behavior. The proportion of persons eating breakfast every day rises slightly in the highest income category, to approximately 57 percent. The proportion of persons reporting that they sometimes eat breakfast remains relatively constant across all income groups.

EATING SNACKS

Table 3 shows that among American adults, approximately 38 percent eat snacks every day, about 27 percent sometimes snack, and about 35 percent never snack. The practice of eating between meals, like the practice of eating breakfast, appears to be related to age. The per-

Table 2. Percent distribution of persons 20 years of age and over by frequency of eating breakfast, according to selected characteristics: United States, 1977

Characteristic	Eats breakfast:			
	Total[1]	Every day	Sometimes	Never
	Percent distribution			
All persons 20 years of age and over	100.0	58.1	15.9	26.1
Sex				
Male	100.0	57.3	15.8	27.0
Female	100.0	58.7	15.9	25.4
Race or ethnicity				
White	100.0	59.8	14.3	25.9
Black	100.0	46.6	25.6	27.8
Hispanic	100.0	55.8	22.6	21.6
Age				
20-34 years	100.0	41.6	22.7	35.8
35-44 years	100.0	49.3	18.3	32.4
45-54 years	100.0	61.5	14.1	24.3
55-64 years	100.0	73.1	9.5	17.4
65 years and over	100.0	86.2	5.7	8.0
Income				
Less than $5,000	100.0	64.9	14.8	20.3
$5,000-$9,999	100.0	59.6	15.3	25.1
$10,000-$14,999	100.0	56.4	16.8	26.8
$15,000-$24,999	100.0	53.3	17.2	29.5
$25,000 or more	100.0	56.5	15.3	28.1
Education of individual				
Less than 12 years	100.0	62.2	14.5	23.3
12 years	100.0	54.0	17.1	28.9
More than 12 years	100.0	58.2	15.9	25.9

[1] Excludes unknown breakfast-eating habits.

NOTE: See table 1 for population.

Table 3. Percent distribution of persons 20 years of age and over by frequency of eating snacks, according to selected characteristics: United States, 1977

Characteristic	Eats snacks:			
	Total[1]	Every day	Sometimes	Never
	Percent distribution			
All persons 20 years of age and over	100.0	38.0	27.4	34.7
Sex				
Male	100.0	40.1	25.4	34.4
Female	100.0	36.3	28.9	34.8
Race or ethnicity				
White	100.0	38.4	26.9	34.7
Black	100.0	37.0	29.1	34.0
Hispanic	100.0	34.2	30.6	35.1
Age				
20-34 years	100.0	43.2	31.7	25.1
35-44 years	100.0	40.5	29.1	30.4
45-54 years	100.0	36.6	26.4	37.1
55-64 years	100.0	34.6	22.7	42.7
65 years and over	100.0	28.3	21.1	50.5
Income				
Less than $5,000	100.0	33.9	25.3	40.8
$5,000-$9,999	100.0	37.2	27.6	35.3
$10,000-$14,999	100.0	39.6	28.8	31.6
$15,000-$24,999	100.0	40.7	28.0	31.2
$25,000 or more	100.0	38.6	26.7	34.7
Education of individual				
Less than 12 years	100.0	35.8	24.9	39.3
12 years	100.0	39.7	28.5	31.8
More than 12 years	100.0	38.2	28.6	33.3

[1] Excludes unknown snacking habits.

NOTE: See table 1 for population.

cent of persons reporting that they snack every day declines from about 43 percent of those aged 20-34 years to about 28 percent of those 65 years of age and over. The proportion of people reporting that they sometimes eat snacks similarly declines—from approximately 3 in 10 in the youngest group to about 2 in 10 among those 65 years of age and over. Together, the data on breakfast eating and snacking indicate that regular eating habits (eating breakfast every day and avoiding snacks) are positively associated with age.

PHYSICAL ACTIVITY

The physical activity measure used in the National Health Interview Survey (table 4) provides only a rough approximation of the level of physical activity in the adult population. Respondents were asked to rate their own level of physical activity relative to other persons their age: more active, about as active, or less active. About half of the respondents judged their own activity level to be about the same as that of their peers, with slightly less than 4 in 10 saying they are more active than others. Among women, 54 percent indicated they are about as active as others their age; about 46 percent of men gave this response. Proportionately more men than women (42.1 percent and 33.3 percent, respectively) reported that they are more active than their peers. The self-perceived level of physical activity exhibits a positive relationship to income. As income level increases, the percent of persons who indicated that they are more active than their peers increases, and the percent of persons indicating that they are less active decreases.

Table 4. Percent distribution of persons 20 years of age and over by physical activity level relative to persons of same age, according to selected characteristics: United States, 1977

Characteristic	Physical activity level			
	Total[1]	More active	Same	Less active
	Percent distribution			
All persons 20 years of age and over	100.0	37.2	50.5	12.3
Sex				
Male	100.0	42.1	46.2	11.7
Female	100.0	33.3	54.0	12.7
Race or ethnicity				
White	100.0	38.6	49.9	11.5
Black	100.0	30.2	53.4	16.4
Hispanic	100.0	33.8	51.1	15.2
Age				
20-34 years	100.0	33.6	56.2	10.2
35-44 years	100.0	38.2	51.5	10.2
45-54 years	100.0	35.6	52.4	12.0
55-64 years	100.0	37.0	45.9	17.1
65 years and over	100.0	44.7	40.1	15.2
Income				
Less than $5,000	100.0	31.1	47.5	21.5
$5,000-$9,999	100.0	34.6	50.4	15.0
$10,000-$14,999	100.0	36.8	52.9	10.3
$15,000-$24,999	100.0	38.4	52.8	8.9
$25,000 or more	100.0	44.9	47.3	7.7
Education of individual				
Less than 12 years	100.0	32.2	51.4	16.5
12 years	100.0	36.5	52.7	10.8
More than 12 years	100.0	43.4	47.2	9.4

[1] Excludes unknown physical activity level.

NOTE: See table 1 for population.

ALCOHOL CONSUMPTION

Estimates of the frequency and quantity of alcohol consumption are shown in table 5. Respondents were asked: "How often do you drink wine (beer, liquor)—never, occasionally, once or twice a week, or more than twice a week?" Separate questions were asked for each type of alcoholic beverage. The data in table 5 reflect the consumption frequency of the most frequently consumed beverage. Persons who stated that they drink two or three types of alcohol once or twice a week may be misclassified in this analysis. A person who drinks beer twice a week and wine once a week, for example, is classified here as drinking "once or twice a week," while in fact he drinks three times a week. The magnitude of the potential error is small, however, with a maximum possible misclassification of only about 2½ percent of the adults who drink alcohol.

The data on quantity are based on responses to the questions: "When you drink wine (beer, liquor), how many drinks do you have at one sitting?" and "On any one occasion during the

Table 5. Percent distribution of persons 20 years of age and over by frequency of alcohol consumption and percent of persons who drink alcohol who consumed 5 or more drinks at one sitting in past year, according to selected characteristics: United States, 1977

Characteristic	Alcohol consumption					
	Total[1]	Never	Occasionally	1 or 2 times a week	3 or more times a week	5 or more drinks at one sitting
	Percent distribution					Percent of persons who drink alcohol
All persons 20 years of age and over	100.0	28.6	41.9	15.5	14.0	29.4
Sex						
Male	100.0	21.5	35.9	20.2	22.5	43.1
Female	100.0	34.2	46.7	11.8	7.3	18.5
Race or ethnicity						
White	100.0	26.2	42.7	15.9	15.2	30.3
Black	100.0	34.1	40.2	15.2	10.5	26.4
Hispanic	100.0	32.1	43.2	15.3	9.4	32.2
Age						
20-34 years	100.0	18.9	47.3	19.5	14.3	43.1
35-44 years	100.0	24.5	43.5	17.3	14.7	33.7
45-54 years	100.0	27.3	40.7	14.8	17.2	26.7
55-64 years	100.0	36.0	37.7	12.6	13.6	18.4
65 years and over	100.0	48.6	33.3	8.2	9.9	7.2
Income						
Less than $5,000	100.0	46.2	35.0	10.3	8.5	20.4
$5,000-$9,999	100.0	34.3	40.9	13.6	11.2	26.2
$10,000-$14,999	100.0	26.4	44.6	16.1	12.9	32.2
$15,000-$24,999	100.0	21.1	45.5	17.1	16.3	33.4
$25,000 or more	100.0	14.9	42.5	20.7	21.9	36.8
Education of individual						
Less than 12 years	100.0	42.1	35.2	12.0	10.7	22.1
12 years	100.0	25.7	45.5	15.6	13.2	31.1
More than 12 years	100.0	17.0	45.0	19.2	18.8	35.4

[1]Excludes alcohol consumption.

NOTE: See table 1 for population.

past 12 months, did you have five or more drinks of wine, beer, or liquor?" The data on quantity reflect the proportion of persons who had five or more drinks at any one sitting during the past 12 months. No distinction can be made between the habitual heavy drinker and the occasional heavy drinker.

Approximately 3 in 10 adults reported that they never drink any type of alcoholic beverage, and about 4 in 10 reported drinking only occasionally. About 16 percent of American adults said they drink wine, beer, or liquor an average of once or twice a week, and the remaining 14 percent drink alcohol an average of three or more times a week. Among respondents who drink alcohol, about 3 in 10 indicated that they had consumed five or more drinks at a sitting at least once during the past 12 months.

Men and women exhibit different patterns of alcohol consumption. A greater proportion of

women reported that they never drink (34.2 percent compared with 21.5 percent of men) or only drink occasionally (46.7 percent compared with 35.9 percent of men). While less than 2 in 10 women reported that they drink at least once a week on a regular basis, more than 4 in 10 men reported this behavior. Similarly, among men and women who reported drinking alcohol, 43.1 percent of men and 18.5 percent of women reported having five or more drinks at least once during the past year.

Drinking habits are clearly related to age, income, and education. Both frequency and quantity of alcohol consumption decrease with advancing age and increase with income and education.

Among adults 20-34 years of age, 34 percent reported drinking at least once a week. In contrast, only about 18 percent of persons 65 years and over reported drinking this often. Similarly, the percent of alcohol drinkers who reported having had five or more drinks at one sitting declines steadily from about 43 percent in the youngest age group to about 7 percent among the oldest respondents.

Persons with higher incomes drink more than persons with lower incomes. The percent of persons who reported drinking three or more times a week increases from 8.5 percent among those with incomes of less than $5,000 a year to about 22 percent among those with incomes of $25,000 or more. The proportion of persons drinking once or twice a week increases from about 1 in 10 to about 2 in 10 between the lowest and the highest income groups. In the lowest income category, about 20 percent of adults who drink alcohol reported having had five or more drinks at one sitting, while about 37 percent of those in the highest income group reported this behavior.

Persons with higher levels of education reported more frequent alcohol consumption than did persons with less education. While 38 percent of respondents having more than 12 years of education reported drinking at least once a week, only 29 percent of those with 12 years of education and less than 23 percent of those with under 12 years of education reported drinking this often. About 42 percent of respondents having less than 12 years of education reported that they never drink alcohol, while only 17 percent of persons with more than 12 years of education reported abstaining. Quantity of alcohol consumption also increases with education. The proportion of alcohol drinkers who reported consuming five or more drinks at one sitting ranges from 22 percent of those with less than 12 years of education to about 35 percent of those with more than 12 years of education.

SMOKING

Table 6 provides information on the smoking practices of the U.S. adult population in 1977. At the time that these data were collected, about 36 percent of adults aged 20 years and over currently smoked cigarettes, about 20 percent had smoked at least 100 cigarettes in their lifetimes but were not currently smoking (former smokers), and about 44 percent had never smoked. Men were more likely to currently be smoking than were women (40.9 percent and 32.1 percent, respectively). They were also more likely to have quit. Adjusting for differences in the proportions of men and women who had ever smoked shows that about 4 in 10 male smokers had quit, while only about 3 in 10 female smokers had quit.

More recent data on smoking, collected in 1978 and 1979, are currently available in *The Health Consequences of Smoking for Women, A Report of the Surgeon General,*[3] an earlier *Advance Data* report,[4] and *Health, United States, 1979.*[5] Additional 1979 data will be available in *Health, United States, 1980.*[6]

BODY WEIGHT

The final health measure included in the 1977 National Health Interview Survey was body weight as compared with desirable body weight. Respondents were asked to estimate their height and weight.[b] This ratio was compared with a standard table of desirable weights prepared by the Metropolitan Life Insurance Company.[8] People were classified according to how closely their height-weight ratio approximated the Metropolitan Life standard: 10 percent or more below desirable body weight; 5-9.9 percent below; plus or minus 4.9 percent; 5-9.9 percent above; 10-19.9 percent above;

[b] For a discussion of the validity and reliability of self-reported height and weight data, see reference 7.

Table 6. Percent distribution of persons 20 years of age and over by smoking status and percent distribution of current smokers by number of cigarettes smoked daily, according to selected characteristics: United States, 1977

Characteristic	Smoking status				Number of cigarettes smoked daily				
	Total[1]	Never smoked	Former smoker	Current smoker	All current smokers[2]	Less than 15	15-24	25-34	35 or more
	Percent distributions								
All persons 20 years of age and over....	100.0	43.9	20.1	36.0	100.0	30.3	43.2	12.8	13.7
Sex									
Male	100.0	30.9	28.2	40.9	100.0	24.4	42.3	15.1	18.2
Female	100.0	54.4	13.5	32.1	100.0	36.2	44.2	10.5	9.1
Race or ethnicity									
White	100.0	43.1	21.7	35.2	100.0	25.2	45.1	14.0	15.8
Black	100.0	45.0	13.0	42.0	100.0	53.8	36.2	7.3	2.7
Hispanic	100.0	54.1	12.3	33.5	100.0	59.1	27.0	4.9	8.7
Age									
20-34 years	100.0	45.3	14.6	40.1	100.0	33.3	45.1	11.7	9.9
35-44 years	100.0	37.1	19.5	43.4	100.0	23.8	42.7	15.4	18.0
45-54 years	100.0	36.8	23.4	39.8	100.0	26.3	40.7	13.7	19.3
55-64 years	100.0	40.3	25.2	34.5	100.0	29.0	44.1	12.4	14.5
65 years and over	100.0	57.8	24.8	17.4	100.0	42.1	39.6	10.5	7.8
Income									
Less than $5,000	100.0	50.0	16.4	33.5	100.0	39.3	40.2	9.5	11.0
$5,000-$9,999	100.0	43.6	18.6	37.8	100.0	35.0	39.2	11.6	14.1
$10,000-$14,999	100.0	42.2	19.3	38.4	100.0	26.3	47.1	14.3	12.2
$15,000-$24,999	100.0	41.1	21.6	37.3	100.0	26.2	44.9	14.2	14.6
$25,000 or more	100.0	40.9	25.3	33.9	100.0	26.8	43.9	12.7	16.6
Education of individual									
Less tha 12 years	100.0	43.1	19.2	37.6	100.0	31.1	43.0	11.0	14.2
12 years	100.0	41.7	19.0	39.3	100.0	27.9	45.0	13.3	13.8
More than 12 years	100.0	47.2	22.1	30.6	100.0	32.8	40.8	13.5	12.9

[1]Excludes unknown smoking status.
[2]Excludes unknown amount smoked.

NOTE: See table 1 for population.

20-29.9 percent above; and 30 percent or more above. The distribution is shown in table 7.

Only about 24 percent of the adults were found to be within 5 percent of their desirable body weight using this standard, with about 18 percent below and 58 percent above the optimal range. Almost 15 percent of the adult population is 30 percent or more overweight using the Metropolitan Life standard.

Approximately equal proportions of men and women are within 5 percent of their optimal weight (21.6 percent and 24.9 percent, respectively). There are sex differences, however, in some of the other weight categories. Women are more likely to be underweight than men are (23.1 percent and 12.0 percent, respectively), and men are more likely to be 5-29.9 percent overweight (about 55 percent of men versus about 35 percent of women). A larger proportion of women than men, however, fall in the highest weight category, 30 percent or more overweight. About 17 percent of women are in this category, in contrast to about 12 percent of men. Overall, about 69 percent of men and

Table 7. Percent distribution of persons 20 years of age and over by body weight,[1] according to selected characteristics: United States, 1977

Characteristic	Total[2]	10 percent or more below desirable weight	5-9.9 percent below desirable weight	Plus or minus 4.9 percent of desirable weight	5-9.9 percent above desirable weight	10-19.9 percent above desirable weight	20-29.9 percent above desirable weight	30 percent or more above desirable weight
	Percent distribution							
All persons 20 years of age and over	100.0	9.1	9.1	23.5	12.5	20.2	11.1	14.5
Sex								
Male	100.0	5.2	6.8	21.6	16.3	24.4	14.0	11.7
Female	100.0	12.2	10.9	24.9	9.5	16.9	8.9	16.7
Race or ethnicity								
White	100.0	9.4	9.4	24.3	12.8	20.2	11.0	13.1
Black	100.0	6.0	6.2	20.1	9.7	20.1	13.0	25.0
Hispanic	100.0	5.8	8.6	19.0	11.6	23.2	13.0	18.8
Age								
20-34 years	100.0	13.0	12.8	27.6	12.4	16.6	7.6	10.0
35-44 years	100.0	6.8	8.5	23.2	13.2	21.4	11.8	15.0
45-54 years	100.0	5.1	6.4	20.8	13.3	23.5	13.4	17.5
55-64 years	100.0	5.3	6.4	19.6	12.3	22.1	14.8	19.6
65 years and over	100.0	10.2	6.4	20.5	11.4	22.2	12.8	16.4
Income								
Less than $5,000	100.0	11.5	8.8	20.5	9.8	18.9	11.4	19.2
$5,000-$9,999	100.0	9.2	9.0	22.9	11.5	19.7	11.1	16.5
$10,000-$14,999	100.0	9.0	8.3	23.1	12.8	21.2	11.0	14.5
$15,000-$24,999	100.0	8.0	9.7	24.4	13.5	20.3	11.3	12.6
$25,000 or more	100.0	8.9	10.3	26.0	14.0	20.5	10.7	9.5
Education of individual								
Less than 12 years	100.0	7.8	6.5	18.5	11.0	21.1	14.0	21.0
12 years	100.0	9.3	9.2	24.4	12.2	20.6	10.7	13.5
More than 12 years	100.0	10.3	11.5	27.6	14.4	18.7	8.7	8.8

[1] Desirable weight modified from 1960 Metropolitan Life Insurance Company data.
[2] Excludes unknown height or weight.

NOTE: See table 1 for population.

about 58 percent of women are in the weight categories identified as "good" by the Alameda County study.[1]

Desirable weight is inversely related to age in this population. With advancing age, there is a small but steady decline in the proportion of persons reporting optimal weight. About 28 percent of persons aged 20-34, compared with about 21 percent of those 65 years and over, reported height-weight ratios within 5 percent of the Metropolitan Life standard. Desirable weight is positively related to both income and education. As these increase, the proportion of persons in the optimal weight category (plus or minus 4.9 percent of desirable weight) increases, and the proportion of persons in the extreme overweight category (30 percent or more) decreases.

Black persons are overrepresented in the most extreme weight category. About one-quarter of all black persons are 30 percent or more overweight, compared with about 13 percent of white persons and about 19 percent of the Hispanic group. Racial and ethnic differences in the other weight categories are minimal.

SUMMARY

This report has presented estimates of the prevalence of seven health practices pertaining to hours of sleep, eating breakfast, eating snacks, physical activity, alcohol consumption, smoking, and weight. In future publications from the National Center for Health Statistics, interrelationships found among these practices will be discussed in more detail and examined in relation to physical health status. The data presented here will be further examined in a Series 10 report in the *Vital and Health Statistics* series.[9] A comparison of the National Health Interview Survey findings with those of the Alameda County study is planned.

The health practices supplement to the National Health Interview Survey was designed to provide national estimates of the health habits found to be important in Alameda County so that their relationship to health status could be examined. The measures used were only rough approximations of those employed in the original Human Population Laboratory study. The National Center for Health Statistics is currently conducting a national telephone survey designed to include some of the features of the Alameda County study. Analysis of these data will shed light on the issue of the generalizability of the Alameda County findings on the relationship between health practices and physical health status.

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TECHNICAL NOTES

Data presented in this report were obtained from household interviews of the National Health Interview Survey. These interviews were conducted among a probability sample of the civilian noninstitutionalized population of the United States. During 1977, approximately 111,000 persons living in about 41,000 households were included in the sample. The total noninterview rate for the National Health Interview Survey was about 3.3 percent, including 1.9 percent due to respondent refusal and 1.4 percent due to failure to find an eligible respondent at home after repeated calls.

Questions concerning health practices were asked of a one-third subsample of all persons 20 years of age and over, or approximately 23,000 persons. Self-reporting was generally required for these questions, but proxy responses were accepted when subsample persons were physically or mentally incapable of answering the questions for themselves. The noninterview rate for the subsample was about 9.4 percent. In addition, individual item nonresponse ranged from about 0.2 to 1.7 percent. Persons with unknown characteristics are excluded from the analysis.

Estimates for the white and black populations, shown in table 1, are based on self-reported racial identifications and therefore are not identical to official U.S. Census estimates for the same period, which are based primarily on interviewer observation. Hispanic classification is also based on self-reporting. The white, black, and Hispanic categories are mutually exclusive. For detailed definitions of other sociodemographic terms used here, see appendix II in most Series 10 reports in the *Vital and Health Statistics* series.

Table I. Standard errors, expressed in percentage points, of estimated percents

Base of percent in thousands	Estimated percent				
	2 or 98	5 or 95	10 or 90	20 or 80	50
50	5.0	7.8	10.7	14.3	17.9
70	4.2	6.6	9.1	12.1	15.1
100	3.5	5.5	7.6	10.1	12.7
300	2.0	3.2	4.4	5.9	7.3
500	1.6	2.5	3.4	4.5	5.7
700	1.3	2.1	2.9	3.8	4.8
1,000	1.1	1.7	2.4	3.2	4.0
5,000	0.5	0.8	1.1	1.4	1.8
10,000	0.4	0.6	0.8	1.0	1.3
20,000	0.3	0.4	0.5	0.7	0.9
30,000	0.2	0.3	0.4	0.6	0.7
50,000	0.2	0.2	0.3	0.5	0.6
100,000	0.1	0.2	0.2	0.3	0.4

Since the estimates shown in this report are based on a sample of the population rather than on the entire population, they are subject to sampling error. Standard errors appropriate for estimated percentages of persons are shown in table I. These standard errors may be somewhat underestimated for the Hispanic population. Information on vital statistics for Hispanic persons does not currently exist, and thus there are no benchmark population estimates that can be used to adjust the sample weights for this ethnic category.

In this report, terms such as "similar" and "the same" mean that no statistical significance exists between the statistics being compared. Terms relating to differences ("greater," "less," etc.) indicate that differences are statistically significant. The *t*-test with a critical value of 1.96 (0.05 level of significance) was used to test all comparisons that are discussed. Lack of comment regarding the difference between any two statistics does not mean the difference was tested and found to be not significant.

To better understand the limitations of the estimates presented in this report, data users are encouraged to familiarize themselves with the survey design, the methods used in estimation, and the general qualifications of the data, which are described in appendix I of the 1977 Current Estimates report (Series 10, No. 126, in the *Vital and Health Statistics* series). Definitions of certain terms used in this report but not specifically addressed in this section and the questionnaire and flashcards used during 1977 appear in appendixes II and III of that report.

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FROM VITAL & HEALTH STATISTICS OF THE NATIONAL CENTER FOR HEALTH STATISTICS
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service Office of Health Research, Statistics, and Technology | Number 65 • November 5, 1980

Cough as the Reason for Office Visits, National Ambulatory Medical Care Survey: United States, 1977-78[1]

Cough was the principal reason for an estimated 29,059,242 visits to office-based physicians during 1977-78. Cough ranked fifth among all principal reasons for visits but was the *second* most frequent *symptomatic* reason given by patients (table 1).

The estimates in this report are based on data collected in the National Ambulatory Medical Care Survey (NAMCS), a probability sample survey conducted yearly by the Division of Health Resources Utilization Statistics of the National Center for Health Statistics.

Since the estimates presented in this report are based on a sample rather than on the entire universe of office-based physicians, the data are subject to sampling variability. The Technical Notes at the end of this report provide a brief explanation and guidelines for judging the precision of the estimates presented. A more detailed description of the sample design and definitions of certain terms used in NAMCS have also been published elsewhere.[2]

Figure 1 is a facsimile of the 1977-78 Patient Record used by participating physicians to record information about office visits. The patient's complaint, symptom, or other reason for the visit, expressed as nearly as possible in the patient's own words, is recorded by the physician in item 6. The *principal* reason is the one that in the physician's judgment was most responsible for the patient making the visit. It is the first-listed reason in this item. These data were classified and coded according to a reason for visit classification (RVC) system presented in *A Reason for Visit Classification for Ambulatory Care.*[3] Since 1977 was the first year that this classification system was used, caution should be exercised in comparing the data presented in this report with those of prior years.

DATA HIGHLIGHTS

Table 2 provides the age and sex of patients who visited office-based physicians for medical care related to cough. Most of these visits (46 percent) were made by children under 15 years of age. Cough accounted for about 8 percent of all visits to pediatricians' offices, a higher proportion than to those of other specialties (table 3).

The rates of visits made because of cough were higher in the Northeast and the West than in the North Central and the South, and in metropolitan than in nonmetropolitan areas (table 4).

The principal diagnosis made by the physician for the patient who presents cough as the

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[1]This report was prepared by Beulah K. Cypress, Ph.D., and Thomas McLemore, M.S.P.H., Division of Health Resources Utilization Statistics.

[2]National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 Summary: United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics.* Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1980.

[3]National Center for Health Statistics: A reason for visit classification for ambulatory care, by D. Schneider, L. Appleton, and T. McLemore. *Vital and Health Statistics.* Series 2-No. 78. DHEW Pub. No. (PHS) 79-1352. Public Health Service. Washington. U.S. Government Printing Office, Feb. 1979.

Figure 1. NATIONAL AMBULATORY MEDICAL CARE SURVEY PATIENT RECORD FORM: 1977-78

ASSURANCE OF CONFIDENTIALITY—All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose.

A 033012

1. DATE OF VISIT ___/___/___ Mo/Day/Yr

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

2. DATE OF BIRTH ___/___/___ Mo/Day/Yr

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ NEGRO/BLACK
3 ☐ OTHER
4 ☐ UNKNOWN

5. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
1 ☐ YES
2 ☐ NO

6. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT *(In patient's own words)*
a. MOST IMPORTANT _____
b. OTHER _____

7. TIME SINCE ONSET OF COMPLAINT/SYMPTOM IN ITEM 6a *(Check one)*
1 ☐ LESS THAN 1 DAY
2 ☐ 1-6 DAYS
3 ☐ 1-3 WEEKS
4 ☐ 1-3 MONTHS
5 ☐ MORE THAN 3 MONTHS
6 ☐ NOT APPLICABLE

8. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a
_____ . _____
b. OTHER SIGNIFICANT CURRENT DIAGNOSES
_____
_____

9. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
↓
IF YES, FOR THE CONDITION IN ITEM 8a?
1 ☐ YES 2 ☐ NO

10. SERIOUSNESS OF CONDITION IN ITEM 8a *(Check one)*
1 ☐ VERY SERIOUS
2 ☐ SERIOUS
3 ☐ SLIGHTLY SERIOUS
4 ☐ NOT SERIOUS

11. DIAGNOSTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ LIMITED EXAM/HISTORY
3 ☐ GENERAL EXAM/HISTORY
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X-RAY
7 ☐ EKG
8 ☐ VISION TEST
9 ☐ ENDOSCOPY
10 ☐ BLOOD PRESSURE CHECK
11 ☐ OTHER *(Specify)* _____
_____

12. THERAPEUTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ IMMUNIZATION/DESENSITIZATION
3 ☐ DRUGS (PRESCRIPTION/NONPRESCRIPTION)
4 ☐ DIET COUNSELING
5 ☐ FAMILY PLANNING
6 ☐ MEDICAL COUNSELING
7 ☐ PHYSIOTHERAPY
8 ☐ OFFICE SURGERY
9 ☐ PSYCHOTHERAPY/THERAPEUTIC LISTENING
10 ☐ OTHER *(Specify)* _____
_____

13. DISPOSITION THIS VISIT *(Check all that apply)*
1 ☐ NO FOLLOW-UP PLANNED
3 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED, P.R.N.
4 ☐ TELEPHONE FOLLOW-UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER *(Specify)* _____
_____

14. DURATION OF THIS VISIT *(Time actually spent with physician)*
_____ MINUTES

HRA-34-2
REV. 9-76

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
NATIONAL CENTER FOR HEALTH STATISTICS

O.M.B. #68-R1498

Table 1. Number, percent, and average annual rate of office visits, by most frequent principal reasons for visit: United States, 1977-78

Principal reason for visit and RVC code[1]	Number of visits in thousands	Percent	Average annual visit rate per 1,000 persons
All reasons	1,154,550	100.0	2,727.1
General medical examination X100	59,115	5.1	139.6
Prenatal examination, routine X205	40,394	3.5	95.4
Symptoms referable to throat S455	34,884	3.0	82.4
Postoperative visit T205	29,674	2.6	70.1
Cough S440	29,059	2.5	68.6

[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC).

Table 2. Number, percent distribution, and average annual rate of office visits with cough as the principal reason for visit by age and sex of patient: United States, 1977-78

Age and sex	Number of visits in thousands	Percent distribution	Average annual visit rate per 1,000 persons
Both sexes			
All ages	29,059	100.0	68.6
Under 15 years	13,438	46.2	132.3
15-24 years	3,048	10.5	38.5
25-44 years	4,706	16.2	42.2
45-64 years	4,899	16.9	56.7
65 years and over	2,969	10.2	66.1
Female			
All ages	15,769	54.3	72.0
Under 15 years	6,103	21.0	122.6
15-24 years	1,976	6.8	49.1
25-44 years	2,794	9.6	48.5
45-64 years	3,164	10.9	70.2
65 years and over	1,732	6.0	65.6
Male			
All ages	13,290	45.7	65.1
Under 15 years	7,335	25.2	141.5
15-24 years	1,072	3.7	32.1
25-44 years	1,912	6.6	35.5
45-64 years	1,735	6.0	42.1
65 years and over	1,237	4.3	66.7

Table 3. Number and percent of office visits with cough as the principal reason for visit, according to selected physician specialties: United States, 1977-78

Specialty	Number in thousands		Percent
	All visits	Visits for cough	
All specialties	1,154,550	29,059	2.5
General and family practice	433,936	15,185	3.5
Internal medicine	133,291	3,279	2.5
Pediatrics	114,921	8,571	7.5
General surgery	69,223	567	0.8
Otolaryngology	32,193	*251	0.8

chief complaint is recorded in item 8 of the Patient Record. Diagnostic codes are based on the Eighth Revision, International Classification of Diseases (ICDA).[4]

Table 5 contains a list of the most frequent associated diagnoses. Bronchitis (acute, unqualified, and chronic) accounted for about 30 percent of these visits.

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

Table 4. Number, percent, and average annual rate of office visits with cough as the principal reason for visit, according to geographic region and type of area of practice: United States, 1977-78

Region and type of area	Number in thousands		Percent	Average annual visit rate per 1,000 persons
	All visits	Visits for cough		
Region				
Northeast	271,440	7,600	2.8	78.3
North Central	291,571	7,577	2.6	66.5
South	355,754	8,291	2.3	60.0
West	235,785	5,591	2.4	75.3
Type of area				
Metropolitan	865,549	21,365	2.5	73.8
Nonmetropolitan	289,001	7,694	2.7	57.5

Table 5. Number and percent distribution of office visits with cough as the principal reason for visit by principal diagnosis: United States, 1977-78

Principal diagnosis and ICDA code[1]		Number of visits in thousands	Percent distribution
Total		29,059	100.0
Otitis media without mention of mastoiditis	381	825	2.8
Acute nasopharyngitis (common cold)	460	910	3.1
Acute pharyngitis	462	984	3.4
Acute laryngitis and tracheitis	464	602	2.1
Acute upper respiratory infection of multiple or unspecified sites	465	7,539	25.9
Acute bronchitis and bronchiolitis	466	2,177	7.5
Influenza, unqualified	470	798	2.8
Pneumonia, unspecified	486	894	3.1
Bronchitis, unqualified	490	6,243	21.5
Chronic bronchitis	491	375	1.3
Asthma	493	1,012	3.5
Chronic sinusitis	503	757	2.6
Hay fever	507	855	2.9
Other diseases of respiratory system	519	837	2.9
Symptoms referable to respiratory system	783	453	1.6
All other diagnoses	residual	3,798	13.1

[1]Based on the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States* (ICDA).

Table 6 shows the percent of visits with selected diagnostic and therapeutic services. Drug therapy (either prescription or nonprescription) was used in 92 percent of the visits related to cough, a proportion that exceeded the average of 53 percent of all NAMCS visits.

Like most visits for acute, self-limiting conditions, most visits for treatment of conditions due to cough were of short duration. Table 7 shows that about 41 percent of such visits took only 6 to 10 minutes, and another 29 percent lasted no longer than 15 minutes.

Table 6. Percent of office visits with cough as the principal reason for visit, by selected diagnostic and therapeutic services ordered or provided: United States, 1977-78

Diagnostic and therapeutic services	Percent of visits
Diagnostic service	
None	3.0
Limited exam/history	70.3
General exam/history	23.0
Clinical lab. test	13.6
X-ray	11.5
EKG	1.2
Blood pressure check	25.2
Therapeutic service	
None	3.3
Immunization/desensitization	4.3
Drugs (prescription/nonprescription)	92.3
Diet counseling	2.7
Medical counseling	21.8

Patients were most often instructed to return if needed (43 percent of visits) or to return at a specified time (about 36 percent).

Additional data on cough and other reasons for office visits will be presented in more detail in a forthcoming publication.

Table 7. Percent distribution of office visits with cough as the principal reason for visit by duration and disposition of visit: United States, 1977-78

Duration and disposition	Percent distribution of visits
Duration	
Total	100.0
0 minutes[1]	1.2
1-5 minutes	15.3
6-10 minutes	40.8
11-15 minutes	29.0
16-30 minutes	12.7
31 minutes or more	*1.1
Disposition[2]	
No followup planned	15.8
Return at specified time	35.5
Return if needed, P.R.N.	43.0
Telephone followup planned	7.3
Referred to other physician	*0.8
Admit to hospital	1.2
Return to referring physician or other disposition	*0.5

[1]Visits in which there was no face-to-face contact between the patient and the physician.

[2]Will not add to 100.0 since more than one disposition was possible.

TECHNICAL NOTES

SOURCE OF DATA

The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1977 and 1978. The NAMCS universe is composed of office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice and are not in the specialties of anesthesiology, pathology, or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, is responsible for the NAMCS field operations.

SAMPLE DESIGN

NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. For 1977-78 a sample of 6,007 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for this period was 75.1 percent. Sampled physicians were requested to complete Patient Records (figure 1) for a systematic random sample of office visits taking place during a randomly assigned weekly reporting period. During 1977-78, 98,335 Patient Records were completed by responding physicians.

SAMPLING ERRORS

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is sampled. 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 percent of the estimate. Relative standard errors for aggregate statistics are shown in tables I and II. Standard errors for estimated percentages are shown in tables III and IV.

Table I. Approximate relative standard errors of estimated number of office visits based on all physician specialties: NAMCS, 1977-78

Estimated number of office visits in thousands	Relative standard error in percent
500	24.9
1,000	17.7
2,000	12.7
5,000	8.3
10,000	6.2
20,000	4.8
50,000	3.8
200,000	3.1
1,000,000	2.9

Example of use of table: An aggregate of 15,000,000 visits has a relative standard error of 5.5 percent or a standard error of 825,000 visits (5.5 percent of 15,000,000).

Table II. Approximate relative standard errors of estimated number of office visits based on an individual physician specialty: NAMCS, 1977-78

Estimated number of office visits in thousands	Relative standard error in percent
500	27.0
1,000	19.6
2,000	14.5
5,000	10.3
10,000	8.5
20,000	7.4
50,000	6.7
100,000	6.4
400,000	6.2

Example of use of table: An aggregate of 7,500,000 visits has a relative standard error of 9.4 percent or a standard error of 705,000 visits (9.4 percent of 7,500,000).

DEFINITIONS

Ambulatory patient.—An ambulatory patient is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Office.—An office is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there

Table III. Approximate standard errors of percent of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.5	5.4	7.4	9.9	11.4	12.4
1,000	1.7	3.8	5.3	7.0	8.0	8.8
2,000	1.2	2.7	3.7	5.0	5.7	6.2
5,000	0.8	1.7	2.3	3.1	3.6	3.9
10,000	0.6	1.2	1.7	2.2	2.5	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.2	0.5	0.7	1.0	1.1	1.2
200,000	0.1	0.3	0.4	0.5	0.6	0.6
1,000,000	0.1	0.1	0.2	0.2	0.3	0.3

Example of use of table: An estimate of 20 percent based on an aggregate of 15,000,000 visits has a standard error of 1.9 percent or a relative standard error of 9.5 percent (1.9 percent ÷ 20 percent).

Table IV. Approximate standard errors of percent of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.6	5.7	7.9	10.5	12.1	13.1
1,000	1.9	4.1	5.6	7.4	8.5	9.3
2,000	1.3	2.9	3.9	5.3	6.0	6.6
5,000	0.8	1.8	2.5	3.3	3.8	4.2
10,000	0.6	1.3	1.8	2.4	2.7	2.9
20,000	0.4	0.9	1.2	1.7	1.9	2.1
50,000	0.3	0.6	0.8	1.1	1.2	1.3
100,000	0.2	0.4	0.6	0.7	0.9	0.9
400,000	0.1	0.2	0.3	0.4	0.4	0.5

Example of use of table: An estimate of 90 percent based on an aggregate of 3,500,000 visits has a standard error of 3.2 percent, or a relative standard error of 3.6 percent (3.2 percent ÷ 90 percent).

generally resides with the individual physician rather than an institution.

Visit.—A visit is a direct personal exchange between an ambulatory patient and a physician or a staff member working under the physician's supervision for the purpose of seeking care and rendering health services.

Physician.—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

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	*

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From Vital and Health Statistics of the National Center for Health Statistics Number 66 • March 2, 1981

1979 Summary National Ambulatory Medical Care Survey

by Thomas McLemore, Division of Health Care Statistics

During 1979 an estimated 556.3 million office visits were made to nonfederally employed, office-based physicians in the conterminous United States, an average of 2.6 office visits per person per year. Although these estimates are approximately 5 percent lower than the corresponding estimates for 1978, the differences between the estimates for the 2 years are not statistically significant. The estimates presented in this report are based on data collected in the National Ambulatory Medical Care Survey, a probability sample survey conducted annually by the Division of Health Care Statistics of the National Center for Health Statistics. The physician sample for the survey was selected, with the cooperation of the American Medical Association and the American Osteopathic Association, from a list of nonfederally employed doctors of medicine and osteopathy who were principally engaged in office-based practice. Excluded were physicians practicing in Alaska and Hawaii, and physicians in the specialties of anesthesiology, pathology, and radiology.

Figure 1 is a facsimile of the 1979 National Ambulatory Medical Care Survey (NAMCS) Patient Record used by participating physicians to record information about their office visits. It will be useful as a reference when reviewing the survey findings presented in the following tables.

This report provides an overview of the data from the 1979 NAMCS. Utilization of ambulatory medical care services is described in terms of the number and percent of office visits and of annual visit rates. Data are presented on patient, physician, and visit characteristics as follows:

Table 1	Patient race and ethnicity
Table 2	Patient age and sex
Table 3	Physician specialty and type of practice
Table 4	Referral status, major reason for visit, and prior visit status
Tables 5 and 6	Principal reason for visit as expressed by patient
Tables 7 and 8	Principal diagnosis rendered by physician
Table 9	Diagnostic and therapeutic services ordered or provided
Table 10	Disposition and duration of visit

Since the estimates presented in this report are based on a sample rather than on the entire universe of office visits, the data are subject to sampling variability. The technical notes at the end of this report provide a brief explanation of sampling errors and guidelines for judging the precision of the estimates. A more detailed description of the NAMCS sample design and survey methodology have been published elsewhere.[1]

Caution should be exercised when comparing the 1979 NAMCS data with data from previous years because changes have been made in data collection and processing. Two major changes on the Patient Record should be noted in particular. First, the item on patient color or race (item 4) was expanded in 1979 to four categories: white, black, Asian or Pacific Islander, and American Indian or Alaskan native; and an item on patient ethnicity, of Hispanic or not of Hispanic origin, was included for the first time. Second, beginning in 1979 the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) was used to code the NAMCS diagnostic data (item 9 on the Patient Record).[2] Prior to 1979 the *Eighth Revision International Classification of Diseases, Adapted for Use*

[1]National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 summary, United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics.* Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1980.

[2]Commission on Professional and Hospital Activities: *International Classification of Diseases, 9th Revision, Clinical Modification.* Ann Arbor. Edwards Brothers, Inc., 1978.

Figure 1. 1979 Patient Record

ASSURANCE OF CONFIDENTIALITY All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose.

Department of Health, Education, and Welfare
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics

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PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

TIME OF VISIT: ____ a.m. ____ p.m. ____ a.m. ____ p.m.

1. DATE OF VISIT ___/___/___ (Mo / Day / Yr)

2. DATE OF BIRTH ___/___/___ (Mo. / Day / Yr.)

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ BLACK
3 ☐ ASIAN/PACIFIC ISLANDER
4 ☐ AMERICAN INDIAN/ ALASKAN NATIVE

5. ETHNICITY
1 ☐ HISPANIC ORIGIN
2 ☐ NOT HISPANIC

6. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
1 ☐ YES
2 ☐ NO

7. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT *(in patient's own words)*
a. MOST IMPORTANT ____
b. OTHER ____

8. MAJOR REASON FOR THIS VISIT *(Check one)*
1 ☐ ACUTE PROBLEM
2 ☐ CHRONIC PROBLEM ROUTINE
3 ☐ CHRONIC PROBLEM, FLAREUP
4 ☐ POST SURGERY POST INJURY
5 ☐ NON ILLNESS CARE (ROUTINE PRENATAL, GENERAL EXAM WELL BABY, ETC.)

9. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS PROBLEM ASSOCIATED WITH ITEM 7a ____
b. OTHER SIGNIFICANT CURRENT DIAGNOSES ____

10. HAVE YOU SEEN PATIENT BEFORE?
☐ YES 2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 9a?
1 ☐ YES 2 ☐ NO

11. DIAGNOSTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ LIMITED HISTORY EXAM
3 ☐ GENERAL HISTORY EXAM
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X RAY
7 ☐ BLOOD PRESSURE CHECK
8 ☐ EKG
9 ☐ VISION TEST
10 ☐ ENDOSCOPY
11 ☐ MENTAL STATUS EXAM
12 ☐ OTHER (Specify) ____

12. THERAPEUTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ DRUG (PRESCRIPTION)
3 ☐ DRUG (NONPRESCRIPTION)
4 ☐ INJECTION
5 ☐ IMMUNIZATION/ DESENSITIZATION
6 ☐ DIET COUNSELING
7 ☐ FAMILY PLANNING
8 ☐ MEDICAL COUNSELING
9 ☐ PHYSIOTHERAPY
10 ☐ OFFICE SURGERY
11 ☐ PSYCHOTHERAPY THERAPEUTIC LISTENING
12 ☐ OTHER (Specify) ____

13. DISPOSITION THIS VISIT *(Check all that apply)*
1 ☐ NO FOLLOW UP PLANNED
2 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED P.R.N.
4 ☐ TELEPHONE FOLLOW UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER (Specify) ____

14. DURATION OF THIS VISIT *(Time actually spent with physician)*
____ MINUTES

15. IS THE REASON FOR THIS VISIT? *(Check one)*
1 ☐ ACCIDENTAL INJURY (Answer 16-19)
2 ☐ PRODUCT RELATED ILLNESS (Answer 16-19)
3 ☐ NEITHER OF THE ABOVE → STOP (Go to next patient)

16. DESCRIBE ALL OBJECTS, PRODUCTS, OR SUBSTANCES INVOLVED IN THE ACCIDENT OR PRODUCT RELATED ILLNESS *(Be Specific)*
____

17. LOCATION OF ACCIDENT OR EXPOSURE TO PRODUCT *(Check One)*
1 ☐ PRIVATE RESIDENCE
2 ☐ ELSEWHERE (Specify) ____
3 ☐ UNKNOWN

18. WAS PATIENT AT WORK, JOB OR BUSINESS WHEN ACCIDENT OR EXPOSURE OCCURRED?
1 ☐ YES
2 ☐ NO
3 ☐ UNKNOWN

19. WAS PATIENT PREVIOUSLY TREATED FOR THIS CONDITION? *(Check all that apply)*
1 ☐ NO
2 ☐ YES - HOSPITAL EMERGENCY ROOM
3 ☐ YES - PRIVATE PHYSICIAN'S OFFICE
4 ☐ YES - PHYSICIAN ELSEWHERE (Specify) ____
5 ☐ YES PLACE UNKNOWN
6 ☐ UNKNOWN

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in the United States had been used to code these data.[3] Discussion of these changes and their effect on NAMCS data will be included in future *Vital and Health Statistics* series reports.

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

Table 1. Number and percent distribution of office visits by race and ethnicity of patient: United States, 1979

Race and ethnicity	*Number of visits in thousands*	*Percent distribution of visits*
All visits	556,313	100.0
Race		
White	502,927	90.4
All other	53,387	9.6
Black	46,789	8.4
Asian or Pacific Islander	5,560	1.0
American Indian or Alaskan native	1,038	0.2
Ethnicity		
Hispanic	26,731	4.8
Not Hispanic	529,583	95.2

Table 2. Number, percent distribution, and annual rate of office visits by sex and age of patient: United States, 1979

Sex and age	*Number of visits in thousands*	*Percent distribution of visits*	*Number of visits per person per year*
Both sexes			
All ages	556,313	100.0	2.6
Under 15 years	101,352	18.2	2.0
15-24 years	82,290	14.8	2.1
25-44 years	151,714	27.3	2.6
45-64 years	128,594	23.1	3.0
65 years and over	92,363	16.6	4.0
Female			
All ages	337,096	60.6	3.0
Under 15 years	48,735	8.8	2.0
15-24 years	52,345	9.4	2.6
25-44 years	102,000	18.3	3.4
45-64 years	76,003	13.7	3.4
65 years and over	58,012	10.4	4.2
Male			
All ages	219,218	39.4	2.1
Under 15 years	52,617	9.5	2.1
15-24 years	29,945	5.4	1.5
25-44 years	49,714	8.9	1.8
45-64 years	52,591	9.5	2.5
65 years and over	34,351	6.2	3.6

Table 3. Number and percent distribution of office visits by physician specialty and type of practice: United States, 1979

Physician specialty and type of practice	*Number of visits in thousands*	*Percent distribution of visits*
All visits	556,313	100.0
Physician specialty		
General and family practice	190,194	34.2
Medical specialties	164,109	29.5
Internal medicine	66,908	12.0
Pediatrics	58,126	10.4
Other	39,075	7.0
Surgical specialties	173,457	31.2
General surgery	33,740	6.1
Obstetrics and gynecology	50,823	9.1
Other	88,894	16.0
Other specialties	28,553	5.1
Psychiatry	17,093	3.1
Other	11,461	2.1
Type of practice		
Solo	315,390	56.7
Other[1]	240,924	43.3

[1] Includes partnership, group practice, and other.

Table 4. Number and percent distribution of office visits by patient's referral status, major reason for visit, and prior visit status: United States, 1979

Visit characteristic	*Number of visits in thousands*	*Percent distribution of visits*
All visits	556,313	100.0
Referral status		
Referred by another physician	22,413	4.0
Not referred by another physician	533,900	96.0
Major reason for visit		
Acute problem	200,012	36.0
Chronic problem, routine	160,603	28.9
Chronic problem, flareup	48,310	8.7
Postsurgery or postinjury	51,241	9.2
Nonillness care[1]	96,148	17.3
Prior visit status		
New patient	88,136	15.8
Old patient	468,178	84.2
New problem	125,647	22.6
Old problem	342,530	61.6

[1] Includes, for example, routine prenatal care, general examination, or well-baby examination.

Table 5. Number and percent distribution of office visits by patient's principal reason for visit: United States, 1979

Principal reason for visit and RVC code[1]	*Number of visits in thousands*	*Percent distribution of visits*
All visits	556,313	100.0
Symptom module. S001-S999	308,588	55.5
General symptoms S001-S099	43,736	7.9
Symptoms referable to psychological and mental disorders S100-S199	15,864	2.9
Symptoms referable to the nervous system (excluding sense organs) S200-S259	16,492	3.0
Symptoms referable to the cardiovascular and lymphatic systems. S260-S299	3,561	0.6
Symptoms referable to the eyes and ears. S300-S399	32,801	5.9
Symptoms referable to the respiratory system. S400-S499	54,488	9.8
Symptoms referable to the digestive system S500-S639	27,414	4.9
Symptoms referable to the genitourinary system S640-S829	27,840	5.0
Symptoms referable to the skin, nails, and hair S830-S899	30,650	5.5
Symptoms referable to the musculoskeletal system S900-S999	55,742	10.0
Disease module .D001-D999	42,748	7.7
Diagnostic, screening, and preventive module .X100-X599	101,203	18.2
Treatment module .T100-T899	58,712	10.6
Injuries and adverse effects module J001-J999	22,473	4.0
Test results module .R100-R700	3,367	0.6
Administrative module .A100-A140	9,154	1.6
Other[2] .U990-U999	10,069	1.8

[1]Based on "A Reason for Visit Classification for Ambulatory Care," Vital and Health Statistics, Series 2-No. 78, Feb. 1979.

[2]Includes blanks, problems and complaints not elsewhere classified, entries of "none," and illegible entries.

Table 6. Number and percent of office visits, by the 20 most common principal reasons for visit: United States, 1979

Rank	*Most common principal reason for visit and RVC code*[1]	*Number of visits in thousands*	*Percent of visits*
1	General medical examination X100	32,160	5.8
2	Prenatal examination X205	21,717	3.9
3	Progress visit not otherwise specified T800	14,827	2.7
4	Symptoms referable to throat .S455	14,556	2.6
5	Postoperative visit. T205	13,896	2.5
6	Cough .S440	12,628	2.3
7	Back symptoms .S905	11,100	2.0
8	Head cold, upper respiratory infection .S445	10,462	1.9
9	Skin rash .S860	9,441	1.7
10	Chest pain and related symptoms (not referable to body system) .S050	8,798	1.6
11	Blood pressure test X320	8,681	1.6
12	Earache, or ear infection .S355	8,575	1.5
13	Vision dysfunctions. .S305	8,498	1.5
14	Abdominal pain, cramps, spasms .S550	8,364	1.5
15	Headache, pain in head. .S210	8,174	1.5
16	Fever .S010	7,285	1.3
17	Well-baby examination. X105	7,102	1.3
18	Allergy medication T100	6,904	1.2
19	Hypertension D510	6,297	1.1
20	Knee symptoms .S925	6,272	1.1

[1]"A Reason for Visit Classification for Ambulatory Care," Vital and Health Statistics, Series 2-No. 78, Feb. 1979.

Table 7. Number and percent distribution of office visits by principal diagnosis: United States, 1979

Principal diagnosis and ICD-9-CM code[1]	*Number of visits in thousands*	*Percent distribution of visits*
All diagnoses	556,313	100.0
Infectious and parasitic diseases .001-139	19,711	3.5
Neoplasms .140-239	14,205	2.6
Endocrine, nutritional, and metabolic diseases and immunity disorders .240-279	22,856	4.1
Mental disorders .290-319	24,580	4.4
Diseases of the nervous system and sense organs .320-389	50,560	9.1
Diseases of the circulatory system .390-459	49,607	8.9
Diseases of the respiratory system .460-519	73,433	13.2
Diseases of the digestive system .520-579	24,711	4.4
Diseases of the genitourinary system .580-629	36,632	6.6
Diseases of the skin and subcutaneous tissue .680-709	29,132	5.2
Diseases of the musculoskeletal system and connective tissue .710-739	37,004	6.7
Symptoms, signs, and ill-defined conditions .780-799	17,251	3.1
Injury and poisoning .800-999	51,782	9.3
Supplementary classification V01-V82	87,903	15.8
All other diagnoses[2]	8,161	1.5
Unknown diagnoses[3]	8,786	1.6

[1]Based on International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM).

[2]Includes diseases of the blood and blood-forming organs (280-289); complications of pregnancy, childbirth, and the puerperium (630-676); congenital anomalies (740-759); and certain conditions originating in the perinatal period (760-779).

[3]Includes blank diagnosis, noncodable diagnosis, and illegible diagnosis.

Table 8. Number and percent of office visits, by the 20 most common principal diagnoses: United States, 1979

Rank	*Most common principal diagnosis and ICD-9-CM code*[1]		*Number of visits in thousands*	*Percent of visits*
1	Essential hypertension	401	23,607	4.2
2	Normal pregnancy	V22	22,426	4.0
3	General medical examination	V70	16,575	3.0
4	Acute upper respiratory infections of multiple or unspecified sites	465	14,946	2.7
5	Health supervision of infant or child	V20	14,022	2.5
6	Suppurative and unspecified otitis media	382	11,166	2.0
7	Neurotic disorders	300	11,102	2.0
8	Allergic rhinitis	477	9,823	1.8
9	Diabetes mellitus	250	8,947	1.6
10	Disorders of refraction and accommodation	367	8,527	1.5
11	Obesity and other hyperalimentation	278	8,348	1.5
12	Acute pharyngitis	462	8,149	1.5
13	Diseases of sebaceous glands	706	7,385	1.3
14	Special investigations and examinations	V72	7,176	1.3
15	Followup examinations	V67	6,792	1.2
16	Asthma	493	6,786	1.2
17	Other forms of chronic ischemic heart disease	414	5,857	1.1
18	Certain adverse effects not elsewhere classified	995	5,697	1.0
19	Contact dermatitis and other eczema	692	5,683	1.0
20	Acute tonsilitis	463	5,420	1.0

[1]Based on International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM).

Table 9. Number and percent of office visits, by diagnostic and therapeutic services ordered or provided: United States, 1979

Diagnostic and therapeutic services	*Number of visits in thousands*	*Percent of visits*
Diagnostic service		
None	56,622	10.2
Limited history/exam	350,637	63.0
General history/exam	93,358	16.8
Pap test	27,414	4.9
Clinical lab test	129,187	23.2
X-ray	45,846	8.2
Blood pressure check	200,501	36.0
Electrocardiogram	15,228	2.7
Vision test	33,451	6.0
Endoscopy	7,335	1.3
Mental status exam	8,261	1.5
Other	19,616	3.5
Therapeutic service		
None	110,021	19.8
Drug (prescription)	260,332	46.8
Drug (nonprescription)	24,740	4.4
Injection	53,327	9.6
Immunization/desensitization	28,849	5.2
Diet counseling	33,154	6.0
Family planning	7,943	1.4
Medical counseling	123,682	22.2
Physiotherapy	17,084	3.1
Office surgery	40,989	7.4
Psychotherapy/therapeutic listening	24,719	4.4
Other	19,215	3.5

Table 10. Number and percent distribution of office visits by disposition and duration of visit: United States, 1979

Disposition and duration	*Number of visits in thousands*	*Percent distribution of visits*
All visits	556,313	100.0
Disposition[1]		
No followup planned	64,686	11.6
Return at specified time	344,029	61.8
Return if needed	114,069	20.5
Telephone followup planned	21,194	3.8
Referred to other physician	13,797	2.5
Returned to referring physician	3,561	0.6
Admit to hospital	11,431	2.1
Other	3,764	0.7
Duration		
0 minutes[2]	18,997	3.4
1-5 minutes	67,610	12.2
6-10 minutes	169,217	30.4
11-15 minutes	149,291	26.8
16-30 minutes	118,171	21.2
31 minutes or more	33,027	5.9

[1]Will not add to 100.0 since more than one disposition was possible.
[2]Represents visits in which there was no face-to-face contact between the patient and the physician.

Technical notes

Source of data and sample design

The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1979. The target universe of NAMCS encompasses office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice. The National Opinion Research Center, under contract to the National Center for Health Statistics, was responsible for the survey's field operations.

NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physicians' practices within PSU's, and patient visits within practices. For 1979 a sample of 3,023 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for 1979 was 71.8 percent. Sampled physicians were asked to complete Patient Records (figure 1) for a systematic random sample of office visits taking place during a randomly assigned weekly reporting period. During 1979, 45,351 Patient Records were completed by responding physicians.

Sampling errors and rounding of numbers

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. 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 percent of the estimate. Provisional relative standard errors of selected aggregate statistics are shown in tables I and II. The provisional standard errors for estimated percents of visits are shown in tables III and IV.

Table I. Provisional relative standard errors of estimated numbers of office visits based on all physician specialties: NAMCS, 1978

Estimated number of office visits in thousands	*Relative standard error in percent*
500	25.8
1,000	18.4
2,000	13.3
5,000	9.0
10,000	7.0
20,000	5.7
50,000	4.8
100,000	4.4
500,000	4.1

Example of use of table: An aggregate of 75,000,000 visits has a relative standard error of 4.6 percent, or a standard error of 3,450,000 visits (4.6 percent of 75,000,000).

Table II. Provisional relative standard errors of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1978

Estimated number of office visits in thousands	*Relative standard error in percent*
500	28.5
1,000	21.0
2,000	15.9
5,000	11.9
10,000	10.2
20,000	9.2
50,000	8.6
100,000	8.3
200,000	8.2

Example of use of table: An aggregate of 15,000,000 visits has a relative standard error of 9.7 percent, or a standard error of 1,455,000 visits (9.7 percent of 15,000,000).

Table III. Provisional standard errors of percents of estimated numbers of office visits based on all physician specialties: NAMCS, 1978

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.5	5.5	7.6	10.2	11.7	12.7
1,000	1.8	3.9	5.4	7.2	8.2	9.0
2,000	1.3	2.8	3.8	5.1	5.8	6.4
5,000	0.8	1.8	2.4	3.2	3.7	4.0
10,000	0.6	1.2	1.7	2.3	2.6	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.3	0.6	0.8	1.0	1.2	1.3
100,000	0.2	0.4	0.5	0.7	0.8	0.9
500,000	0.1	0.2	0.2	0.3	0.4	0.4

Example of use of table: An estimate of 30 percent based on an aggregate of 15,000,000 visits has a standard error of 2.2 percent, or a relative standard error of 7.3 percent (2.2 percent ÷ 30 percent).

Table IV. Provisional standard errors of percents of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1978

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.7	6.0	8.2	10.9	12.5	13.7
1,000	1.9	4.2	5.8	7.7	8.9	9.7
2,000	1.4	3.0	4.1	5.5	6.3	6.8
5,000	0.9	1.9	2.6	3.5	4.0	4.3
10,000	0.6	1.3	1.8	2.4	2.8	3.1
20,000	0.4	0.9	1.3	1.7	2.0	2.2
50,000	0.3	0.6	0.8	1.1	1.3	1.4
100,000	0.2	0.4	0.6	0.8	0.9	1.0
200,000	0.1	0.3	0.4	0.5	0.6	0.7

Example of use of table: An estimate of 90 percent based on an aggregate of 7,500,000 visits has a standard error of 2.2 percent, or a relative standard error of 2.4 percent (2.2 percent ÷ 90 percent).

Estimates of office visits have been rounded to the nearest thousand. For this reason detailed figures within tables do not always add to totals. Percents were calculated on the basis of original, unrounded figures and will not necessarily agree precisely with percents calculated from rounded data.

Definitions

Ambulatory patient.—An ambulatory patient is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Office.—An office is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

Visit.—A visit is a direct personal exchange between an ambulatory patient and a physician, or between a patient and a staff member working under the physician's supervision, for the purpose of seeking care and rendering health services.

Physician.—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

Duration of visit.—Duration of visit is time the physician spent in face-to-face contact with the patient, not including time the patient spent waiting to see the physician, time the patient spent receiving care from someone other than the physician without the presence of the physician, or time the physician spent reviewing records, test results, etc. In cases where the patient received care from a member of the physician's staff, but did not see the physician during the visit, the duration of visit was recorded as zero minutes.

Symbols

- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

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From Vital and Health Statistics of the National Center for Health Statistics Number 67 • January 7, 1981

Headache as the Reason for Office Visits, National Ambulatory Medical Care Survey: United States, 1977-78

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Headache was the principal cause of an estimated 18,341,923 visits to office-based physicians during 1977-78. Headache was the seventh most frequent symptomatic reason for visits given by patients.

The estimates in this report are based on data collected in the National Ambulatory Medical Care Survey (NAMCS), a probability sample survey conducted yearly by the Division of Health Care Statistics of the National Center for Health Statistics. Since the estimates presented in this report are based on a sample rather than on the entire universe of office-based physicians, the data are subject to sampling variability. The Technical Notes at the end of this report provide a brief explanation of sampling errors and guidelines for judging the precision of the estimates presented. A more detailed description of the sample design and additional definitions of certain terms used in NAMCS have been published elsewhere.[1]

Figure 1 is a facsimile of the 1977-78 Patient Record used by participating physicians to record information about office visits. The patient's complaint, symptom, or other reason for the visit, expressed as nearly as possible in the patient's own words, is recorded by the physician in item 6. The *principal* reason (listed first in this item) is the one that in the physician's judgment was most responsible for the patient making the visit. Data on principal reason were classified and coded according to a reason for visit classification system presented in another report.[2] Since 1977 was the first year that this classification system was used, caution should be exercised in comparing data presented in this report with those of prior years.

[1] National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 summary: United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics.* Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1980.

[2] National Center for Health Statistics: A reason for visit classification for ambulatory care, by D. Schneider, L. Appleton, and T. McLemore. *Vital and Health Statistics.* Series 2-No. 78. DHEW Pub. No. (PHS) 79-1352. U.S. Government Printing Office, Feb. 1979.

Data highlights

Table 1 provides the age and sex of patients who visited office-based physicians for medical care related to headache. The average annual rate of these visits increased with the advancing age group of the patients. Females over 15 years of age tended to visit more frequently for headache problems than males did. Visit rates for female patients over 44 years of age were about twice as high as those for their male counterparts.

Headache accounted for about the same proportion of total visits regardless of the geographic location of

Table 1. Number, percent distribution, and average annual rate of office visits with headache as the principal reason for visit by sex and age of patient: United States, 1977-78

Sex and age	Number of visits in thousands	Percent distribution	Average annual visit rate per 1,000 persons
Both sexes			
All ages	18,342	100.0	43.2
Under 15 years	1,793	9.8	17.6
15-24 years	2,486	13.6	31.4
25-44 years	5,996	32.7	53.8
45-64 years	5,196	28.3	60.2
65 years and over	2,871	15.7	63.9
Female			
All ages	12,148	66.2	55.4
Under 15 years	787	4.3	15.8
15-24 years	1,645	9.0	40.8
25-44 years	3,858	21.0	67.0
45-64 years	3,699	20.2	82.0
65 years and over	2,159	11.8	81.8
Male			
All ages	6,194	33.8	30.3
Under 15 years	1,006	5.5	19.4
15-24 years	841	4.6	21.7
25-44 years	2,138	11.7	39.7
45-64 years	1,496	8.2	36.3
65 years and over	713	3.9	38.4

Symbols

- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

Figure 1. NATIONAL AMBULATORY MEDICAL CARE SURVEY PATIENT RECORD FORM: 1977-78

ASSURANCE OF CONFIDENTIALITY—All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose.

A 033012

1. DATE OF VISIT ___/___/___ Mo/Day/Yr

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

2. DATE OF BIRTH ___/___/___ Mo/Day/Yr

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ NEGRO/BLACK
3 ☐ OTHER
4 ☐ UNKNOWN

5. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
1 ☐ YES
2 ☐ NO

6. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT *(In patient's own words)*
a. MOST IMPORTANT _____
b. OTHER _____

7. TIME SINCE ONSET OF COMPLAINT/SYMPTOM IN ITEM 6a *(Check one)*
1 ☐ LESS THAN 1 DAY
2 ☐ 1-6 DAYS
3 ☐ 1-3 WEEKS
4 ☐ 1-3 MONTHS
5 ☐ MORE THAN 3 MONTHS
6 ☐ NOT APPLICABLE

8. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a
_____
b. OTHER SIGNIFICANT CURRENT DIAGNOSES
_____
_____

9. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 8a?
1 ☐ YES 2 ☐ NO

10. SERIOUSNESS OF CONDITION IN ITEM 8a *(Check one)*
1 ☐ VERY SERIOUS
2 ☐ SERIOUS
3 ☐ SLIGHTLY SERIOUS
4 ☐ NOT SERIOUS

11. DIAGNOSTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ LIMITED EXAM/HISTORY
3 ☐ GENERAL EXAM/HISTORY
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X RAY
7 ☐ EKG
8 ☐ VISION TEST
9 ☐ ENDOSCOPY
10 ☐ BLOOD PRESSURE CHECK
11 ☐ OTHER *(Specify)* _____
_____

12. THERAPEUTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ IMMUNIZATION/DESENSITIZATION
3 ☐ DRUGS (PRESCRIPTION/NONPRESCRIPTION)
4 ☐ DIET COUNSELING
5 ☐ FAMILY PLANNING
6 ☐ MEDICAL COUNSELING
7 ☐ PHYSIOTHERAPY
8 ☐ OFFICE SURGERY
9 ☐ PSYCHOTHERAPY/THERAPEUTIC LISTENING
10 ☐ OTHER *(Specify)* _____
_____

13. DISPOSITION THIS VISIT *(Check all that apply)*
1 ☐ NO FOLLOW-UP PLANNED
2 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED, P.R.N.
4 ☐ TELEPHONE FOLLOW-UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER *(Specify)* _____
_____

14. DURATION OF THIS VISIT *(Time actually spent with physician)*
_____ MINUTES

HRA-34-2
REV. 9-76

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
NATIONAL CENTER FOR HEALTH STATISTICS

O.M.B. #68-R1498

Table 2. Number of office visits and number, percent, and average annual rate of office visits with headache as the principal reason for visit, by location of physician's practice: United States, 1977-78

Location of practice	Number in thousands		Percent	Average annual visit rate per 1,000 persons
	All visits	Visits for headache		
Geographic region				
Northeast	271,440	4,580	1.7	47.1
North Central	291,571	4,404	1.5	38.6
South	355,754	5,613	1.6	40.6
West	235,785	3,745	1.6	50.5
Type of area				
Metropolitan	865,549	13,479	1.6	46.5
Nonmetropolitan	289,001	4,863	1.7	36.3

the physician's practice (table 2). However, visit rates varied, indicating higher utilization rates in the Northeast and West Regions than in the North Central and South, and in metropolitan than in nonmetropolitan areas.

The specialists most commonly visited by patients presenting headache as the reason for visit are shown in table 3. Eighteen percent of visits to neurologists were made by patients with a principal complaint of headache. Other specialists treated headache patients in 1 or 2 percent of their visits.

Table 3. Number of office visits and number and percent of office visits with headache as the principal reason for visit, by selected physician specialties: United States, 1977-78

Specialty	Number in thousands		Percent
	All visits	Visits for headache	
All specialties	1,154,550	18,342	1.6
General and family practice	433,936	9,528	2.2
Internal medicine	133,291	2,754	2.1
Pediatrics	114,921	905	0.8
General surgery	69,223	584	0.8
Ophthalmology	58,851	1,053	1.8
Neurology	5,109	938	18.4
Otolaryngology	32,193	802	2.5

Patients who developed a headache that was a new problem were likely to visit their physicians within 3 weeks of its onset, with over 40 percent of visits occurring in less than a week (table 4).

About half the visits for headache involved a condition evaluated by the physician as not serious in nature (table 5). There was no statistically significant difference in this proportion by sex of the patient.

The principal diagnosis made by the physician for the patient who presents headache as the chief complaint is recorded in item 8 of the Patient Record. Diagnostic codes are based on the Eighth Revision International Classification of Diseases (ICDA).[3] Table 6 contains a list of the diagnoses most frequently associated with headache. Headache, as a *diagnosis*, appeared in an estimated 31 percent of such visits (ICDA codes 306, 346, and 791). An additional 14 percent were attributed to hypertension.

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

Table 4. Percent of office visits with headache as a new problem, by sex of patient and time since onset of complaint: United States, 1977-78

Time since onset of complaint	Female	Male
	Percent	
Less than 1 week	43.9	49.3
1-3 weeks	16.3	22.7
1-3 months	16.1	13.6
More than 3 months	20.5	13.7

Table 5. Percent distribution of office visits with headache as the principal reason for visit, by seriousness of problem, according to sex of patient: United States, 1977-78

Seriousness of problem	Female	Male
	Percent distribution	
All visits	100.0	100.0
Not serious	51.4	47.3
Slightly serious	35.6	38.3
Serious or very serious	12.9	14.5

Table 6. Number and percent distribution of office visits with headache as the principal reason for visit by principal diagnosis: United States, 1977-78

Principal diagnosis and ICDA code[1]	*Number of visits in thousands*	*Percent distribution*
All diagnoses	18,342	100.0
Neuroses 300	653	3.6
Special symptoms not elsewhere classified[2] 306	1,692	9.2
Migraine 346	1,635	8.9
Refractive errors 370	500	2.7
Essential benign hypertension 401	2,494	13.6
Acute upper respiratory infection of multiple or unspecified sites 465	640	3.5
Chronic sinusitis 503	1,332	7.3
Hay fever 507	420	2.3
Headache[3] 791	2,303	12.6
Concussion 850	345	1.9
All other diagnoses residual	6,328	34.5

[1]Based on the Eighth Revision International Classification of Diseases, Adapted for Use in the United States (ICDA).

[2]These records coded 306.8, the ICDA category for cephalalgia, including headache of nonorganic origin and tension headache.

[3]Excludes headache of nonorganic origin (306.8), migraine (346), and tension headache (306.8).

Table 7. Percent of office visits with headache as the principal reason for visit, by selected diagnostic and therapeutic services ordered or provided: United States, 1977-78

Diagnostic and therapeutic services	*Percent of visits*
Diagnostic services	
None	6.1
Limited exam/history	62.2
General exam/history	23.9
Pap test	*1.4
Clinical lab test	16.2
X-ray	9.0
EKG	3.5
Vision test	6.3
Blood pressure check	49.2
Other	7.1
Therapeutic services	
None	12.2
Immunization/desensitization	3.1
Drugs (prescription/nonprescription)	73.8
Diet counseling	6.5
Medical counseling	21.0
Physiotherapy	4.0
Office surgery	*1.3
Psychotherapy/therapeutic listening	5.0
Other	2.6

Table 8. Percent distribution of office visits with headache as the principal reason for visit by duration and disposition of visit: United States, 1977-78

Duration and disposition	*Percent distribution of visits*
All visits	100.0
Duration	
0 minutes[1]	2.2
1-5 minutes	11.2
6-10 minutes	26.9
11-15 minutes	30.5
16-30 minutes	21.7
31 minutes or more	7.5
Disposition[2]	
No followup planned	9.4
Return at specified time	52.4
Return if needed, p. r. n.	32.3
Telephone followup planned	3.3
Referred to other physician	4.6
Return to referring physician	*1.8
Admit to hospital	*1.2
Other disposition	*0.8

[1]Visits in which there was no face-to-face contact between the patient and the physician.

[2]Will not total 100.0 since more than one disposition was possible.

The potential presence of hypertension is reflected in the higher than average proportion of visits in which blood pressure was measured. Table 7 shows that blood pressure was checked during 49 percent of visits for headache compared with the NAMCS average of 34 percent of all visits.

Drug therapy (either prescription or nonprescription) was used in 74 percent of visits, a proportion that exceeded the average of 53 percent of all NAMCS visits. Table 7 also shows the percent of visits in which various diagnostic and therapeutic services were either ordered or provided.

Table 8 provides data on the duration and disposition of visits for headache.

Additional data on headache and other reasons for visits will be presented in more detail in a report from the *Vital and Health Statistics* series. Questions regarding this report may be directed to the Ambulatory Care Statistics Branch by calling 301-436-7132.

Technical notes

Source of data

The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1977 and 1978. The NAMCS universe is composed of office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice and are not in the specialties of anesthesiology, pathology, or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, is responsible for the NAMCS field operations.

Sample design

NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. For 1977-78 a sample of 6,007 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for this period was 75.1 percent. Sampled physicians were requested to complete Patient Records (figure 1) for a systematic random sample of office visits taking place during a randomly assigned weekly reporting period. During 1977-78, 98,335 Patient Records were completed by responding physicians.

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is sampled. 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 percent of the estimate. Relative standard errors for aggregate statistics are shown in tables I and II. Standard errors for estimated percentages are shown in tables III and IV.

Table I. Approximate relative standard errors of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Estimated number of office visits in thousands	*Relative standard error in percent*
500	24.9
1,000	17.7
2,000	12.7
5,000	8.3
10,000	6.2
20,000	4.8
50,000	3.8
200,000	3.1
1,000,000	2.9

Example of use of table: An aggregate of 15,000,000 visits has a relative standard error of 5.5 percent, or a standard error of 825,000 visits (5.5 percent of 15,000,000).

Table II. Approximate relative standard errors of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Estimated number of office visits in thousands	*Relative standard error in percent*
500	27.0
1,000	19.6
2,000	14.5
5,000	10.3
10,000	8.5
20,000	7.4
50,000	6.7
100,000	6.4
400,000	6.2

Example of use of table: An aggregate of 7,500,000 visits has a relative standard error of 9.4 percent, or a standard error of 705,000 visits (9.4 percent of 7,500,000).

Definitions

Ambulatory patient.—An ambulatory patient is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Office.—An office is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

Visit.—A visit is a direct personal exchange between an ambulatory patient and a physician, or between a patient and a staff member working under the physician's supervision, for the purpose of seeking care and rendering health services.

Physician.—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

Table III. Approximate standard errors of percents of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	*Estimated percent*					
	1 or 99	*5 or 95*	*10 or 90*	*20 or 80*	*30 or 70*	*50*
	Standard error in percentage points					
500	2.5	5.4	7.4	9.9	11.4	12.4
1,000	1.7	3.8	5.3	7.0	8.0	8.8
2,000	1.2	2.7	3.7	5.0	5.7	6.2
5,000	0.8	1.7	2.3	3.1	3.6	3.9
10,000	0.6	1.2	1.7	2.2	2.5	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.2	0.5	0.7	1.0	1.1	1.2
200,000	0.1	0.3	0.4	0.5	0.6	0.6
1,000,000	0.1	0.1	0.2	0.2	0.3	0.3

Example of use of table: An estimate of 20 percent based on an aggregate of 15,000,000 visits has a standard error of 1.9 percent, or a relative standard error of 9.5 percent (1.9 percent ÷ 20 percent).

Table IV. Approximate standard errors of percents of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	*Estimated percent*					
	1 or 99	*5 or 95*	*10 or 90*	*20 or 80*	*30 or 70*	*50*
	Standard error in percentage points					
500	2.6	5.7	7.9	10.5	12.1	13.1
1,000	1.9	4.1	5.6	7.4	8.5	9.3
2,000	1.3	2.9	3.9	5.3	6.0	6.6
5,000	0.8	1.8	2.5	3.3	3.8	4.2
10,000	0.6	1.3	1.8	2.4	2.7	2.9
20,000	0.4	0.9	1.2	1.7	1.9	2.1
50,000	0.3	0.6	0.8	1.1	1.2	1.3
100,000	0.2	0.4	0.6	0.7	0.9	0.9
400,000	0.1	0.2	0.3	0.4	0.4	0.5

Example of use of table: An estimate of 90 percent based on an aggregate of 3,500,000 visits has a standard error of 3.2 percent, or a relative standard error of 3.6 percent (3.2 percent ÷ 90 percent).

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From Vital and Health Statistics of the National Center for Health Statistics Number 68 • May 13, 1981

Stroke Survivors Among the Noninstitutionalized Population 20 Years of Age and Over: United States, 1977

by Abigail J. Moss, Division of Health Interview Statistics

Findings from a special stroke supplement to the 1977 National Health Interview Survey questionnaire are presented in this report from the National Center for Health Statistics. The supplement was developed in response to a request from officials at the National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health. Their particular data needs centered around three major areas: (1) estimating the number of adults among the noninstitutionalized population who have survived a stroke, (2) gaining information on the relationship between selected chronic conditions and a history of stroke, and (3) describing the characteristics of persons who have had symptoms associated with stroke. This report addresses each of these objectives and presents related stroke data by three demographic variables—age, sex, and race.

According to data from the National Health Interview Survey (NHIS), in 1977 an estimated 2,692,000 persons 20 years of age and over in the U.S. civilian noninstitutionalized population had experienced a cerebrovascular accident—a stroke—and survived (table 1).

Some persons reported stroke in response to questions on the NHIS questionnaire concerning doctor visits or restricted activity in the past 2 weeks, chronic limitation of activity, or selected chronic conditions. However, the question that is the primary source of information on the prevalence of stroke survivors, asked of all persons who had not reported stroke in response to earlier questions, was "Has - - EVER had a stroke?"

Both self-respondents and proxy respondents were asked the stroke questions. Because of the characteristic manifestations of stroke, the use of proxy respondents probably produced little underreporting of this condition. At the same time, proxy respondents and self-respondents alike probably contributed to some overreporting of this condition.

Users of these data should remember that NHIS stroke estimates are representative only of the civilian noninstitutionalized population living at the time of interview. Excluded from the estimates are persons who had experienced a stroke but were not living at the time of the interview as well as those residing in long-term care facilities. (About one-fourth of all residents in nursing homes have cerebrovascular disease.[1])

Furthermore, the above estimate of about 2.7 million stroke survivors is based on respondents' perceptions of a stroke's occurrence; that is, it is based on self-diagnosed as well as medically diagnosed strokes. A stroke is classified as medically diagnosed whenever there was a positive response to the question: "Has a doctor EVER told - - he had a stroke?" While an estimate based only on medically confirmed strokes might be more precise than one based on both self-diagnosed and medically confirmed strokes, no significant differences were noted between medically confirmed and non-medically confirmed strokes by sex, age, or race to warrant separate treatment of the data. Limiting the data presented to medically confirmed strokes was considered, but there is evidence to suggest that some strokes are not actually medically diagnosed. Excluding all persons without a medical diagnosis would probably result in an undercount. No doubt the estimate in this report does include persons who would not have been medically diagnosed as having had a stroke had they been examined by a medical doctor. All NHIS data are subject to this kind of reporting error. Therefore, the fact that some persons might be misclassified is not sufficient reason to exclude *all* persons without a medical confirmation.

Specifically, medically confirmed strokes were reported for 92 percent of the stroke population (table 2). (Persons who did not know whether the stroke was medically confirmed were excluded from

Table 1. Number and percent distribution of persons 20 years of age and over by stroke status, according to race, sex, and age: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Race, sex, and age	Total[1]	Ever had a stroke	Never had a stroke	Total[2]	Ever had a stroke	Never had a stroke
	Number in thousands			Percent distribution		
All races[3]						
Both sexes 20 years and over	139,965	2,692	134,487	100.0	2.0	98.0
20-44 years	74,341	287	72,639	100.0	0.4	99.6
45-64 years	43,357	881	41,605	100.0	2.1	97.9
65 years and over	22,266	1,524	20,243	100.0	7.0	93.0
Male 20 years and over	65,801	1,316	63,234	100.0	2.0	98.0
20-44 years	35,904	125	35,136	100.0	0.4	99.6
45-64 years	20,700	484	19,812	100.0	2.4	97.6
65 years and over	9,197	708	8,286	100.0	7.9	92.1
Female 20 years and over	74,164	1,376	71,253	100.0	1.9	98.1
20-44 years	38,437	163	37,503	100.0	0.4	99.6
45-64 years	22,657	397	21,793	100.0	1.8	98.2
65 years and over	13,070	817	11,957	100.0	6.4	93.6
White						
20 years and over	123,626	2,314	118,928	100.0	1.9	98.1
20-44 years	64,671	220	63,268	100.0	0.3	99.7
45-64 years	38,792	751	37,266	100.0	2.0	98.0
65 years and over	20,163	1,344	18,394	100.0	6.8	93.2
Male	58,519	1,162	56,277	100.0	2.0	98.0
Female	65,106	1,152	62,651	100.0	1.8	98.2
Black						
20 years and over	14,420	362	13,672	100.0	2.6	97.4
20-44 years	8,372	56	8,091	100.0	0.7	99.3
45-64 years	4,098	130	3,878	100.0	3.2	96.8
65 years and over	1,950	176	1,702	100.0	9.4	90.6
Male	6,339	148	6,031	100.0	2.4	97.6
Female	8,081	215	7,641	100.0	2.7	97.3

[1] Includes unknowns.
[2] Excludes unknowns.
[3] Includes all races not shown separately.

the population base used to calculate this percent.) Men and women stroke victims had similar proportions of medically confirmed strokes. At first glance, it would appear that there are differences among the three age groups shown in table 2 and between black and white persons in the percent for whom medical attention was reported. In this sample, however, these variations were not statistically significant.[a]

As a measure of the approximate number of adult stroke survivors currently in the noninstitutionalized population, the figure of 2.7 million[b] is probably a fairly complete estimate when compared with estimates of certain other chronic conditions that are derived from household interview surveys. Chronic conditions are generally underreported in health interviews. A number of methodological studies have shown that respondents report only conditions that they know of and are willing to discuss. The conditions that are best reported in health interviews are those—such as stroke—with the most impact on a person, limiting participation in one's usual activities, resulting in costly treatment, or requiring medical care or days in bed.[2]

For further details on the survey design and procedures used to obtain data shown in this report, see the technical notes.

Age, sex, and race

An estimated 2 percent of the 1977 civilian noninstitutionalized population 20 years of age and over had suffered a stroke and survived. The prevalence rates for the youngest and oldest age groups differed markedly, from a low of 4 persons per 1,000 population aged 20-44 years to a high of

[a] The *t*-test with a critical value of 1.96 (0.05 level of significance) was used to test all comparisons discussed in this report.

[b] For comparative purposes, the stroke prevalence estimate derived from data collected by NHIS was 1.5 million persons in 1972, and in 1978 it was 1.7 million persons. During these years a checklist of chronic conditions which included stroke was read to the household respondent.

Table 2. Percent of persons with stroke for whom medical confirmation of stroke was reported, by age, sex, and race: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Age, sex, and race	*Percent medically confirmed*
All persons 20 years and over	92.0
Age	
20-44 years	87.0
45-64 years	91.4
65 years and over	92.9
Sex	
Male	92.5
Female	91.4
Race	
White	92.5
Black	88.6

NOTE: Denominator of percent excludes unknown medical confirmation.

70 persons per 1,000 population 65 years of age or older. In fact, over one-half of the stroke victims surveyed were at least 65 years of age; this reflects the fact that stroke is a disease of the aged.[3]

The stroke prevalence rate was similar for men and women under 45 years of age. For ages 45 and over, however, the reported prevalence for men was somewhat higher—40 per 1,000 population compared to 34 per 1,000 population. National Health Interview Survey results further show black persons to have slightly higher stroke prevalence estimates than white persons have (2.6 and 1.9 percent, respectively). Similarly, when these data have been age adjusted to the U.S. adult population, the age-standardized estimates of stroke are higher for black persons (2.9 percent) than for white persons (1.9 percent).[c] These racial differences, for the most part, occurred regardless of age. Statistically different stroke estimates by sex and color, however, were observed only between black women (2.7 percent) and white women (1.8 percent).

Age at time of first stroke

All respondents who reported stroke were asked: "How old was - - at the time he had his first stroke?" Data derived from this question are shown in table 3. A higher proportion of male than female stroke survivors experienced their initial attack before they were 65 years old—64.7 percent compared with 57.1 percent.

Data for black and white stroke victims seem to suggest that black persons are more likely than white persons to have their first stroke at an early age. However, the apparent black-white differences seen in table 3 are not statistically significant.

Further examination of table 3 suggests that the data shown there may partly reflect the disproportionate age distribution of black and white persons in the population. For 1977, the U.S. Bureau of the Census estimated that 11.4 percent of the white population and 7.7 percent of the black population were 65 years of age or older.[4]

Table 3. Number and percent distribution of persons 20 years of age and over with stroke by age at time of first stroke, according to race and sex: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Race and sex	*All persons 20 years and over with stroke*	*Age at time of first stroke*		
		Under 45 years	*45-64 years*	*65 years and over*
	Number in thousands			
All races[1]				
Both sexes	2,692	476	991	945
Male	1,316	196	571	418
Female	1,376	280	420	527
White				
Both sexes	2,314	390	863	829
Male	1,162	165	505	385
Female	1,152	224	358	445
Black				
Both sexes	362	84	129	111
Male	148	*29	67	*34
Female	215	55	62	77
	Percent distribution[2]			
All races[1]				
Both sexes	100.0	19.7	41.1	39.2
Male	100.0	16.5	48.2	35.3
Female	100.0	22.8	34.3	43.0
White				
Both sexes	100.0	18.7	41.5	39.8
Male	100.0	15.6	47.9	36.5
Female	100.0	21.8	34.9	43.3
Black				
Both sexes	100.0	25.9	39.8	34.3
Male	100.0	*22.5	51.9	*26.4
Female	100.0	28.2	31.8	39.5

[1] Includes all races not shown separately.
[2] Excludes unknowns.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

[c] Data were adjusted to the age distribution of the 1977 U.S. civilian noninstitutionalized population 20 years of age and over. The reader should use the age-adjusted rates only for examination of the relationships within a given variable. Any quotation of percents and age-specific rates should be of the crude rates rather than the age-adjusted data.

Table 4, which presents the percent of stroke survivors aged 65 years and over by age at time of first stroke, shows no appreciable difference between white and black persons with respect to age at first stroke.

Table 4. Number of persons 65 years of age and over with stroke and percent distribution by age at time of first stroke, according to sex and race: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Sex and race	Number of persons 65 years and over with stroke in thousands	Total[1]	Age at time of first stroke		
			Under 45 years	45-64 years	65 years and over
		Percent distribution			
Total[2]	1,524	100.0	4.8	28.5	66.8
Sex					
Male	708	100.0	*4.4	31.9	63.7
Female	817	100.0	5.0	25.6	69.4
Race					
White	1,344	100.0	4.5	29.4	66.2
Black	176	100.0	*7.0	22.3	70.7

[1]Excludes unknowns.
[2]Includes all races not shown separately.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

Hospitalization for stroke

During the NHIS interview, respondents were asked whether stroke survivors were hospitalized for their first stroke. Responses to this item indicate that about 62 percent of the stroke survivors were hospitalized for their first stroke (table 5). A hospitalization was reported for proportionately more men than women (66.5 compared with 58.3 percent).

Moreover, a higher percent of males under 65 than 65 years of age or older were hospitalized for their initial stroke (73.4 compared with 61.3 percent). In contrast, the proportion of females hospitalized for stroke did not vary appreciably among specific age groups.

The overall percents of white and black persons hospitalized for initial strokes are similar. When these data are compared for males and for females, it appears that a substantially greater proportion of black males than white males were hospitalized (74.6 compared with 65.6 percent). The difference between these estimates, however, could be due to sampling variability.

Chronic activity limitation

Besides the frequent loss of life associated with stroke, a high proportion of stroke victims who survive are left with permanent disabilities. As an illustration, table 6 contrasts the percent of persons with and without stroke by the kind of activity limitation they had at the time of interview. These data are derived from a series of NHIS questions that enable sample persons to be classified into one of four broad limitation categories—unable to perform major activity, limited in amount or kind of major activity, limited in other activities, and not limited in any activities. Major activities include working, keeping house, and going to school. In NHIS, only activity limitations caused by at least one chronic condition are classified.

In 1977, an estimated 72 percent of the stroke population were limited in performance of their major or other activities in some way because of either a stroke or some other chronic condition.[d] In contrast, 17.4 percent of adults without stroke were limited in some way. As expected, with each succeeding age group there was an increase in reported activity limitation for both the stroke and nonstroke populations. Among stroke victims, 39 percent of those 20-44 years of age reported some limitation, compared with 78.5 percent of persons 65 years of age or older.

Over 40 percent of the stroke population surveyed were unable to perform their major activity at all (compared with less than 5 percent of other adults in the population). While this estimate varied appreciably between males and females (58.1 and 25.1 percent, respectively), the dissimilarity may primarily reflect a sex difference in the NHIS definition of usual activity roles. For example, women who had to leave the work force because of a stroke and now consider their usual activity as "keeping house" are asked about any limitations associated with housework and classified accordingly. Men in the same situation are classified according to their ability to work outside the home.

All limitations combined were reported for a higher proportion of males with stroke (75.8 percent) than females (68.1 percent). The pattern is consistent with activity limitation estimates for males and females in the general population.

Some of the difference in the limitation-of-activity estimates for persons with and without stroke is attributable to the disproportionate number of older persons in the stroke population. When making comparisons between population groups with varying

[d]For this analysis, no data were available on whether a stroke survivor's activity limitation was related to the stroke.

Table 5. Number and percent distribution of persons 20 years of age and over with stroke by whether hospitalized for first stroke, according to race, sex, and age: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Race, sex, and age	*All persons 20 years and over with stroke*	*Hospitalized for first stroke*	*Not hospitalized for first stroke*	*All persons 20 years and over with stroke*[1]	*Hospitalized for first stroke*	*Not hospitalized for first stroke*
All races[2]	Number in thousands			Percent distribution		
Both sexes 20 years and over	2,692	1,526	921	100.0	62.4	37.6
20-44 years	287	132	76	100.0	63.5	36.5
45-64 years	881	530	271	100.0	66.2	33.8
65 years and over	1,524	864	574	100.0	60.1	39.9
Male 20 years and over	1,316	797	401	100.0	66.5	33.5
20-44 years	125	59	*26	100.0	69.4	30.6
45-64 years	484	329	116	100.0	73.9	26.1
65 years and over	708	409	259	100.0	61.3	38.8
Female 20 years and over	1,376	728	521	100.0	58.3	41.7
20-44 years	163	72	50	100.0	58.5	40.7
45-64 years	397	200	155	100.0	56.2	43.5
65 years and over	817	456	315	100.0	59.1	40.9
White						
20 years and over	2,314	1,308	798	100.0	62.1	37.9
20-44 years	220	103	50	100.0	67.8	32.9
45-64 years	751	447	236	100.0	65.4	34.6
65 years and over	1,344	758	512	100.0	59.7	40.3
Male	1,162	695	365	100.0	65.6	34.4
Female	1,152	613	433	100.0	58.6	41.4
Black						
20 years and over	362	213	119	100.0	64.2	35.8
20-44 years	56	*27	*25	100.0	*52.9	*49.0
45-64 years	130	83	35	100.0	70.3	29.7
65 years and over	176	104	59	100.0	63.8	36.2
Male	148	100	*34	100.0	74.6	25.4
Female	215	113	85	100.0	56.8	42.7

[1] Excludes unknowns.
[2] Includes all races not shown separately.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

age distributions, it is helpful to take these differences into account. Comparisons can be made within age groups or by using age-standardized percents.

Table 7 shows limitation-of-activity data with and without age adjustment. Age adjustment reduces the estimate of the proportion of the stroke population comprising the most severe limitation-of-activity category from 41.2 to 26.1 percent. However, the difference between the estimates of the most severe limitation for persons with and without stroke remained substantial (26.1 compared with 4.7 percent). Age adjustment had little or no effect on the estimates for the two remaining limitation-of-activity categories. (see footnote c.)

Chronic conditions associated with stroke

Four health conditions associated with stroke were listed on the 1977 NHIS questionnaire: (1) diabetes or sugar diabetes, (2) high blood pressure or hypertension, (3) heart disease or heart trouble, and (4) blood clots in arms, legs, or lungs. Data obtained from responses to questions as to whether sample persons had any of these conditions in the 12-month period preceding the interview are shown in tables 8 and 9.

The methodology employed for obtaining data on these conditions was not intended to produce prevalence figures similar to the estimates of chronic

Table 6. Number of persons 20 years of age and over and percent distribution by degree of activity limitation, according to stroke status, age, sex, and race: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Stroke status, age, sex, and race	Number of persons in thousands	Total	Activity limitation status				
			All degrees of limitation	Unable to perform major activity	Limited in amount or kind of major activity	Limited in other activities	No activity limitation
		Percent distribution					
With stroke							
Age							
20 years and over	2,692	100.0	71.8	41.2	25.0	5.6	28.2
20-44 years	287	100.0	39.0	12.5	20.9	*5.6	61.0
45-64 years	881	100.0	70.9	37.9	27.6	5.4	29.1
65 years and over	1,524	100.0	78.5	48.6	24.3	5.7	21.5
Sex							
Male	1,316	100.0	75.8	58.1	13.9	3.8	24.2
Female	1,376	100.0	68.1	25.1	35.6	7.3	31.9
Race							
White	2,314	100.0	71.4	40.8	24.6	6.0	28.6
Black	362	100.0	77.3	45.6	27.9	*3.6	22.9
Without stroke							
Age							
20 years and over	134,487	100.0	17.4	4.6	9.0	3.8	82.6
20-44 years	72,639	100.0	8.5	1.2	4.4	2.8	91.5
45-64 years	41,605	100.0	22.0	5.6	12.0	4.5	78.0
65 years and over	20,243	100.0	40.3	14.8	19.7	5.8	59.7
Sex							
Male	63,234	100.0	18.2	7.6	7.0	3.6	81.8
Female	71,253	100.0	16.7	2.0	10.8	3.9	83.3
Race							
White	118,928	100.0	17.2	4.4	9.0	3.9	82.8
Black	13,672	100.0	20.3	7.1	10.5	2.8	79.6

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

conditions routinely produced from NHIS. Rather, the items were viewed as providing gross measures for observing any differences in the rates between stroke victims and the rest of the population. These qualifications should be considered when using the data shown in these tables.

For each condition included in table 8, the age-specific rates were markedly higher among stroke victims than among other persons. The most pronounced difference is for heart conditions, reported for almost one-third of the stroke population compared with only one-twentieth of other adults surveyed. A similar comparison of estimates for the three remaining condition groups reveals the following differences: diabetes—14.6 compared with 3.1 percent, hypertension—48.1 compared with 12.5 percent, and blood clots—4.4 compared with 0.8 percent.

When data in table 9 are compared for diabetics and nondiabetics, hypertensives and nonhypertensives, and persons with and without heart disease, similar patterns are found. Specifically, there were proportionately more stroke victims among the groups with either diabetes, hypertension, or heart disease than among the group without these conditions. Futhermore, persons with all three of these conditions were considerably more likely than others to have had a stroke. Approximately 1 out of 5 persons (22.6 percent) with diabetes, hypertension, and heart disease was also reported to have had a stroke. Similarly, the rate of persons with all of these conditions was almost 15 times higher among the group of persons who had had a stroke than among those who had not (49.0 compared with 3.4 per 1,000 persons). Even after age adjustment, the variation between the estimates of stroke survivors

Table 7. Unadjusted and age-adjusted percent distributions of persons 20 years of age and over by limitation of activity status, according to stroke status: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Activity limitation status	Unadjusted		Age-adjusted[1]	
	With stroke	Without stroke	With stroke	Without stroke
	Percent distribution			
All persons 20 years and over	100.0	100.0	100.0	100.0
All degrees of limitation	71.8	17.4	55.2	17.7
Unable to perform major activity	41.2	4.6	26.1	4.7
Limited in amount or kind of major activity	25.0	9.0	23.5	9.2
Limited in other activities	5.6	3.8	5.6	3.8
No activity limitation	28.2	82.6	44.8	82.3

[1]Adjusted by the direct method to the age distribution of the total civilian noninstitutionalized population of the United States.

with and without these conditions remains substantial. These data are consistent with findings from several epidemiological studies in which high blood pressure, heart disease, and diabetes have been identified as cardinal risk factors for stroke.[5,6]

Symptoms associated with stroke and transient ischemic attack (TIA)

There is general agreement among researchers and the medical profession that the risk of stroke is substantially increased among persons who have experienced transient ischemic attack (TIA).[5] TIA is most often described as a history of a neurological deficit that clears in a defined period of time, but there is less consensus in the criteria for its diagnosis. Diagnosis of TIA is difficult for several reasons: the transience of symptoms, the similarity of TIA symptoms to those of other diseases, the absence of residual disability, and the lack of a diagnostic test.

The symptom data contained in this report were derived from responses to a checklist of some of the symptoms associated with cerebrovascular disease and TIA. The specific symptoms chosen are those determined to be caused least often by conditions other than cerebrovascular disease and TIA.[e] The following symptom checklist was read to household respondents: (1) sudden paralysis or weakness of an arm and leg on the same side of the body, (2) sudden numbness on one side of the body, (3) sudden loss of vision, and (4) sudden loss of speech. The reference period for this checklist was the 12 months immediately preceding the interview.

The duration of symptoms used to define TIA or to distinguish it from stroke is not standardized.[7] Symptoms characteristic of TIA generally last from 5 to 30 minutes, but intervals of up to 24 hours also occur. Stroke diagnosis is linked to symptoms lasting more than 24 hours.

For this report, symptoms were classified according to whether they lasted for more than 24 hours or 24 hours or less. Because of the problems associated with identifying persons with TIA even in a clinical setting, however, symptom data in this report are not presented as prevalence estimates of TIA. Furthermore, the estimated number of persons with symptoms is small, further limiting analysis of data shown in the remaining tables of this report.

Only about 2 percent of the adult population surveyed were reported to have had one or more symptoms during the year preceding the interview (table 10). As expected, however, a considerably higher proportion of persons with a history of stroke were reported to have had symptoms. Approximately 1 out of 5 persons with stroke experienced symptoms during the year preceding the interview (17.9 percent compared with 1.7 percent of persons without a stroke). The population having suffered a stroke can also be classified by whether the stroke was suffered recently—within 12 months of the interview date. Of recent stroke victims, 48.1 percent had one or more symptoms, compared with 10.7 percent of the residual stroke population. Unfortunately, the number of sample persons with recent strokes is too small for detailed tabulation of the data.

When the population with one or more stroke-like symptoms is examined, it can be seen that approximately two-thirds (64.3 percent) of the population with no stroke, compared with less than one-half (47.5 percent) of the stroke population, had their symptoms completely disappear within 24 hours. For both population subgroups, the differences observed for duration of symptoms by age, sex, or race were not statistically significant.

The group of persons without a stroke who had symptoms lasting more than 1 day is also sizable (35.7 percent). As TIA symptoms usually disappear in less than 1 day, it appears that many of the persons surveyed reported symptoms that were associated with some other health condition.

About one-half of the stroke population experiencing stroke-like symptoms in the past year were 65 years of age and over, whereas almost one-half (46.8 percent) of persons without a stroke who had these

[e]In this survey, no attempt was made to limit reporting of symptoms to those caused by certain conditions, such as stroke or TIA. However, symptoms were excluded if the respondent volunteered the information that they occurred over a gradual period of time or resulted from an accident or injury (e.g., loss of vision due to old age or a blow to the head).

Table 8. Number of persons 20 years of age and over and percent by selected conditions, stroke status, sex, and age: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Stroke status, sex, and age	Number of persons in thousands	Condition: Diabetes	Hypertension	Heart disease	Blood clots in arms, legs, or lungs
		Percent of persons			
With stroke					
Both sexes 20 years and over	2,692	14.6	48.1	31.8	4.4
20-44 years	287	*6.6	27.5	17.4	*3.1
45-64 years	881	13.4	52.7	29.7	5.3
65 years and over	1,524	16.8	49.4	35.6	4.1
Male 20 years and over	1,316	14.5	42.9	33.6	3.8
20-44 years	125	*8.0	*27.2	*20.0	*1.6
45-64 years	484	13.2	54.1	32.9	*4.3
65 years and over	708	16.4	38.0	36.6	*4.0
Female 20 years and over	1,376	14.7	53.2	30.0	4.9
20-44 years	163	*5.5	27.6	*16.0	*4.3
45-64 years	397	13.6	50.9	25.9	*6.5
65 years and over	817	17.1	59.4	34.8	4.3
Without stroke					
Both sexes 20 years and over	134,487	3.1	12.5	4.9	0.8
20-44 years	72,639	1.0	5.0	1.2	0.4
45-64 years	41,605	4.6	18.2	6.4	1.0
65 years and over	20,243	7.4	27.8	15.2	1.6
Male 20 years and over	63,234	2.8	10.4	5.0	0.5
20-44 years	35,136	0.9	4.9	1.1	0.2
45-64 years	19,812	4.4	16.1	7.4	0.8
65 years and over	8,286	7.4	19.9	16.1	1.1
Female 20 years and over	71,253	3.3	14.4	4.8	1.0
20-44 years	37,503	1.2	5.0	1.3	0.5
45-64 years	21,793	4.8	20.1	5.4	1.2
65 years and over	11,957	7.4	33.3	14.6	1.8

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

symptoms were aged 20-44 years (table 11). Men and women with stroke were equally likely to have experienced stroke-like symptoms within the year. Among the population without a stroke, however, there were proportionately more women than men with symptoms.

About three-fourths of the persons with symptoms had only one of the symptoms listed on the questionnaire (table 12). About one-half of the stroke population, compared with only about 15 percent of persons without a stroke, had two symptoms or more during the year preceding the interview. Paralysis was the symptom most frequently reported for persons having had a stroke (65.8 percent), while numbness was experienced by the greatest number of persons who had never had a stroke (66.9 percent).

One or two additional questions were asked of persons reporting symptoms:

"Did - - see a doctor for his (*symptoms*) (at that time)?" and, if a doctor was seen,

"Was - - hospitalized because of the (*symptoms*)?"

Table 13 contains data derived from answers to these questions. About 60 percent of persons with stroke-like symptoms during the year preceding the interview sought medical attention for the symptoms, and about 1 out of every 3 persons who saw a doctor was subsequently hospitalized. A greater proportion of persons with stroke than without stroke reported medical attention for the symptoms (78.3 percent compared with 56.4 percent). Of persons who saw a doctor for their symptoms, proportionately about 3 times as many persons with stroke as without stroke were hospitalized (62.8 percent compared with 22.0 percent).

Table 9. Number of persons 20 years of age and over and percent distribution and rate per 1,000 population by stroke status, according to selected groups of conditions: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Condition group	*Number of persons in thousands*	*Total*[1]	*With stroke*	*Without stroke*	*With stroke*	*Without stroke*
		Percent distribution			Rate per 1,000 population	
Diabetes	4,593	100.0	8.6	91.4	146.0	30.9
No diabetes	135,314	100.0	1.7	98.3	851.8	968.8
Hypertension	18,269	100.0	7.2	92.8	481.4	125.0
No hypertension	121,508	100.0	1.2	98.8	514.5	873.8
Heart disease	7,518	100.0	11.5	88.5	318.0	48.9
No heart disease	132,332	100.0	1.4	98.6	680.2	950.4
Diabetes only	2,100	100.0	3.9	96.1	30.5	14.9
Hypertension only	13,235	100.0	4.8	95.2	234.8	92.9
Heart disease only	3,513	100.0	7.1	93.0	91.0	24.0
Diabetes and hypertension	1,348	100.0	7.9	92.1	39.4	9.2
Diabetes and heart disease	388	100.0	13.4	86.6	18.9	2.5
Hypertension and heart disease	2,608	100.0	14.0	86.0	134.5	16.5
Diabetes, hypertension, and heart disease	590	100.0	22.6	77.4	49.0	3.4

[1]Excludes persons with unknown stroke status.

Table 10. Number of persons 20 years of age and over and percent distributions by whether stroke-like symptoms present in past year and duration of symptoms, according to stroke status, age, sex, and race: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Stroke status, age, sex, and race	Number of persons in thousands	Symptoms in past year		Total with 1 symptom or more[1]	Duration of symptoms	
		Total[1]	None	1 or more	24 hours or less	More than 24 hours
		Percent distributions				
Total						
Age						
20 years and over[2]	139,965	100.0	97.9	2.1	100.0	61.6	38.4
20-44 years	74,341	100.0	98.5	1.5	100.0	64.2	35.8
45-64 years	43,357	100.0	97.5	2.5	100.0	60.3	39.7
65 years and over	22,266	100.0	97.1	2.9	100.0	59.0	41.0
Sex						
Male	65,801	100.0	98.1	1.9	100.0	57.1	42.9
Female	74,164	100.0	97.8	2.2	100.0	64.8	35.3
Race						
White	123,626	100.0	98.0	2.0	100.0	62.9	37.1
Black	14,420	100.0	96.9	3.1	100.0	53.5	46.3
With stroke						
Age						
20 years and over[2]	2,692	100.0	82.1	17.9	100.0	47.5	52.5
20-44 years	287	100.0	84.7	15.3	100.0	*65.9	*34.1
45-64 years	881	100.0	78.1	21.9	100.0	44.9	55.1
65 years and over	1,524	100.0	83.9	16.1	100.0	46.4	53.6
Sex						
Male	1,316	100.0	80.6	19.4	100.0	45.0	55.0
Female	1,376	100.0	83.5	16.5	100.0	50.0	49.5
Race						
White	2,314	100.0	82.5	17.5	100.0	49.9	50.1
Black	362	100.0	78.5	21.5	100.0	*35.9	64.1
Without stroke						
Age						
20 years and over[2]	134,487	100.0	98.3	1.7	100.0	64.3	35.7
20-44 years	72,639	100.0	98.5	1.5	100.0	63.7	36.3
45-64 years	41,605	100.0	98.0	2.0	100.0	63.8	36.1
65 years and over	20,243	100.0	98.1	1.9	100.0	67.0	33.0
Sex						
Male	63,234	100.0	98.5	1.5	100.0	60.5	39.5
Female	71,253	100.0	98.1	1.9	100.0	66.8	33.2
Race						
White	118,928	100.0	98.4	1.6	100.0	65.3	34.7
Black	13,672	100.0	97.4	2.6	100.0	57.8	42.2

[1] Excludes unknowns.
[2] Includes all races not shown separately.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

Table 11. Number and percent distributions of persons 20 years of age and over with stroke-like symptoms by age and sex, according to duration of symptoms and stroke status: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Stroke status, age, and sex	*Total with 1 symptom or more*[1]	*Duration of symptoms*		*Total with 1 symptom or more*[1]	*Duration of symptoms*	
		24 hours or less	*More than 24 hours*		*24 hours or less*	*More than 24 hours*
	Number in thousands			Percent distributions		
Total						
Age						
20 years and over	2,877	1,671	1,043	100.0	100.0	100.0
20-44 years	1,151	709	396	40.0	42.4	38.0
45-64 years	1,076	605	399	37.4	36.2	38.3
65 years and over	650	357	248	22.6	21.4	23.8
Sex						
Male	1,220	647	486	42.4	38.7	46.6
Female	1,657	1,024	558	57.6	61.3	53.5
With stroke						
Age						
20 years and over	482	214	237	100.0	100.0	100.0
20-44 years	44	*29	*15	9.1	*13.6	*6.3
45-64 years	193	83	102	40.0	38.8	43.0
65 years and over	245	103	119	50.8	48.1	50.2
Sex						
Male	255	104	127	52.9	48.6	53.6
Female	227	110	109	47.1	51.4	46.0
Without stroke						
Age						
20 years and over	2,326	1,417	786	100.0	100.0	100.0
20-44 years	1,088	665	379	46.8	46.9	48.2
45-64 years	851	506	286	36.6	35.7	36.4
65 years and over	386	246	121	16.6	17.4	15.4
Sex						
Male	940	532	347	40.4	37.5	44.1
Female	1,385	885	440	59.5	62.5	56.0

[1] Includes unknown duration.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

Table 12. Number and percent of persons 20 years of age and over with stroke-like symptoms, by stroke status, number of symptoms, and kind of symptom: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Number and kind of symptoms	*Total with 1 symptom or more*[1]	*With stroke*	*Without stroke*	*Total with 1 symptom or more*[1]	*With stroke*	*Without stroke*
	Number in thousands			Percent distribution		
Number of symptoms						
Total	2,877	482	2,326	100.0	100.0	100.0
1	2,236	236	1,962	77.7	49.0	84.4
2	474	160	293	16.5	33.2	12.6
3	116	60	50	4.0	12.4	2.1
4	52	*26	*20	1.8	*5.4	*0.9
	Number in thousands			Percent		
Kind of symptom[2]						
Paralysis	978	317	629	34.0	65.8	27.0
Numbness	1,861	260	1,555	64.7	53.9	66.9
Vision loss	593	110	462	20.6	22.8	19.9
Speech loss	305	152	132	10.6	31.5	5.7

[1] Includes unknown stroke status.
[2] Percents by kind of symptom add to more than 100 as categories are not mutually exclusive.

NOTE: When a figure is shown with an asterisk, it is presented only for the purpose of combining with other cells. An estimate has a relative standard error of less than 30 percent when the aggregate is at least 35,000.

Table 13. Number and percent distributions of persons 20 years and over with stroke-like symptoms by whether doctor seen and, if so, whether hospitalized, according to stroke status: United States, 1977

[Data are based on household interviews of the civilian noninstitutionalized population. The source of data, sampling, and limitations and qualifications of data are given in the technical notes]

Doctor visit and hospitalization status	*Total with 1 symptom or more*[1]	*With stroke*	*Without stroke*	*Total with 1 symptom or more*[1]	*With stroke*	*Without stroke*
	Number in thousands			Percent distributions		
Doctor visit status						
Total[2]	2,877	482	2,326	100.0	100.0	100.0
Doctor seen	1,492	329	1,121	60.4	78.3	56.4
Doctor not seen	978	91	866	39.6	21.7	43.6
Hospitalization status[3]						
Total[4]	1,492	329	1,121	100.0	100.0	100.0
Hospitalized	458	203	247	30.8	62.8	22.0
Not hospitalized	1,027	121	874	69.2	37.5	78.0

[1] Includes unknown stroke status.
[2] Numbers include unknown if doctor seen; percents exclude unknown if doctor seen.
[3] Excludes persons who did not see a doctor.
[4] Numbers include unknown if hospitalized; percents exclude unknown if hospitalized.

References

[1]National Center for Health Statistics: Chronic conditions and impairments of nursing home residents, United States, 1969, by A. Sirrocco. *Vital and Health Statistics*. Series 12-No. 22. DHEW Pub. No. (HRA) 74-1707. Health Resources Administration. Washington. U.S. Government Printing Office, Dec. 1973.

[2]National Center for Health Statistics: Prevalence of chronic circulatory conditions, United States, 1972, by C. S. Wilder. *Vital and Health Statistics*. Series 10-No. 94. DHEW Pub. No. (HRA) 75-1521. Health Resources Administration. Washington. U.S. Government Printing Office, Sept. 1974.

[3]Lilienfeld, A. M., and Gifford, A. J.: *Chronic Diseases and Public Health*. Baltimore. The Johns Hopkins Press, 1966. p. 284.

[4]U.S. Bureau of the Census: *Statistical Abstract of the United States, 1978*, 99th ed. Washington, D.C., 1978. p. 29.

[5]Mules, J.: A population survey of symptoms suggestive of transient ischemic attacks. *Stroke*. 2:114-127, Mar.-Apr. 1971.

[6]Lavy, S.: Hypertension and diabetes as risk factors in stroke patients. *Stroke*. 4:751-759, Sept.-Oct. 1973.

[7]Kuller, L. H.: Survey of stroke epidemiology studies. *Stroke*. 3:579-585, Sept.-Oct. 1972.

Technical notes

The information from the National Health Interview Survey presented in this report is based on data collected during 1977 in a continuing nationwide survey by household interview. Each week a probability sample of households was interviewed by personnel of the U.S. Bureau of the Census to obtain information about the health and other characteristics of each member of the household in the civilian noninstitutionalized population of the United States.

During 1977, there were about 41,000 interviewed households including about 111,000 persons. The total noninterview rate was about 3.3 percent, of which 1.9 percent was due to respondent refusal, and the remainder was primarily due to the failure to find an eligible respondent at home after repeated calls. Stroke data were obtained for each household member 20 years of age and over. This sample included approximately 73,000 persons.

Since the estimates shown in this report are based on a sample of the population rather than on the entire population, they are subject to sampling error. Many tables in this report contain cells in which the estimate of a given characteristic is small. When an estimate or the numerator or denominator of a percent is small, the sampling error may be relatively high. Therefore, differences observed in many of the tables between figures for specific population groups may be due to sampling variability.

Cells containing estimates of questionable statistical reliability are noted by an asterisk (*) and are provided solely to allow readers to recombine cells into useful groupings with greater reliability.

Standard errors appropriate for estimates of the number of persons are shown in table I; standard errors appropriate for estimated percents are shown in table II.

To better understand the limitations of the estimates presented in this report, data users are encouraged to familiarize themselves with the survey design, methods used in estimation, and general qualifications of the data, which are described in appendix I of the 1977 Current Estimates report (Series 10, No. 126, in the *Vital and Health Statistics* series).

Definitions of certain terms used in this report and the questionnaire used during 1977 appear in appendixes II and III of the 1977 Current Estimates report.

Whenever possible, data users should seek other data sources to provide comparative statistics derived from a variety of data-collection mechanisms.

Table I. Standard errors of estimates of aggregates

Size of estimate in thousands	*Standard error in thousands*
35	11
50	13
70	15
100	18
200	26
300	31
500	40
700	48
1,000	57
3,000	98
5,000	125
10,000	174
30,000	278
50,000	325
70,000	340

Table II. Standard errors, expressed in percentage points, of estimated percents

Base of percent in thousands	*Estimated percent*				
	2 or 98	*5 or 95*	*10 or 90*	*20 or 80*	*50*
50	3.6	5.6	7.7	10.2	12.8
70	3.0	4.7	6.5	8.6	10.8
100	2.5	3.9	5.4	7.2	9.0
200	1.8	2.8	3.8	5.1	6.4
300	1.5	2.3	3.1	4.2	5.2
500	1.1	1.8	2.4	3.2	4.0
700	1.0	1.5	2.0	2.7	3.4
1,000	0.8	1.2	1.7	2.3	2.9
3,000	0.5	0.7	1.0	1.3	1.6
5,000	0.4	0.6	0.8	1.0	1.3
10,000	0.3	0.4	0.5	0.7	0.9
30,000	0.1	0.2	0.3	0.4	0.5
50,000	0.1	0.2	0.2	0.3	0.4
70,000	0.1	0.1	0.2	0.3	0.3

Symbols

- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

nchs advancedata

From Vital and Health Statistics of the National Center for Health Statistics Number 69 • April 1, 1981

Office Visits for Preventive Care, National Ambulatory Medical Care Survey: United States, 1977-78

by Beulah K. Cypress, Ph.D., Division of Health Care Statistics

This report provides an estimate of public utilization of office-based physicians for purposes of preventive care. Its focus is on visits for certain examinations and tests that are likely to be undertaken because of the patient's interest in good health maintenance or early detection of disease.

Data on visits for such health-monitoring activities are collected in the National Ambulatory Medical Care Survey (NAMCS) of the National Center for Health Statistics. In this survey the patient's complaint, symptom, or other reason for visit, expressed as nearly as possible in the patient's own words, is recorded by the physician in item 6 of the data collection form. Physicians are instructed to record key words or phrases verbatim to the extent possible. Figure 1 is a facsimile of the 1977-78 Patient Record used by participating physicians to record information about office visits. The *principal* reason (the reason that is listed first in item 6) is the one that in the physician's judgment was most responsible for the patient making the visit. Data on reasons were classified and coded according to a reason for visit classification system presented in another report.[1]

NAMCS is a probability sample survey conducted yearly by the Division of Health Care Statistics. Since the estimates presented in this report are based on a sample rather than on the entire universe of office-based physicians, the data are subject to sampling variability. The technical notes at the end of this report provide a brief explanation of sampling errors and guidelines for judging the precision of the estimates presented as well as definitions of certain terms used in NAMCS. A more detailed description of the sample design and additional definitions have been published elsewhere.[2] The reader should note that estimates of numbers of visits contained in this report are for a 2-year period, but ratios and rates represent average annual estimates.

Pain, discomfort, and other morbidity-related symptoms classified in the symptom module of the reason for visit classification system, because of their compelling nature, were the reasons given most frequently by patients. These reasons constituted 56 percent of all office visits during the 2-year period 1977-78 (table 1). Visits for diagnostic, screening, and preventive care—usually made by asymptomatic patients for reasons other than illness—made up the second largest group, accounting for about 18 percent. The examinations and tests listed in table 2 composed the major part of the diagnostic, screening, and preventive care group and were responsible for about 17 percent of all visits. These specific reasons for visits were selected for this analysis because they are likely to be patient motivated rather than physician initiated; they are also the reasons for visits that are least likely to be related to a morbid condition. Thus they offer a measure of patients' interest in preventive care.

As a group, illness-related reasons in the symptom module exceeded those not necessarily related to illness. Among all specific reasons, however, two nonillness reasons were predominant, ranking first and second. These were general medical examinations and routine prenatal examinations, which accounted for about 5 percent and 4 percent of visits, respectively (table 2). For women, prenatal

[1]National Center for Health Statistics: A reason for visit classification for ambulatory care, by D. Schneider, L. Appleton, and T. McLemore. *Vital and Health Statistics.* Series 2-No. 78. DHEW Pub. No. (PHS) 79-1352. Public Health Service. Washington. U.S. Government Printing Office, Feb. 1979.

[2]National Center for Health Statistics: The National Ambulatory Medical Care Survey, 1977 summary: United States, January-December 1977, by T. Ezzati and T. McLemore. *Vital and Health Statistics.* Series 13-No. 44. DHEW Pub. No. (PHS) 80-1795. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1980.

ASSURANCE OF CONFIDENTIALITY—All information which would permit identification of an individual, a practice, or an establishment will be held confidential, will be used only by persons engaged in and for the purposes of the survey and will not be disclosed or released to other persons or used for any other purpose.

A 033012

1. DATE OF VISIT ___/___/___ Mo/Day/Yr

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

2. DATE OF BIRTH ___/___/___ Mo/Day/Yr

3. SEX
1 ☐ FEMALE
2 ☐ MALE

4. COLOR OR RACE
1 ☐ WHITE
2 ☐ NEGRO/BLACK
3 ☐ OTHER
4 ☐ UNKNOWN

5. WAS PATIENT REFERRED FOR THIS VISIT BY ANOTHER PHYSICIAN?
1 ☐ YES
2 ☐ NO

6. PATIENT'S COMPLAINT(S), SYMPTOM(S), OR OTHER REASON(S) FOR THIS VISIT *(In patient's own words)*
a. MOST IMPORTANT _____
b. OTHER _____

7. TIME SINCE ONSET OF COMPLAINT/SYMPTOM IN ITEM 6a *(Check one)*
1 ☐ LESS THAN 1 DAY
2 ☐ 1-6 DAYS
3 ☐ 1-3 WEEKS
4 ☐ 1-3 MONTHS
5 ☐ MORE THAN 3 MONTHS
6 ☐ NOT APPLICABLE

8. PHYSICIAN'S DIAGNOSES
a. PRINCIPAL DIAGNOSIS/PROBLEM ASSOCIATED WITH ITEM 6a
_____
b. OTHER SIGNIFICANT CURRENT DIAGNOSES
_____
_____

9. HAVE YOU SEEN PATIENT BEFORE?
1 ☐ YES 2 ☐ NO
IF YES, FOR THE CONDITION IN ITEM 8a?
1 ☐ YES 2 ☐ NO

10. SERIOUSNESS OF CONDITION IN ITEM 8a *(Check one)*
1 ☐ VERY SERIOUS
2 ☐ SERIOUS
3 ☐ SLIGHTLY SERIOUS
4 ☐ NOT SERIOUS

11. DIAGNOSTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ LIMITED EXAM/HISTORY
3 ☐ GENERAL EXAM/HISTORY
4 ☐ PAP TEST
5 ☐ CLINICAL LAB TEST
6 ☐ X-RAY
7 ☐ EKG
8 ☐ VISION TEST
9 ☐ ENDOSCOPY
10 ☐ BLOOD PRESSURE CHECK
11 ☐ OTHER *(Specify)* _____
_____

12. THERAPEUTIC SERVICES THIS VISIT *(Check all ordered or provided)*
1 ☐ NONE
2 ☐ IMMUNIZATION/DESENSITIZATION
3 ☐ DRUGS (PRESCRIPTION/NONPRESCRIPTION)
4 ☐ DIET COUNSELING
5 ☐ FAMILY PLANNING
6 ☐ MEDICAL COUNSELING
7 ☐ PHYSIOTHERAPY
8 ☐ OFFICE SURGERY
9 ☐ PSYCHOTHERAPY/THERAPEUTIC LISTENING
10 ☐ OTHER *(Specify)* _____
_____

13. DISPOSITION THIS VISIT *(Check all that apply)*
1 ☐ NO FOLLOW-UP PLANNED
2 ☐ RETURN AT SPECIFIED TIME
3 ☐ RETURN IF NEEDED, P.R.N.
4 ☐ TELEPHONE FOLLOW-UP PLANNED
5 ☐ REFERRED TO OTHER PHYSICIAN
6 ☐ RETURNED TO REFERRING PHYSICIAN
7 ☐ ADMIT TO HOSPITAL
8 ☐ OTHER *(Specify)* _____
_____

14. DURATION OF THIS VISIT *(Time actually spent with physician)*
_____ MINUTES

HRA-34-2
REV. 9-76

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
NATIONAL CENTER FOR HEALTH STATISTICS

O.M.B. #68-R1498

Figure 1. National Ambulatory Medical Care Survey Patient Record Form: 1977-78

Table 1. Number and percent distribution of office visits by reason for visit module: United States, 1977-78

Reason for visit module and RVC code[1]	*Number of visits in thousands*	*Percent distribution of visits*
All modules	1,154,550	100.0
Symptom module. S001-S999	648,990	56.2
Disease module .D001-D999	100,902	8.7
Diagnostic, screening, and preventive module. X100-X599	211,690	18.3
Treatment module .T100-T899	103,586	9.0
Injuries and adverse effects module J001-J999	48,941	4.2
Test results module .R100-R700	6,237	0.5
Administrative module .A100-A140	19,029	1.7
Other[2] .U990-U999	15,185	1.3

[1]Based on the reason for visit classification (RVC). See reference 1.
[2]Includes blanks, problems and complaints not elsewhere classified, entries of "none," and illegible entries.

examinations were proportionately more frequent than general medical examinations. A rough measure of patient motivation toward health care is the ratio of return visits to new-problem visits. On the average, patients giving prenatal care as the reason for visit made about 5.3 return visits for each new-problem visit. Because of these and other sex-specific examinations, the preventive measures shown in table 2 accounted for about 20 percent of visits made by women, compared with 11 percent of those made by men.

Table 3 presents the percent distribution and average annual rates of visits for the selected preventive care measures by sex and age of patients. When the visits were for general medical examinations, eye examinations, or family planning, visit rates for females in all age groups exceeded those for their

Table 2. Number of office visits and percent of visits for preventive care, by sex of patient and selected principal reasons for visit: United States, 1977-78

Principal reason for visit and RVC code[1]		Both sexes	Female	Male
		Number of visits in thousands		
All reasons		1,154,550	694,431	460,119
		Percent of visits		
General medical examination	X100	5.1	5.0	5.3
Well-baby examination	X105	1.2	1.0	1.5
Prenatal examination, routine	X205	3.5	5.8	...
Postpartum examination	X215	0.4	0.6	...
Breast examination	X220	0.1	0.1	*0.0
Gynecological examination	X225	1.2	1.9	...
Eye examination	X230	1.0	1.1	1.0
Blood pressure test	X320	2.1	2.0	2.2
Pap smear	X365	0.7	1.1	...
Prophylactic inoculations	X400	0.7	0.6	0.8
Family planning	X500-X510	0.7	1.0	0.2

[1]Based on the reason for visit classification (RVC). See reference 1.

male counterparts. Figure 2 demonstrates how visit rates for general medical examinations increased with advancing age of the patients, regardless of sex. Rates for well-baby examinations and prophylactic inoculations were similar for both sexes, as might be expected.

Visits for blood pressure tests were more common among men 15-44 years of age than among women the same age, but the comparison is reversed for ages 55 and over. During the middle years, 45-54, women were as likely to visit for blood pressure tests as men were. Figure 3 highlights this phenomenon. Additional information on blood pressure measurement (not necessarily related to the reason for visit) has been published earlier.[3]

Women 25-44 years of age had higher visit rates for gynecological examinations and Pap smears than women in other age groups had. Although professional opinions vary regarding the optimal age and interval for testing for cervical cancer, it appears from these data that women in the childbearing years are more likely than other women to have concern for this aspect of health status.

Table 4 presents data on the utilization for preventive care of the four most visited physician specialties. More than half the visits to specialists in

[3]National Center for Health Statistics: Office visits for diseases of the circulatory system, the National Ambulatory Medical Care Survey: United States, 1975-76, by B. K. Cypress. *Vital and Health Statistics.* Series 13-No. 40. DHEW Pub. No. (PHS) 79-1791. Public Health Service. Washington. U.S. Government Printing Office, Jan. 1979.

Table 3. Number, percent distribution, and average annual rate of office visits for preventive care by sex and age of patient, according to selected principal reasons for visit: United States, 1977-78

Principal reason for visit and RVC code[1]		Number of visits in thousands	Both sexes, all ages	Female					Male				
				Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over	Under 15 years	15-24 years	25-44 years	45-64 years	65 years and over
				Percent distribution of visits									
General medical examination	X100	59,115	100.0	17.7	5.4	12.5	13.5	10.0	17.0	2.5	5.3	9.6	6.6
Well-baby examination	X105	13,726	100.0	48.9	...	...	...	...	51.1	...	...	...	...
Prenatal examination, routine	X205	40,394	100.0	*0.5	47.2	51.8	*0.4	...	...	...	...	...	...
Postpartum examination	X215	4,114	100.0	*3.6	43.1	52.6	*0.7	...	...	...	...	...	...
Breast examination	X220	915	100.0	-	*12.8	*35.1	*35.7	*15.2	-	-	-	-	*1.3
Gynecological examination	X225	13,262	100.0	*0.1	19.7	50.9	25.1	4.3	...	...	...	...	...
Eye examination	X230	11,952	100.0	7.6	10.0	12.7	19.7	12.5	5.9	5.6	7.1	11.0	8.0
Blood pressure test	X320	23,696	100.0	*0.6	*0.4	4.7	26.0	26.5	*0.1	*0.9	6.8	20.5	13.6
Pap smear	X365	7,631	100.0	*0.7	21.5	50.6	23.3	*4.1	...	...	...	...	...
Prophylactic inoculations	X400	8,152	100.0	22.9	5.4	8.0	9.5	7.2	23.9	*3.7	7.7	6.9	4.9
Family planning	X500-X510	7,948	100.0	*1.5	40.9	46.6	*1.3	*0.8	-	*0.6	7.1	*1.2	-
				Average annual visit rate per 1,000 persons									
General medical examination	X100	...	139.6	209.8	79.1	128.1	176.2	224.4	193.4	38.1	58.3	137.6	211.3
Well-baby examination	X105	...	[2]758.4	[2]760.1	...	...	...	...	[2]758.3	...	...	...	...
Prenatal examination, routine	X205	...	[3]184.2	*3.9	473.6	363.2	*3.6	...	...	...	...	...	...
Postpartum examination	X215	...	[3]18.8	*3.0	44.0	37.6	*0.3	...	...	...	...	...	...
Breast examination	X220	...	2.2	-	*2.9	*5.6	*7.2	*5.3	-	-	-	-	*0.6
Gynecological examination	X225	...	[3]60.5	*0.2	64.7	117.3	73.6	21.6	...	...	...	...	...
Eye examination	X230	...	28.2	18.2	29.7	26.4	52.1	56.5	13.6	17.1	15.7	31.9	51.3
Blood pressure test	X320	...	56.0	*2.6	*2.3	19.4	136.4	238.2	*0.4	*5.2	30.1	117.5	173.9
Pap smear	X365	...	[3]34.8	*1.0	40.6	67.0	39.3	*11.8	...	...	...	...	...
Prophylactic inoculations	X400	...	19.3	37.5	10.9	11.3	17.2	22.2	37.5	*7.9	11.7	13.6	21.4
Family planning	X500-X510	...	18.8	*2.3	90.0	70.5	*2.4	*2.4	-	*1.2	20.0	*2.8	-

[1]Based on the reason for visit classification (RVC). See reference 1.
[2]Based on the population under 3 years of age.
[3]Based on the female population only.

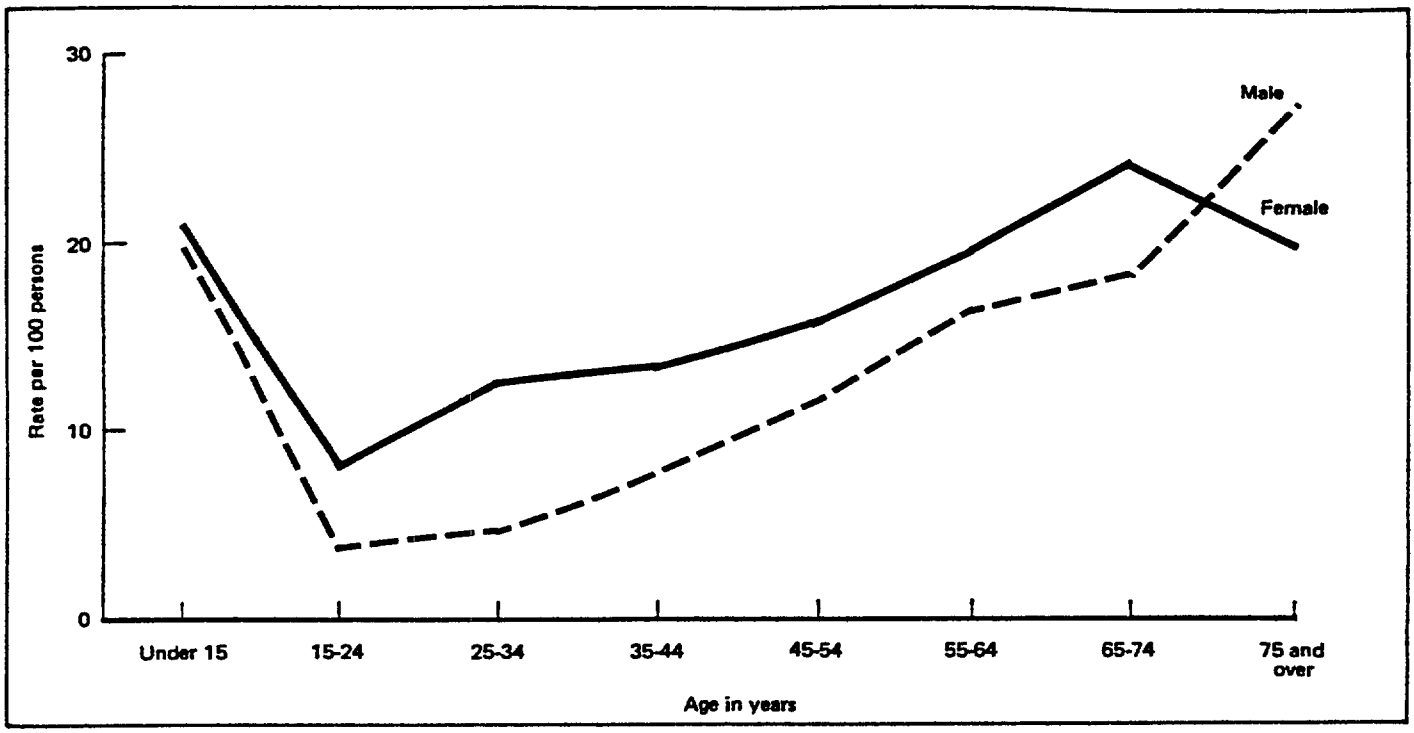

Figure 2. Average annual rate of office visits for general medical examinations, by sex and age of patient: United States, 1977-78

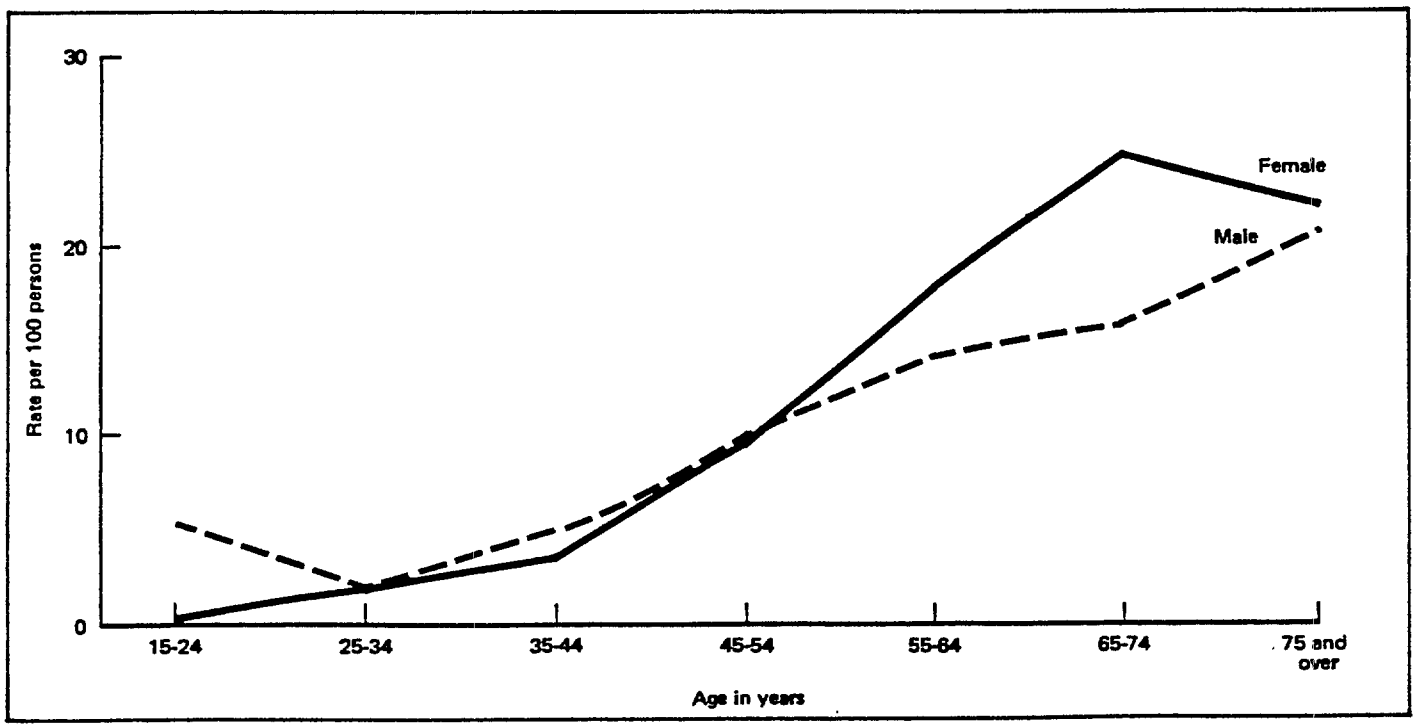

Figure 3. Average annual rate of office visits for blood pressure tests, by sex and age of patient: United States, 1977-78

obstetrics and gynecology were for preventive care, with prenatal examinations the predominant type of visit. Because of the large proportions of general medical examinations and well-baby examinations, about one-fourth of the average pediatrician's practice included visits chiefly for preventive care. Internists and physicians in general and family practice provided proportionately about the same amount of preventive care (about 14 percent of visits for the former and 13 percent for the latter). However, general medical examinations and blood pressure tests constituted a larger share of preventive care

Table 4. Number of office visits and percent of visits for preventive care, by physician specialty, type of practice, and selected principal reasons for visit: United States, 1977-78

Principal reason for visit and RVC code[1]	Physician specialty				Type of practice	
	General and family practice	Internal medicine	Pediatrics	Obstetrics and gynecology	Solo	Other[2]
	Number of visits in thousands					
All visits	433,936	133,291	114,921	104,412	683,404	471,146
	Percent of visits					
General medical examination X100	4.3	7.7	[3]16.0	5.5	4.6	5.8
Well-baby examination X105	0.9	...	[4]8.5	...	0.8	1.7
Prenatal examination, routine X205	2.2	0.0	*0.1	29.1	2.5	4.9
Postpartum examination X215	0.2	-	-	3.0	0.3	0.5
Breast examination X220	*0.0	*0.1	-	*0.2	0.1	0.1
Gynecological examination X225	0.3	*0.1	*0.1	11.1	0.7	1.8
Blood pressure test X320	3.2	5.5	*0.0	*0.1	2.4	1.6
Pap smear X365	1.0	0.4	*0.0	2.2	0.6	0.8
Prophylactic inoculations X400	0.9	0.5	1.2	*0.2	1.0	0.3
Family planning .X500-X510	0.4	0.1	*0.0	1.7	0.6	1.1

[1]Based on the reason for visit classification (RVC). See reference 1.
[2]Includes partnership, group practice, and other.
[3]Includes patients 3 years of age and over.
[4]Includes patients under 3 years of age.

visits for internists than they did for general and family practitioners, probably because internists see proportionately more older patients.

Eye examination is not included in table 4 since 94 percent of such visits were to ophthalmologists. Eye examination as a reason for visit was responsible for 19 percent of the visits to ophthalmologists.

According to the data on type of practice shown in table 4, certain types of preventive care are more common in offices with practice arrangements other than solo. Except for breast examinations, prophylactic inoculations, and blood pressure tests, preventive care visits made up a smaller proportion of visits to solo practitioners than of visits to physicians with other practice arrangements. Blood pressure tests were proportionately more frequently the reason for visits to physicians in solo practice than to others. It is not possible to determine from NAMCS data why visits for certain kinds of preventive care were more common in group than in other practice arrangements. However, the availability of more than one specialty may be a factor since, according to an American Medical Association report, multispecialty groups constituted 59 percent of group practice arrangements in 1975.[4]

Often, patients who visit primarily for illness-related problems also seek preventive care. The secondary reason for visit is also recorded on the Patient Record (figure 1). It is noteworthy that the kinds of preventive care shown in table 5 were mentioned as second reasons for 19.6 million visits in 1977-78. There were almost as many visits with breast examination mentioned second as there were with the same examination given as the principal reason. Obtaining a Pap smear was also frequently a second reason for a visit. A well-baby examination or a routine prenatal examination was likely to be the sole reason for a visit since a relatively small number of records listed either of them second.

An exhaustive list of preventive care activities comprises more than the examinations and tests discussed in this report. Depending on the definition of preventive care that is used, NAMCS preventive

Table 5. Number of office visits with preventive care as second reason for visit: United States, 1977-78.

Second reason for visit and RVC code[1]	Number of visits in thousands
General medical examination X100	2,936
Prenatal examination, routine X205	773
Breast examination X220	852
Gynecological examination X225	1,480
Eye examination X230	852
Blood pressure test X320	4,252
Pap smear X365	4,395
Prophylactic inoculations X400	1,727
Family planning .X500-X510	2,345

[1]Based on the reason for visit classification (RVC). See reference 1.

[4]Goodman, L. J., Bennett, E. H., and Odem, R. J.: *Group Medical Practice in the U.S., 1975.* Chicago. Center for Health Services Research and Development. American Medical Association, 1976.

care visits also include visits for such reasons as patient education, diet and nutritional counseling, social problem counseling, and glucose level determination. Additional data on these and other types of preventive care as well as on other reasons for visit will be presented in more detail in a forthcoming report from the *Vital and Health Statistics* series. Questions regarding this report may be directed to the Ambulatory Care Statistics Branch by calling 301-436-7132.

Technical notes

Source of data

The information presented in this report is based on data collected in the National Ambulatory Medical Care Survey (NAMCS) during 1977 and 1978. The NAMCS universe is composed of office visits made within the conterminous United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice and are not in the specialties of anesthesiology, pathology, or radiology. The National Opinion Research Center, under contract to the National Center for Health Statistics, is responsible for the NAMCS field operations.

Sample design

NAMCS utilizes a multistage probability design that involves samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. For 1977-78 a sample of 6,007 non-Federal, office-based physicians was selected from master files maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for this period was 75.1 percent. Sampled physicians were requested to complete Patient Records (figure 1) for a systematic random sample of office visits taking place during a randomly assigned weekly reporting period. During 1977-78, 98,335 Patient Records were completed by responding physicians.

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance because only a sample, rather than the entire universe, is sampled. 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 percent of the estimate. Relative standard errors for aggregate statistics are shown in tables I and II. Standard errors for estimated percents are shown in tables III and IV.

Table I. Approximate relative standard errors of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Estimated number of office visits in thousands	*Relative standard error in percent*
500	24.9
1,000	17.7
2,000	12.7
5,000	8.3
10,000	6.2
20,000	4.8
50,000	3.8
200,000	3.1
1,000,000	2.9

Example of use of table: An aggregate of 15,000,000 visits has a relative standard error of 5.5 percent, or a standard error of 825,000 visits (5.5 percent of 15,000,000).

Table II. Approximate relative standard errors of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Estimated number of office visits in thousands	*Relative standard error in percent*
500	27.0
1,000	19.6
2,000	14.5
5,000	10.3
10,000	8.5
20,000	7.4
50,000	6.7
100,000	6.4
400,000	6.2

Example of use of table: An aggregate of 7,500,000 visits has a relative standard error of 9.4 percent, or a standard error of 705,000 visits (9.4 percent of 7,500,000).

Table III. Approximate standard errors of percents of estimated numbers of office visits based on all physician specialties: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.5	5.4	7.4	9.9	11.4	12.4
1,000	1.7	3.8	5.3	7.0	8.0	8.8
2,000	1.2	2.7	3.7	5.0	5.7	6.2
5,000	0.8	1.7	2.3	3.1	3.6	3.9
10,000	0.6	1.2	1.7	2.2	2.5	2.8
20,000	0.4	0.9	1.2	1.6	1.8	2.0
50,000	0.2	0.5	0.7	1.0	1.1	1.2
200,000	0.1	0.3	0.4	0.5	0.6	0.6
1,000,000	0.1	0.1	0.2	0.2	0.3	0.3

Example of use of table: An estimate of 20 percent based on an aggregate of 15,000,000 visits has a standard error of 1.9 percent, or a relative standard error of 9.5 percent (1.9 percent ÷ 20 percent).

Table IV. Approximate standard errors of percents of estimated numbers of office visits based on an individual physician specialty: NAMCS, 1977-78

Base of percent (number of office visits in thousands)	Estimated percent					
	1 or 99	5 or 95	10 or 90	20 or 80	30 or 70	50
	Standard error in percentage points					
500	2.6	5.7	7.9	10.5	12.1	13.1
1,000	1.9	4.1	5.6	7.4	8.5	9.3
2,000	1.3	2.9	3.9	5.3	6.0	6.6
5,000	0.8	1.8	2.5	3.3	3.8	4.2
10,000	0.6	1.3	1.8	2.4	2.7	2.9
20,000	0.4	0.9	1.2	1.7	1.9	2.1
50,000	0.3	0.6	0.8	1.1	1.2	1.3
100,000	0.2	0.4	0.6	0.7	0.9	0.9
400,000	0.1	0.2	0.3	0.4	0.4	0.5

Example of use of table: An estimate of 90 percent based on an aggregate of 3,500,000 visits has a standard error of 3.2 percent, or a relative standard error of 3.6 percent (3.2 percent ÷ 90 percent).

Definitions

Ambulatory patient.—An ambulatory patient is an individual presenting himself for personal health services who is neither bedridden nor currently admitted to any health care institution on the premises.

Office.—An office is a place that the physician identifies as a location for his ambulatory practice. Responsibility over time for patient care and professional services rendered there generally resides with the individual physician rather than an institution.

Visit.—A visit is a direct personal exchange between an ambulatory patient and a physician, or between a patient and a staff member working under the physician's supervision, for the purpose of seeking care and rendering health services.

Physician.—A physician is a duly licensed doctor of medicine (M.D.) or doctor of osteopathy (D.O.) currently in office-based practice who spends time in caring for ambulatory patients. Excluded from NAMCS are physicians who are hospital based; physicians who specialize in anesthesiology, pathology, or radiology; physicians who are federally employed; physicians who treat only institutionalized patients; physicians employed full time by an institution; and physicians who spend no time seeing ambulatory patients.

Symbols

---	Data not available
...	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

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From Vital and Health Statistics of the National Center for Health Statistics Number 70 • May 22, 1981

Utilization of Short-Stay Hospitals in the Treatment of Mental Disorders: 1974-1978

by Edmund Graves, Division of Health Care Statistics, and Chris Lovato, formerly with this Division

Introduction

This report presents national estimates on the utilization of non-Federal short-stay hospitals by patients discharged with a diagnosis of mental disorder. Included in the report are data on patients whose first-listed diagnosis is psychosis, neurosis, personality disorder (including alcoholism and drug dependence), or other nonpsychotic mental disorder coded according to the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.*[1] Information on the number of mental disorder discharges, average length of stay, and most frequent diagnostic categories are presented according to patient characteristics for 1974-78. Also included are data on the average length of stay according to patient's expected source of payment for 1978. Discharges of newborn infants are excluded from this report.

The statistics presented are based on data collected through the National Hospital Discharge Survey, a continuous survey which has been conducted since 1965 by the National Center for Health Statistics. A brief description of the sample design, source of data, and definitions of terms used in this report can be found in the technical notes. Several factors should be kept in mind in using the data discussed in this report. It should be noted that the survey does not include persons discharged from long-stay psychiatric facilities. Also, statistics are presented on discharges, not individual patients, since an individual may have been discharged from a hospital more than once.

Since the data presented in this report are based on a sample of all discharges, they are subject to sampling error. See the technical notes for further discussion of sampling error.

Findings

General trends

From 1974 to 1978 an average of 1.5 million persons with a first-listed diagnosis of mental disorder were discharged each year from short-stay hospitals in the United States. The incidence of discharges increased from 1974 to 1978 (table 1). There were an estimated 1.3 million such discharges in 1974 and 1.7 million in 1978, an increase of 28 percent.

When the number of mental disorder discharges are compared with the number of all patients discharged from short-stay hospitals, an average annual mental disorder discharge rate of 44 per 1,000 is indicated across 5 years of data. This rate increased slightly from 41 per 1,000 discharges in 1974 to 48 in 1978. For a given hospital subpopulation, the mental disorder discharge rate is the number of mental disorder discharges divided by the total number of discharges multiplied by 1,000. The rate can be expressed as:

$$\text{MDDR} = \frac{\text{number of first-listed mental disorder discharges} \times 1{,}000}{\text{total number of discharges}}$$

Table 1 also presents the average length of stay for all mental disorder discharges for each year from 1974 to 1978. During this period, the average length of stay for patients diagnosed as having a mental disorder was 11.0 days, compared with 7.5 days for all other diagnoses.

Table 1. Number of patients with a diagnosed mental disorder and average length of stay: United States, 1974-78

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Year	Number of discharges in thousands	Average length of stay in days
1978	1,713	11.2
1977	1,613	10.9
1976	1,471	10.5
1975	1,476	11.1
1974	1,338	11.3

Patient characteristics

As indicated in figure 1, the mental disorder discharge rate was higher for all other patients than for white patients. The largest difference is seen for 1975, in which there was a mental disorder discharge rate of 40 for white patients discharged and 52 for all other patients. It should be noted that color was not stated in a large number of cases (approximately 15 percent). As a result, interpretations should be made with caution.

Table 2 shows, by age and sex group, the number and rate of patients diagnosed as having a mental disorder who were discharged from short-stay hospitals. From 1974 through 1978, the number of males and females hospitalized with a mental disorder was about the same. The rate of hospitalization per 1,000 civilian noninstitutionalized population was higher in 1978 than in 1974. The rates for males were 8.3 and 6.6, respectively, and those for females were 7.8 and 6.3.

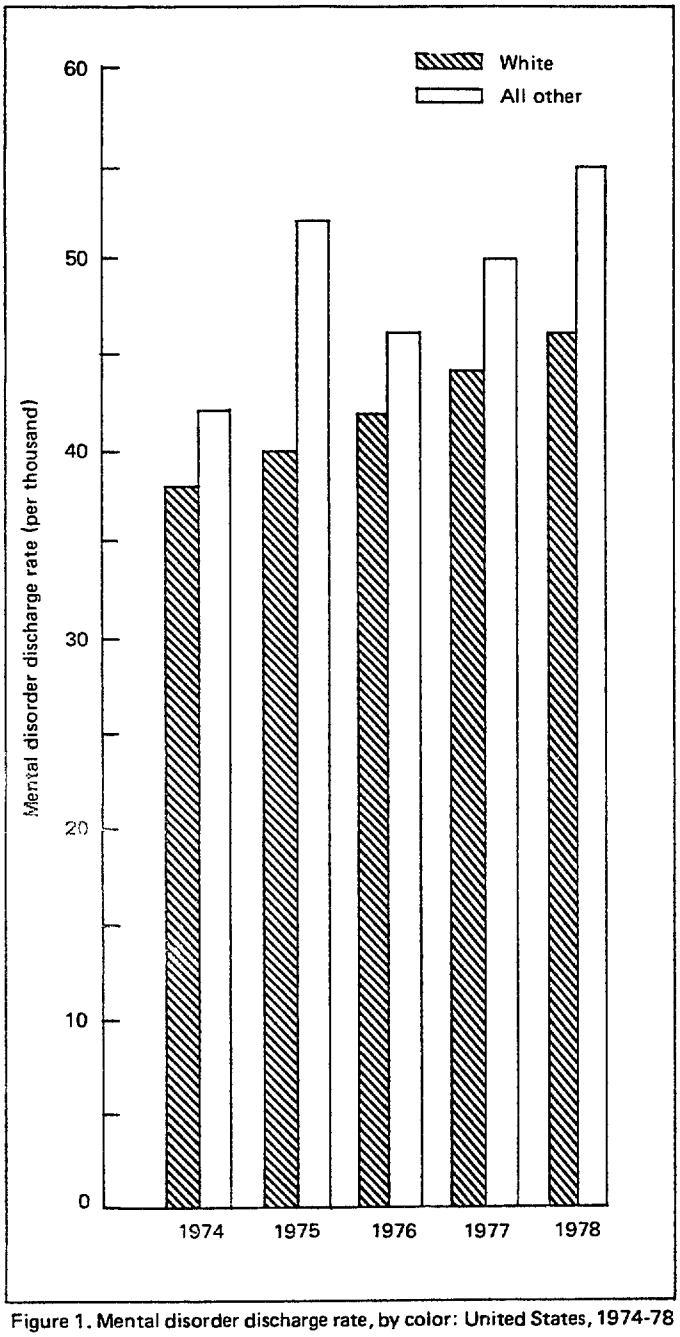

Figure 1. Mental disorder discharge rate, by color: United States, 1974-78

In 1974-78 a total of 3 million patients in the age groups 25-34 and 35-44 with a diagnosed mental disorder were discharged from short-stay hospitals. Together these age groups accounted for 39 percent, or almost 4 out of every 10 patients with a mental disorder. The age groups 15-24 and 45-54 accounted for 33 percent, or a little over 3 out of every 10 patients with a mental disorder. The remaining 30 percent was distributed among the other three age groups, with the under 15 years group accounting for less than 5 percent of the discharges during this period.

Most frequent diagnostic categories

During 1974-78, the two most frequent diagnostic categories for all mental disorder discharges were alcoholism and neurosis (table 3). Together these two categories accounted for almost 6 out of every 10 persons diagnosed with a mental disorder (56 percent). Schizophrenia and effective psychosis ranked third and fourth, respectively, over the 5-year period. These two diagnostic categories accounted for an average of 18 percent of these discharges.

Of the four most common diagnoses described above, affective psychosis and schizophrenia had the two longest average lengths of stay, with an average of 17.5 and 16.6 days, respectively. The average length of stay for neurosis and alcoholism was 9.9 and 8.2 days, respectively.

For females, neurosis was the most common diagnosis for each of the 5 years from 1974 through 1978. This diagnostic category accounted for approximately 38 percent of all females diagnosed with a mental disorder. Alcoholism and schizophrenia were the next two leading categories of female discharges in the 5-year period under discussion. Together these two categories accounted for approximately 26 percent of all diagnoses of mental disorders for females. For males, alcoholism was the leading mental disorder diagnostic category for each year of data analyzed. Approximately 45 percent of all males with a mental disorder diagnosis were discharged with a diagnosis of alcoholism. The second and third most frequent diagnoses were neurosis and schizophrenia, respectively. Together these two diagnostic categories accounted for 29 percent of all males diagnosed with a mental disorder.

Expected source of payment

In 1977, the National Hospital Discharge Survey began collecting data on patient's expected principal

Table 2. Number and rate of patients with a diagnosed mental disorder discharged from short-stay hospitals, by sex and age: United States, 1974-78

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Sex and age	1974	1975	1976	1977	1978
			Number of discharges in thousands		
All mental conditions (except mental retardation)	1,338	1,476	1,471	1,613	1,713
Sex					
Male	657	712	713	810	853
Female	680	765	758	803	860
Age					
Under 15 years	41	42	46	47	42
15-24 years	230	223	236	260	278
25-34 years	270	294	294	347	364
35-44 years	248	281	270	293	319
45-54 years	230	264	254	272	274
55-64 years	167	178	185	200	207
65 years and over	153	192	187	193	229
			Rate of discharges per 1,000 population		
All mental conditions (except mental retardation)	6.5	7.1	7.0	7.6	8.0
Sex					
Male	6.6	7.1	7.0	7.9	8.3
Female	6.3	7.1	7.0	7.3	7.8
Age					
Under 15 years	0.8	0.8	0.9	0.9	0.8
15-24 years	6.1	5.8	6.0	6.5	7.0
25-34 years	9.3	9.8	9.4	10.8	11.0
35-44 years	11.1	12.6	11.9	12.7	13.3
45-54 years	9.8	11.2	10.9	11.7	11.9
55-64 years	8.7	9.1	9.3	9.9	10.1
65 years and over	7.4	9.0	8.6	8.7	10.0

source of payment. This section describes these data for patients with and without mental disorders who were discharged in 1978.

Figure 2 depicts the percent distribution of first-listed diagnosis by source of payment for those patients with and without mental disorders. Approximately 50 percent of all patients without mental disorders and 43 percent of patients with mental disorders listed private or commercial insurance as their principal source of payment. The second leading payment category for patients with and without mental disorders was Medicare. For patients without mental disorders it was 26.1 percent, while for patients with a mental disorder it was 16.6 percent. Together these two payment sources were used by 75.6 percent of all patients without a mental disorder, and 58.8 percent of all patients with a mental disorder. At the other end of the spectrum, Workmen's Compensation was a source of payment for 1.6 percent of all patients without a mental disorder, and 0.3 percent with a mental disorder. "Other" was a source of payment for 1.4 percent of all patients without a mental disorder, and 2.3 percent with a mental disorder. There was no charge for 0.1 percent of all patients without a mental disorder, and 0.2 percent with a mental disorder. Fourteen percent of the patients with mental disorders and 6 percent of the patients without mental disorders did not state their source of payment.

As shown in table 4, the distribution of days of care by source of payment was similar to the distribution of discharges. Individuals with a diagnosed mental disorder expecting to pay hospital charges through private or commercial insurance carriers used the largest proportion of days of care (45.6 percent, or approximately 8.8 million days). Medicare patients utilized the second highest percent of total days of care (19.3 percent, or 3.7 million days). Of the major sources of payment, the smallest proportion of days of care was utilized by patients with Workmen's Compensation (0.2 percent, or 46,000 days of care).

Overall, there was little significant variation in length of stay by source of payment. The most noticeable difference was that patients using private or commercial insurance carriers as a method of payment stayed an average of 3.8 days longer than those utilizing their own resources as a source of payment.

Table 3. Number of patients with a diagnosed mental disorder discharged from short-stay hospitals and average length of stay, by selected first-listed diagnostic categories and sex: United States, 1974-78

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Selected first-listed diagnostic categories, ICDA code,[1] and sex	*1974*	*1975*	*1976*	*1977*	*1978*	*1974*	*1975*	*1976*	*1977*	*1978*
	Number of discharges in thousands					Average length of stay in days				
All mental disorders (290-309)										
Both sexes	1,338	1,476	1,471	1,613	1,713	11.25	11.06	10.50	10.85	11.23
Male	657	711	713	810	853	10.36	9.90	10.18	10.30	10.49
Female	680	765	758	803	860	12.10	12.14	10.80	11.42	11.96
Alcoholism (303)										
Both sexes	339	424	429	468	519	7.98	7.90	8.08	8.54	8.50
Male	274	324	328	362	397	7.69	7.71	8.22	8.66	8.06
Female	65	100	102	106	122	9.19	8.53	7.65	8.13	9.93
Neuroses (300)										
Both sexes	424	421	391	426	437	10.12	10.22	9.37	9.29	10.25
Male	131	123	118	133	136	10.30	9.91	10.43	8.99	10.20
Female	293	298	273	293	301	10.05	10.34	8.92	9.43	10.27
Schizophrenia (295)										
Both sexes	153	165	179	221	222	18.17	17.21	15.99	15.69	16.59
Male	71	73	84	101	108	16.61	14.46	14.96	13.88	16.61
Female	82	93	95	120	114	19.51	19.36	16.91	17.22	16.56
Affective psychosis (296)										
Both sexes	77	83	85	97	124	19.35	18.71	16.71	16.71	16.73
Male	25	26	24	35	41	19.62	20.31	16.51	18.02	15.84
Female	52	56	62	62	83	19.22	17.97	16.76	15.97	17.17

[1] Eighth Revision International Classification of Diseases, Adapted for Use in the United States, 1965.

Table 4. Days of care, number of first-listed diagnosis, and average length of stay for inpatients with and without mental disorders discharged from short-stay hospitals, by sources of payment: United States, 1978

[Discharges from non-Federal short-stay hospitals. Excludes newborn infants]

Source of payment	*With mental disorders*			*Without mental disorders*		
	Days of care	*Number of first-listed diagnosis*	*Average length of stay*	*Days of care*	*Number of first-listed diagnosis*	*Average length of stay*
	In thousands		In days	In thousands		In days
All sources of payment	19,232	1,714	11.2	242,736	33,902	6.9
Self pay	1,204	144	8.3	9,920	1,936	5.1
Workmen's compensation	46	5	9.7	3,689	556	6.6
Medicare	3,714	284	13.1	93,778	8,834	10.6
Medicaid	1,753	181	9.7	16,142	2,547	6.3
Other government payments	812	91	9.0	4,484	783	5.7
Blue Cross, other private or commercial insurance	8,772	723	12.1	97,283	16,787	5.8
No charge	31	3	10.1	254	38	6.7
Other	413	40	10.2	2,870	461	6.2
Not stated	2,487	243	10.2	14,316	1,961	7.3

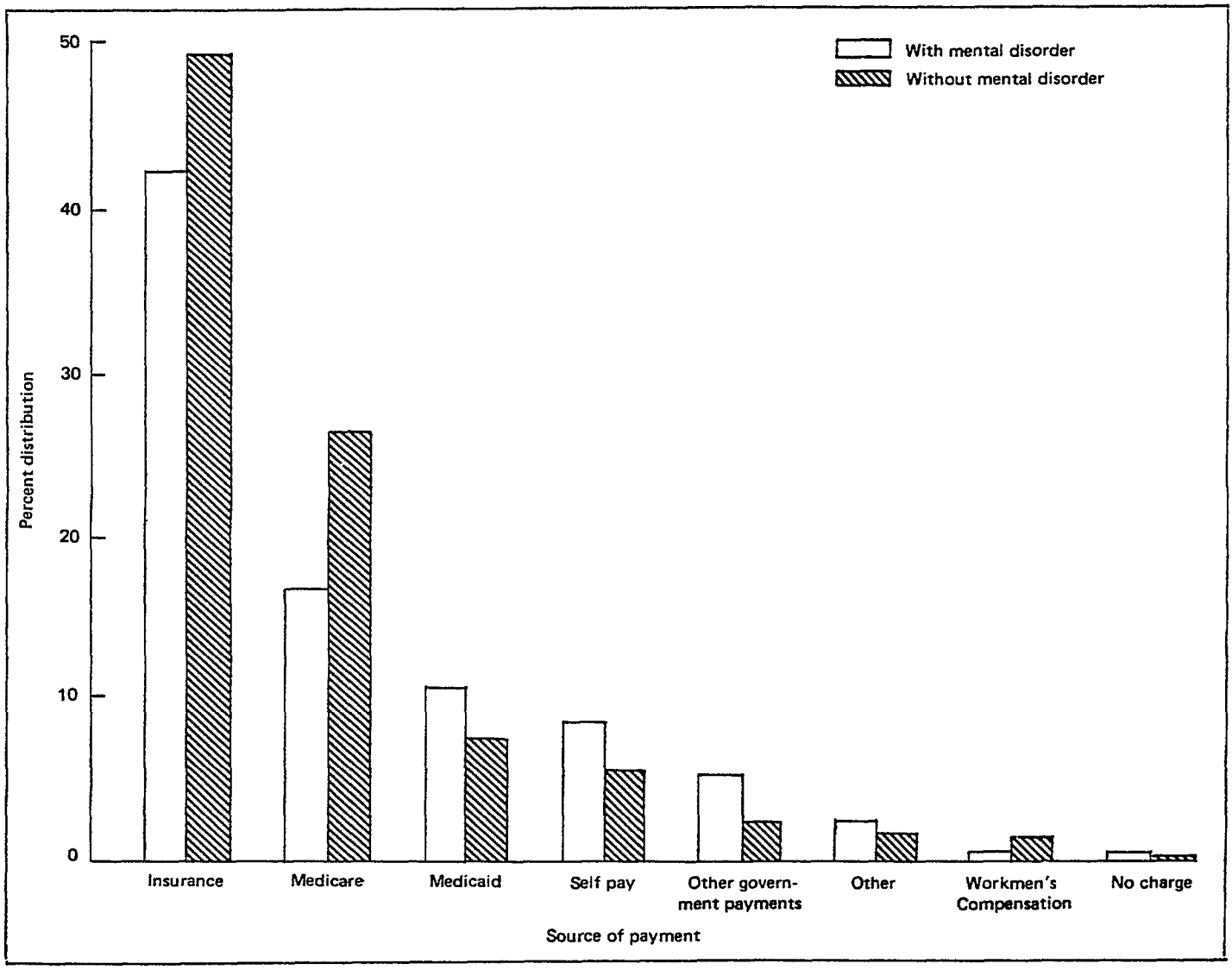

Figure 2. Percent distribution of first-listed diagnosis, by source of payment: United States, 1978

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[5]National Center for Health Statistics: Utilization of short-stay hospitals, annual summary of the United States, 1977, by B. J. Haupt. *Vital and Health Statistics.* Series 13-No. 41. DHEW Pub. No. (PHS) 79-1557. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1979.

[6]National Center for Health Statistics: Utilization of short-stay hospitals, annual summary for the United States, 1978, by B. J. Haupt. *Vital and Health Statistics.* Series 13-No. 46. DHEW Pub. No. (PHS) 80-1797. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1980.

[7]National Center for Health Statistics: Utilization of short-stay hospitals, summary of nonmedical statistics, United States, 1973, by W. F. Lewis. *Vital and Health Statistics.* Series 13-No. 23. DHEW Pub. No. (HRA) 76-1774. Health Resources Administration. Washington. U.S. Government Printing Office, July 1976.

Technical Notes

Survey methodology

Source of data

The scope of the National Hospital Discharge Survey encompasses patients discharged from short-stay noninstitutionalized hospitals, exclusive of military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals with six beds or more and an average length of stay less than 30 days for all patients are included in the survey.

The universe of the survey consisted of 6,965 short-stay hospitals contained in the 1963 Master Facility Inventory of Hospitals and Institutions. New hospitals were sampled for inclusion into the survey in 1968, 1972, 1975, and 1977.

The sample size and number of medical records provided for the survey are presented below. Detailed information in regard to the sample can be found in certain *Vital and Health Statistics* Series reports.[2-6]

Year	Number of participating hospitals	Number of records provided
1978	413	219,000
1977	423	224,000
1976	419	223,000
1975	432	232,000
1974	426	227,000

Sample design

All hospitals with 1,000 beds or more in the universe of short-stay hospitals were selected with certainty in the sample. All hospitals with fewer than 1,000 beds were stratified, the primary strata being 24 size-by-region classes. Within each of these 24 primary strata, the allocation of the hospitals was made through a controlled selection technique so that hospitals in the sample would be properly distributed with regard to type of ownership and geographic division. Sample hospitals were drawn with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals.

Subsamples of discharges were selected within the sample hospitals using the daily listing sheet of discharges as the sampling frame. These discharges were selected by a random technique, usually on the basis of the terminal digit(s) of the patient's medical record number, a number assigned when the patient was admitted to the hospital. The within hospital sampling ratio for selecting sample discharges varied inversely with the probability of selection of the hospitals.

Sampling errors

Since the estimates for this report are based on a sample rather than the entire universe, they are subject to sampling variability. The standard error is primarily a measure of the variability that is attributed to using a value obtained from a sample as an estimate of a population value. The value that would have been obtained had a complete enumeration of the population been made will be contained in an interval represented by the sample estimate plus or minus 1 standard error about 68 out of 100 times, and plus or minus 2 standard errors about 95 out of 100 times.

The relative standard error is obtained by dividing the standard error by the estimate. The resulting value is multiplied by 100, which expresses the standard error as a percentage. The relative standard error applicable to patients discharged (or first-listed diagnosis) and days of care for 1978 data presented in this report are provided in table I. Relative standard error estimates for 1974 through 1977 can be found in earlier publications.[2-5] The formula used for computing the variance of average length of stay has also been published.[7] The two-tailed Bonferroni test for multiple comparisons was performed for testing the difference between two estimates.

Table I. Approximate relative standard errors of estimated number of first-listed diagnoses and days of care

Size of estimate in thousands	First-listed diagnoses	Days of care
	Relative standard error	
1	.370	---
10	.165	.290
100	.080	.165
1,000	.050	.100
10,000	.035	.060

Definition of terms

Patient.—A person who is formally admitted to the inpatient service of a short-stay hospital for observation, care, diagnosis, or treatment. In this report the number of patients refers to the number of discharges during the year including any multiple

NOTE: A list of references follow text.

discharges of the same individual from one or more short-stay hospitals.

Discharge.—The formal release of a patient by a hospital; that is, the termination of a period of hospitalization by death or by disposition to place of residence, nursing home, or another hospital. "Discharges" and "patient discharges" are used synonymously.

Days of Care.—The total number of patient days accumulated at the time of discharge by patients discharged from short-stay hospitals during a year. A stay of less than 1 day (patient admitted and discharged on the same day) is counted as 1 day in the summation of total days of care. For patients admitted and discharged on different days, the number of days of care is computed by counting all days from (and including) the date of admission to (but not including) the date of discharge.

Average Length of Stay.—The total number of patient days accumulated at time of discharge by patients discharged during the year divided by the number of patients discharged.

Mental Disorder Discharges.—Discharges discussed in this report are those designated with a first-listed diagnosis of mental disorder in the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.*[1] Included are three-digit code numbers 290 through 309. Mental Retardation, code 310, is not included in this report.

First-Listed Diagnosis.—The coded diagnosis identified as the principal diagnosis or else listed first on the face sheet of the medical record. The number of first-listed diagnoses is equivalent to the number of discharges.

Age.—Patient's age refers to age at birthday prior to admission to the hospital inpatient service.

Color.—Patients are classified into two groups, "white" and "all other." The all other classification includes all categories other than white.

NOTE: A list of references follow text.

Symbols

---	Data not available
...	Category not applicable
-	Quantity zero
0.0	Quantity more than 0 but less than 0.05
*	Figure does not meet standards of reliability or precision

*U.S. Government Printing Office: 1993 — 301-019/80015

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For answers to questions about this report or for a list of reports published in these series, contact:

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DHHS Publication No. (PHS) 94-1866, Series 16, No. 7