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Advance Data

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Office Visits to Psychiatrists: United States, 1989–90

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Introduction

During the 2-year period 1989–90, an estimated 37.6 million visits were made to nonfederally employed, office-based physicians in the United States who specialized in psychiatry—an average of 18.8 million visits per year. This report summarizes data pertaining to these visits in terms of patient characteristics, physician practice characteristics, and visit characteristics. Two earlier reports provide data on office visits to psychiatrists for the years 1975–76 and 1985 (1,2).

The information presented in this report is based on data collected by means of the National Ambulatory Medical Care Survey (NAMCS), a national probability sample survey conducted by the Division of Health Care Statistics of the National Center for Health Statistics, Centers for Disease Control and Prevention. This survey was conducted yearly from 1973 through 1981, and again in 1985. It resumed an annual schedule with the 1989 survey.

The 1989 and 1990 National Ambulatory Medical Care Surveys shared identical survey instruments, definitions, and procedures. The resulting 2 years of data have been combined to provide more reliable estimates, and the reader should note that the estimates, percent distributions, and rates presented in this report reflect average annual estimates based on the combined 1989 and 1990 data. The Patient Record, the survey instrument used by participating physicians to record information about their patients' office visits, is shown in figure 1.

The estimates presented in this report are based on a sample, rather than on the entire universe, of office visits and, as such, are subject to sampling variability. The Technical notes found at the back of this report include a brief discussion of the sample design, sampling errors, and guidelines for judging the precision of NAMCS estimates. Also located in the Technical notes are definitions of terms used in this report, including the definition of a psychiatrist for NAMCS purposes.

Several limitations of the data should be emphasized. These include the small number of psychiatrists who participated in the 1989 and 1990 surveys (see the Technical notes for additional discussion of sample size), and the exclusion from participation in the survey of all physicians who were not primarily engaged in office-based patient care as defined by the American Medical Association. Psychiatrists who are not classified by the American Medical Association as spending the majority of their professional time in office-based patient care may nevertheless spend a significant proportion of their time engaged in this type of activity in addition to their "principal" activity. Also excluded by the survey design are psychiatrists who see patients at community mental health centers and other government-operated facilities.

It has been estimated that the current NAMCS survey design captures about 84 percent of all ambulatory medical visits to psychiatrists (3). Continuing evaluation of the survey design may result in a broader definition of eligibility for participation in the survey to better reflect the spectrum of ambulatory medical care visits.

Several other publications summarize overall findings from the 1989 and 1990 National Ambulatory Medical Care Surveys (4–6), and reports on visits to other physician specialties and related topics are also available.

To obtain a list of NAMCS publications, readers may contact the Ambulatory Care Statistics Branch at (301) 436-7132.

Patient characteristics

Visits to psychiatrists by patient's age, sex, and race are displayed in

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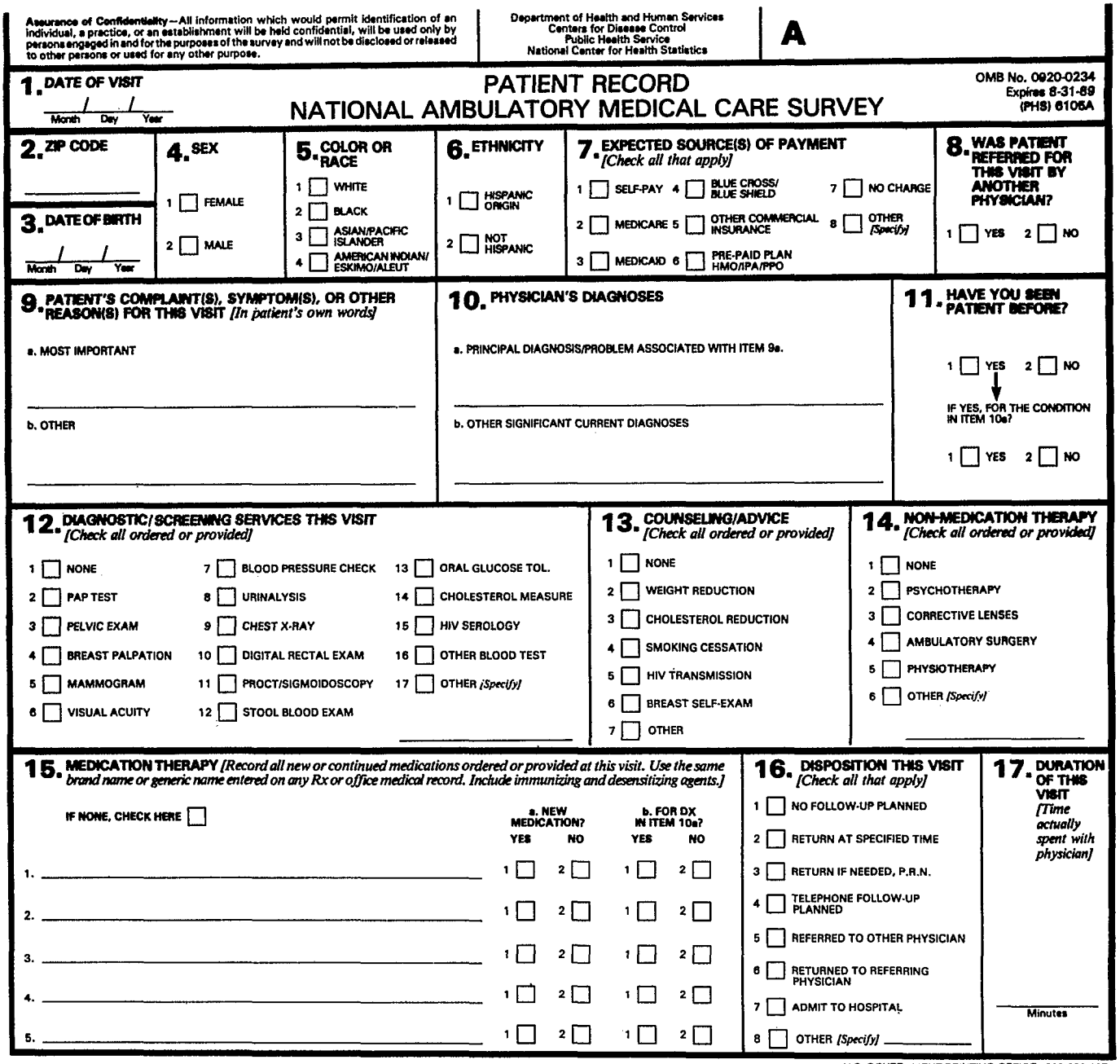
CENTERS FOR DISEASE CONTROL AND PREVENTION



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 and Human Services
Centers for Disease Control
Public Health Service
National Center for Health Statistics

A

PATIENT RECORD
NATIONAL AMBULATORY MEDICAL CARE SURVEY

OMB No. 0920-0234
Expires 8-31-89
(PHS) 6105A

1. DATE OF VISIT — Month / Day / Year

2. ZIP CODE

3. DATE OF BIRTH — Month / Day / Year

4. SEX
1 ☐ FEMALE
2 ☐ MALE

5. COLOR OR RACE
1 ☐ WHITE
2 ☐ BLACK
3 ☐ ASIAN/PACIFIC ISLANDER
4 ☐ AMERICAN INDIAN/ ESKIMO/ALEUT

6. ETHNICITY
1 ☐ HISPANIC ORIGIN
2 ☐ NOT HISPANIC

7. EXPECTED SOURCE(S) OF PAYMENT [Check all that apply]
1 ☐ SELF-PAY
2 ☐ MEDICARE
3 ☐ MEDICAID
4 ☐ BLUE CROSS/ BLUE SHIELD
5 ☐ OTHER COMMERCIAL INSURANCE
6 ☐ PRE-PAID PLAN HMO/IPA/PPO
7 ☐ NO CHARGE
8 ☐ OTHER [Specify]

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

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

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

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

12. DIAGNOSTIC/SCREENING SERVICES THIS VISIT [Check all ordered or provided]
1 ☐ NONE
2 ☐ PAP TEST
3 ☐ PELVIC EXAM
4 ☐ BREAST PALPATION
5 ☐ MAMMOGRAM
6 ☐ VISUAL ACUITY
7 ☐ BLOOD PRESSURE CHECK
8 ☐ URINALYSIS
9 ☐ CHEST X-RAY
10 ☐ DIGITAL RECTAL EXAM
11 ☐ PROCT/SIGMOIDOSCOPY
12 ☐ STOOL BLOOD EXAM
13 ☐ ORAL GLUCOSE TOL.
14 ☐ CHOLESTEROL MEASURE
15 ☐ HIV SEROLOGY
16 ☐ OTHER BLOOD TEST
17 ☐ OTHER [Specify]

13. COUNSELING/ADVICE [Check all ordered or provided]
1 ☐ NONE
2 ☐ WEIGHT REDUCTION
3 ☐ CHOLESTEROL REDUCTION
4 ☐ SMOKING CESSATION
5 ☐ HIV TRANSMISSION
6 ☐ BREAST SELF-EXAM
7 ☐ OTHER

14. NON-MEDICATION THERAPY [Check all ordered or provided]
1 ☐ NONE
2 ☐ PSYCHOTHERAPY
3 ☐ CORRECTIVE LENSES
4 ☐ AMBULATORY SURGERY
5 ☐ PHYSIOTHERAPY
6 ☐ OTHER [Specify]

15. MEDICATION THERAPY [Record all new or continued medications ordered or provided at this visit. Use the same brand name or generic name entered on any Rx or office medical record. Include immunizing and desensitizing agents.]
IF NONE, CHECK HERE ☐

	a. NEW MEDICATION? YES	a. NEW MEDICATION? NO	b. FOR DX IN ITEM 10a? YES	b. FOR DX IN ITEM 10a? NO
1.	1 ☐	2 ☐	1 ☐	2 ☐
2.	1 ☐	2 ☐	1 ☐	2 ☐
3.	1 ☐	2 ☐	1 ☐	2 ☐
4.	1 ☐	2 ☐	1 ☐	2 ☐
5.	1 ☐	2 ☐	1 ☐	2 ☐

16. 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]

17. DURATION OF THIS VISIT [Time actually spent with physician]
Minutes

* U.S. GOVERNMENT PRINTING OFFICE:1990-226-197

Figure 1. Patient Record form

table 1. Overall, this specialty received an average of 7.7 office visits per 100 persons per year for 1989 and 1990, not significantly different from visit rates noted in 1975–76 and 1985 (2). Visit rates were highest among persons 25–44 years of age and 45–64 years of age. These age groups together accounted for more than three-quarters (79.9 percent) of all psychiatrists' visits, with persons in the age group 25–44 years accounting for nearly half of all visits (48.2 percent). Visit rates for these two groups did not differ significantly from each other, at 11.4 visits and 12.8 visits per 100 persons, respectively.

Persons 15–24 years of age and 65 years and over visited psychiatrists significantly less frequently than did persons 25–44 and 45–64 years of age, with 4.2 and 4.6 visits per 100 persons, respectively. Persons under 15 years had the lowest visit rate of the five age groups, with only 1.7 visits per 100 persons. These three age groups (under 15 years, 15–24 years, and 65 years and over) together accounted for only 20.1 percent of visits to this specialty. The age distribution of visits to psychiatrists is contrasted with that of visits to all other physicians in figure 2.

Females accounted for more than half of the visits (59.1 percent) to office-based psychiatrists in 1989–90, significantly higher than the 40.9 percent of visits made by males. However, there was no significant difference found in the rate of visits

Table 1. Annual number, percent distribution, and rate of office visits to psychiatrists by selected patient characteristics and geographic region, averaged over a 2-year period: United States, 1989–90

Patient characteristic	Number of visits in thousands	Percent distribution	Visit rate per 100 persons[1]
Age			
All ages	18,790	100.0	7.7
Under 15 years	940	5.0	1.7
15–24 years	1,484	7.9	4.2
25–44 years	9,065	48.2	11.4
45–64 years	5,950	31.7	12.8
65 years and over	1,351	7.2	4.6
Sex and age			
Female, all ages	11,100	59.1	8.8
Under 15 years	229	1.2	0.9
15–24 years	918	4.9	5.2
25–44 years	5,497	29.3	13.6
45–64 years	3,466	18.4	14.4
65 years and over	990	5.3	5.7
Male, all ages	7,690	40.9	6.5
Under 15 years	712	3.8	2.6
15–24 years	565	3.0	3.2
25–44 years	3,568	19.0	9.2
45–64 years	2,484	13.2	11.2
65 years and over	361	1.9	2.9
Race			
White	17,355	92.4	8.4
Black	1,050	5.6	3.5
Asian and Pacific Islander	201	1.1	---
American Indian, Eskimo, and Aleut	58	0.3	---
Unspecified	126	0.7	---
Geographic region			
Northeast	6,325	33.7	12.8
Midwest	4,132	22.0	6.9
South	5,359	28.5	6.4
West	2,974	15.8	5.7

[1]Visit rates are based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized U.S. population for July 1 of 1989 and 1990, averaged over the 2-year period.

to psychiatrists by females and males during this period (8.8 visits per 100 females per year compared with 6.5 visits per 100 males).

By age group, a somewhat different profile emerged. Males under the age of 15 were significantly more likely to visit a psychiatrist than were females under the age of 15. No significant differences were noted between males and females 15–24 years, 25–44 years, and 45–64 years of age, but the visit rate for females 65 years of age and over was significantly higher than the rate for males in the same age group.

Between 1985 and 1990 no statistical differences were found in visit rates by age and sex. However, significant increases were noted in the percent of visits made by persons 45–64 years of age and 65 years and over, along with a corresponding decrease in the percent of visits by persons 25–44 years of age.

White persons made 92.4 percent of all visits to psychiatrists during 1989–90, while black persons accounted for 5.6 percent. Asians and Pacific Islanders represented only 1.1 percent of these visits. Correspondingly, the visit rate for white persons was higher (8.4 visits per 100 persons per year) than for black persons (3.5 visits per 100 persons).

Physician practice characteristics

Psychiatrists received an average of 2.7 percent of the office visits made to ambulatory care physicians for 1989–90, making them the ninth most visited physician specialty overall (table 2). However, psychiatry was the fifth most visited specialty among persons 25–44 years of age, receiving an annual average of 9.1 million visits by persons in this age group, or 4.5 percent of all visits made by persons 25–44 years of age during 1989–90.

Between 1975 and 1990, the number of visits made to psychiatrists went from a 2-year total of 30.6 million visits during 1975–76 to a 2-year total of 37.6 million visits in 1989–90, but this was not a statistically significant change. The 1975–76 total represented 2.6 percent of all visits to office-based physicians during that period. This was not significantly different from their 1989–90 share.

Visit characteristics

Referral status and prior-visit status

Only 2.1 percent of office visits to psychiatrists were the result of a referral by another physician, significantly lower than the 5.6 percent for visits to all other physicians. The chronic nature of psychiatric illness is underscored by the fact that more than 90 percent of the visits to this specialty were made by patients who were returning to the physician for care of a previously treated condition, compared with 60.2 percent for visits to all other physicians. Only 6.0 percent of psychiatric visits were made by new patients. Visits by referral status and prior-visit status are summarized in table 3.

Expected source of payment

Self-payment was the expected source of payment listed most frequently at visits to psychiatrists (63.5 percent). In contrast, self-payment was cited at only 30.3 percent of visits to all other physicians. Private insurance (including commercial insurance and

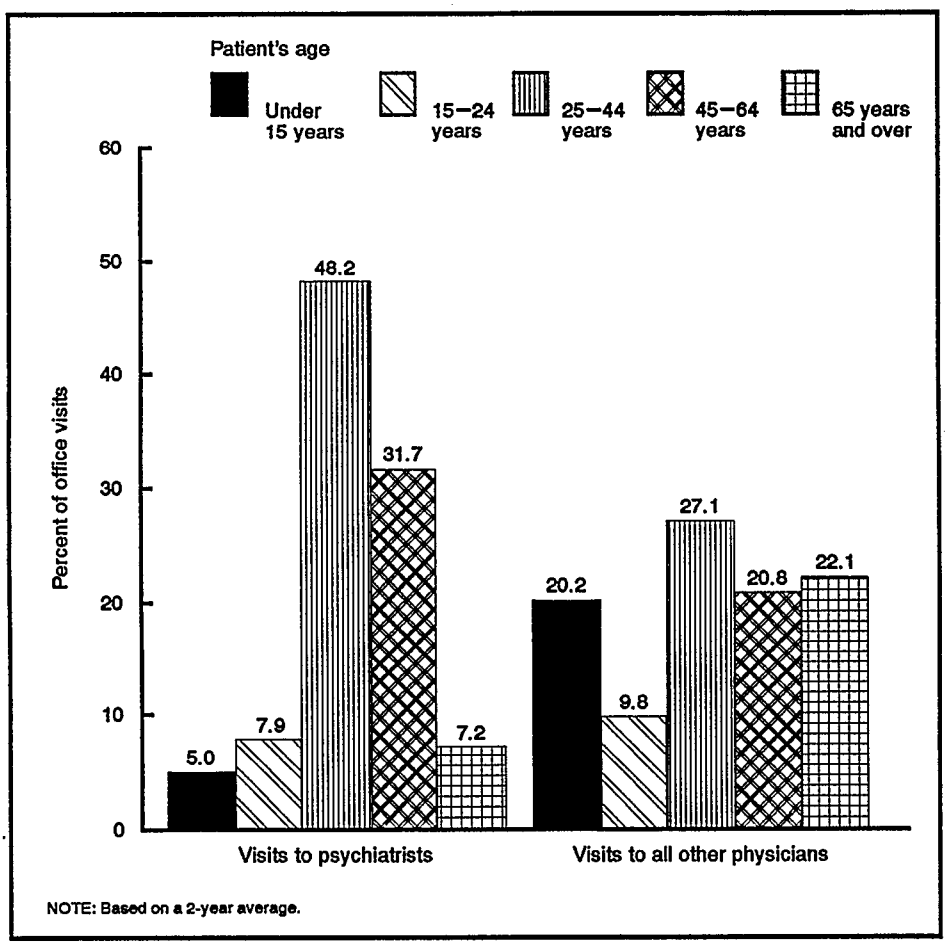


Figure 2. Percent distribution of office visits to psychiatrists and to all other physicians, by patient's age: United States, 1989–90

Blue Cross/Blue Shield) was listed at 41.6 percent of psychiatrists' visits. It should be noted that physicians were able to report more than one expected source of payment per visit. Visits to psychiatrists by expected source of payment are displayed in table 4.

Table 2. Annual number, percent distribution, and rate of office visits by physician specialty, averaged over a 2-year period: United States, 1989–90

Physician specialty	*Number of visits in thousands*	*Percent distribution*	*Visit rate per 100 persons*[1]
All visits	698,653	100.0	285.4
General and family practice	208,045	29.8	85.0
Internal medicine	87,719	12.6	35.8
Pediatrics	84,280	12.1	34.4
Obstetrics and gynecology	59,812	8.6	[2]24.4
Ophthalmology	41,302	5.9	16.9
Orthopedic surgery	34,033	4.9	13.9
Dermatology	25,164	3.6	10.3
General surgery	23,891	3.4	9.8
Psychiatry	18,790	2.7	7.7
Otolaryngology	16,957	2.4	6.9
Cardiovascular diseases	11,040	1.6	4.5
Urological surgery	9,852	1.4	4.0
Neurology	6,167	0.9	2.5
Other	71,603	10.2	29.2

[1]Visit rates are based on U.S. Bureau of the Census estimates of the civilian noninstitutionalized population of the United States for July 1 of 1989 and 1990, averaged over the 2-year period.
[2]Visit rate is 47.2 visits per 100 females. Females made 99.4 percent of the visits to obstetricians and gynecologists during this 2-year period.

Patient's principal reason for visit

Data in table 5 summarize the patient's principal reason for visiting the physician, according to the eight reason for visit modules, or groups of reasons, outlined in *A Reason for Visit Classification for Ambulatory Care* (RVC) (7). Principal reason for visit (item 9a on the Patient Record) is the patient's most important complaint, symptom, or other reason(s) for this visit expressed in the patient's (or patient surrogate's) own words. Up to three reasons per visit may be coded based on the classification system found in the RVC. It should be noted that the principal reason for visit reported at office visits to psychiatrists may be characterized by the psychiatrist based on his or her assessment of the patient's condition, especially when the visit is part of an ongoing course of psychiatric treatment.

Two-thirds (67.8 percent) of all visits to this specialty were due to a symptomatic problem or complaint, with the largest percent of symptoms falling into the category of psychological and mental disorders (62.3 percent). Also prominent was the treatment module, cited at one-quarter (25.9 percent) of the visits.

Specific reasons for visit are listed in table 6. The single most frequently mentioned principal reason for visiting the psychiatrist was depression, recorded at 28.2 percent of visits. Anxiety or nervousness was the second most frequent reason, mentioned at 15.9 percent of visits. It is important to note that the rank ordering found in this and other tables in this report may not always be reliable, because near estimates may not differ from one another because of sampling variability.

Diagnostic and screening services

About 7 percent of visits to psychiatrists included one or more

Table 3. Annual number and percent distribution of office visits to psychiatrists and to all other physicians by patient's referral status and prior-visit status, averaged over a 2-year period: United States, 1989–90

Visit characteristic	Visits to psychiatrists		Visits to all other physicians	
	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution
All visits	18,790	100.0	679,863	100.0
Patient's referral status				
Patient was referred to this visit by another physician	395	2.1	37,830	5.6
Patient was not referred to this visit by another physician	18,395	97.9	642,033	94.4
Patient's prior-visit status				
New patient	1,121	6.0	113,288	16.7
Old patient, new problem	132	0.7	157,506	23.2
Old patient, old problem	17,537	93.3	409,069	60.2

Table 4. Annual number and percent distribution of office visits to psychiatrists and to all other physicians, by patient's expected source of payment, averaged over a 2-year period: United States, 1989–90

Expected source of payment[1]	Visits to psychiatrists		Visits to all other physicians	
	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution
All visits	18,790	100.0	679,863	100.0
Self-pay	11,922	63.5	206,139	30.3
Commercial insurance	5,077	27.0	154,188	22.7
Blue Cross/Blue Shield	2,743	14.6	78,876	11.6
Medicare	1,695	9.0	131,339	19.3
Medicaid	1,156	6.2	55,487	8.2
Prepaid plan/HMO/IPA/PPO[2]	922	4.9	102,420	15.1
No charge	163	0.9	12,746	1.9
Other	1,245	6.6	37,007	5.4
Unknown	107	0.6	14,015	2.1

[1]Numbers may not add to totals because more than one source of payment may be coded for each visit.
[2]HMO is health maintenance organization, IPA is indepedent practice association, and PPO is preferred provider organization.

Table 5. Annual number and percent distribution of office visits to psychiatrists by patient's principal reason for visit, averaged over a 2-year period: United States, 1989–90

Principal reason for visit and RVC code[1]	Number of visits in thousands	Percent distribution
All visits	18,790	100.0
Symptom module .S001–S999	12,743	67.8
General symptoms .S001–S099	347	1.8
Symptoms referable to psychological and mental disorders .S100–S199	11,711	62.3
Symptoms referable to the nervous system (excluding sense organs) .S200–S259	295	1.6
Symptoms referable to the digestive system .S500–S639	197	1.0
Symptoms referable to the musculoskeletal system .S900–S999	93	0.5
All other symptoms .S260–S499,S640–S899	99	0.6
Disease module .D001–D999	585	3.1
Diagnostic, screening, and preventive module .X100–X599	98	0.5
Treatment module .T100–T899	4,875	25.9
Injury and adverse effects module .J001–J999	85	0.5
Other[2] .R100–R700,A100–A140,U990–U999	403	2.3

[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (7).
[2]Includes test results and administrative modules, blanks, problems, and complaints not elsewhere classified, entries of "none," and illegible entries.

diagnostic or screening services ordered or provided by the psychiatrist, compared with 64.3 percent of visits to all other physicians. The "other" category was checked most frequently (5.4 percent). The mental status exam, often used as a diagnostic tool at the patient's initial visit to the psychiatrist, was included in the list of specific diagnostic and screening services on the 1991 NAMCS Patient Record, where it was cited at 40.3 percent of all visits to psychiatrists. It did not appear as a separate category in the NAMCS for 1989 or 1990.

Physician's diagnoses

Data on principal diagnoses rendered at office visits are obtained from item 10a of the Patient Record, which asks physicians to record the principal diagnosis associated with the patient's most important reason for the visit. Diagnoses are classified and coded according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM) (8).

About 9 of every 10 visits to psychiatrists resulted in a principal diagnosis that was classifiable to a mental disorder (ICD–9–CM codes 290–319). Principal diagnoses are presented throughout this report according to a classification system suggested by the American Psychiatric Association (APA) for use with NAMCS data (see Technical notes) (9). Grouped principal diagnoses according to patient's age and sex are presented in tables 7 and 8.

The most frequently reported diagnostic category was mood disorders, including bipolar and depressive disorders, which were reported at 43.1 percent of all visits, for an estimated average of 8.1 million office visits per year for 1989 and 1990. Within this group, depressive disorders predominated, accounting for 6.9 million visits, or 36.8 percent of all visits to office-based psychiatrists.

Table 6. Annual number and percent distribution of office visits to psychiatrists by the 20 most frequently mentioned principal reasons for visit, averaged over a 2-year period: United States, 1989–90

Principal reason for visit and RVC code[1]	Number of visits in thousands	Percent distribution
All visits	18,790	100.0
Depression .S110	5,303	28.2
Anxiety or nervousness .S100	2,983	15.9
Psychotherapy .T410	1,300	6.9
Other signs or symptoms relating to psychological and mental disorders .S165	1,030	5.5
Marital problems .T705	690	3.7
Behavioral disturbances .S130	610	3.2
Medication, other and unspecified kinds .T115	441	2.3
Parent-child problems .T710	372	2.0
Anger .S115	357	1.9
Disturbances of sleep .S135	321	1.7
Social adjustment problems .T730	319	1.7
Occupational problems .T725	294	1.6
Psychosexual disorders .S160	233	1.2
Problems with identity and self-esteem .S120	227	1.2
Fears and phobias .S105	223	1.2
Other problems of family relationship .T715	219	1.2
Delusions or hallucinations .S155	212	1.1
Functional psychoses .D305	209	1.1
Counseling, not otherwise specified .T605	194	1.0
Tiredness, exhaustion .S015	184	1.0
All other reasons	3,070	16.3

[1]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (7).

Anxiety disorders accounted for an average of 2.5 million office visits per year for 1989 and 1990, or 13.4 percent of the total. The most common diagnoses within this group were generalized anxiety disorder (ICD–9–CM code 300.02) with an average of 693,000 visits per year and anxiety state, unspecified (ICD–9–CM code 300.00) with 500,000 visits per year.

Also prominent among the grouped diagnoses were personality disorders. There was an annual average of 1.9 million visits in this category, or 10.2 percent of the total.

Figure 3 illustrates the distribution of secondary diagnoses at visits to office-based psychiatrists. Secondary diagnoses were recorded at 6.8 million visits, or 36.3 percent of the total. The largest group of secondary diagnoses was personality disorders, mentioned at 1.9 million visits, or 27.3 percent of all visits with secondary diagnoses. Depressive disorders were listed at 1.2 million visits, accounting for 17.0 percent of the secondary diagnoses. Ill-defined signs and symptoms and nonpsychiatric medical conditions (1.8 million visits) and anxiety disorders (1.7 million visits) were also prominent among secondary diagnoses.

Visits to other physicians for depression and anxiety

Pyschiatrists, as mentioned earlier, received an annual average of 5.3 million visits at which the patient's reason for visiting the physician was depression, and another 3.0 million visits for anxiety or nervousness during 1989–90. However, an additional 4.0 million visits per year for depression and anxiety were made to physicians other than psychiatrists over the same period. Listed in table 9 are office visits made for selected reasons for visit and diagnoses, according to physician specialty. The data indicate that primary care physicians receive a significant number of visits for many problems that may be psychiatric in nature. An analysis of visits made for depression, anxiety, and related problems to physicians other than psychiatrists is beyond the scope of this report, but is scheduled to be the topic of a later publication in this series.

Therapeutic services

Data on therapeutic services, including the use of medication, ordered or provided at office visits to psychiatrists are shown in tables 10–14. As used in the NAMCS, the term "drug" is interchangeable with the term "medication" and includes all new or continued medications ordered or provided at the visit. This includes prescription and nonprescription preparations, immunizing agents, and desensitizing agents. "Drug mentions" refers to the total number of medications listed in item 15 of the Patient Record. Physicians may record more than one medication per visit, so that the total number of drug mentions may exceed the total number of visits. "Drug visits" refers to visits with at least one mention of medication ordered or provided by the physician. An earlier report describes the method and instruments used in the collection and processing of NAMCS drug data (10).

Table 10 presents data on the range of therapeutic services ordered or provided at visits to office-based psychiatrists. Psychotherapy was the type of therapeutic service mentioned most frequently, at 89.5 percent of the visits. More than one-third (38.6 percent) of psychiatric visits included some form of counseling or advice. This was most often reported in the "other" category (36.7 percent); of the specific types of counseling mentioned on the Patient Record, weight reduction was cited most often, at 2.2 percent of visits.

Medication therapy was mentioned at half of the visits (50.2 percent), somewhat less than the 60.5 percent of visits to all other physicians. More than half of all visits made by females included medication therapy (54.4 percent), significantly higher than the 44.1 percent of visits by males. Overall, the proportion of visits that included medication

Table 7. Annual number and percent distribution of visits to office-based psychiatrists by grouped principal diagnoses, according to patient's sex, averaged over a 2-year period: United States, 1989–90

Grouped principal diagnoses[1]	Patient's sex		
	Total	Female	Male
	Number of visits in thousands		
All visits	18,790	11,100	7,690
Mental retardation, developmental disorders, and other childhood disorders	522	93	429
Hyperkinetic syndrome of childhood	352	56	296
Other	170	*37	133
Delirium, dementia, and other mental disorders due to a general medical condition	81	64	*17
Substance-related disorders	284	80	204
Schizophrenia and other (nonmood) psychotic disorders	1,651	974	676
Mood disorders	8,100	5,420	2,680
Bipolar disorders	1,160	797	363
Depressive disorders	6,920	4,603	2,317
Major depressive disorder	2,820	1,826	994
Dysthymia	3,054	2,011	1,043
Other depressive disorders	1,046	766	280
Other mood disorders	*20	*20	–
Anxiety disorders	2,511	1,503	1,008
Panic disorders	417	289	128
Obsessive-compulsive disorder	410	245	165
Other anxiety disorders	1,684	969	715
Adjustment disorders	1,457	756	700
Personality disorders	1,913	867	1,046
Other mental disorders	1,115	606	509
Other conditions that may be a focus of treatment	470	295	174
Ill-defined signs and symptoms and other nonpsychiatric medical conditions	558	375	183
Unknown	128	66	62
	Percent distribution		
All visits	100.0	100.0	100.0
Mental retardation, developmental disorders, and other childhood disorders	2.8	0.8	5.6
Hyperkinetic syndrome of childhood	1.9	0.5	3.9
Other	0.9	*0.3	1.7
Delirium, dementia, and other mental disorders due to a general medical condition	0.4	0.6	*0.2
Substance-related disorders	1.5	0.7	2.7
Schizophrenia and other (nonmood) psychotic disorders	8.8	8.8	8.8
Mood disorders	43.1	48.8	34.9
Bipolar disorders	6.2	7.2	4.7
Depressive disorders	36.8	41.5	30.1
Major depressive disorder	15.0	16.5	12.9
Dysthymia	16.3	18.1	13.6
Other depressive disorders	5.6	6.9	3.6
Other mood disorders	*0.1	*0.2	–
Anxiety disorders	13.4	13.5	13.1
Panic disorders	2.2	2.6	1.7
Obsessive-compulsive disorder	2.2	2.2	2.1
Other anxiety disorders	9.0	8.7	9.3
Adjustment disorders	7.8	6.8	9.1
Personality disorders	10.2	7.8	13.6
Other mental disorders	5.9	5.5	6.6
Other conditions that may be a focus of treatment	2.5	2.7	2.3
Ill-defined signs and symptoms and other nonpsychiatric medical conditions	3.0	3.4	2.4
Unknown	0.7	0.6	0.8

[1]Diagnostic groupings are based on a classification system developed for the American Psychiatric Association by Michael B. First, M.D., of the New York State Psychiatric Institute, for use with NAMCS data.

therapy was not significantly different from the 46.3 percent noted in 1985.

Table 11 examines psychotherapy and medication therapy used separately or in combination at psychiatrists' office visits according to grouped principal diagnoses. Again, principal diagnoses are combined according to the APA's suggested classification system.

Medication therapy was most often used as an adjunct to psychotherapy; 45.6 percent of all visits listed both psychotherapy and medication therapy ordered or provided by the psychiatrist, while an additional 43.9 percent listed psychotherapy without medication.

Psychotherapy without medication was provided more often than not at visits for adjustment disorders (74.6 percent of visits); personality disorders (72.6 percent); substance-related disorders (64.1 percent); anxiety disorders excluding panic disorder and obsessive-compulsive disorder (56.1 percent); and depressive disorders excluding major depressive disorder (55.4 percent).

About three-quarters (78.6 percent) of visits with diagnoses of major depressive disorder reported the use of psychotherapy and medication. This treatment option was also frequently cited at visits with diagnoses of bipolar disorders (72.9 percent); panic disorder (71.7 percent); hyperkinetic syndrome of childhood (68.7 percent); and schizophrenia and other nonmood psychotic disorders (64.2 percent).

Additional data relating to the utilization of medication at psychiatrists' office visits are shown in tables 12–14. Among visits to psychiatrists, there was an average of 15.9 million drug mentions per year for 1989–90, yielding about 1.7 mentions per drug visit and about 8 mentions for every 10 visits in general. Data pertaining to selected drug characteristics are shown in table 12. Most of the drugs mentioned at visits to office-based psychiatrists were available by prescription only (95.0 percent), were composed of a single ingredient (93.3 percent), were prescribed using a trade name

Table 8. Annual number, percent distribution, and cumulative percent of visits to office-based psychiatrists by grouped principal diagnoses, according to patient's age, averaged over a 2-year period: United States, 1989–90

Grouped principal diagnoses[1]	Number of visits in thousands	Percent distribution	Cumulative percent
Under 15 years			
All visits	940	100.0	...
Mental retardation, developmental disorders, and other childhood disorders	359	38.2	38.2
Hyperkinetic syndrome of childhood	289	30.8	...
Other	70	7.4	...
Adjustment disorders	171	18.1	56.3
Mood disorders	158	16.8	73.1
Depressive disorders	158	16.8	...
All other	252	26.8	100.0
15–24 years			
All visits	1,484	100.0	...
Mood disorders	535	36.1	36.1
Bipolar disorders	63	4.2	...
Depressive disorders	473	31.9	...
Adjustment disorders	228	15.3	51.4
Anxiety disorders	205	13.8	65.2
Mental retardation, developmental disorders, and other childhood disorders	104	7.0	72.2
All other	412	27.8	100.0
25–44 years			
All visits	9,065	100.0	...
Mood disorders	3,764	41.5	41.5
Bipolar disorders	605	6.7	...
Depressive disorders	3,152	34.8	...
Other mood disorders	*8	*0.1	...
Anxiety disorders	1,419	15.7	57.2
Panic disorders	199	2.2	...
Obsessive-compulsive disorder	194	2.1	...
Other anxiety disorders	1,026	11.3	...
Personality disorders	1,041	11.5	68.7
Schizophrenia and other (nonmood) psychotic disorders	786	8.7	77.4
Adjustment disorders	699	7.7	85.1
All other	1,356	15.0	100.0
45–64 years			
All visits	5,950	100.0	...
Mood disorders	2,795	47.0	47.0
Bipolar disorders	397	6.7	...
Depressive disorders	2,398	40.3	...
Anxiety disorders	699	11.8	58.8
Personality disorders	735	12.3	71.1
Adjustment disorders	322	5.4	76.5
All other	1,399	23.5	100.0
65 years and over			
All visits	1,351	100.0	...
Mood disorders	847	62.7	62.7
Bipolar disorders	95	7.1	...
Depressive disorders	740	54.8	...
Other mood disorders	12	0.9	...
All other	504	37.3	100.0

[1]Diagnostic groupings are based on a classification system developed for the American Psychiatric Association by Michael B. First, M.D., of the New York State Psychiatric Institute, for use with NAMCS data.

(77.5 percent), and were not classified as a controlled substance by the Drug Enforcement Agency (74.0 percent).

Data in table 13 summarize the number of drug mentions by therapeutic classification, adapted from therapeutic categories used in the *National Drug Code directory,* 1985 edition (11). In cases where a particular drug was classifiable to more than one therapeutic category, it was listed under the category for which it was most frequently prescribed. As expected, psychopharmacologic drugs were prescribed most frequently (82.8 percent of drug mentions). Within this category, antidepressants (39.7 percent of the mentions), antipsychotic drugs (21.2 percent), and antianxiety agents (15.6 percent) figured most prominently.

The generic substances used most frequently in medications ordered or provided at psychiatric office visits are shown in table 14. Fluoxetine hydrochloride (Prozac) was the most commonly mentioned generic ingredient, with 2.0 million mentions, accounting for 12.7 percent of the total. It should be noted that drugs containing more than one ingredient are listed in the data for each ingredient.

Disposition of visit

Visits to psychiatrists were more likely to include instructions to return at a specific time (93.3 percent) than were visits to all other physicians (60.8 percent). Data on disposition of visit are displayed in table 15.

Duration of visit

More than half (53.6 percent) of all office visits to psychiatrists lasted 41 to 50 minutes (table 16). Average duration of psychiatric visits was 42.7 minutes compared with 15.5 minutes for visits to all other physicians. Average duration is based on the time spent in direct, face-to-face contact between the physician and the patient. It does not include visits of "0"-minutes duration, that is, visits in which the patient did not meet with the physician directly.

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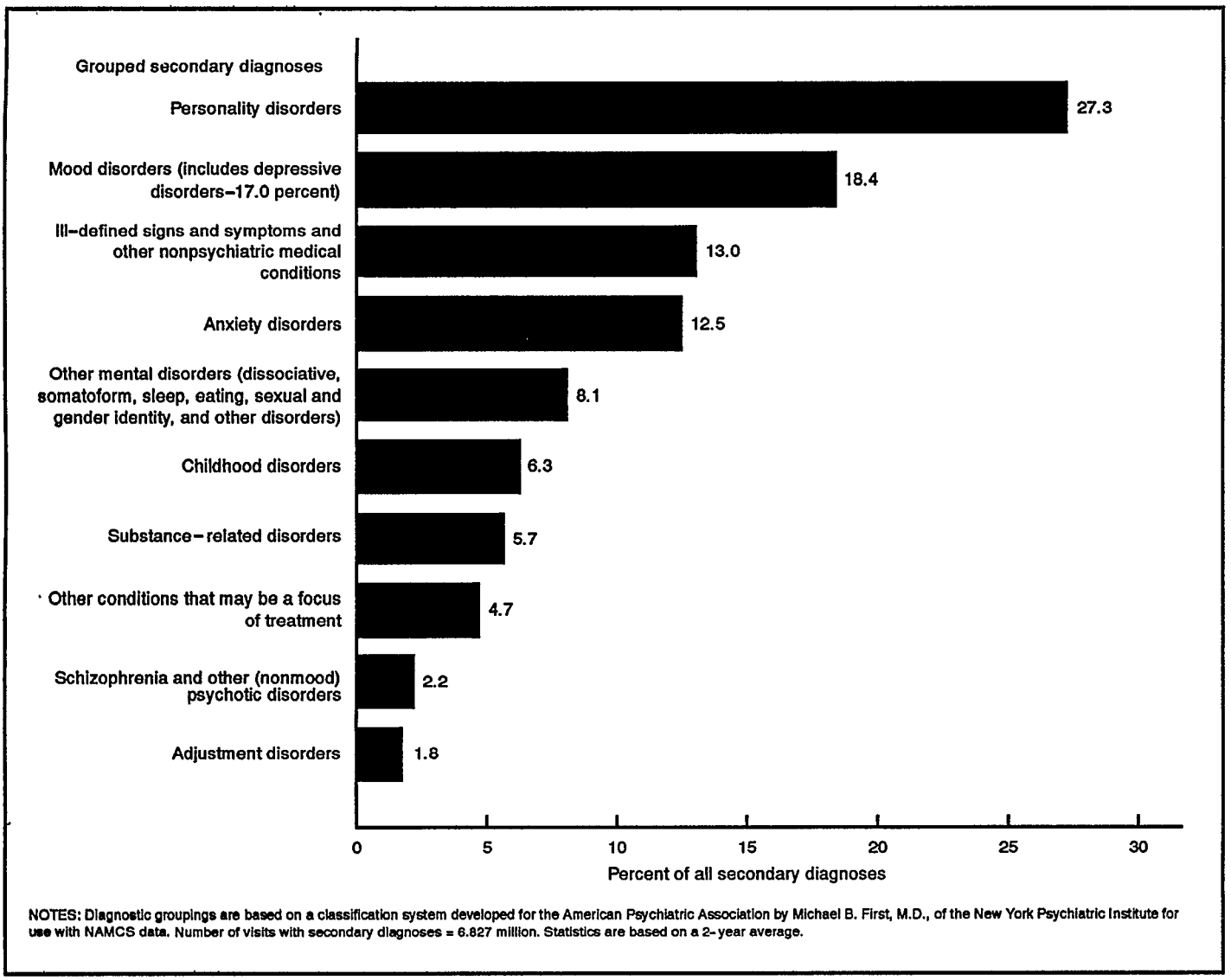

Figure 3. Percent distribution of secondary diagnoses at psychiatrists office visits by diagnostic group: United States, 1989–90

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Table 9. Annual number and percent distribution of office visits for selected principal reasons for visit and grouped principal diagnoses by physician specialty, averaged over a 2-year period: United States, 1989–90

Visit characteristic	Number of visits in thousands	Total	Physician specialty		
			Psychiatry	Primary care[1]	All other specialties
			Percent distribution		
All visits	698,653	100.0	2.7	54.5	42.8
Principal reason for visit and RVC code[2]					
All symptoms referable to psychological and mental disorders .S100–S199	18,945	100.0	61.8	30.4	7.8
Depression .S110	6,956	100.0	76.2	20.7	*3.1
Anxiety and nervousness .S100	5,336	100.0	55.9	37.5	6.6
Disturbances of sleep .S135	1,522	100.0	21.1	64.6	*14.3
Other signs or symptoms relating to psychological and mental disorders .S165	1,365	100.0	75.5	19.9	*4.6
Behavioral disturbances .S130	999	100.0	61.0	32.3	*6.7
Psychosexual disorders .S160	891	100.0	26.1	*17.4	56.5
Anger .S115	357	100.0	100.0	–	–
Fears and phobias .S105	246	100.0	90.6	*9.4	–
Problems with identity and self-esteem .S120	234	100.0	96.9	*3.1	–
Delusions or hallucinations .S155	225	100.0	94.3	*2.8	*2.9
Grouped principal diagnoses[3]					
Mental retardation, developmental disorders, and other childhood disorders	1,490	100.0	35.0	60.8	*4.2
Delirium, dementia, and other mental disorders due to a general medical condition	412	100.0	*19.7	44.0	*36.2
Substance-related disorders	988	100.0	28.7	65.3	*6.0
Schizophrenia and other (nonmood) psychotic disorders	2,100	100.0	78.6	18.3	*3.1
Mood disorders	10,914	100.0	74.2	21.8	4.0
Bipolar disorders	1,175	100.0	98.7	*1.3	–
Depressive disorders	9,718	100.0	71.2	24.3	4.4
Major depressive disorder	3,014	100.0	93.6	*5.9	*0.6
Dysthymia	3,757	100.0	81.3	16.5	*2.3
Other depressive disorders	2,947	100.0	35.5	53.3	*11.2
Other mood disorders	*21	100.0	*95.1	–	*4.9
Anxiety disorders	4,876	100.0	51.5	41.6	*6.9
Adjustment disorders	1,792	100.0	81.3	17.1	*1.6
Personality disorders	1,935	100.0	98.9	*1.1	*0.1
Other mental disorders	3,713	100.0	30.0	45.4	24.5
Other conditions that may be a focus of treatment	2,016	100.0	23.3	40.1	36.6
Ill-defined signs and symptoms and other nonpsychiatric medical conditions	654,311	100.0	0.1	55.5	44.5
Unknown	14,106	100.0	*0.9	54.6	44.5

[1]Includes visits to general and family practitioners, internists, and pediatricians.
[2]Based on *A Reason for Visit Classification for Ambulatory Care* (RVC) (7).
[3]Diagnostic groupings are based on a classification developed for the American Psychiatric Association by Michael B. First, M.D., of the New York State Psychiatric Institute, for use with NAMCS data.

13. National Center for Health Statistics. Public Use Data Tape Documentation, 1990 National Ambulatory Medical Care Survey. Hyattsville, Maryland. 1992.

Table 10. Annual number and percent distribution of office visits to psychiatrists by therapeutic service ordered or provided, averaged over a 2-year period: United States, 1989–90

Therapeutic service ordered or provided at visit[1]	Number of visits in thousands	Patient's sex		
		Total	Female	Male
		Percent distribution		
All visits	18,790	100.0	100.0	100.0
New or continuing medication:				
No drug mentions	9,353	49.8	45.6	55.9
One drug mention	5,106	27.2	28.5	25.2
Two drug mentions	2,862	15.2	17.5	11.9
Three drug mentions	988	5.3	5.5	4.9
Four or five drug mentions	481	2.6	2.9	2.1
Counseling/advice:				
None	11,535	61.4	60.1	63.2
Weight reduction	407	2.2	2.3	2.0
Smoking cessation	121	0.6	0.5	0.8
HIV transmission	62	0.3	*0.1	0.7
Other[2]	6,904	36.7	38.2	34.7
Other nonmedication therapy:				
None	1,055	5.6	4.7	6.9
Psychotherapy	16,819	89.5	91.6	86.6
Other[2]	1,796	9.6	7.7	12.2

[1]Numbers may not add to totals because more than one type of therapy may be ordered or provided at each visit.
[2]None of the specific therapeutic services listed in this category had frequencies large enough to meet NCHS reliability standards.

Table 11. Annual number and percent distribution of visits to office-based psychiatrists by type of therapy ordered or provided, according to grouped principal diagnoses, averaged over a 2-year period: United States, 1989–90

Grouped principal diagnoses[1]	Number of visits in thousands	Type of therapy ordered or provided				
		Total	Psychotherapy with medication	Psychotherapy without medication	Medication without psychotherapy[2]	Neither psychotherapy nor medication[3]
			Percent distribution			
All visits	18,790	100.0	45.6	43.9	4.6	5.9
Mental retardation, developmental disorders, and other childhood disorders	522	100.0	57.9	25.7	11.0	*5.4
Hyperkinetic syndrome of childhood	352	100.0	68.7	14.5	12.6	*4.1
Other	170	100.0	35.5	48.8	*7.6	*8.1
Delirium, dementia, and other mental disorders due to a general medical condition	81	100.0	55.1	37.0	*7.9	...
Substance-related disorders	284	100.0	27.5	64.1	*1.9	*6.4
Schizophrenia and other (nonmood) psychotic disorders	1,651	100.0	64.2	16.7	16.8	*2.4
Mood disorders	8,100	100.0	58.5	35.6	3.8	*2.1
Bipolar disorders	1,160	100.0	72.9	21.5	5.6	...
Depressive disorders	6,920	100.0	56.0	38.1	3.5	2.4
Major depressive disorder	2,820	100.0	78.6	12.8	6.4	2.1
Dysthymia	3,054	100.0	39.1	58.2	*1.0	1.7
Other depressive disorders	1,046	100.0	44.2	47.3	*3.3	5.2
Other mood disorders	*20	100.0	100.0	–	–	–
Anxiety disorders	2,511	100.0	47.1	47.1	2.3	3.4
Panic disorders	417	100.0	71.7	21.2	*7.1	–
Obsessive-compulsive disorder	410	100.0	53.2	35.9	*2.9	*7.9
Other anxiety disorders	1,684	100.0	40.1	56.1	*1.0	2.8
Adjustment disorders	1,457	100.0	18.2	74.6	*3.1	4.1
Personality disorders	1,913	100.0	13.0	72.6	*0.9	13.5
Other mental disorders	1,115	100.0	22.9	58.2	*0.5	18.4
Other conditions that may be a focus of treatment	470	100.0	30.6	47.6	*3.4	18.4
Ill-defined signs and symptoms and other nonpsychiatric medical conditions	558	100.0	37.2	33.3	5.8	23.6
Unknown	128	100.0	30.4	*22.7	29.3	*17.6

[1]Diagnostic groupings are based on a classification system developed for the American Psychiatric Association by Michael B. First, M.D., of the New York Psychiatric Institute, for use with NAMCS data.
[2]An average of 870,000 visits included medication without mention of psychotherapy. Of these, 47.7 percent reported other counseling advice ordered or provided at the visit, and 20.1 percent reported other nonmedication therapy at the visit.
[3]An average of 1.1 million visits did not include psychotherapy or medication therapy. However, 67.3 percent of these cited other nonmedication therapy, and 24.8 percent reported that other counseling/advice was ordered or provided.

Table 12. Annual number and percent distribution of drug mentions at office visits to psychiatrists by selected characteristics, averaged over a 2-year period: United States, 1989–90

Selected characteristics	Number of drug mentions in thousands	Percent distribution
All mentions	15,933	100.0
Entry status		
Generic name	3,012	18.9
Trade name	12,342	77.5
Undetermined	579	3.6
Prescription status		
Prescription drug	15,133	95.0
Nonprescription drug	221	1.4
Undetermined	579	3.6
Composition status		
Single ingredient drug	14,858	93.3
Combination drug	495	3.1
Undetermined	579	3.6
Control status[1]		
Controlled drug	3,564	22.4
Schedule I	–	–
Schedule II	323	2.0
Schedule III	*116	*0.7
Schedule IV	3,125	19.6
Schedule V	–	–
Uncontrolled drug	11,790	74.0
Undetermined	579	3.6

[1]Refers to whether the medication is controlled by the Drug Enforcement Agency (DEA). The DEA classifies drugs into five categories of control depending on therapeutic use and potential for addiction or habituation, with Schedule I drugs having no currently accepted medical use and the highest potential for abuse. Schedule II–V drugs all have currently accepted medical uses, with potential for abuse ranging from high for Schedule II to low relative to more restricted control classes for Schedules III, IV, and V.

Table 13. Annual number and percent distribution of drug mentions at office visits to psychiatrists by therapeutic classification, averaged over a 2-year period: United States, 1989–90

Therapeutic classification[1]	Number of drug mentions in thousands	Percent distribution
All mentions	15,933	100.0
Psychopharmacologic drugs	13,191	82.8
Antidepressants	6,331	39.7
Antipsychotic drugs	3,375	21.2
Antianxiety agents	2,484	15.6
Sedatives and hypnotics	619	3.9
CNS stimulants, anorexiants	382	2.4
Neurologic drugs	1,018	6.4
Anticonvulsants	590	3.7
Drugs used in extrapyramidal movement disorders	428	2.7
Pain relief	287	1.8
Cardiovascular-renal drugs	264	1.7
Gastrointestinal agents	*198	1.2
Hormones and agents affecting hormonal mechanisms	*170	*1.1
Metabolic, nutrient agents	*76	*0.5
Respiratory tract drugs	*52	*0.3
Antimicrobial agents	*38	*0.2
Hematologic agents	*20	*0.1
Other[2]	*40	*0.3
Unclassified, miscellaneous	579	3.6

[1]Therapeutic classification is based on the standard drug classification used in the *National Drug Code directory*, 1985 edition (11).
[2]Includes anesthetics, antidotes, and otologic drugs.

Symbols

- - - Data not available
. . . Category not applicable
– Quantity zero
0.0 Quantity more than zero but less than 0.05
Z Quantity more than zero but less than 500 where numbers are rounded to thousands
* Figure does not meet standard of reliability or precision

Table 14. Annual number, percent distribution, and therapeutic classification of drug mentions at office visits to psychiatrists by the 20 most frequently used generic substances, averaged over a 2-year period: United States, 1989–90

Generic substance	Number of drug mentions in thousands[1]	Percent distribution	Therapeutic classification[2]
All mentions	15,933	100.0	...
Fluoxetine hydrochloride	2,016	12.7	Antidepressants
Lithium	1,269	8.0	Antipsychotic drugs
Alprazolam	951	6.0	Antianxiety agents
Amitriptyline	851	5.3	Antidepressants
Imipramine	606	3.8	Antidepressants
Trazadone	558	3.5	Antidepressants
Thioridazine	553	3.5	Antipsychotic drugs
Nortriptyline	551	3.5	Antidepressants
Diazepam	526	3.3	Antianxiety agents
Desipramine	521	3.3	Antidepressants
Lorazepam	436	2.7	Antianxiety agents
Doxepin	433	2.7	Antidepressants
Trifluoperazine	420	2.6	Antipsychotic drugs
Haloperidol	344	2.2	Antipsychotic drugs
Perphenazine	308	1.9	Antidepressants
Chlorpromazine	293	1.8	Antipsychotic drugs
Temazepam	262	1.6	Sedatives and hypnotics
Benztropine	262	1.6	Drugs used in extrapyramidal movement disorders
Maprotiline	*248	*0.0	Antidepressants
Clonazepam	*245	*0.0	Anticonvulsants

[1]Frequency of mention combines single-ingredient agents with mentions of the agent as an ingredient in a combination drug.
[2]Therapeutic classification is based on the standard drug classification used in the *National Drug Code directory*, 1985 edition (11). In cases where a generic substance had more than one therapeutic classification, it was listed in the category for which it was most frequently prescribed.

Table 15. Annual number and percent distribution of office visits to psychiatrists and to all other physicians, by disposition of visit, averaged over a 2-year period: United States, 1989–90

Disposition of visit[1]	Visits to psychiatrists		Visits to all other physicians	
	Number of visits in thousands	Percent distribution	Number of visits in thousands	Percent distribution
All visits	18,790	100.0	679,863	100.0
Return at specified time	17,526	93.3	413,531	60.8
Return if needed	648	3.5	159,043	23.4
No followup planned	402	2.1	66,941	9.8
Telephone followup planned	226	1.2	25,858	3.8
Admit to hospital	133	0.7	6,849	1.0
Refer to other physician	120	0.6	21,385	3.1
Return to referring physician	*51	*0.3	6,624	1.0
Other disposition	233	1.2	13,292	2.0

[1]Numbers may not add to totals because more than one disposition may be coded for each visit.

Table 16. Annual number and percent distribution of office visits to psychiatrists by duration of visit, averaged over a 2-year period: United States, 1989–90

Duration of visit[1]	Number of visits in thousands	Percent distribution
All visits	18,790	100.0
0 minutes[2]	–	–
1–20 minutes	2,543	13.5
21–40 minutes	3,450	18.4
41–50 minutes	10,077	53.6
51 minutes and over	2,720	14.5

[1]Mean duration of physician-patient contact was 42.7 minutes.
[2]Visits of 0-minutes duration are those in which there was no face-to-face contact between the physician and the patient.

Technical notes

Source of data and sample design

The information presented in this report is based on data collected by means of the National Ambulatory Medical Care Survey (NAMCS) over a 2-year period from 1989 through 1990. The target universe of NAMCS includes office visits made in the United States by ambulatory patients to nonfederally employed physicians who are principally engaged in office practice, but not in the specialties of anesthesiology, pathology, or radiology. Telephone contacts and nonoffice visits are excluded.

A multistage probability sample design is used in NAMCS, involving samples of primary sampling units (PSU's), physician practices within PSU's, and patient visits within physician practices. The PSU's are counties, groups of counties or county equivalents (such as parishes or independent cities), or towns and townships (for some PSU's in New England). Physicians were stratified into 15 specialty groups during the second stage of the survey design. Detailed descriptions of the 1989 and 1990 survey design have been published (4,12,13), and the reader is urged to consult these sources for further technical information.

The 1989 NAMCS physician sample included 2,535 physicians selected from master files maintained by the American Medical Association (AMA) and the American Osteopathic Association (AOA); 104 of these were psychiatrists. Physicians were screened at the time of the survey to ensure that they were eligible for survey participation, based on a set of design criteria; of those screened, 608 physicians, including 30 psychiatrists, were ruled ineligible (out-of-scope), because they were retired; employed primarily in teaching, administration, or research; or other reasons. Of the remaining 1,927 physicians, 74 percent responded to the survey, including 58 psychiatrists, or 78 percent of those surveyed.

Sample physicians were asked to complete Patient Records (see figure 1) for a systematic random

sample of their office visits occurring during a randomly assigned 1-week reporting period. Responding physicians completed 38,384 forms, including 1,184 forms completed by psychiatrists.

For 1990, a sample of 3,063 non-Federal, office-based physicians was selected from master files maintained by the AMA and AOA. Of this number, 127 were psychiatrists. The overall response rate for the 2,269 in-scope physicians was 74 percent; the rate was 71 percent for the 91 in-scope psychiatrists. Responding physicians completed 43,469 patient records, including 1,455 forms from psychiatrists.

Characteristics of the physician practice, such as primary specialty and type of practice, were obtained from the physicians during an induction interview. The U.S. Bureau of the Census, Housing Surveys Branch, was responsible for the survey's data collection. Processing operations and medical coding were performed by the National Center for Health Statistics, Health Care Survey Section, Research Triangle Park, North Carolina.

The 1989 and 1990 National Ambulatory Medical Care Surveys were identical in terms of survey instruments, definitions, and procedures. The resulting 2 years of data have been combined to provide more reliable estimates. All estimates, percent distribution, and rates presented here, unless otherwise noted, reflect 1989 and 1990 data, which were averaged over the 2-year period.

Sampling errors

The standard error is primarily a measure of the sampling variability that occurs by chance when only a sample, rather than an entire universe, is surveyed. The relative standard error of an estimate is obtained by dividing the standard error by the estimate itself; the result is then expressed as a percent of the estimate. Table I shows relative standard errors for estimated numbers of office visits for 1989–90, and table II presents relative standard errors for estimated numbers of drug mentions. Standard errors for estimated percents of visits are shown in table III. Readers wishing to utilize these tables should note that they refer to combined years of data rather than average annual estimates.

Table I. Relative standard errors for estimated numbers of office visits to all specialists and to psychiatrists: National Ambulatory Medical Care Survey, 1989–90

Estimated numbers of office visits	All visits[1]	Visits to psychiatrists[2]
	Relative standard error in percent	
100	72.7	31.1
200	51.5	23.4
500	32.6	17.1
1,000	23.2	14.4
2,000	16.5	12.9
5,000	10.7	11.9
10,000	7.9	11.9
20,000	6.0	11.3
50,000	4.5	11.2
100,000	3.9	11.2
200,000	3.5	11.1
500,000	3.9	11.1
1,000,000	3.2	11.1
1,400,000	3.2	11.1

[1]For visits overall, the smallest reliable estimate is 593,000 visits. Estimates below this figure have a relative standard error greater than 30 percent.
[2]For visits to psychiatrists, the smallest reliable estimate is 110,000 visits.

Example of use of table: An aggregate estimate of 2 million visits to psychiatrists has a relative standard error of 12.9 percent, or a standard error of 258,000 visits (12.9 percent of 2 million).

Alternatively, relative standard errors for aggregate estimates may be calculated using the following general formula, where x is the aggregate of interest in thousands, and A and B are the appropriate coefficients from table IV.

$$\mathrm{RSE}(x) = \sqrt{A + \frac{B}{x}} \bullet 100.0$$

Similarly, relative standard errors for percents may be calculated using the following general formula, where p is the percent of interest and x is the denominator of the percent in thousands, using the appropriate coefficient from table IV.

$$\mathrm{RSE}\,(p) = \sqrt{\frac{B \bullet (1-p)}{p \bullet x}} \bullet 100.0$$

Adjustments for nonresponse

Estimates from NAMCS data were adjusted to account for sample physicians who were in scope but did not participate in the study. This adjustment was calculated to minimize the impact of response on final estimates by imputing to nonresponding physicians data from visits to similar physicians. For this purpose, physicians were judged similar if they had the same specialty designation and practiced in the same PSU.

Test of significance and rounding

In this report, the determination of statistical inference is based on the t-test. The Bonferroni inequality was used to establish the critical value for statistically significant differences (0.05 level of confidence). Terms relating to differences such as "greater than" or "less than" indicate that the difference is statistically significant. A lack of comment regarding the difference between any two estimates does not mean that the difference was tested and found to be not significant.

In the tables, estimates of office visits have been rounded to the nearest thousand. Consequently, estimates will not always add to totals. Rates and percents were calculated from original unrounded figures and do not necessarily agree with percents calculated from rounded data.

Diagnostic classification system used in this report

Physicians' diagnoses were grouped throughout this report according to a classification system suggested by the American Psychiatric Association (APA). Table V shows the proposed groupings of diagnostic codes that were developed for the APA by Michael B. First, M.D. for use with NAMCS data. Diagnostic codes used in this system are based on the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD–9–CM) (8).

Table II. Relative standard errors for estimated numbers of drug mentions at visits to psychiatrists: National Ambulatory Medical Care Survey, 1989–90

Estimated number of drug mentions in thousands[1]	Relative standard error in percent
100	58.2
200	42.9
500	30.3
1,000	24.6
2,000	21.2
5,000	18.9
10,000	18.1
20,000	17.7
50,000	17.4
100,000	17.3
200,000	17.3
500,000	17.2
1,000,000	17.2
1,400,000	17.2

[1]The smallest reliable estimate of drug mentions at visits to psychiatrists is 514,000. Estimates below this figure have a relative standard error greater than 30 percent.

Example of use of table: An aggregate estimate of 10 million drug mentions has a relative standard error of 18.1 percent or a standard error of 1,810,000 mentions (18.1 percent of 10 million).

Table IV. Coefficients appropriate for determining relative standard errors by type of estimate and physician groups: National Ambulatory Medical Care Survey, 1989–90

Type of estimate and physician group	Coefficient (for estimates in thousands) A	B
Visits		
Overall totals	0.00097549	52.77952184
General and family practice, internal medicine	0.00456412	37.27953208
Pediatrics, obstetrics and gynecology	0.00755165	23.43030623
Doctors of osteopathy, general surgery, orthopedic surgery, cardiovascular diseases, psychiatry, urological surgery, dermatology, neurology, ophthalmology, otolaryngology	0.01236777	8.46452955
All other	0.01169917	39.38793804
Drug mentions		
Overall totals	0.00157151	81.47054833
General and family practice, internal medicine	0.00589721	59.72807201
Psychiatry	0.0296738	30.9506771
Doctors of osteopathy, general surgery, orthopedic surgery, cardiovascular diseases, urological surgery, dermatology, neurology, ophthalmology, otolaryngology, obstetrics and gynecology, pediatrics	0.01603845	11.42009384
All other	0.01877082	70.35063675

Table III. Standard errors for percents of estimated numbers of office visits to psychiatrists: National Ambulatory Medical Care Survey: 1989–90

Base of percent (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					
200	2.1	4.5	6.2	8.2	9.4	10.3
500	1.3	2.8	3.9	5.2	6.0	6.5
1,000	0.9	2.0	2.8	3.7	4.2	4.6
2,000	0.6	1.4	2.0	2.6	3.0	3.3
5,000	0.4	0.9	1.2	1.7	1.9	2.1
10,000	0.3	0.6	0.9	1.2	1.3	1.5
20,000	0.2	0.5	0.6	0.8	1.0	1.0
50,000	0.1	0.3	0.4	0.5	0.6	0.7
100,000	0.1	0.2	0.3	0.4	0.4	0.5
600,000	<.1	0.1	0.1	0.2	0.3	0.4

Example of use of table: An estimate of 30 percent based on an aggregate estimate 10 million visits has a standard error of 1.3 percent or a relative standard error of 4.3 percent (1.3 percent divided by 30 percent).

Table V. Proposed groupings of ICD–9–CM codes for use with National Ambulatory Medical Care Survey data

Grouped principal diagnoses[1]	ICD–9–CM codes[2]
Mental retardation, developmental disorders, and other childhood disorders	299,307.0,307.2–307.3,307.52–307.53,307.6–307.7, 309.21,312.0–312.2, 312.4–315,317–319
Hyperkinetic syndrome of childhood	314
Other	299,307.0,307.2–307.3,307.52–307.53,307.6–307.7, 309.21,312.0–312.2,312.4–313,315,317–319
Delirium, dementia, and other mental disorders due to a general medical condition	290,293–294,310
Substance-related disorders	291–292,303–305
Schizophrenia and other (nonmood) psychotic disorders	295,297,298
Mood disorders	296.0–296.9,300.4,301.13,311
Bipolar disorders	296.0–296.1,296.4–296.81,296.89,301.13
Depressive disorders	296.2–296.3,296.82,300.4,311
Major depressive disorder	296.2–296.3
Dysthymia	300.4
Other depressive disorders	296.82,311
Other mood disorders	296.6
Anxiety disorders	300.0–300.9,300.2–300.3,308,309.81,309.89
Adjustment disorders	309.0–309.1,309.23–309.3,309.4,309.82–309.83,309.9
Personality disorders	301.0–301.12,301.2–301.50,301.59–301.9
Other mental disorders[3]	300.10–300.19,300.5–300.9,302,306,307.1,307.4, 307.50,307.51,307.54,307.59,307.8,307.9,312.3, 316,648.4,780.5
Other conditions that may be a focus of treatment[4]	V11,V17.0,V60–V63,V65–2,995.2,995.5,995.81
Ill-defined signs and symptoms and other nonpsychiatric medical conditions	001–289,320–648.3,648.5–780.4,780.6–995.1,995.3, 995.4,995.89–999.9,V01–V10,V12–V16,V17.1–V59.9, V64–V65.1,V65.3–V82
Unknown	Includes blank, illegible, and uncodable diagnoses.

[1]Diagnostic groupings are based on a classification developed for the American Psychiatric Association by Michael B. First, M.D., of the New York State Psychiatric Institute, for use with National Ambulatory Medical Care Survey data.
[2]Diagnostic codes are based on the *International Classification of Diseases, 9th Revision, Clinical Modification, ICD–9–CM* (8).
[3]Includes dissociative disorders, somatoform disorders, sleep disorders, eating disorders, disorders of sexual and gender identity, impulse control disorders, and other disorders.
[4]Includes housing, household, and economic circumstances; other family circumstances (family disruption, marital problems, parent-child problems, etc.); other psychosocial circumstances; and other conditions.

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Definition of terms

Ambulatory patient—An ambulatory patient is an individual seeking personal health services who is not admitted to any health care institution on the premises.

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

Psychiatrist—A physician described in this report as a psychiatrist has self-designated a practice specialty of psychiatry, psychoanalysis, or child psychiatry on the AMA's Physicians' Professional Activities Questionnaire. The physician's specialty is also verified during the NAMCS interview. About 72 percent of the visits to office-based psychiatrists were made to physicians who were certified by the American Board of Psychiatry and Neurology.

Office—An office is the space that physicians identify as a location for their ambulatory practice. Offices customarily include consultation, examination, or treatment spaces that patients associate with the particular physician.

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 personal health services.

Drug mention—A drug mention is the physician's entry of a pharmaceutical agent—by any route of administration—for prevention, diagnosis, or treatment. Generic as well as brand-name drugs are included as are nonprescription and prescription drugs. Along with all new drugs, the physician also records continued medications if the patient was specifically instructed during the visit to continue the medication.

Drug visit—A drug visit is a visit in which medication was prescribed or provided by the physician.

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