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Visits to Office-Based Physicians by Hispanic Persons: United States, 1980–81

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This report presents National Ambulatory Medical Care Survey (NAMCS) information on visits to office-based physicians by Hispanic persons. NAMCS is a national survey used to collect data on the demographic characteristics, medical problems, and medical management of patients making visits to office-based physicians. As such, the survey is uniquely valuable for providing an overview of the office-based medical care obtained by Hispanic Americans.

Although the Hispanic population of the United States is the sixth largest in the world,¹ only recently has much attention been focused on this group's need for health care services. Increased interest in the specific factors affecting this minority's use of health care resources also has been evident. Two of the factors most often considered are socioeconomic status²⁻⁵ and type of medical insurance coverage, if any.^{3,6}

Currently, the principal source of objective information on the health status of Hispanic Americans is the Hispanic Health and Nutrition Examination Survey (HHANES), which was conducted by the National Center for Health Statistics from July 1982 through December 1984.⁷ HHANES was designed to assess the physical and mental health status of three special population subgroups in selected areas of the United States—Mexican Americans in selected areas of five Southwestern States (Texas, Colorado, New Mexico, Arizona, and California); Cuban Americans in Dade County, Florida; and Puerto Ricans in the New York City metropolitan area (New York, New Jersey, and Connecticut). The health and nutritional status of the sample members was assessed by means of physical examinations (including dental examinations and anthropometric measurements), diagnostic testing (including laboratory analyses), and personal interviews. The survey was not designed to be a national Hispanic survey, so national estimates for the Hispanic population cannot be made, but it is estimated that the three HHANES universes included approximately 76 percent of the population of Hispanic origin

in the United States in 1980. Initial results of the survey are being publicized.^{8,9}

The prime source of national estimates of the level of use of all health care services by Hispanic persons, and of information on self-reported health status, is the National Health Interview Survey (NHIS). In this population-based survey, respondents from a sample of households are asked numerous health-related questions, and also are asked if they have specific Hispanic national origins or ancestry (for example, "Puerto Rican," "Mexican-American," or "Other Spanish"). Consequently, NHIS information on self-reported health items can be used not only for comparisons between Hispanic and non-Hispanic persons, but also for comparisons among the major Hispanic-origin groups in the United States. In an NCHS report analyzing selected 1978–80 data on Hispanic persons,¹⁰ the authors found that the average annual number of all outpatient physician contacts (including hospital clinic visits and telephone calls) did not differ significantly among Hispanic persons (4.4 per person), white non-Hispanic persons (4.8), and black non-Hispanic persons (4.6). Further analysis, however, revealed that national origin had substantial effects which were obscured by grouping all Hispanic persons together—Mexican Americans had significantly fewer physician contacts (3.7 per person per year) than either white or black non-Hispanic persons, and Puerto Ricans and Cuban Americans had significantly more (6.0 and 6.2 contacts, respectively). Therefore, national origin must be viewed as a very important variable in understanding Hispanic persons' use of health care services.

Data source and limitations

This report summarizes the characteristics of Hispanic persons' 1980 and 1981 visits to office-based physicians. Significant differences between the visits made by Hispanic patients and those made by other patients also are discussed.

NAMCS is a sample survey of the ambulatory care provided during office visits to office-based physicians in the United States, excluding Alaska and Hawaii. NAMCS was conducted annually by the National Center for Health Statistics from 1973 through 1981, and again in 1985. A summary of the survey methodology is presented in the technical notes appended to this report, as are selected definitions and guidelines for judging the precision of estimates.

It is important to note that the statistics presented in this report are derived from combined 1980 and 1981 NAMCS data files. Consequently, the frequency estimates represent visit totals for the 2-year period, but the percent distributions and rates represent annual averages.

Two aspects of NAMCS are particularly crucial to the interpretation of the information presented in this report and warrant special attention. First, NAMCS includes only visits made to the offices of physicians who are engaged primarily in office-based care; the data cannot be generalized to describe all outpatient medical care. Second, the question of defining the Hispanic population is always difficult and somewhat arbitrary.¹ In NAMCS, sample physicians are asked to report whether a patient making a sample visit is of "Hispanic origin" (defined as "a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race"), or is "not Hispanic" (defined as "any person not of Hispanic origin"). As a result, NAMCS has no information on the specific national origins of the Hispanic patients who make sample visits. In addition, the reporting of Hispanic ethnicity depends on the extent and accuracy of the physician's knowledge of, and perceptions of, the patient's background. Because of this factor, NAMCS may underestimate the number of visits made by Hispanic persons, and such underestimation may affect the results of analysis. This issue is considered in greater detail later in this report.

Patient demographics

During 1980 and 1981, Hispanic persons made an estimated total of 53.3 million visits to office-based physicians, or 1.8 per person per year (see table 1). This was substantially lower than the estimated rate for non-Hispanic persons (2.7 visits per person per year). Although the visit rate for Hispanic persons was lower than that for all other persons for each of the five age groups displayed in table 1, the differences are statistically significant for only the three

youngest groups. In the age groups of under 15 years, 15–24 years, and 25–44 years, Hispanic persons had average annual visit rates of 1.3, 1.3, and 1.9 visits per person, respectively. In comparison, the corresponding average annual visit rates for all other persons were 2.2, 2.1, and 2.5 visits per person, respectively.

The differences between the rates for Hispanic persons and those for non-Hispanic persons highlight the most problematic aspect of the information presented in this report—the question of the accuracy with which Hispanic ethnicity was reported in NAMCS. Careful consideration of other relevant information leads to the conclusion that the extreme magnitude of this difference is an artifactual finding resulting from the survey methodology.

Evidence that NAMCS underestimated Hispanic persons' visits to office-based physicians in 1980 and 1981 can be found in NHIS data. NHIS rates should be similar to, but not identical with, NAMCS rates because the universe of office visits as measured by NHIS overlaps, but does not coincide with, the universe of office visits to office-based physicians as measured by NAMCS. However, unpublished estimates from the 1980 and 1981 NHIS surveys yield office visit rates of 3.0 per person per year for Hispanic persons and 3.2 per person per year for non-Hispanic persons. The difference between these rates is in the same direction as the NAMCS difference in rates but is not large enough to be statistically significant.

The major reason for the difference between the NAMCS data and the NHIS data appears to be the different approaches used to identify Hispanic persons. The self-identification method of ethnicity classification utilized in NHIS appears to be much stronger than the provider-identification method used in NAMCS. For this reason, the large difference found in NAMCS between the visit rate for Hispanic persons and that for non-Hispanic persons should be considered the result of an undercount of visits made by Hispanic persons and a concomitant overcount of visits made by non-Hispanic persons.

The percent distributions displayed in table 1 also indicate that the Hispanic patients were significantly younger than the non-Hispanic patients. Of all visits made by Hispanic persons, 70.2 percent were made by patients under 45 years of age, compared with 58.7 percent of the visits made by non-Hispanic persons. The median ages further illustrate this difference: the estimated median patient ages were 30 years

Table 1. Number, percent distribution, and average annual rate of office visits to office-based physicians by patient age, according to patient ethnicity: United States, 1980–81

Age	Hispanic ethnicity			Other ethnicity		
	Number in thousands	Percent distribution	Average annual rate per person ¹	Number in thousands	Percent distribution	Average annual rate per person ¹
All patients	53,337	100.0	1.8	1,107,585	100.0	2.7
Under 15 years	12,206	22.9	1.3	203,922	18.4	2.2
15–24 years	8,714	16.3	1.3	152,081	13.7	2.1
25–44 years	16,503	30.9	1.9	293,881	26.5	2.5
45–64 years	10,540	19.8	2.4	255,160	23.0	3.1
65 years and over	5,374	10.1	3.8	202,541	18.3	4.3

¹Rates were computed using National Health Interview Survey estimates of the civilian noninstitutionalized Hispanic and non-Hispanic populations (see the technical notes).

for the visits made by Hispanic persons and 37 years for all other visits. The different patient age distributions reflect the relative youth of the American Hispanic population, as can be seen in the population estimates presented in the technical notes.

In addition to the differences in the age distributions, a significant difference appeared in the race distributions. Of the visits made by Hispanic persons, 94.2 percent were made by white persons, compared with only 89.1 percent of the visits made by non-Hispanic persons. The sex distributions were virtually identical, however, with females accounting for 60.1 percent of the visits made by Hispanic persons.

Medical characteristics

The same methodological difference between NAMCS and NHIS that is the source of NHIS's strength in identifying Hispanic persons also is the source of NAMCS's greatest strength. Because the basic data in NAMCS are supplied by health care providers, the medical information contained in NAMCS can be expected to be relatively complete, precise, and accurate. In this respect, NAMCS information on the medical aspects of Hispanic persons' visits to office-based physicians can be regarded as less problematic than the population rates. It is extremely important to note, however, that the apparent undercount of Hispanic patients' visits in NAMCS may have biased the results. Unfortunately, there is no information available for determining if such bias occurred, or for assessing the direction and amount of it.

The 1980 and 1981 NAMCS data indicate that Hispanic and non-Hispanic patients who visited physicians were equally likely to have been referred by another physician—5.6 percent of Hispanic patients' visits were the direct result of referrals. The visits of Hispanic persons, however, were more likely to have been prompted by a new problem than were other visits (42.0 percent compared with 36.4 percent, respectively). Although significant, this difference is not large, and it may be simply the result of the relative youth of the Hispanic population. This is because younger people are more likely to develop short-term problems that are completely resolved, and older people are more likely to develop chronic problems that may be controllable but not curable.

In NAMCS, the general type of medical care sought by each patient making a visit is recorded by the responding physician in the variable "major reason for visit." For the 1980 and 1981 visits made by Hispanic patients, the most common major reason was obtaining care for an acute problem (38.9 percent), followed by obtaining routine care for a chronic problem (24.8 percent). Nonillness care, such as prenatal care, was the third most common major reason (18.0 percent). The least common major reasons for visit were seeking care for a flareup of a chronic problem (9.6 percent) and obtaining aftercare for surgery or an injury (8.7 percent). Hispanic patients were significantly less likely than non-Hispanic patients to have been seeking routine care for a chronic problem (24.8 percent of visits compared with 28.2 percent, respectively). Again the difference was not large and easily can be explained by the differing age distributions of the two populations.

Table 2. Number and percent distribution of office visits made by Hispanic patients, by principal reason for visit: United States, 1980-81

Principal reason for visit and RVC code ¹	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
Symptom module S001-S999	31,389	58.8
General symptoms S001-S099	5,145	9.6
Systems referable to psychological and mental disorders S100-S199	979	1.8
Symptoms referable to the nervous system (excluding sense organs) S200-S259	2,027	3.8
Symptoms referable to the cardiovascular and lymphatic systems S260-S299	*323	*0.6
Symptoms referable to the eyes and ears S300-S399	2,322	4.4
Symptoms referable to the respiratory system S400-S499	4,781	9.0
Symptoms referable to the digestive system S500-S639	3,501	6.6
Symptoms referable to the genitourinary system S640-S829	3,206	6.0
Symptoms referable to the skin, nails, and hair S830-S899	2,662	5.0
Symptoms referable to the musculoskeletal system S900-S999	6,444	12.1
Disease module D001-D999	4,426	8.3
Diagnostic, screening, and preventive module X100-X599	9,044	17.0
Treatment module T100-T899	4,084	7.7
Injuries and adverse effects module J001-J999	2,492	4.7
Other ² R100-R700, A100-A140, U990-U999	1,904	3.6

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

²Includes test results module, administrative module, blanks, problems and complaints not elsewhere classified, entries of "none," and illegible entries.

Patients' specific reasons for visit are classified in NAMCS according to the system established in "A Reason for Visit Classification for Ambulatory Care."¹¹ Table 2 shows the principal reasons for visit, grouped into modules of related reasons, for Hispanic persons' 1980 and 1981 visits. By far the most common principal reason for visit was a symptom; the complaints classified in the symptom module precipitated 58.8 percent of all visits. Different types of symptoms occurred with varying frequencies, ranging from the 0.6 percent of all visits precipitated by symptoms of the cardiovascular and lymphatic systems to the 12.1 percent of all visits precipitated by symptoms related to the musculoskeletal system.

Next to symptoms, the most common principal reasons for visit were those in the diagnostic, screening, and preventive module, which includes such services as regularly scheduled examinations and inoculations. In comparison with symptoms, however, this module accounted for a far smaller proportion of all visits by Hispanic persons—17.0 percent. Even smaller were the proportions of visits with principal reasons in the disease and treatment modules, which accounted for 8.3 percent and 7.7 percent of all visits, respectively. Injuries and adverse effects made up the smallest proportion (4.7 percent) of all visits by Hispanic persons.

Only two significant differences in the type of principal complaint appeared between visits made by Hispanic persons and visits made by other persons. The principal reasons for

Table 3. Number and percent distribution of office visits made by Hispanic patients, by the 10 specific principal reasons for visit most commonly given: United States, 1980-81

Principal reason for visit and RVC code ¹	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
Prenatal examination, routine X205	2,729	5.1
General medical examination X100	2,482	4.7
Fever S010	1,671	3.1
Cough S440	1,621	3.0
Postoperative visit T205	1,534	2.9
Abdominal pain, cramps, spasms S550	1,248	2.3
Headache, pain in head S210	1,164	2.2
Back symptoms S905	1,040	2.0
Symptoms referable to throat S455	1,026	1.9
Chest pain and related symptoms (not referable to body system) S050	968	1.8
All other reasons for visit Residual	37,853	71.0

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

Hispanic patients' visits were somewhat more likely to be symptoms (58.8 percent compared with 53.8 percent) and somewhat less likely to be specifically for obtaining treatment (7.7 percent compared with 10.6 percent). These differences also can be attributed to the differing health problems of populations with different age structures.

Of the 10 most common specific principal reasons for Hispanic patients' visits, shown in table 3, 7 were symptoms typical of acute diseases or injuries: fever; cough; abdominal pain, cramps, or spasms; headache or head pain; back symptoms; throat symptoms; and chest pain and related symptoms. In examining table 3, it should be noted that not all differences between the ranked frequencies and percents are statistically significant. All 10 of the most common reasons together accounted for more than one-fourth (29.0 percent) of all office visits by Hispanic persons. In contrast, the same reasons accounted for only 24.9 percent of all other visits, indicating that these particular problems were somewhat less common among non-Hispanic persons visiting office-based physicians.

The principal diagnoses made by the physicians in Hispanic patients' visits, grouped into categories based on the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*,¹² are shown in table 4. Two groups of diagnoses were used more frequently than any other group, and together these groups accounted for almost one-third of the total. These groups were the supplementary classification (including prenatal care, immunizations, general examinations, and all other well-person care), which was listed for 17.6 percent of all visits by Hispanic persons, and diseases of the respiratory system (many of which are acute infections of the upper respiratory tract), which accounted for 13.9 percent.

This distribution of Hispanic patients' visits among the various diagnostic categories was remarkably similar to the comparable distribution for non-Hispanic patients. In fact,

Table 4. Number and percent distribution of office visits made by Hispanic patients, by principal diagnostic class: United States, 1980-81

Principal diagnostic class and ICD-9-CM code ¹	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
Infectious and parasitic diseases (001-139)	1,552	2.9
Neoplasms (140-239)	912	1.7
Endocrine, nutritional, and metabolic diseases, and immunity disorders (240-279)	2,408	4.5
Mental disorders (290-319)	1,788	3.4
Diseases of the nervous system and sense organs (320-389)	3,940	7.4
Diseases of the circulatory system (390-459)	3,084	5.8
Diseases of the respiratory system (460-519)	7,391	13.9
Diseases of the digestive system (520-579)	2,905	5.4
Diseases of the genitourinary system (580-629)	3,903	7.3
Diseases of the skin and subcutaneous tissue (680-709)	3,331	6.2
Diseases of the musculoskeletal system and connective tissue (710-739)	4,480	8.4
Symptoms, signs, and ill-defined conditions (780-799)	1,596	3.0
Injury and poisoning (800-999)	4,965	9.3
Supplementary classification of factors influencing health status and contact with health services (V01-V82)	9,373	17.6
Other ² Residual	1,710	3.2

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

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

only one significant difference between the distributions appeared in the results: diseases of the circulatory system were recorded less frequently for Hispanic patients' visits than for non-Hispanic patients' visits (5.8 percent compared with 9.9 percent, respectively). The direct relationship of hypertension and other chronic cardiovascular problems to age is well known, and this difference also can be attributed to the age difference between Hispanic and non-Hispanic persons.

The 10 specific principal diagnoses that were most commonly made during Hispanic patients' visits are shown in table 5. Again, the differences between the ranked frequencies and percents are not necessarily statistically significant. Six of these specific diagnoses are from the two leading groups of diagnoses: normal pregnancy, health supervision of an infant or child, and a general medical examination are all well-care services included in the supplementary classification of the ICD-9-CM; and acute upper respiratory infections of multiple or unspecified sites, asthma, and acute pharyngitis are all included in the category of respiratory system diseases. Together the 10 diagnoses accounted for more than one-fourth (27.2 percent) of all office visits by Hispanic persons in 1980 and 1981. The same 10 diagnoses were recorded for a slightly smaller proportion (24.7 percent) of the visits made by non-Hispanic persons.

Table 5. Number and percent distribution of office visits made by Hispanic patients, by the 10 specific principal diagnoses most commonly given: United States, 1980-81

Specific principal diagnosis and ICD-9-CM code ¹	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
Normal pregnancy V22	3,155	5.9
Health supervision of infant or child V20	1,717	3.2
Acute upper respiratory infections of multiple or unspecified sites 465	1,546	2.9
Essential hypertension 401	1,529	2.9
Suppurative and unspecified otitis media 382	1,438	2.7
General medical examination V70	1,208	2.3
Asthma 493	1,091	2.0
Diabetes mellitus 250	1,087	2.0
Obesity and other hyperalimentation 278	980	1.8
Acute pharyngitis 462	743	1.4
All other diagnoses Residual	38,842	72.8

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

Physician characteristics

The specialty distribution of the physicians visited by Hispanic patients is shown in table 6. The vast majority of the visits were divided almost equally among general and family practitioners (33.2 percent), medical specialists (29.8 percent), and surgical specialists (32.7 percent). The remaining few visits (4.3 percent) were made to all other specialists.

Of the visits to medical specialists, visits to pediatricians (14.1 percent of all visits) exceeded visits to internists (9.6 percent), which, in turn, exceeded visits to other medical specialists (6.2 percent). Of the visits to surgical specialists, however, the largest proportion was made to physicians in the residual category of other surgical specialties (15.9 percent of all visits), followed by visits to obstetricians and gynecologists (11.5 percent). Visits to general surgeons accounted for the smallest proportion (5.3 percent).

Only two significant differences between this distribution and the comparable one for the visits made by non-Hispanic patients were noted, and both clearly were caused by the differing age structures of the Hispanic and non-Hispanic populations. Pediatricians, who primarily treat infants and young children,¹³ accounted for a somewhat larger proportion of the visits made by Hispanic patients than of the visits made by all other persons (14.1 percent compared with 10.9 percent, respectively). Conversely, internists, whose patients are principally the middle-aged and elderly,¹⁴ accounted for a significantly smaller proportion of the visits made by Hispanic persons than of all other visits (9.6 percent compared with 12.6 percent, respectively).

Hispanic patients' visits were distributed unevenly among the four major geographic regions of the United States (see table 7). The largest proportion (35.2 percent) occurred in the West, followed by the South (29.3 percent), and then the Northeast (23.7 percent). Only 11.8 percent were made in the Midwest. This distribution differed markedly from that observed for all visits made by non-Hispanic persons, as the Northeast was the only region that claimed essentially equal

Table 6. Number and percent distribution of office visits made by Hispanic patients, by physician specialty: United States, 1980-81

Physician specialty	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
General and family practice	17,703	33.2
All medical specialties	15,904	29.8
Internal medicine	5,100	9.6
Pediatrics	7,505	14.1
Other medical specialties	3,299	6.2
All surgical specialties	17,429	32.7
General surgery	2,828	5.3
Obstetrics and gynecology	6,139	11.5
Other surgical specialties	8,462	15.9
All other specialties	2,301	4.3
Psychiatry	954	1.8
Other specialties	1,347	2.5

Table 7. Number and percent distribution of office visits made by Hispanic patients, by geographic region: United States, 1980-81

Geographic region	Number of visits in thousands	Percent distribution
All visits	53,337	100.0
Northeast	12,635	23.7
Midwest	6,308	11.8
South	15,620	29.3
West	18,774	35.2

proportions of Hispanic and non-Hispanic patients' visits (23.7 percent and 23.6 percent, respectively). The most striking differences appeared in the West, which accounted for 35.2 percent of Hispanic patients' visits but only 17.6 percent of other patients' visits, and in the Midwest, which accounted for only 11.8 percent of Hispanic patients' visits and 26.0 percent of all other visits. These differences are explained, of course, by the geographic distribution of the American Hispanic population, which has a relatively high concentration in the Southwest and a relatively low one in the Midwest. The remaining region, the South, accounted for 29.3 percent of the visits made by Hispanic persons and 32.8 percent of those made by non-Hispanic persons. Although this is a statistically significant difference, it is not a substantively large one.

Another locational variable utilized in NAMCS is the metropolitan status of the area in which the visit occurred. Although large majorities of both the visits made by Hispanic persons and those made by non-Hispanic persons took place in metropolitan areas, the visits of Hispanic persons were substantially more concentrated in those areas (87.1 percent compared with 75.5 percent, respectively).

Hispanic patients' visits were quite similar to non-Hispanic patients' visits on the remaining variables describing the physicians and their practices. Of the Hispanic patients' visits, 3.9 percent involved female physicians and 7.2 percent involved Doctors of Osteopathy (D.O.'s), rather than Doctors of Medicine (M.D.'s). A large majority of the visit total was divided almost equally between physicians 44 years of age or younger (39.9 percent) and physicians 45-60 years

of age (44.2 percent). Only 16.0 percent of the visits were made to physicians 61 years of age or older. In addition, a majority of the visits (57.5 percent) were to solo practitioners. Although this was significantly larger than the comparable proportion of all visits made by non-Hispanic persons (54.6 percent), the difference was not a large one.

Visit management

Physicians utilized a single diagnostic service in almost half of all visits made by Hispanic persons (46.0 percent). Two such services were used in fewer visits (30.6 percent), and three or more were used in still fewer (16.6 percent). Only 1 of every 15 visits (6.8 percent) involved no diagnostic services.

The rates at which various specific diagnostic services were ordered or provided during Hispanic patients' visits are shown in table 8. The services can be ranked according to their frequency of use as follows.

- Limited medical histories and/or examinations (64.4 percent of the visits).
- Blood pressure measurements (33.7 percent).
- One or more clinical laboratory tests (21.5 percent) and general medical histories and/or examinations (17.5 percent).
- One or more x rays (9.0 percent).
- Pap tests (4.2 percent) and vision tests (3.6 percent).
- Electrocardiograms (2.6 percent), mental status examinations (1.7 percent), and endoscopies (1.0 percent).

This usage pattern for diagnostic services is remarkably similar to the one that appeared for non-Hispanic patients' visits. In fact, only one significant difference was found: vision tests were utilized in the visits made by Hispanic patients somewhat less frequently than in all other visits (3.6 percent compared with 5.8 percent, respectively).

Hispanic patients' visits and all other visits also were very similar with respect to the use of therapeutic services other than medication. Physicians utilized no therapeutic services other than medication in a slight majority of all visits made by Hispanic persons (54.2 percent). Another large pro-

Table 8. Number and percent of office visits made by Hispanic patients, by type of diagnostic service ordered or provided: United States, 1980-81

<i>Diagnostic service</i>	<i>Number of visits in thousands</i>	<i>Percent</i>
None	3,609	6.8
Limited history/exam	34,341	64.4
General history/exam	9,360	17.5
Pap test	2,215	4.2
Clinical lab test	11,453	21.5
X ray	4,779	9.0
Blood pressure check	17,965	33.7
Electrocardiogram	1,392	2.6
Vision test	1,908	3.6
Endoscopy	551	1.0
Mental status exam	887	1.7
Other	2,179	4.1

NOTE: More than one diagnostic service was ordered or provided during some visits.

Table 9. Number and percent of office visits made by Hispanic patients, by type of nonmedication therapeutic service ordered or provided: United States, 1980-81

<i>Nonmedication therapeutic service</i>	<i>Number of visits in thousands</i>	<i>Percent</i>
None	28,906	54.2
Physiotherapy	3,455	6.5
Office surgery	3,471	6.5
Family planning	1,522	2.9
Psychotherapy/therapeutic listening	1,628	3.1
Diet counseling	4,965	9.3
Family/social counseling	1,036	1.9
Medical counseling	11,812	22.1
Other	1,063	2.0

NOTE: More than one nonmedication therapeutic service was ordered or provided during some visits.

portion of the visits (38.3 percent) involved just one such service. Fewer than 1 of every 10 visits made by Hispanic persons involved the order or provision of more therapeutic services—two services were used by physicians in only 6.7 percent of the visits, and three or more services in just 0.9 percent.

Grouped according to their order of frequency of use, the specific therapeutic services on which information was collected by means of NAMCS in 1980 and 1981 were as follows (see table 9).

- Medical counseling (22.1 percent of all visits made by Hispanic persons).
- Diet counseling (9.3 percent), office surgery (6.5 percent), and physiotherapy (6.5 percent).
- Psychotherapy and/or therapeutic listening (3.1 percent), family planning (2.9 percent), and family and/or social counseling (1.9 percent).

Of all these services, only one, psychotherapy and/or therapeutic listening, was utilized significantly less often in the visits made by Hispanic persons (3.1 percent) than in all other visits (5.0 percent).

In the visits made by Hispanic patients, as in all other visits, by far the most common therapeutic service was for the physician to order or supply one or more medications. In NAMCS, the term "drug visits" refers to the visits in which this was done. Drug visits accounted for 63.3 percent of all visits made by Hispanic patients. Medications are used to control common chronic conditions whose incidence is directly related to age, such as diabetes and hypertension, as well as to treat other conditions. Because of this, the use of medications in the treatment of Hispanic patients by office-based physicians was expected to be related to age, and this expectation was confirmed. Drug visits accounted for 71.0 percent of all visits made by Hispanic patients 45 years of age and older, but only 60.0 percent of those made by younger Hispanic patients. Neither the overall level of medication usage in Hispanic patients' visits nor the age difference that appeared differed significantly from the comparable statistics observed for all other visits.

The principal unit of measurement used in NAMCS in assessing medication utilization is the drug mention, or the order or provision of a particular drug during a patient visit.

Table 10. Average number of drug mentions per visit and per drug visit made by Hispanic patients, by patient age: United States, 1980-81

Age	Average number of drug mentions per visit	Average number of drug mentions per drug visit
All visits	1.13	1.79
Under 15 years	1.10	1.64
15-24 years	0.86	1.58
25-44 years	0.97	1.69
45-64 years	1.31	1.92
65 years and over	1.77	2.30

Table 11. Number and percent distribution of drug mentions during office visits made by Hispanic patients, by therapeutic category: United States, 1980-81

Therapeutic category ¹	Number of drug mentions in thousands	Percent distribution
All	60,260	100.0
Antihistamine drugs	3,273	5.4
Anti-infective agents	10,612	17.6
Autonomic drugs	2,694	4.5
Cardiovascular drugs	3,381	5.6
Central nervous system drugs	11,383	18.9
Electrolytic, caloric, and water balance	2,996	5.0
Expectorants and cough preparations	2,353	3.9
Eye, ear, nose, and throat preparations	1,513	2.5
Gastrointestinal drugs	2,532	4.2
Hormones and synthetic substances	5,781	9.6
Serums, toxoids, and vaccines	2,469	4.1
Skin and mucous membrane preparations	5,055	8.4
Spasmolytic agents	1,136	1.9
Vitamins	2,142	3.6
Other ²	2,939	4.9

¹Based on the pharmacologic-therapeutic classification of the American Society of Hospital Pharmacists.
²Includes antineoplastic agents, blood formation and coagulation agents, diagnostic agents, enzymes, gold compounds, heavy metal antagonists, local anesthetics, oxytocics, unclassified therapeutic agents, devices, pharmaceutical aids, and undetermined substances.

In the 1980 and 1981 NAMCS, as many as eight drug mentions were recorded for a sample visit. The amount of drug usage for all patients can be assessed by evaluating the average number of drug mentions per visit. The averages for visits made by Hispanic persons in different age groups are displayed in table 10.

For all visits made by Hispanic patients, an average of 1.13 drugs were ordered or provided per visit. This varied with the age of the patient, however. Children 14 years of age and younger frequently need immunizations and are prone to infective diseases that are often treated with antibiotics. For these children, an average of 1.10 medications per visit were used. Usage by adolescents and young adults 15-24 years of age was significantly lower (0.86 medications per visit), and usage remained low for the next age group also (0.97 per visit for adults 25-44 years of age). For the group 45-64 years of age, usage rose significantly, to 1.31 drugs per visit. This is the age range in which chronic diseases requiring medication therapy are often first detected. A significantly higher average of 1.77 medications per visit was ordered or provided for the remaining age group, persons 65 years of age and older. This undoubtedly reflects both

the relatively high prevalence of chronic conditions among the elderly and the increase in acute problems that occurs as the effectiveness of the immune system decreases with age.

The intensity of drug usage among the patients who were ordered or provided with at least one medication is reflected in the average number of drug mentions per drug visit. In 1980 and 1981, an average of 1.79 drug mentions was made during each drug visit made by a Hispanic person. The averages for the different age groups indicate that, except among the elderly, age did not affect the intensity of drug usage once the decision to use at least one medication had been made. None of the pairs of successive age groups differed significantly in the intensity of drug usage during drug visits. In fact, in comparing each age group with every other age group, the only significant differences that appeared were that more drugs were used in drug visits made by the elderly (2.30 drugs per drug visit) than in the drug visits made by the three youngest age groups (1.64 for children under 15 years of age, 1.58 for youth 15-24 years of age, and 1.69 for adults 25-44 years of age).

All drug mentions recorded in NAMCS in 1980 and 1981 were coded into categories describing the various therapeutic effects that can be expected of medications. The categories used were based on the classification system developed by the American Society of Hospital Pharmacists.¹⁵ As shown in table 11, an estimated 60.3 million drug mentions were made during Hispanic patients' visits in 1980 and 1981. Two drug categories were used significantly more frequently than any other category: central nervous system drugs (18.9 percent of all drug mentions) and anti-infective agents (17.6 percent). Each of the other drug categories accounted for less than 10 percent of all drug mentions.

This distribution of drug mentions for Hispanic patients was very similar to the distribution observed for all other patients. In fact, only two significant differences appeared. Compared with the drugs used with non-Hispanic patients, the drugs ordered or provided to Hispanic patients were less likely to be cardiovascular drugs (5.6 percent, compared with 10.2 percent) and less likely to be electrolytic, caloric, or water balance agents (5.0 percent, compared with 8.2 percent). These differences in drug utilization stem from the differing health problems physicians encounter during visits by Hispanic and non-Hispanic patients. Both of these types of drugs are used frequently to treat hypertension and other diseases of the cardiovascular system, and diseases of the circulatory system accounted for a smaller proportion of Hispanic patients' visits than of all other patients' visits.

The final aspects of Hispanic patients' office visits to be considered here are visit duration and patient disposition. A distinct majority of all visits by Hispanic patients (60.5 percent) lasted 6-15 minutes. Almost one-third of the visits (27.9 percent) lasted longer than 15 minutes, and the smallest proportion (11.6 percent) lasted 5 minutes or less. The only significant difference in duration between Hispanic patients' visits and non-Hispanic patients' visits was that non-Hispanic patients' visits were more likely to be in the shortest duration category (15.4 percent of all visits).

Finally, table 12 shows that asking the patient to return

Table 12. Number and percent of visits made by Hispanic patients, by patient disposition: United States, 1980-81

<i>Patient disposition</i>	<i>Number of visits</i>	
	<i>in thousands</i>	<i>Percent</i>
No followup planned	5,806	10.9
Return at specified time	31,789	59.6
Return if needed, p.r.n.	12,422	23.3
Telephone followup planned	1,919	3.6
Referred to other physician	1,368	2.6
Admit to hospital	1,490	2.8
Other	630	1.2

NOTE: More than one patient disposition was recorded for some visits.

at a specific time was by far the most common disposition in Hispanic patients' visits (59.6 percent). The patients were instructed to return if needed in one-fourth of the visits (23.3 percent), and no followup was planned in one-tenth of the visits (10.9 percent). Each of the other dispositions was made in fewer than 1 of every 25 visits. This distribution did not differ significantly in any respect from the comparable distribution for all other patients.

Conclusions

This report has been devoted to describing the 1980 and 1981 visits to office-based physicians made by Hispanic persons in terms of the patients' medical problems and the physicians' diagnostic actions and therapeutic interventions. In addition, differences between these visits and those made by non-Hispanic persons were highlighted. The comparisons revealed that the two sets of visits had many more similarities than

differences. Most of the differences that did appear were relatively minor ones that can be understood in light of the relative youth of the Hispanic population in the United States. The only major differences that appeared can be viewed as reflecting the differing geographic distributions of the Hispanic and non-Hispanic populations.

A cursory view of the NAMCS visit rates for Hispanic and non-Hispanic persons suggests that in 1980 and 1981 the Hispanic population obtained substantially less health care from office-based physicians than the non-Hispanic population obtained. Closer examination of the NAMCS and NHIS findings and methodologies, however, leads to the conclusion that the magnitude of the difference in rates shown by NAMCS is an artifactual finding. NAMCS's reliance on ethnicity information supplied by medical care providers, rather than ethnicity identifications that are self-reported, apparently leads to an undercount of visits made by Hispanic persons.

Because of this apparent undercounting, all of the population-based rates presented in this report must be interpreted with particular caution. In addition, there is a possibility that the undercounting may have introduced an element of bias that may have distorted the results of the visit analyses. Unfortunately, there are no indicators for assessing the existence, amount, or type of any possible bias. Despite these problems, these findings are uniquely valuable in being based on a national-level survey with extensive medical data supplied by medical care professionals. Consequently, the results constitute an important contribution to the currently sparse literature available on the utilization of health care resources by Hispanic persons.

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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 standards of reliability or precision
 - # Figure suppressed to comply with confidentiality requirements
-

Technical notes

Source of data and sample design

The estimates presented in this report are based on the findings of the National Ambulatory Medical Care Survey (NAMCS), a sample survey of office-based care conducted annually from 1973 through 1981 by the National Center for Health Statistics. The target universe of NAMCS is composed of office visits made by ambulatory patients to non-Federal and noninstitutional physicians who are principally engaged in office-based, patient-care practice. Visits to physicians practicing in Alaska and Hawaii are excluded from the range of NAMCS, as are visits to anesthesiologists, pathologists, and radiologists.

A multistage probability sample design, involving a step sampling of primary sampling units, physicians' practices within primary sampling units, and patient visits within physicians' practices, was employed in NAMCS. The physician sample (5,805 physicians for 1980 and 1981) was selected from master files maintained by the American Medical Association and the American Osteopathic Association. Those members of the sample who proved to be in scope and eligible participated at a rate of 77.3 percent. Responding physicians completed visit records for a systematic random sample of office visits made during a randomly assigned weekly reporting period. Telephone contacts were excluded. During 1980 and 1981 responding physicians completed 89,477 visit records on which they recorded 97,796 drug mentions. Characteristics of the physician's practice, such as primary specialty and type of practice, were obtained during an induction interview. The National Opinion Research Center, under contract to the National Center for Health Statistics, was responsible for the field operations of the survey.

Sampling errors, statistical testing, and rounding

The standard error is 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 by the estimate itself and is expressed as a percent of the estimate. In this report, any estimate that exceeds a relative standard error of 30 percent is marked with an asterisk. Table I should be used to obtain the relative standard error for aggregates of office visits, and table II should be used to obtain the relative standard error for drug mentions expressed as drug groups (for example, the analgesic drug family).

In this report, the determination of statistical inference is based on the Bonferroni test for multiple comparisons, a modification of the *t*-test. Terms relating to differences, such as "higher" and "less," indicate that the differences are statistically significant at the $p < .05$ level. Terms such as "similar" or "no difference" mean that no statistical significance exists between the estimates being compared. 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.

Table I. Approximate relative standard errors of estimated numbers of office visits, based on all physician specialties: National Ambulatory Medical Care Survey, 1980-81

<i>Estimated number of office visits</i>		<i>Relative standard error</i>
Estimated number in thousands		Percent
450	.....	30.0
600	.....	26.0
800	.....	22.6
1,000	.....	20.2
2,000	.....	14.5
5,000	.....	9.5
10,000	.....	7.1
20,000	.....	5.6
50,000	.....	4.4
100,000	.....	3.9
200,000	.....	3.6
500,000	.....	3.5
1,000,000	.....	3.4

EXAMPLE OF USE OF TABLE: An aggregate estimate of 35,000,000 office visits has a relative standard error of 5.0 percent or a standard error of 1,750,000 visits (5.0 percent of 35,000,000 visits).

Table II. Approximate relative standard errors of estimated numbers of drug mentions when drugs appear in groups (for example, the analgesic drug family), based on all physician specialties: National Ambulatory Medical Care Survey, 1980-81

<i>Estimated number of grouped drug mentions</i>		<i>Relative standard error</i>
Estimated number in thousands		Percent
*650	.....	*30.3
800	.....	27.3
1,000	.....	24.5
2,000	.....	17.6
5,000	.....	11.6
10,000	.....	8.7
20,000	.....	6.8
50,000	.....	5.3
100,000	.....	4.7
200,000	.....	4.4
500,000	.....	4.2
1,000,000	.....	4.1

EXAMPLE OF USE OF TABLE: An aggregate estimate of 30,000,000 drug mentions has a relative standard error of 7.0 percent or a standard error of 2,100,000 mentions (7.0 percent of 30,000,000 mentions).

Frequency estimates presented in this report have been rounded to the nearest thousand. For this reason, detailed estimates do not always add to totals.

Population estimates and rate computation

The population estimates used in computing the average annual visit rates presented in this report are shown in table III. These estimates represent the 1980-81 average annual civilian noninstitutionalized population of the United States. Except for the totals by age, which are adjusted to independent estimates furnished by the U.S. Bureau of the Census, these estimates are based on the samples of households in the

Table III. Estimates of the civilian noninstitutionalized population of the United States used in computing average annual rates in this report, by age and ethnicity: 1980-81

<i>Ethnicity</i>	<i>All ages</i>	<i>Under 15 years</i>	<i>15-24 years</i>	<i>25-44 years</i>	<i>45-64 years</i>	<i>65 years and over</i>
	Number in thousands					
All ethnicities	221,485	50,525	40,416	62,319	43,857	24,369
Hispanic	15,215	4,615	3,343	4,380	2,164	713
Non-Hispanic	206,271	45,910	37,073	57,939	41,693	23,655

NOTE: Figures may not add to total due to rounding.

and 1981 National Health Interview Surveys. Detailed information on the source and reliability of these estimates can be found in the technical notes of earlier publications.^{16,17}

Average annual visit rates were computed by dividing visit totals for 1980 and 1981 by twice the average annual population.

Definitions of terms used in this report

An *office* is a place that physicians identify as a location for their ambulatory practice. Responsibility for patient care and professional services rendered in an office resides with the individual physician rather than with an institution.

A *visit* is a direct personal exchange between an ambulatory patient seeking health care and a physician, or staff member working under the physician's supervision, who provides the health services.

NOTE: A list of references follows the text.

A *drug mention* is the physician's entry on the visit record of a pharmaceutical agent ordered or provided by any route of administration for prevention, diagnosis, or treatment. Generic and brand-name drugs are included as are nonprescription and prescription drugs. The physician records all new drugs and all continued medications if the patient specifically is instructed during the visit to continue the medication.

An *acute problem* is a morbid condition with a relatively sudden or recent onset (within 3 months of the visit).

A *chronic problem* is a morbid condition that existed for 3 months or longer before the visit. The care indicated is of a regular, maintenance nature.

A *chronic problem flareup* is a sudden exacerbation of a preexisting chronic condition.

Nonillness care denotes health examinations and care provided for presumably healthy persons. Examples of nonillness care include prenatal and postnatal care, annual physicals, well-child examinations, and insurance examinations.

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