

# Vital and Health Statistics

From the CENTERS FOR DISEASE CONTROL AND PREVENTION / National Center for Health Statistics

# Ambulatory Health Care Visits by Children: Principal Diagnosis and Place of Visit

May 1998





#### **Copyright Information**

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

#### Suggested citation

Freid VM, Makuc DM, Rooks RN. Ambulatory health care visits by children: principal diagnosis and place of visit. National Center for Health Statistics. Vital Health Stat 13(137). 1998.

#### Library of Congress Cataloging-in-Publication Data

Freid, Virginia M.

Ambulatory health care visits by children : principal diagnosis and place of isit.

 p. cm. — (Vital and health statistics. Series 13, Data from the National Health Survey; no. 137) (DHHS publication; no. (PHS) 98-1798)
 By Virginia M. Freid, Diane M. Makuc, Ronica N. Rooks.
 "April 1998."

ISBN 0-8406-0546-3

1. Ambulatory medical care for children—Utilization—United States—Statistics. 2. United States—Statistics, Medical. I. Makuc, Diane M. II. Rooks, Ronica N. III. National Center for Health Statistics (U.S.) IV. Title. V. Series. VI. Series: DHHS publication; no. (PHS) 98-1798.

[DNLM: 1. Ambulatory Care—in infancy & childhood—United States statistics. 2. Ambulatory Care—in adolescence—United States—statistics. 3. Ambulatory Care Facilities—utilization—United States. 4. Office Visits—utilization—United States. W2 A N148vm no. 137 1998] RA407.3.A349 no. 137 [RJ102] 362.1'0973'021 s—dc21

362.1 09/3 021 s—021 [614.4'273'083] DNLM/DLC for Library of Congress

98-15148 CIP

For sale by the U.S. Government Printing Office Superintendent of Documents Mail Stop: SSOP Washington, DC 20402-9328 Printed on acid-free paper.

# Vital and Health Statistics

Ambulatory Health Care Visits by Children: Principal Diagnosis and Place of Visit

Series 13: Data From the National Health Survey No. 137

#### **National Center for Health Statistics**

Edward J. Sondik, Ph.D., Director

Jack R. Anderson, Deputy Director

Jack R. Anderson, Acting Associate Director for International Statistics

Lester R. Curtin, Ph.D., Acting Associate Director for Research and Methodology

Jennifer H. Madans, Ph.D., Acting Associate Director for Analysis, Epidemiology, and Health Promotion

P. Douglas Williams, Acting Associate Director for Data Standards, Program Development, and Extramural Programs

Edward L. Hunter, Associate Director for Planning, Budget, and Legislation

Jennifer H. Madans, Ph.D., Acting Associate Director for Vital and Health Statistics Systems

Stephen E. Nieberding, Associate Director for Management

Charles J. Rothwell, Associate Director for Data Processing and Services

#### Office of Analysis, Epidemiology, and Health Promotion

Jennifer H. Madans, Ph.D. Acting Associate Director

Diane M. Makuc, Dr.P.H. Director, Division of Health and Utilization Analysis

John L. Kiely, Ph.D. Chief, Infant and Child Health Studies Branch

Diane M. Makuc, Dr.P.H. Acting Chief, Analytic Studies Branch

### Contents

Abst	ract	1
Intro	oduction	1
Metl	nods	2
A V: W M In A	Ilts. Il Visits Isits by Principal Diagnosis Fell-Child Visits. Iddle Ear Infection Visits Jury Visits. Isthma Visits Ittention Deficit Disorder Visits	3 4 4 4 5 6
Disc	ussion	6
Refe	rences	8
	endix	
Fig	ures	
1. 2. 3. 4. 5. 6.	Ambulatory care visit rates among children under 15 years of age by place of visit and age: United States, average annual 1993–95.  Ambulatory care visit rates among children under 15 years of age by place of visit and race: United States, average annual 1993–95.  Ambulatory care visit rates among children under 1 year of age by principal diagnosis and race: United States, average annual 1993–95.  Ambulatory care visit rates among children 1–4 years of age by principal diagnosis and race: United States, average annual 1993–95.  Ambulatory care visit rates among children 5–14 years of age by principal diagnosis and race: United States, average annual 1993–95.  Ambulatory care visit rates among children under 15 years of age by place of visit, principal diagnosis, and race: United States, average annual 1993–95.	4 4 5 5
List	t of Detailed Tables	
<ol> <li>2.</li> </ol>	Ambulatory care visits among children under 15 years of age by place of visit, age, sex, and race: United States, average annual 1993–95	9
<ol> <li>3.</li> <li>4.</li> </ol>	Ambulatory care visits among children under 15 years of age by sex and principal diagnosis category: United States,	12
5.	average annual 1993–95	14 16

0.	Ambulatory care visits among children under 15 years of age by place of visit and principal diagnosis category:	
	United States, average annual 1993–95	17
7.	Ambulatory care visits among children under 15 years of age by place of visit, race, and selected principal diagnosis category: United States, average annual 1993–95	19
8.	Injury visits among children under 15 years of age by place of visit and principal injury diagnosis category:	
	United States, average annual 1993–95	20
App	pendix Tables	
App I.		
I.	pendix Tables	21

#### **Abstract**

#### **Objectives**

This report presents national estimates of ambulatory health care use by children under 15 years of age according to principal diagnosis, place of visit (physician office, hospital outpatient department, and hospital emergency department), and patient characteristics (age, sex, and race).

#### **Methods**

Data were from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey. Data were from 1993–95.

#### Results

In 1993–95 children under 15 years of age made 165.3 million visits per year (289 visits per 100 children). Visit rates were highest among infants and varied inversely with age. Visit rates were 43 percent higher among white children than black children.

Three-quarters of ambulatory visits occurred in physician offices, 8 percent in hospital outpatient departments, and 14 percent in hospital emergency departments. Visits by white children were more likely to occur in physician offices than visits by black children (81 percent and 54 percent). Conversely, visits by black children were more likely to occur in hospital outpatient departments (19 percent and 7 percent) and hospital emergency departments (28 percent and 12 percent) than visits by white children.

The following principal diagnoses accounted for almost 40 percent of visits: well-child visit, 15 percent; middle ear infection, 12 percent; and injury, 10 percent. Rates for well-child visits were almost 80 percent higher among white infants than black infants. Continued monitoring of these differences in use of ambulatory care among children are needed, particularly in view of the possible impact of changes in the health care system on these differences.

**Keywords:** well-child visits • physician office visits • hospital outpatient department • hospital emergency department

# Ambulatory Health Care Visits by Children: Principal Diagnosis and Place of Visit

Virginia M. Freid, M.S.; Diane M. Makuc, Dr.P.H.; Ronica N. Rooks, M.A., Division of Health and Utilization Analysis

#### Introduction

mbulatory health care services are important for maintaining good health in children by providing preventive services and treatment of illness and injuries. Population-based data from the National Health Interview Survey (NHIS) and National Medical Expenditure Survey show that ambulatory health care utilization among children varies considerably by family income, race/ethnicity, and health insurance coverage. Poor children, minority children, and uninsured children have lower levels of health care utilization than their more advantaged counterparts (1–6). Uninsured children and those in families with low income are at elevated risk of reporting unmet health care needs and are less likely to have a usual source of health care (7). In addition, data from the NHIS document changes in health insurance coverage among children over the past decade. Between 1984 and 1995, the proportion of children with private coverage declined from 73 to 66 percent, the proportion with Medicaid coverage increased from 12 to 21 percent, and the proportion of children without health insurance coverage remained between 13 and 15 percent (6). During this period, the

average number of physician office visits per child remained fairly stable among children under 15 years of age (6,8) while the rate of inpatient days of care declined by one-third (5,9).

Data from medical-records-based surveys such as the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) complement information obtained from population-based surveys by providing record-based data on the physician's diagnosis and on the type of place where the ambulatory visits occurred among those who gain access to the health care system. Collection of data on these items in population-based interviews may be subject to bias due to inaccurate recall and lack of knowledge by the respondent.

The objectives of this report are to provide national data on the principal diagnosis and place of ambulatory care visits among children and to examine how these vary by the age and race of the child. This report presents information about ambulatory care visits for three of the major places that provide such care (physician's offices, hospital outpatient departments, and hospital emergency departments) and provides estimates of ambulatory care use for all three places combined. Data on ambulatory care visits are presented

This report was prepared in the Division of Health and Utilization Analysis (DHUA). The assistance and expertise of the following persons, who contributed to this report, is gratefully acknowledged. Alan J. Cohen, TRW, provided computer expertise. Lois Fingerhut, Office of Analysis, Epidemiology, and Health Promotion, provided assistance with injury categorization. Kenneth C. Schoendorf, DHUA, provided assistance with ICD–9–CM diagnosis categorization. Jennifer D. Parker, DHUA, provided comments on the paper. Catharine W. Burt, Division of Health Care Statistics, provided comments on the paper and expertise on the data sets. Iris Shimizu and Wayne E. Johnson, Office of Research and Methodology, provided methodological assistance. The report was edited by Klaudia M. Cox and typeset by Annette F. Holman, Division of Data Services.

for a set of clinically significant pediatric diagnosis categories. The data in this report complement previous analyses of ambulatory care visits in physician office, hospital outpatient, and emergency department sites (10-20) by presenting combined estimates for all three sites, focusing specifically on utilization among children, and presenting visits according to diagnosis categories specifically designed for children. Diagnosis categories of particular public health interest for children include well-child visits, middle ear infection, injury, asthma, and attention deficit disorder.

#### Methods

his report uses data from two surveys conducted by the National Center for Health Statistics (NCHS). Data on physician office visits are from the 1993, 1994, and 1995 National Ambulatory Medical Care Survey (NAMCS) (10-12), a national probability sample survey of office visits made in the United States to non-Federally-employed physicians who are principally engaged in office practice, excluding the offices of anaesthesiologists, pathologists, and radiologists. Visits to physicians engaged in prepaid practices (health maintenance organizations (HMO's), independent practice organizations (IPA's), and other prepaid plans) are included in NAMCS. Sample physicians were asked to complete Patient Record Forms on a systematic random sample of office visits occurring during a randomly assigned 1-week reporting period. Physicians were directed to record the principal diagnosis for the visit that relates to the patient's complaint, symptoms, or other reason for the visit. The physician response rate for NAMCS was 70-73 percent for the years of interest.

Data for hospital outpatient and emergency department visits are from the 1993, 1994, and 1995 National Hospital Ambulatory Medical Care Survey (NHAMCS) (13–18, 21). NHAMCS is a national probability sample of visits to outpatient and

emergency departments of non-Federal, short-stay, or general hospitals, excluding Federal, military, and Veterans Administration hospitals. Only outpatient department clinics under the supervision of a physician were included in NHAMCS. In NHAMCS, hospital staff were asked to complete Patient Record Forms for a systematic random sample of patient visits occurring during a randomly assigned 4-week reporting period. Hospital staff were directed to record the physician's principal diagnosis for the visit that relates to the patient's complaint, symptom, or other reason for the visit. The hospital response rate was 94–95 percent for the years of interest.

In this report, a visit was defined as a direct personal exchange between a patient and a physician for the purpose of seeking or receiving health services. Visits in NAMCS included office visits with nonphysician providers (for example, nurse practitioners, physician assistants, and registered nurses) working under the direct supervision of physicians who were solo practitioners. Nonphysician provider visits for physicians in group practices or HMO's were excluded. However, visits in NHAMCS included visits with nonphysician providers. Telephone contacts, purely administrative contacts, or off-site visits (for example, home visits) were excluded from both surveys.

The physician's principal diagnosis, associated with the patient's stated reason for this visit, was collected from NAMCS and NHAMCS Patient Record Forms and coded by NCHS to the International Classification of Diseases, Clinical Modification (ICD-9-CM) (22). The principal diagnosis was missing for 1.9 percent of visits. Data presented in table 1 include all visits and data in tables 2-8 exclude visits without a principal diagnosis. In addition to principal diagnosis, the Patient Record Form for NAMCS and NHAMCS permitted the recording of second and third diagnoses. Among children, a second diagnosis was present in 30 percent of records and a third diagnosis was present in 6 percent of records.

In this report, three principles guided the construction of a set of 20

clinically significant pediatric diagnosis categories based on ICD-9-CM codes for the principal diagnosis. (See table I for clinical diagnoses and ICD-9-CM codes that define principal diagnosis categories.) First, categories were designed to be inclusive of clinically similar and difficult to differentiate principal ICD-9-CM codes. The cold, cough, runny nose category includes codes for both nasopharyngitis and acute upper respiratory infection because these conditions are clinically similar. Cough is also included in this category because it is often associated with cold and runny nose symptoms. For example, a child with a cold and cough might be characterized as having a principal diagnosis of "cold" by one provider and "cough" by another provider. Grouping together diagnoses that are often concurrent avoids the problem of slightly different clinical impressions regarding the "principal" diagnosis. Second, categories were constructed only for conditions that are common among children. Third, categories were constructed to differentiate between diagnoses for which treatment and followup needs differ. For example, sore throat is not combined with streptococcal sore throat due to the clear need for antibiotics in the latter case. Middle ear infection is not combined with external ear infection (although both cause ear pain) due to different treatment methods and followup needs.

Injury visits were defined as all visits with a principal diagnosis in the injury chapter of the ICD–9–CM (codes 800–999). Because external causes of injury information (E-codes) were not collected in the 1993 and 1994 NAMCS, injury categories in this report were based solely on the ICD–9–CM codes. E-coded data were collected in NHAMCS beginning in 1992 and NAMCS beginning in 1995 (23, 24). (See table II for a listing of clinical diagnoses and ICD–9–CM codes that define clinical injury categories.)

Demographic variables were obtained from the Patient Record Form based on information in the child's medical record. This report includes visits by children under 15 years of age. Many results are reported separately for infants (under 1 year of age),

preschoolers (1–4 years of age), and school-age children (5–14 years of age) because use of ambulatory care differs for these three age groups. In addition, data are also presented by race of child because of large differences in use of ambulatory care by race.

Race of child (white, black) was collected from the patient's record. For the 9 percent of records with missing data on race, NCHS imputed the information using a hot deck approach. Total figures include children of races not shown separately. Numbers were unstable for Asian and American Indian children and were not included as separate categories. Due to a high proportion of missing and imputed records, data by Hispanic origin of child were not presented.

Data for 3 survey years (1993, 1994, and 1995) were combined to increase the stability of estimates. Average annual numbers of visits, visit rates per 100 children, percent distributions of visits, and standard errors were calculated using SUDAAN (25), a statistical program for survey data analysis that takes into account the NAMCS and NHAMCS sample weights and complex survey design. Annual sample weights were divided by 3 to calculate average annual estimates for the 3-year period. Relative standard errors were calculated as the standard error divided by the point estimate expressed as a percent. Population denominators for rates are the U.S. civilian noninstitutionalized population averaged for 1993, 1994, and 1995. (See table III). Assuming that the denominators of the rates have a negligible error, the standard errors for rates were calculated as the rate multiplied by the relative standard error of the numerator. Estimates with relative standard errors between 30-50 percent are marked with asterisks, and estimates with relative standard errors greater than 50 percent are not shown.

Differences discussed in the text were tested for statistical significance using the two-sided *t*-test with a critical value of 2.57 (0.01 level of significance). The 0.01 level of significance was used because of the increased probability of finding a difference when one does not exist due

to the large number of tests carried out and the large sample sizes for some comparisons.

#### Results

#### **All Visits**

n 1993–95 children under 15 years of age made a total of 165.3 million ambulatory visits per year (table 1). Among children, visit rates varied inversely with age with the rate among infants under 1 year of age 4 times the rate among school-age children 5-14 years of age (815 and 204 visits per 100 children per year) (figure 1). Utilization of ambulatory care visits was similar for boys and girls (299 and 280 visits per 100 children per year). The visit rate among white children was 43 percent higher than among black children (307 compared with 215 visits per 100 children per year).

More than three-quarters of visits among children occurred in physician offices, 8 percent in hospital outpatient departments, and 14 percent in hospital emergency departments. The distribution of ambulatory care visits among these three sites of care was similar for boys and girls and there were small differences in this distribution among infants, preschool, and school-age children. However, use of the three ambulatory care sites varied considerably among white and black

children. The proportion of all ambulatory care visits by white children that occurred in physician offices was substantially higher (81 percent) than those by black children (54 percent). In contrast, 19 percent of visits among black children occurred in hospital outpatient departments compared with 7 percent of visits among white children. Twenty-eight percent of ambulatory care visits by black children took place in hospital emergency departments compared with 12 percent of visits among white children. Although black children used the hospital outpatient and emergency departments for ambulatory care disproportionately to their numbers, white children still made the vast majority of visits that occurred in these sites, accounting for more than 70 percent of the visits in each of these settings.

The differential use of the three ambulatory care sites by race of child is also reflected in the visit rates for each place (figure 2). The average annual physician office visit rate for white children (248 per 100 children) was more than twice the rate for black children (115 per 100 children). In contrast, the hospital outpatient department and hospital emergency department visit rates were lower for white children than for black children. The average annual visit rate in hospital outpatient departments was about half as high for white children as for black children. Hospital emergency department visit rates were one-third lower for

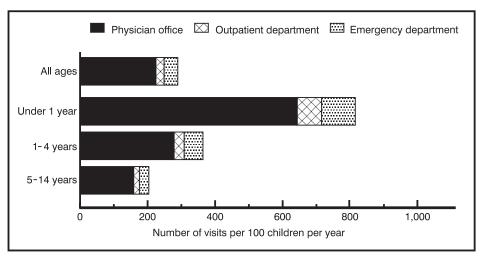


Figure 1. Ambulatory care visit rates among children under 15 years of age by place of visit and age: United States, average annual 1993–95

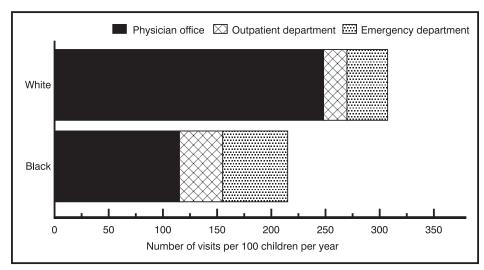


Figure 2. Ambulatory care visit rates among children under 15 years of age by place of visit and race: United States, average annual 1993–95

white children than for black children (38 compared with 60 visits per 100 children per year).

# Visits by Principal Diagnosis

Tables 2–8 and accompanying text focus on the 162 million ambulatory care visits with a principal diagnosis coded, and exclude 1.9 percent of visits without a principal diagnosis.

#### **Well-Child Visits**

Well-child visits accounted for 15 percent of all ambulatory care visits provided to children (table 2). Well-child visits accounted for one-third of ambulatory care visits among infants compared with 14 percent of visits among preschoolers and 8 percent of visits among school-age children (figures 3–5). The well-child visit rate among infants (256 visits per 100 infants per year) was 5 times the rate among preschool children and the rate among preschool children was almost 3 times as high as for school-age children (49 and 17 visits per 100 children). Rates for well-child visits were the same for boys and girls, and were 66 percent higher for white children than for black children (tables 3 and 4). Rates for well-child visits were almost 80 percent higher for white infants than for black infants (table 5, figure 3).

The most common site for well-child visits was physician offices

(91 percent) (table 6). Eight percent of well-child visits occurred in hospital outpatient departments and less than 1 percent of well-child visits occurred in hospital emergency departments. Although well-child visit rates were substantially higher in physician offices than hospital outpatient departments, well-child visits accounted for 15–17 percent of all visits provided in physician offices and hospital outpatient departments.

Use of well-child visits in physician offices and hospital outpatient departments varied substantially by race. In physician offices, well-child visit rates were twice as high among white children as black children (42 visits compared with 18 visits per 100 children). In contrast, well-child visit rates in hospital outpatient departments

were 3 times as high among black children as white children (9 and 3 visits per 100 children) (table 7, figure 6). Additional analyses (not shown) indicated that conclusions regarding the use of well-child visits by white and black children were unchanged when second- and third-listed diagnoses of well-child visits were considered.

#### **Middle Ear Infection Visits**

Middle ear infection (otitis media) was the principal diagnosis for 12 percent of ambulatory care visits provided to children under 15 years of age (table 2). Visit rates for middle ear infection were similar among boys and girls, but nearly 2 times as high among white children as black children (tables 3 and 4). Visit rates for middle ear infection were substantially higher among infants and preschoolers (110 and 65 visits per 100 children per year) than older children (15 per 100 children). Visit rates for middle ear infection were about 70 percent higher among white infants than black infants and among white preschool children than black preschool children (table 5, figures 3 and 4). Middle ear infection was the most frequently occurring principal diagnosis among preschool children, accounting for 18 percent of ambulatory care visits provided to preschool children. Although the most common site for visits with a principal diagnosis of middle ear infection was physician offices (81 percent), 13 percent

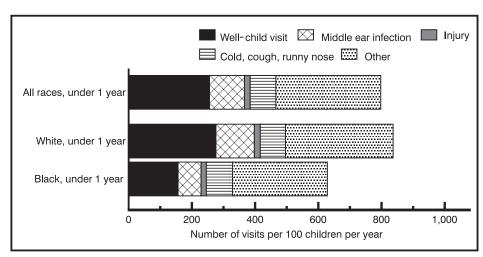


Figure 3. Ambulatory care visit rates among children under 1 year of age by principal diagnosis and race: United States, average annual 1993–95

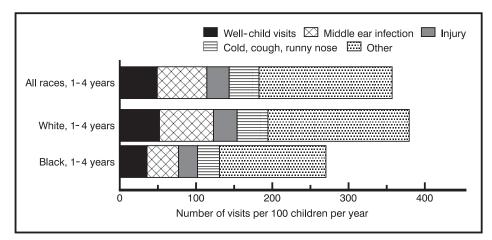


Figure 4. Ambulatory care visit rates among children 1–4 years of age by principal diagnosis and race: United States, average annual 1993–95

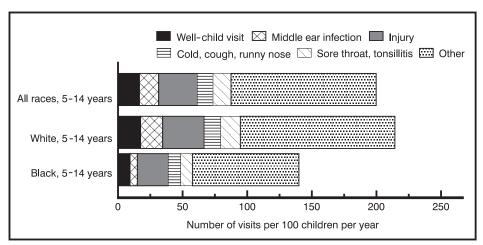


Figure 5. Ambulatory care visit rates among children 5–14 years of age by principal diagnosis and race: United States, average annual 1993–95

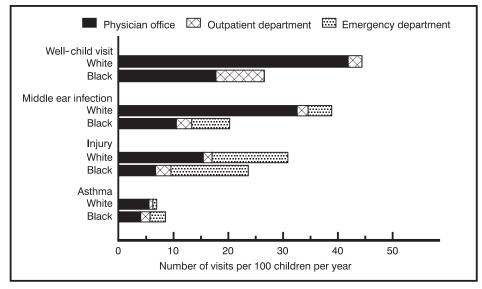


Figure 6. Ambulatory care visit rates among children under 15 years of age by place of visit, principal diagnosis, and race: United States, average annual 1993–95

of visits with a principal diagnosis of middle ear infection occurred in hospital emergency departments and 6 percent in hospital outpatient departments (table 6). Middle ear infections accounted for similar proportions of visits by children in physician offices and hospital emergency departments (12-13 percent). Middle ear infection visit rates for the three places of ambulatory care varied substantially by race. Visit rates were 3 times as high among white children as black children in physician offices (33 and 11 visits per 100 children); similar in hospital outpatient departments; and higher among black children than white children in hospital emergency departments (7 and 4 visits per 100 children) (table 7, figure 6).

#### **Injury Visits**

During 1993–95 visits with a principal diagnosis of injury accounted for 10 percent of ambulatory care visits among children under 15 years of age and 15 percent of visits among schoolage children (table 2). Two-thirds of injury visits occurred among school-age children, 28 percent among preschoolers, and 4 percent among infants. Rates for injury visits were about one-third higher among boys than among girls (33 and 25 visits per 100 children) and among white school-age children than among black school-age children (tables 3 and 5, figure 5).

Injury visits were approximately equally divided between physician offices and hospital emergency departments. Forty-seven percent of injury visits took place in physician offices, 47 percent in hospital emergency departments, and 6 percent in hospital outpatient departments (table 6). The provision of ambulatory care services for injury was a major component of visits provided by hospital emergency departments, accounting for about one-third of visits by children to hospital emergency departments. Rates for injury visits in physician offices varied by race with rates among white children twice as high as among black children (16 and 7 visits per 100 children). However, in hospital outpatient and emergency department sites, injury visit rates were similar

among white and black children (table 7, figure 6).

More detailed diagnosis information for injury visits are presented in table 8. (Detailed injury diagnosis data for age subgroups are not presented because two-thirds of injury visits occurred among school-age children.) The three most common injury categories (open wounds; fracture of upper or lower extremity; and scrape, bite, blister, and bruise) accounted for almost two-thirds of injury visits among children.

Injury visits involving open wounds as the principal diagnosis accounted for nearly one-quarter of injury visits among children under 15 years of age. Open wound visits were more likely to occur in hospital emergency departments than other places, with two-thirds of visits for open wounds occurring in emergency departments. These visits were a major component of injury visits provided by hospital emergency departments, accounting for one-third of injury visits among children to hospital emergency departments.

Twenty percent of ambulatory care injury visits among children involved extremity fractures. Visits for fractures were twice as likely to take place in physician offices as in hospital emergency departments (64 compared with 28 percent). Almost half of injury visits to physician offices for fracture of the upper or lower extremity were for followup purposes. (Analysis available upon request).

Visits with a principal diagnosis of scrapes and bruises (superficial injury and contusion with intact skin surface) accounted for 20 percent of all injury visits among children. Visits for scrapes and bruises were almost equally likely to occur in physician offices and hospital emergency departments, with 50 percent occurring in hospital emergency departments and 45 percent occurring in physician offices. Scrapes and bruises were a major component of injury visits provided by all three sites of care, accounting for 22 percent of emergency department visits and 17-19 percent of visits to the other two sites.

#### **Asthma Visits**

Asthma accounted for almost 3 percent of visits by children (table 2). The average annual visit rate for asthma (7 visits per 100 children) was similar for infants, preschool, and school-age children. Asthma visit rates were 42 percent higher for boys than girls and similar among white children and black children (tables 3 and 4). About three-quarters of visits with a principal diagnosis of asthma took place in physician offices, with an additional 15 percent in hospital emergency departments and 11 percent in hospital outpatient departments (table 6). Visits for asthma made up a similar proportion of ambulatory care services provided by physician offices, hospital outpatient departments, and hospital emergency departments (2-4 percent of visits). In physician offices and hospital outpatient departments, asthma visit rates were similar among white and black children. By contrast, in hospital emergency departments, asthma visit rates were almost 4 times as high among black children than white children (2.8 and 0.7 visits per 100 children) (table 7, figure 6).

#### **Attention Deficit Disorder Visits**

The average annual visit rate for attention deficit disorder (ADD) was 4 visits per 100 children, accounting for 1 percent of all ambulatory care medical visits provided to children (table 2). Visit rates for ADD were nearly 4 times as high among boys as girls (table 3). Visit rates were similar among white and black children (table 4). Visits for attention deficit disorder were heavily concentrated among school-age children. Ninety-four percent of visits with a principal diagnosis of ADD occurred among school-age children (table 2). Attention deficit disorder accounted for 3 percent of ambulatory care visits among school-age children. Ninety percent of visits for ADD occurred in physician offices (table 6). (Not included in this analysis of ADD are visits to nonphysician providers such as psychologists, clinical social workers, and physical and occupational therapists.)

#### Discussion

Physician's offices remained the primary site of ambulatory care for children in 1993–95 with about three-quarters of visits occurring there. However, a more complete picture of ambulatory care use is also gained by considering visits to hospital outpatient and emergency departments. Visits to hospital outpatient and emergency departments were particularly prevalent among black children.

Although a small proportion of overall visits (8 percent) occurred in hospital outpatient departments, they accounted for almost 20 percent of visits by black children. One-third of wellchild visits among black children occurred in hospital outpatient departments. In addition, hospital outpatient departments were the site of care for 13 percent of visits for "all other diagnoses," (table I) a category that includes serious and less common types of health problems. A higher proportion of visits in hospital outpatient departments than in physician offices and emergency departments were for "all other diagnoses" (44 compared with 24–26 percent of visits).

The emergency department accounted for 14 percent of visits by children overall, but 28 percent of visits among black children and 47 percent of all visits for injuries. About a third of children's visits to emergency rooms were for injuries. However, the proportion of emergency department visits for conditions such as middle ear infection (12 percent) and respiratory illnesses were similar to the proportions of visits in physician offices for those conditions. This indicates that hospital emergency departments may be used for some apparently routine ambulatory care for children.

Children access the health care system for three broad reasons—preventive care (15 percent of visits), illness care (75 percent of visits), and injury care (10 percent of visits). Visits for preventive care provide an opportunity for assessing growth and development as well as to provide child safety information and routine immunizations. The strong inverse

association of the ambulatory care visit rate with age in part reflects the recommended schedule of well-child visits. Although prevention activities can occur during other types of visits, these services may not be as in-depth because the primary focus of the visit is for diagnosis and treatment of illness or injury. Well-child visit rates for black children were lower than rates for white children, especially during infancy and school-age years. Even if full well-child services occurred during other visits, black children received fewer of these services because visit rates among black children were lower than visit rates among white children of the same age group. Data from the 1994 National Health Interview Survey, which provides information on all ambulatory care received regardless of the place of care, show a similar relative difference in physician contacts between white and black children as in this report (5).

Another measure of preventive services received by preschool children is vaccination status. In 1996, 79 percent of non-Hispanic white children 19-35 months of age compared with 74 percent of non-Hispanic black children had completed a combined series of vaccines (four doses of diphtheria-tetanuspertussis vaccine, three doses of polio, one dose of a measles-containing vaccine, and three doses of Haemophilus influenzae type b (Hib) vaccine) (26). However, there was no difference in vaccination status by race after controlling for poverty status. The percent of poor non-Hispanic black children who were vaccinated was similar to the percent of poor non-Hispanic white children with vaccinations, and poor children in both groups had lower vaccination rates than their nonpoor counterparts.

The lower rates of overall ambulatory care use and well-child visits among black children compared with white children may be attributed to financial as well as nonfinancial barriers to care. In 1995, 42 percent of black children compared with 16 percent of white children under 18 years of age lived in families with incomes below the poverty threshold (5). In 1996, the likelihood of black children living in a two-parent family was less than half the

likelihood for white children (33 and 75 percent). This impacted on income level as well as access to employer-based private health insurance coverage and the amount of time available for health care visits (27). In 1994–95 among non-Hispanic children under 18 years of age, black children and white children were about equally likely to be uninsured (14 and 12 percent) (unpublished data from the NHIS). However, the type of coverage differed by race, with black children more likely than white children to have Medicaid coverage (44 and 13 percent) and black children less likely than white children to have private coverage (40 and 74 percent).

The sites where care was received may differ between black and white children for several reasons. Although Medicaid provides financial access to care, the health care providers available to those with Medicaid and those with private coverage differ because not all health care providers accept Medicaid coverage. Other factors contributing to racial differences in site of care may include differences in the types of health care providers located in the neighborhoods where black children and white children reside, and a greater need for accessing the health care system during evenings and weekends among children in single-parent families. A cross-sectional survey of patients in 56 hospital emergency departments found that half the patients interviewed (patients arriving by ambulance were excluded) cited at least one nonfinancial barrier to care as an important reason for coming to the emergency department (28). These included such reasons as unable to go during the hours open, nowhere else to go, and unable to get an appointment soon enough.

Some caveats should be kept in mind when interpreting the results of this report. Visit rates should not be interpreted as incidence or prevalence rates but rather are a measure of the total use of ambulatory care services during a year. Visits captured in the sampling include a combination of initial and followup visits. In addition, children without visits do not contribute to the visit rate. Variation in visit rates among groups reflect a number of

factors including underlying incidence and prevalence of illness and injury, severity of the condition, access to care, and decisions about use of health care such as whether to seek care for the condition and number of followup visits.

The reader should exercise caution in interpreting the necessity of an ambulatory care visit based on the principal diagnosis categories. Diagnosis categories used in this report are based on the physician's principal diagnosis assigned after the physician performed an examination of the patient and possibly received results from diagnostic tests and laboratory studies. Thus, the principal diagnosis may differ significantly from the physician's first clinical impression as to the type of illness. For example, a visit with a principal diagnosis of a cold may have initially been considered a possible case of pneumonia or other more serious respiratory illness.

Results presented in this report should not be interpreted as providing information regarding the appropriateness of the place of visit, especially for emergency department visits. An emergency department may be the appropriate location for treatment of an apparently nonurgent diagnosis when time of day and limitations of access to other places are considered.

An additional limitation is that broad diagnostic groupings, especially for injury visits, were used due to sample size considerations. Several injury categories were collapsed in order to obtain more stable estimates. A final concern is the inability to capture the severity of an illness in the principal diagnosis or the ICD-9-CM coding. Although comparisons of the same category across three sites are possible, they may be somewhat misleading due to the potential for combining varying severities of diagnosis within broad categories. For example, injury visits in emergency departments may be more severe in nature than injury visits in other sites.

In summary, data from 1993–95 show that the amount of care received and the place of ambulatory care services for children varied by age and race. Utilization was higher among infants than among children of other age

groups, primarily due to high rates of well-child visits among infants. Black children received fewer visits overall and fewer visits primarily dedicated to well-child services than white children. Black children were more likely to receive ambulatory care in hospital outpatient and emergency departments, while white children were more likely to use physician office services. Continued monitoring of these differences in use of ambulatory care among children are needed, particularly in view of the possible impact of changes in the health care system on these differences.

#### References

- Newacheck PW, Hughes DC, Stoddard JJ. Children's access to primary care: differences by race, income, and insurance status. Ped. 97(1):26–32.
   1996.
- Overpeck MD, Kotch JB. The effect of US children's access to care on medical attention for injuries. AJPH 85(3):402–04. 1995.
- Weissman JS, Epstein AM. Falling through the safety net. Johns Hopkins University Press. Baltimore, Maryland. 1994.
- U.S. General Accounting Office.
   Health, Education, and Human Services
   Division. Health Insurance: Coverage leads to increased health care access for children. Washington. D.C. 1997.
- National Center for Health Statistics. Health, United States, 1996–97. Hyattsville, Maryland: 1997.
- National Center for Health Statistics. Health, United States, 1998. Hyattsville, Maryland: (forthcoming).
- Simpson G, Bloom B, Cohen RA, Parsons PE. Access to health care. Part 1: Children. National Center for Health Statistics. Vital Health Stat 10(196). 1997
- National Center for Health Statistics. Health, United States, 1990. Hyattsville, Maryland: Public Health Service. 1991.
- National Center for Health Statistics. Health, United States, 1995. Hyattsville, Maryland: Public Health Service. 1996.
- Woodwell DA, Schappert SM. National Ambulatory Medical Care Survey: 1993 summary. Advance data from vital and health statistics; no 270. Hyattsville, Maryland: National Center for Health

- Statistics. 1995.
- Schappert SM. National Ambulatory Medical Care Survey: 1994 summary. Advance data from vital and health statistics; no 273. Hyattsville, Maryland: National Center for Health Statistics. 1996.
- Woodwell DA. National Ambulatory Medical Care Survey: 1995 summary. Advance data from vital and health statistics; no 286. Hyattsville, Maryland: National Center for Health Statistics. 1997.
- Stussman BJ. National Hospital Ambulatory Medical Care Survey: 1993 emergency department summary. Advance data from vital and health statistics; no 271. Hyattsville, Maryland: National Center for Health Statistics. 1996.
- Stussman BJ. National Hospital
   Ambulatory Medical Care Survey: 1994 emergency department summary.
   Advance data from vital and health statistics; no 275. Hyattsville,
   Maryland: National Center for Health Statistics. 1996.
- Stussman BJ. National Hospital Ambulatory Medical Care Survey: 1995 emergency department summary. Advance data from vital and health statistics; no 285. Hyattsville, Maryland: National Center for Health Statistics. 1997.
- Lipkind KL. National Hospital
   Ambulatory Medical Care Survey: 1993 outpatient department summary.
   Advance data from vital and health statistics; no 268. Hyattsville,
   Maryland: National Center for Health Statistics. 1995.
- Lipkind KL. National Hospital
   Ambulatory Medical Care Survey: 1994 outpatient department summary.

   Advance data from vital and health statistics; no 276. Hyattsville,
   Maryland: National Center for Health Statistics. 1996.
- Lipkind KL. National Hospital Ambulatory Medical Care Survey: 1995 outpatient department summary. Advance data from vital and health statistics; no 284. Hyattsville, Maryland: National Center for Health Statistics. 1997.
- Burt CW, Knapp DE. Ambulatory care visits for asthma: United States, 1993–94. Advance data from vital and health statistics; no 277. Hyattsville, Maryland: National Center for Health Statistics. 1996.
- Schappert SM. Ambulatory care visits to physician offices, hospital outpatient

- departments, and emergency departments: United States, 1995. National Center for Health Statistics. Vital and Health Statistics 13(129).
- McCaig LF, McLemore T. Plan and operation of the National Hospital
   Ambulatory Medical Care Survey.
   National Center for Health Statistics.
   Vital and Health Statistics 1(34). 1994.
- 22. Public Health Service and Health Care Financing Administration. International classification of diseases, 9th revision, clinical modification. Washington: Public Health Service. 1989.
- Fingerhut LA, Warner M. Injury chartbook. Health, United States, 1996–97. Hyattsville, Maryland: National Center for Health Statistics. 1997.
- Burt CW, Fingerhut LA. Injury visits to hospital emergency departments: United States, 1992–95. National Center for Health Statistics. Vital Health Stat 13(131), 1998.
- 25. Shah BV, Barnwell BG, Bieler GS. SUDAAN user's manual: software for analysis of correlated data, release 6.40. Research Triangle Park, North Carolina: Research Triangle Institute. 1995
- Centers for Disease Control and Prevention. Vaccination coverage by race/ethnicity and poverty level among children aged 19–35 months: United States, 1996. MMWR 1997; 46(41):963–969.
- Federal Interagency Forum on Child and Family Statistics. America's children: key national indicators of well-being. 1997.
- Young GP, Wagner MB, Kellermann AL et al. Ambulatory visits to hospital emergency departments: Patterns and reasons for use. JAMA 276(6):460–5. 1996.

Table 1. Ambulatory care visits among children under 15 years of age by place of visit, age, sex, and race: United States, average annual 1993–95

Age, sex, and race	All places	Physician office	Hospital outpatient department	Hospital emergency department	All places	Physician office	Hospital outpatient department	Hospital emergency department
		Number of vi	sits in thousands			Sta	ndard error	
All races <sup>1</sup>	165,299	128,416	13,828	23,055	5,966	5,051	1,524	986
Age								
Jnder 5 years	88,958	68,862	7,488	12,608	3,624	3,151	795	571
Under 1 year	31,533	24,886	2,792	3,854	1,461	1,349	289	197
1–4 years	57,425	43,976	4,695	8,754	2,313	1,959	522	397
–14 years	76,340	59,554	6,340	10,447	2,659	2,299	790	449
Sex								
fale	87,280	67,508	7,213	12,560	3,284	2,818	796	555
emale	78,018	60,908	6,615	10,495	2,852	2,414	739	452
Race								
/hite	139,426	112,593	9,814	17,018	5,523	4,813	1,224	815
lack	19,090	10,232	3,542	5,316	1,095	859	408	322
	Nur	nber of visits pe	r 100 children pe	r year				
ull races <sup>1</sup>	289.4	224.8	24.2	40.4	10.4	8.8	2.7	1.7
Age								
nder 5 years	452.8	350.5	38.1	64.2	18.4	16.0	4.0	2.9
Under 1 year	815.2	643.4	72.2	99.6	37.8	34.9	7.5	5.1
1–4 years	363.9	278.7	29.8	55.5	14.7	12.4	3.3	2.5
-14 years	203.7	158.9	16.9	27.9	7.1	6.1	2.1	1.2
Sex								
fale	298.5	230.9	24.7	43.0	11.2	9.6	2.7	1.9
emale	279.8	218.4	23.7	37.6	10.2	8.7	2.6	1.6
Race								
Vhite	307.4	248.2	21.6	37.5	12.2	10.6	2.7	1.8
lack	215.2	115.3	39.9	59.9	12.3	9.7	4.6	3.6
		Percent	distribution					
ıll races <sup>1</sup>	100.0	77.7	8.4	14.0		1.1	0.8	0.6
Age								
Inder 5 years	100.0	77.4	8.4	14.2		1.2	0.8	0.7
Under 1 year	100.0	78.9	8.9	12.2		1.3	0.9	0.7
1–4 years	100.0	76.6	8.2	15.2		1.1	0.8	0.7
–14 years	100.0	78.0	8.3	13.7		1.2	1.0	0.6
Sex								
lale	100.0	77.4	8.3	14.4		1.1	0.8	0.6
emale	100.0	78.1	8.5	13.5		1.1	0.9	0.6
Race								
Vhite	100.0	80.8	7.0	12.2		1.1	0.8	0.6
Black	100.0	53.6	18.6	27.9		2.7	1.8	1.6

<sup>...</sup> Category not applicable.

NOTE: This table shows data for all visits, including 1.9 percent of visits without a principal diagnosis coded, and differs from data shown in tables 2-8.

<sup>&</sup>lt;sup>1</sup>Includes all other races not shown separately.

Table 2. Ambulatory care visits among children by age and principal diagnosis category: United States, average annual 1993–95

Principal diagnosis category	Under 15 years	Under 1 year	1–4 years	5–14 years	Under 15 years	Under 1 year	1–4 years	5–14 years
		Number of visits	s in thousands			Standard	error	
Total	162,072	30,851	56,354	74,867	5,850	1,439	2,268	2,613
Well-child visit	23,896	9,899	7,758	6,239	1,370	702	462	500
Injury	16,579	708	4,618	11,253	666	72	228	492
Selected respiratory conditions								
Cold, cough, runny nose	13,805	3,145	6,168	4,493	771	224	406	391
Sore throat, tonsillitis	8,445	448	2,745	5,253	595	85	262	394
Hayfever, sinusitis	5,321	*237	1,436	3,649	405	75	150	337
Bronchitis	4,232	700	1,597	1,936	395	108	198	209
Asthma	4,109	249	1,251	2,609	286	47	151	197
Pneumonia	2,299	715	891	693	243	101	128	109
Streptococcal sore throat	1,870	*	498	1,362	212		99	160
Croup	822	105	510	207	108	25	89	51
Selected ear conditions								
Middle ear infection	20,127	4,272	10,256	5,600	1,140	353	622	355
External ear canal infection	1,006	*	150	831	136		38	129
Selected eye conditions								
Infectious conjunctivitis	2,093	307	882	904	180	63	108	117
Correctable vision	1,821	*70	572	1,179	337	24	150	199
Selected other conditions								
Viral syndrome	3,756	884	1,596	1,276	306	109	142	172
Eczema	3,192	654	942	1,596	238	103	91	158
Attention deficit disorder	2,113	*	*131	1,979	258		39	253
Bladder infection	1,035	*63	352	620	115	20	60	88
Gastroenteritis	651	85	347	219	90	18	61	52
Chicken pox	631	*80	239	312	97	27	46	78
All other diagnoses	44,270	8,196	13,415	22,658	1,754	439	626	987
· ·		ber of visits per 1						
Total	283.7	797.6	257.4	199.8	10.2	37.2	14.4	7.0
Total	41.8	255.9	357.1 49.2	16.6	2.4	18.1	2.9	7.0 1.3
Injury	29.0	18.3	29.3	30.0	1.2	1.9	1.4	1.3
Selected respiratory conditions	24.2	04.2	20.4	42.0	4.4	F 0	2.6	1.0
Cold, cough, runny nose	24.2 14.8	81.3 11.6	39.1 17.4	12.0 14.0	1.4 1.0	5.8 2.2	2.6 1.7	1.0 1.1
Hayfever, sinusitis	9.3	*6.1	9.1	9.7	0.7	1.9	0.9	0.9
Bronchitis	9.3 7.4	18.1	10.1	5.2	0.7	2.8	1.3	0.9
Asthma	7.4	6.4	7.9	7.0	0.5	1.2	1.0	0.5
Pneumonia	4.0	18.5	5.7	1.8	0.4	2.6	0.8	0.3
Streptococcal sore throat	3.3	*	3.2	3.6	0.4		0.6	0.4
Croup	1.4	2.7	3.2	0.6	0.2	0.7	0.6	0.1
Selected ear conditions								
Middle ear infection	35.2	110.4	65.0	14.9	2.0	9.1	3.9	0.9
External ear canal infection	1.8	*	1.0	2.2	0.2		0.2	0.3
Selected eye conditions								
Infectious conjunctivitis	3.7	7.9	5.6	2.4	0.3	1.6	0.7	0.3
Correctable vision	3.2	*1.8	3.6	3.1	0.6	0.6	0.9	0.5
Selected other conditions								
Viral syndrome	6.6	22.8	10.1	3.4	0.5	2.8	0.9	0.5
Eczema	5.6	16.9	6.0	4.3	0.4	2.7	0.6	0.4
Attention deficit disorder	3.7	*	*0.8	5.3	0.5		0.2	0.7
Bladder infection	1.8	*1.6	2.2	1.7	0.2	0.5	0.4	0.2
Gastroenteritis	1.1	2.2	2.2	0.6	0.2	0.5	0.4	0.1
Chicken pox	1.1	*2.1	1.5	0.8	0.2	0.7	0.3	0.2
All other diagnoses	77.5	211.9	85.0	60.5	3.1	11.4	4.0	2.6

Table 2. Ambulatory care visits among children by age and principal diagnosis category: United States, average annual 1993-95-Con.

Principal diagnosis category	Under 15 years	Under 1 year	1–4 years	5–14 years	Under 15 years	Under 1 year	1–4 years	5–14 years
		Percent dis	stribution			Standard	error	
Total	100.0	100.0	100.0	100.0				
Well-child visit	14.7	32.1	13.8	8.3	0.6	1.5	0.6	0.6
Injury	10.2	2.3	8.2	15.0	0.3	0.2	0.4	0.5
Selected respiratory conditions								
Cold, cough, runny nose	8.5	10.2	10.9	6.0	0.4	0.7	0.6	0.5
Sore throat, tonsillitis	5.2	1.5	4.9	7.0	0.3	0.3	0.4	0.4
Hayfever, sinusitis	3.3	*0.8	2.6	4.9	0.3	0.3	0.3	0.5
Bronchitis	2.6	2.3	2.8	2.6	0.2	0.3	0.3	0.3
Asthma	2.5	0.8	2.2	3.5	0.2	0.2	0.3	0.3
Pneumonia	1.4	2.3	1.6	0.9	0.1	0.3	0.2	0.2
Streptococcal sore throat	1.2	*	0.9	1.8	0.1		0.2	0.2
roup	0.5	0.3	0.9	0.3	0.1	0.1	0.2	0.1
Selected ear conditions								
Aiddle ear infection	12.4	13.9	18.2	7.5	0.5	0.9	0.7	0.4
external ear canal infection	0.6	*	0.3	1.1	0.5		0.7	0.4
	0.0		0.3	1.1	0.1		0.1	0.2
Selected eye conditions								
nfectious conjunctivitis	1.3	1.0	1.6	1.2	0.1	0.2	0.2	0.2
Correctable vision	1.1	*0.2	1.0	1.6	0.2	0.1	0.3	0.3
Selected other conditions								
'iral syndrome	2.3	2.9	2.8	1.7	0.2	0.3	0.2	0.2
czema	2.0	2.1	1.7	2.1	0.1	0.3	0.2	0.2
Attention deficit disorder	1.3	*	*0.2	2.6	0.2		0.1	0.3
Bladder infection	0.6	*0.2	0.6	0.8	0.1	0.1	0.1	0.1
Sastroenteritis	0.4	0.3	0.6	0.3	0.1	0.1	0.1	0.1
Chicken pox	0.4	*0.3	0.4	0.4	0.1	0.1	0.1	0.1
All other diagnoses	27.3	26.6	23.8	30.3	0.6	1.1	0.7	0.8
		Percent dis	stribution					
- Total	100.0	19.0	34.8	46.2		0.4	0.5	0.6
Vell-child visit	100.0	41.4	32.5	26.1		1.6	1.1	1.5
njury	100.0	4.3	27.9	67.9		0.4	0.9	1.0
Selected respiratory conditions								
Cold, cough, runny nose	100.0	22.8	44.7	32.5		1.5	1.6	1.9
Sore throat, tonsillitis	100.0	5.3	32.5	62.2	• • •	1.0	2.0	2.2
Hayfever, sinusitis	100.0	*4.4	27.0	68.6		1.4	2.5	2.8
Bronchitis	100.0	16.5	37.7	45.7		2.2	2.7	2.8
Asthma	100.0	6.1	30.5	63.5	• • • • • • • • • • • • • • • • • • • •	1.1	2.7	2.8
Pneumonia	100.0	31.1	38.8	30.1		2.9	3.9	3.8
Streptococcal sore throat	100.0	*	26.7	72.9			4.1	4.1
Croup	100.0	12.7	62.1	25.2		3.1	6.1	5.4
Selected ear conditions								
	100.0	24.2	F1.0	27.0		4.4	4.0	1.0
Aiddle ear infection	100.0 100.0	21.2	51.0 14.9	27.8 82.6		1.1	1.3 3.8	1.2 4.1
	.00.0			02.0			0.0	
Selected eye conditions	100.0	447	40.4	40.0		2.0	2.0	4.0
nfectious conjunctivitis	100.0 100.0	14.7 *3.9	42.1 31.4	43.2 64.7		3.0 1.2	3.9 3.6	4.0 4.0
Selected other conditions	100.0	22.5	40 F	24.0		2.2	2.0	2.4
firal syndrome	100.0 100.0	23.5 20.5	42.5 29.5	34.0 50.0		2.3 2.8	2.8 2.6	3.1 3.0
ttention deficit disorder	100.0	20.5 *	29.5 *6.2	93.7			2.6 1.9	3.0 1.9
Bladder infection	100.0	*6.1	34.0	93.7 59.9		2.0	4.6	4.7
Sastroenteritis	100.0	13.0	53.3	33.7		2.0	4.6 6.3	4.7 6.1
Chicken pox	100.0	*12.7	33.3 37.9	33.7 49.4		2. <i>1</i> 4.1	6.9	7.8
	100.0	14.1	31.3	43.4		4.1	0.3	1.0
All other diagnoses	100.0	18.5	30.3	51.2		0.7	0.8	0.9

<sup>...</sup> Category not applicable.

NOTE: This table excludes 1.9 percent of visits without a principal diagnosis coded, and differs from data presented in table 1. See appendix table I for definitions of principal diagnosis categories and ICD-9-CM codes.

<sup>\*</sup> Estimates with a relative standard error between 30-50 percent are shown with an asterisk. Estimates with a relative standard error greater than 50 percent are not shown.

Table 3. Ambulatory care visits among children under 15 years of age by sex and principal diagnosis category: United States, average annual 1993–95

Principal diagnosis category	Both sexes	Males	Females	Both sexes	Males	Females
	Nur	nber of visits in thous	ands		Standard erro	r
	162,072	85,699	76,373	5,850	3,234	2,789
Well-child visit	23,896	12,127	11,769	1,370	782	724
njury	16,579	9,623	6,956	666	435	325
Selected respiratory conditions						
Cold, cough, runny nose	13,805	7,047	6,758	771	441	441
Sore throat, tonsillitis	8,445	4,253	4,192	595	339	327
Hayfever, sinusitis	5,321	2,805	2,516	405	250	217
Bronchitis	4,232	2,452	1,781	395	281	182
Asthma	4,109	2,451	1,658	286	182	171
Pneumonia	2,299	1,207	1,093	243	166	126
Streptococcal sore throat	1,870	843	1,027	212	129	136
Croup	822	432	390	108	75	73
Selected ear conditions						
Middle ear infection	20,127	10,844	9,283	1,140	692	548
external ear canal infection	1,006	542	464	136	92	73
Selected eye conditions						
nfectious conjunctivitis	2,093	1,057	1,035	180	123	106
Correctable vision	1,821	886	935	337	160	189
Selected other conditions						
/iral syndrome	3,756	1,796	1,960	306	157	194
Eczema	3,192	1,875	1,316	238	165	127
Attention deficit disorder	2,113	1,684	428	258	208	78
Bladder infection	1,035	225	810	115	49	104
Gastroenteritis	651	372	279	90	65	50
Chicken pox	631	300	331	97	57	77
All other diagnoses	44,270	22,878	21,392	1,754	982	895
	Number o	f visits per 100 childre	en per year			
Total	283.7	293.1	273.9	10.2	11.1	10.0
Well-child visit	41.8	41.5	42.2	2.4	2.7	2.6
Injury	29.0	32.9	24.9	1.2	1.5	1.2
Selected respiratory conditions						
Cold, cough, runny nose	24.2	24.1	24.2	1.4	1.5	1.6
Sore throat, tonsillitis	14.8	14.6	15.0	1.0	1.2	1.2
Hayfever, sinusitis	9.3	9.6	9.0	0.7	0.9	0.8
Bronchitis	7.4	8.4	6.4	0.7	1.0	0.7
Asthma	7.2	8.4	5.9	0.5	0.6	0.6
Pneumonia	4.0	4.1	3.9	0.4	0.6	0.5
Streptococcal sore throat	3.3	2.9	3.7	0.4	0.4	0.5
Croup	1.4	1.5	1.4	0.2	0.3	0.3
Selected ear conditions						
Middle ear infection	35.2	37.1	33.3	2.0	2.4	2.0
External ear canal infection	1.8	1.9	1.7	0.2	0.3	0.3
Selected eye conditions						
nfectious conjunctivitis	3.7	3.6	3.7	0.3	0.4	0.4
Correctable vision	3.2	3.0	3.4	0.6	0.6	0.7
Selected other conditions						
/iral syndrome	6.6	6.1	7.0	0.5	0.5	0.7
Eczema	5.6	6.4	4.7	0.4	0.6	0.5
Attention deficit disorder	3.7	5.8	1.5	0.5	0.7	0.3
Bladder infection	1.8	0.8	2.9	0.2	0.2	0.4
Gastroenteritis	1.1	1.3	1.0	0.2	0.2	0.2
	1.1	1.0	1.2	0.2	0.2	0.3
Chicken pox	***	1.0			*	

Table 3. Ambulatory care visits among children under 15 years of age by sex and principal diagnosis category: United States, average annual 1993–95—Con.

Principal diagnosis category	Both sexes	Males	Females	Both sexes	Males	Female
		Percent distribution			Standard erro	or
	100.0	100.0	100.0			
Vell-child visit	14.7	14.2	15.4	0.6	0.7	0.7
njury	10.2	11.2	9.1	0.3	0.4	0.4
ijuiy	10.2	11.2	9.1	0.3	0.4	0.4
Selected respiratory conditions						
old, cough, runny nose	8.5	8.2	8.9	0.4	0.4	0.5
ore throat, tonsillitis	5.2	5.0	5.5	0.3	0.3	0.4
ayfever, sinusitis	3.3	3.3	3.3	0.3	0.3	0.3
ronchitis	2.6	2.9	2.3	0.2	0.3	0.2
sthma	2.5	2.9	2.2	0.2	0.2	0.2
neumonia	1.4	1.4	1.4	0.1	0.2	0.2
treptococcal sore throat	1.2	1.0	1.3	0.1	0.1	0.2
roup	0.5	0.5	0.5	0.1	0.1	0.1
	0.0	0.0	0.0	0.1	0.1	0.1
Selected ear conditions						
liddle ear infection	12.4	12.7	12.2	0.5	0.6	0.5
xternal ear canal infection	0.6	0.6	0.6	0.1	0.1	0.1
Selected eye conditions						
nfectious conjunctivitis	1.3	1.2	1.4	0.1	0.2	0.1
Correctable vision	1.1	1.0	1.2	0.2	0.2	0.3
Selected other conditions						
iral syndrome	2.3	2.1	2.6	0.2	0.2	0.2
czema	2.0	2.2	1.7	0.1	0.2	0.2
ttention deficit disorder	1.3	2.0	0.6	0.2	0.2	0.2
	0.6			0.2		0.1
ladder infection		0.3	1.1		0.1	
Gastroenteritis	0.4	0.4	0.4	0.1	0.1	0.1
Chicken pox	0.4	0.4	0.4	0.1	0.1	0.1
Il other diagnoses	27.3	26.7	28.0	0.6	0.7	0.7
_		Percent distribution		_		
otal	100.0	52.9	47.1		0.5	0.5
Vell-child visit	100.0	50.8	49.3		1.4	1.4
njury	100.0	58.0	42.0		1.1	1.1
•	100.0	30.0	42.0			
Selected respiratory conditions						
cold, cough, runny nose	100.0	51.1	49.0		1.6	1.6
ore throat, tonsillitis	100.0	50.4	49.6		1.8	1.8
ayfever, sinusitis	100.0	52.7	47.3		2.3	2.3
ronchitis	100.0	57.9	42.1		2.9	2.9
sthma	100.0	59.7	40.3		2.7	2.7
neumonia	100.0	52.5	47.5		3.7	3.7
treptococcal sore throat	100.0	45.1	54.9		4.5	4.5
roup	100.0	52.5	47.5		6.2	6.2
Selected ear conditions						
Middle ear infection	100.0	53.9	46.1		1.3	1.3
xternal ear canal infection	100.0	53.9	46.1		4.9	4.9
Selected eye conditions						
nfectious conjunctivitis	100.0	50.5	49.5		3.6	3.6
orrectable vision	100.0	48.6	51.4		2.6	2.6
	100.0	40.0	31.4	• • •	2.0	2.0
Selected other conditions						
iral syndrome	100.0	47.8	52.2		2.4	2.4
czema	100.0	58.8	41.2		2.7	2.7
ttention deficit disorder	100.0	79.7	20.3		2.7	2.7
ladder infection	100.0	21.8	78.2		4.4	4.4
Sastroenteritis	100.0	57.1	42.9		5.8	5.8
Chicken pox	100.0	47.5	52.5		7.7	7.7
Il other diagnoses	100.0	51.7	48.3		0.8	0.8

<sup>...</sup> Category not applicable.

Table 4. Ambulatory care visits among children under 15 years of age by race and principal diagnosis category: United States, average annual 1993–95

Principal diagnosis category	All races <sup>1</sup>	White	Black	All races <sup>1</sup>	White	Black
	Nur	mber of visits in thousan	ds		Standard error	
— Fotal	162,072	136,849	18,623	5,850	5,420	1,042
Well-child visit	23,896	20,166	2,376	1,370	1,225	216
njury	16,579	14,032	2,109	666	616	163
Selected respiratory conditions						
old, cough, runny nose	13,805	11,292	1,764	771	716	184
ore throat, tonsillitis	8,445	7,359	840	595	548	98
ayfever, sinusitis	5,321	4,688	344	405	391	7
ronchitis	4,232	3,786	325	395	369	7
sthma	4,109	3,155	760	286	259	9
neumonia	2,299	1,959	289	243	216	6
treptococcal sore throat	1,870	1,640	*186	212	208	5
roup	822	747	*63	108	106	2
Selected ear conditions						
iddle ear infection	20,127	17,636	1,800	1,140	1,054	13
xternal ear canal infection	1,006	936	*	136	136	
Selected eye conditions						
nfectious conjunctivitis	2,093	1,773	285	180	174	58
Correctable vision	1,821	1,638	*115	337	310	4
Selected other conditions						
iral syndrome	3,756	3,088	380	306	267	5
czema	3,192	2,337	609	238	206	10
ttention deficit disorder	2,113	1,871	230	258	238	6
ladder infection	1,035	856	*140	115	104	4
astroenteritis	651	541	96	90	83	2
Chicken pox	631	519	83	97	91	2
Il other diagnoses	44,270	36,832	5,770	1,754	1,596	38
		of visits per 100 children		.,. • .	1,000	00.
<del>-</del>		·		-		
otal	283.7	301.7	209.9	10.2	11.9	11.7
Vell-child visit	41.8 29.0	44.5 30.9	26.8 23.8	2.4 1.2	2.7 1.4	2.4 1.8
, ,	20.0	00.0	20.0			•••
Selected respiratory conditions	24.2	24.2	40.0		4.0	•
old, cough, runny nose	24.2	24.9	19.9	1.4	1.6	2.
ore throat, tonsillitis	14.8	16.2	9.5	1.0	1.2	1.
ayfever, sinusitis	9.3	10.3	3.9	0.7	0.9	0.
ronchitis	7.4	8.3	3.7	0.7	0.8	0.
sthma	7.2	7.0	8.6	0.5	0.6	1.
neumonia	4.0	4.3	3.3	0.4	0.5	0.
treptococcal sore throat	3.3	3.6	*2.1	0.4	0.5	0.
roup	1.4	1.6	*0.7	0.2	0.2	0.3
Selected ear conditions						
Aiddle ear infection	35.2	38.9	20.3	2.0	2.3	1.0
xternal ear canal infection	1.8	2.1	*	0.2	0.3	
Selected eye conditions						
fectious conjunctivitis	3.7	3.9	3.2	0.3	0.4	0.7
orrectable vision	3.2	3.6	*1.3	0.6	0.7	0.
Selected other conditions						
'iral syndrome	6.6	6.8	4.3	0.5	0.6	0.
czema	5.6	5.2	6.9	0.4	0.5	1.
ttention deficit disorder	3.7	4.1	2.6	0.5	0.5	0.
	1.8	1.9	*1.6	0.2	0.2	0.
ladder infection	1.0					
	1.1	1.2	1.1	0.2	0.2	0.
Bastroenteritis Chicken pox			1.1 0.9	0.2 0.2	0.2 0.2	0.3 0.3

Table 4. Ambulatory care visits among children under 15 years of age by race and principal diagnosis category: United States, average annual 1993-95-Con.

Principal diagnosis category	All races <sup>1</sup>	White	Black	All races <sup>1</sup>	White	Black
		Percent distribution			Standard error	
— Total	100.0	100.0	100.0			
Well-child visit	14.7	14.7	12.8	0.6	0.6	0.9
njury	10.2	10.3	11.3	0.3	0.4	0.7
Selected respiratory conditions						
Cold, cough, runny nose	8.5	8.3	9.5	0.4	0.4	0.8
Sore throat, tonsillitis	5.2	5.4	4.5	0.3	0.3	0.5
Hayfever, sinusitis	3.3	3.4	1.9	0.3	0.3	0.4
Bronchitis	2.6	2.8	1.7	0.2	0.3	0.4
Asthma	2.5	2.3	4.1	0.2	0.2	0.4
Pneumonia	1.4	1.4	1.6	0.1	0.1	0.3
Streptococcal sore throat	1.2	1.2	*1.0	0.1	0.1	0.3
Croup	0.5	0.6	*0.3	0.1	0.1	0.1
Selected ear conditions						
Middle ear infection	12.4	12.9	9.7	0.5	0.5	0.6
External ear canal infection	0.6	0.7	*	0.1	0.1	
Selected eye conditions						
nfectious conjunctivitis	1.3	1.3	1.5	0.1	0.1	0.3
Correctable vision	1.1	1.2	*0.6	0.2	0.2	0.2
Selected other conditions						
Viral syndrome	2.3	2.3	2.0	0.2	0.2	0.3
Eczema	2.0	1.7	3.3	0.1	0.1	0.5
Attention deficit disorder	1.3	1.4	1.2	0.2	0.2	0.3
Bladder infection	0.6	0.6	*0.8	0.1	0.1	0.2
Sastroenteritis	0.4	0.4	0.5	0.1	0.1	0.2
Chicken pox	0.4	0.4	0.5	0.1	0.1	0.1
All other diagnoses	27.3	26.9	31.0	0.6	0.7	1.1

NOTE: This table excludes 1.9 percent of visits without a principal diagnosis coded, and differs from data presented in table 1. See appendix table I for definitions of principal diagnosis categories and ICD-9-CM codes.

<sup>...</sup> Category not applicable.

\* Estimates with a relative standard error between 30–50 percent are shown with an asterisk. Estimates with a relative standard error greater than 50 percent are not shown.

<sup>&</sup>lt;sup>1</sup>All races includes races not listed separately.

Table 5. Ambulatory care visits among children under 15 years of age by selected principal diagnosis category, age, and race: United States, average annual 1993–95

				Sele	ected diagnoses		
Age and race	All visits	Well- child visit	Middle ear infection	Injury	Cold, cough, runny nose	Sore throat/ tonsillitis	Asthma
Under 15 years			Numbe	r of visits per 10	0 children per year		
All races <sup>1</sup>	283.7	41.8	35.2	29.0	24.2	14.8	7.2
White	301.7	44.5	38.9	30.9	24.9	16.2	7.0
Black	209.9	26.8	20.3	23.8	19.9	9.5	8.6
Inder 5 years:							
All races <sup>1</sup>	443.9	89.9	73.9	27.1	47.4	16.3	7.6
White	469.3	96.1	80.7	28.6	48.2	18.1	7.5
Black	340.6	59.5	47.5	23.3	39.4	10.2	9.4
All races <sup>1</sup>	797.6	255.9	110.4	18.3	81.3	11.6	6.4
White	836.7	276.2	121.4	18.9	79.9	12.2	6.4
Black	628.6	156.4	73.0	16.5	82.6	8.9	6.5
1-4 years:							
All races <sup>1</sup>	357.1	49.2	65.0	29.3	39.1	17.4	7.9
White	379.5	52.1	70.8	31.0	40.4	19.6	7.8
Black	270.3	35.8	41.3	24.9	28.8	10.5	10.2
-14 years:							
All races <sup>1</sup>	199.8	16.6	14.9	30.0	12.0	14.0	7.0
White	214.3	17.5	17.1	32.1	12.8	15.2	6.7
Black	140.0	9.3	5.7	24.0	9.5	9.1	8.1
Under 15 years				Standard	error		
ıll races <sup>1</sup>	10.2	2.4	2.0	1.2	1.4	1.0	0.5
White	11.9	2.7	2.3	1.4	1.6	1.2	0.6
Black	11.7	2.4	1.6	1.8	2.1	1.1	1.0
nder 5 years:							
All races <sup>1</sup>	18.1	5.4	4.5	1.3	2.7	1.5	0.8
White	20.9	6.0	5.3	1.6	3.1	1.8	1.0
Black	20.6	5.9	3.7	1.9	4.0	1.8	1.5
All races <sup>1</sup>	37.2	18.1	9.1	1.9	5.8	2.2	1.2
White	41.7	20.1	10.7	2.2	6.4	2.3	1.5
Black	45.7	20.5	9.1	2.4	11.3	3.8	1.5
1-4 years:							
All races <sup>1</sup>	14.4	2.9	3.9	1.4	2.6	1.7	1.0
White	16.9	3.5	4.6	1.7	3.0	2.0	1.2
Black	17.5	4.4	3.6	2.1	3.9	2.1	1.7
-14 years:							
All races <sup>1</sup>	7.0	1.3	0.9	1.3	1.0	1.1	0.5
White	8.2	1.5	1.1	1.5	1.2	1.2	0.6
Black	8.6	1.4	0.9	2.3	1.8	1.4	1.2

<sup>&</sup>lt;sup>1</sup>All races includes races not listed separately.

NOTE: This table excludes 1.9 percent of visits without a principal diagnosis coded, and differs from data presented in table 1. See appendix table I for definitions of principal diagnosis categories and ICD-9-CM codes.

Table 6. Ambulatory care visits among children under 15 years of age by place of visit and principal diagnosis category: United States, average annual 1993–95

Principal diagnosis category	All places	Physician office	Hospital outpatient department	Hospital emergency department	All places	Physician office	Hospital outpatient department	Hospital emergency department
		Number of v	risits in thousand	ls		Star	ndard error	
Total	162,072	125,968	13,457	22,647	5,850	4,957	1,492	969
Well-child visit	23,896	21,825	1,997	74	1,370	1,304	213	12
Injury	16,579	7,856	1,006	7,717	666	442	165	330
Selected respiratory conditions								
Cold, cough, runny nose	13,805	11,509	772	1,524	771	741	130	96
Sore throat, tonsillitis	8,445	6,980	443	1,022 202	595 405	558 409	89	72 24
Hayfever, sinusitis	5,321 4,232	4,854 3,587	265 119	527	395	389	53 26	43
Asthma	4,109	3,029	469	611	286	272	106	46
Pneumonia	2,299	1,747	103	449	243	231	25	43
Streptococcal sore throat	1,870	1,607	100	163	212	206	25	24
Croup	822	595	*34	193	108	103	14	23
Selected ear conditions								
Middle ear infection	20,127 1,006	16,310 846	1,172 *50	2,646 110	1,140 136	1,077 136	151 16	152 17
Selected eye conditions								
Infectious conjunctivitis	2,093	1,688	131	273	180	177	23	28
Correctable vision	1,821	1,661	*159	*	337	332	60	
Selected other conditions								
Viral syndrome	3,756	2,668	157	931	306	282	26	86
Eczema	3,192	2,613	240	338	238	222	41	34
Attention deficit disorder	2,113	1,887	220	*5	258	252	49	2
Bladder infection	1,035	753	84	198	115	115	16	20
Gastroenteritis	651 631	428 500	37 25	186 106	90 97	84 94	9 7	24 15
All other diagnoses	44,270	33,027	5,873	5,370	1,754	1,335	694	267
			er 100 children i		.,	1,000		
Total	283.7	220.5	23.6	39.6	10.2	8.7	2.6	1.7
Well-child visit	41.8	38.2	3.5	0.1	2.4	2.3	0.4	0.0
Injury	29.0	13.8	1.8	13.5	1.2	0.8	0.3	0.6
Selected respiratory conditions								
Cold, cough, runny nose	24.2	20.1	1.4	2.7	1.4	1.3	0.2	0.2
Sore throat, tonsillitis	14.8	12.2	0.8	1.8	1.0	1.0	0.2	0.1
Hayfever, sinusitis	9.3	8.5	0.5	0.4	0.7	0.7	0.1	0.0
Bronchitis	7.4	6.3	0.2	0.9	0.7	0.7	0.1	0.1
Asthma	7.2	5.3	8.0	1.1	0.5	0.5	0.2	0.1
Pneumonia	4.0	3.1	0.2	0.8	0.4	0.4	0.0	0.1
Streptococcal sore throat	3.3	2.8	0.2	0.3	0.4	0.4	0.0	0.0
Croup	1.4	1.0	*0.1	0.3	0.2	0.2	0.0	0.0
Selected ear conditions	05.0	20.0	0.4	4.0	0.0	4.0	0.0	0.0
Middle ear infection	35.2 1.8	28.6 1.5	2.1 *0.1	4.6 0.2	2.0 0.2	1.9 0.2	0.3 0.0	0.3 0.0
Selected eye conditions								
Infectious conjunctivitis	3.7	3.0	0.2	0.5	0.3	0.3	0.0	0.1
Correctable vision	3.2	2.9	*0.3	*	0.6	0.6	0.1	
Selected other conditions								
Viral syndrome	6.6	4.7	0.3	1.6	0.5	0.5	0.1	0.2
Eczema	5.6	4.6	0.4	0.6	0.4	0.4	0.1	0.1
Attention deficit disorder	3.7	3.3	0.4	*	0.5	0.4	0.1	
Bladder infection	1.8	1.3	0.2	0.3	0.2	0.2	0.0	0.0
Gastroenteritis	1.1 1.1	0.7 0.9	0.1 0.0	0.3 0.2	0.2 0.2	0.1 0.2	0.0	0.0 0.0
Chicken pox							0.0	
All other diagnoses	77.5	57.8	10.3	9.4	3.1	2.3	1.2	0.5

Table 6. Ambulatory care visits among children under 15 years of age by place of visit and principal diagnosis category: United States, average annual 1993–95—Con.

Principal diagnosis category	All places	Physician office	Hospital outpatient department	Hospital emergency department	All places	Physician office	Hospital outpatient department	Hospital emergency department
		Percen	t distribution			Sta	ndard error	
Total	100.0	100.0	100.0	100.0				
Well-child visit	14.7	17.3	14.8	0.3	0.6	0.7	1.1	0.1
Injury	10.2	6.2	7.5	34.1	0.3	0.3	0.7	0.7
		0.2		•	0.0	0.0	· · ·	0
Selected respiratory conditions								
Cold, cough, runny nose	8.5	9.1	5.7	6.7	0.4	0.5	0.6	0.3
Sore throat, tonsillitis	5.2	5.5	3.3	4.5	0.3	0.4	0.4	0.3
Hayfever, sinusitis	3.3 2.6	3.9 2.9	2.0 0.9	0.9 2.3	0.3	0.4 0.3	0.2	0.1 0.2
Asthma	2.5	2.9	3.5	2.7	0.2 0.2	0.3	0.1 0.6	0.2
Pneumonia	1.4	1.4	0.8	2.0	0.2	0.2	0.1	0.2
Streptococcal sore throat	1.2	1.3	0.7	0.7	0.1	0.2	0.1	0.1
Croup	0.5	0.5	*0.3	0.9	0.1	0.1	0.1	0.1
·								
Selected ear conditions	10.4	42.0	0.7	44 7	0.5	0.6	0.5	0.4
Middle ear infection	12.4 0.6	13.0 0.7	8.7 0.4	11.7 0.5	0.5 0.1	0.6 0.1	0.5 0.1	0.4 0.1
External ear canal infection	0.0	0.7	0.4	0.5	0.1	0.1	0.1	0.1
Selected eye conditions								
Infectious conjunctivitis	1.3	1.3	1.0	1.2	0.1	0.1	0.1	0.1
Correctable vision	1.1	1.3	*1.2	*	0.2	0.3	0.4	
Selected other conditions								
Viral syndrome	2.3	2.1	1.2	4.1	0.2	0.2	0.2	0.3
Eczema	2.0	2.1	1.8	1.5	0.1	0.2	0.2	0.1
Attention deficit disorder	1.3	1.5	1.6	*	0.2	0.2	0.3	
Bladder infection	0.6	0.6	0.6	0.9	0.1	0.1	0.1	0.1
Gastroenteritis	0.4	0.3	0.3	0.8	0.1	0.1	0.1	0.1
Chicken pox	0.4	0.4	0.2	0.5	0.1	0.1	0.0	0.1
All other diagnoses	27.3	26.2	43.6	23.7	0.6	0.7	1.8	0.5
Ç		Percen	t distribution					
Total	100.0	77.7	8.3	14.0		1.1	0.8	0.6
	100.0	91.3			• • •	0.9	0.9	
Well-child visit	100.0	91.3 47.4	8.4 6.1	0.3 46.6		0.9 1.7	0.9	0.1 1.5
Injury	100.0	47.4	0.1	40.0		1.7	0.9	1.5
Selected respiratory conditions								
Cold, cough, runny nose	100.0	83.4	5.6	11.0		1.4	1.0	0.9
Sore throat, tonsillitis	100.0	82.6	5.3	12.1		1.6	1.1	1.1
Hayfever, sinusitis	100.0	91.2	5.0	3.8		1.4	1.2	0.5
Bronchitis	100.0	84.8	2.8	12.5		1.7	0.7	1.4
Asthma	100.0	73.7	11.4	14.9		3.1	2.5	1.4
Pneumonia	100.0 100.0	76.0 86.0	4.5 5.3	19.6 8.7		3.0 2.2	1.2 1.5	2.5 1.5
Croup	100.0	72.4	*4.1	23.5		4.2	1.8	3.6
·	100.0	12.4	4.1	20.0	• • • •	4.2	1.0	3.0
Selected ear conditions								
Middle ear infection	100.0	81.0	5.8	13.1		1.4	0.8	0.9
External ear canal infection	100.0	84.1	*5.0	10.9		3.5	1.9	2.2
Selected eye conditions								
Infectious conjunctivitis	100.0	80.7	6.3	13.1		2.5	1.2	1.7
Correctable vision	100.0	91.2	*8.7	*		3.5	3.5	
Selected other conditions								
Viral syndrome	100.0	71.0	4.2	24.8		2.8	0.8	2.5
Eczema	100.0	81.9	7.5	10.6		2.0	1.2	1.2
Attention deficit disorder	100.0	89.3	10.4	*0.3		2.6	2.6	0.1
Bladder infection	100.0	72.7	8.1	19.2		4.0	1.8	2.9
Gastroenteritis	100.0	65.7	5.7	28.6		5.3	1.6	4.5
Chicken pox	100.0	79.3	*4.0	16.7		3.9	1.3	3.3
	100.0	74.6						

<sup>...</sup> Category not applicable.

NOTE: This table excludes 1.9 percent of visits without a principal diagnosis coded, and differs from data presented in table 1. See appendix table I for definitions of principal diagnosis categories and ICD-9-CM codes.

<sup>0.0</sup> Quantity more than zero but less than 0.05.

<sup>\*</sup> Estimates with a relative standard error between 30-50 percent are shown with an asterisk. Estimates with a relative standard error greater than 50 percent are not shown.

Table 7. Ambulatory care visits among children under 15 years of age by place of visit, race, and selected principal diagnosis category: United States, average annual 1993–95

Principal diagnosis category	All places		Physician office		Hospital outpatient department		Hospital emergency department	
	White	Black	White	Black	White	Black	White	Black
	Number of visits per 100 children per year							
Well-child visit	44.5	26.8	41.9	17.8	2.5	8.8	*	*
Middle ear infection	38.9	20.3	32.6	10.6	2.0	2.8	4.3	6.9
Injury	30.9	23.8	15.5	6.8	1.6	2.8	13.8	14.1
Asthma	7.0	8.6	5.6	4.1	0.7	1.7	0.7	2.8
Attention deficit disorder	4.1	2.6	3.8	*2.0	0.4	0.6	*	*
	Standard error							
Well-child visit	2.7	2.4	2.6	2.1	0.3	1.1		
Middle ear infection	2.3	1.6	2.2	1.3	0.3	0.4	0.3	0.6
Injury	1.4	1.8	0.9	1.2	0.3	0.6	0.6	1.1
Asthma	0.6	1.0	0.6	0.8	0.1	0.4	0.1	0.3
Attention deficit disorder	0.5	0.7	0.5	0.7	0.1	0.2		

<sup>...</sup> Category not applicable.

NOTE: Data shown for selected diagnostic categories only. See appendix table I for definitions of principal diagnosis categories and ICD-9-CM codes.

<sup>\*</sup> Estimates with a relative standard error between 30-50 percent are shown with an asterisk. Estimates with a relative standard error greater than 50 percent are not shown.

Table 8. Injury visits among children under 15 years of age by place of visit and principal injury diagnosis category: United States, average annual 1993–95

Principal injury diagnosis category	All places	Physician office	Hospital outpatient department	Hospital emergency department	All places	Physician office	Hospital outpatient department	Hospital emergency department
		Number	in thousands		Standard error			
Total	16,579	7,856	1,006	7,717	666	442	165	330
Open wound	3,910	1,107	183	2,620	214	135	40	125
Fracture of upper, lower extremity	3,401	2,160	307	935	221	195	58	57
Scrape, bite, blister, bruise	3,381	1,513	167	1,701	184	147	44	84
Dislocations, strains, sprains of joints	2,128	1,162	103	863	150	122	20	61
racture of skull or intracranial injury	768	310	30	427	83	70	10	35
Poisoning or toxic effect	539	208	25	305	80	69	7	30
Trauma	440	204	35	201	55	47	12	24
All other injury	2,012	1,192	156	665	139	119	31	50
	Num	ber of visits pe	r 100 children p	er year				
Total	29.0	13.8	1.8	13.5	1.2	0.8	0.3	0.6
Open wound	6.9	1.9	0.3	4.6	0.4	0.2	0.1	0.2
Fracture of upper, lower extremity	6.0	3.8	0.5	1.6	0.4	0.3	0.1	0.1
Scrape, bite, blister, bruise	5.9	2.7	0.3	3.0	0.3	0.3	0.1	0.2
Dislocations, strains, sprains of joints	3.7	2.0	0.2	1.5	0.3	0.2	0.0	0.1
Fracture of skull or intracranial injury	1.3	0.5	0.1	0.8	0.2	0.1	0.0	0.1
Poisoning or toxic effect	0.9	0.4	0.0	0.5	0.1	0.1	0.0	0.1
Trauma	8.0	0.4	0.1	0.4	0.1	0.1	0.0	0.0
All other injury	3.5	2.1	0.3	1.2	0.2	0.2	0.1	0.1
		Percent	distribution					
Total	100.0	100.0	100.0	100.0				
Open wound	23.6	14.1	18.2	34.0	0.9	1.5	1.9	0.9
Fracture of upper, lower extremity	20.5	27.5	30.5	12.1	1.0	2.0	3.6	0.5
Scrape, bite, blister, bruise	20.4	19.3	16.6	22.0	0.9	1.8	2.3	0.7
Dislocations, strains, sprains of joints	12.8	14.8	10.2	11.2	0.7	1.3	1.3	0.6
Fracture of skull or intracranial injury	4.6	4.0	3.0	5.5	0.5	0.9	0.9	0.4
Poisoning or toxic effect	3.3	2.7	2.5	4.0	0.5	0.9	0.6	0.3
Гrauma	2.7	2.6	3.5	2.6	0.3	0.6	0.9	0.3
All other injury	12.1	15.2	15.5	8.6	0.7	1.4	1.6	0.5
		Percent	distribution					
Total	100.0	47.4	6.1	46.6		1.7	0.9	1.5
Open wound	100.0	28.3	4.7	67.0		2.5	1.0	2.4
Fracture of upper, lower extremity	100.0	63.5	9.0	27.5		2.6	1.6	1.9
Scrape, bite, blister, bruise	100.0	44.8	4.9	50.3		2.8	1.3	2.5
Dislocations, strains, sprains of joints	100.0	54.6	4.8	40.6		2.9	1.0	2.7
racture of skull or intracranial injury	100.0	40.4	3.9	55.6		5.8	1.4	5.5
Poisoning or toxic effect	100.0	38.7	4.7	56.6		7.7	1.4	7.1
rauma	100.0	46.3	8.0	45.7		6.7	2.6	5.8
All other injury	100.0	59.2	7.7	33.1		3.0	1.5	2.5

<sup>...</sup> Category not applicable.

NOTE: This table excludes 1.9 percent of visits without a principal diagnosis coded, and differs from data presented in table 1. See appendix table II for definitions of principal injury diagnosis categories and ICD-9-CM codes.

<sup>0.0</sup> Quantity more than zero but less than 0.05.

## Appendix

#### Principal Diagnosis Category and Population Tables

Table I. Principal diagnosis categories and ICD-9-CM codes

Principal diagnosis category	Definition of ICD-9-CM code				
Well-child visit					
V20.2	Routine infant or child health check				
V70.0	Routine general medical exam				
V70.5	Health exam of defined subpopulations				
V70.9	Unspecified general medical exam				
Injury					
800–999	Injury and poisoning				
Cold, cough, runny nose					
460.0	Acute nasopharyngitis				
464.0	Acute laryngitis				
465.9	Acute upper respiratory infection, unspecified site				
472.0	Chronic rhinitis				
786.2	Cough				
Sore throat, tonsillitis					
462.0	Acute pharyngitis				
463.0	Acute tonsillitis				
472.1–472.2	Chronic pharyngitis/nasopharyngitis				
474	Chronic diseases of tonsils and adenoids				
475	Peritonsillar abscess				
Hayfever, sinusitis					
461	Acute sinusitis				
473	Chronic sinusitis				
477	Allergic rhinitis				
Bronchitis					
466.0	Acute bronchitis				
490	Bronchitis, not specified as acute or chronic				
491	Chronic bronchitis				
Asthma					
493	Asthma				
Pneumonia	A				
466.1	Acute bronchiolitis				
480	Viral pneumonia				
481	Pneumococcal pneumonia				
482	Other bacterial pneumonia				
483	Pneumonia due to specified organism				
484	Pneumonia in infectious disease				
485	Bronchopneumonia, organism unspecified				
486	Pneumonia, organism unspecified				
487.0	Influenza with pneumonia				
Streptococcal sore throat					
034.0	Streptococcal sore throat				
034.1	Scarlet fever				
Croup					
464.1–464.4	Acute tracheitis, laryngotracheitis, epiglottitis, and cro				
Middle ear infection					
381.0–381.4	Nonsupprative otitis media				
382	Supprative and unspecified otitis media				

Table I. Principal diagnosis categories and ICD-9-CM codes—Con.

Principal diagnosis category	Definition of ICD-9-CM code			
External ear canal infection				
380.1–380.16	Infective otitis externa			
380.2–380.23	Other otitis externa			
Infectious conjunctivitis				
077.9	Viral conjunctivitis, not otherwise specified			
372.0–372.05	Acute conjunctivitis			
372.1–372.14	Chronic conjunctivitis			
372.30	Conjunctivitis, unspecified			
372.39	Other conjunctivitis			
372.9	Unspecified disorder of conjunctiva			
Correctable vision				
367.0	Hypermetropia			
367.1	Муоріа			
367.2	Astigmatism			
367.3	Anisometropia and aniseikonia			
367.4	Presbyopia			
367.5	Disorders of accomodation			
367.8	Other disorders of refraction and accomodation			
367.9	Unspecified disorder of refraction and accomodation			
378.0–378.9	Strabismus and other disorders of binocular eye			
	movements			
Viral syndrome	Hornotic gingly cotons stitle			
054.2	Herpetic gingivostomatitis			
	Herpes simplex without mention of complication Erythema infectiosum			
057.0	•			
057.9	Other viral exanthemata (Fourth disease, roseola etc) Viral exanthem, unspecified			
074.0	Herpangina			
074.3	Hand, foot, and mouth disease			
074.8	Other diseases due to Coxsackie virus			
075.0	Infectious mononucleosis			
079.0	Adenovirus			
079.1	ECHO virus			
079.2	Coxsackie virus			
079.3	Rhinovirus			
079.8	Other specified viral infections			
079.9	Viral infection, not otherwise specified			
487.1	Influenza with other respiratory manifestations			
780.6	Pyrexia of unknown origin			
Eczema	,			
691	Atopic dermatitis and related conditions			
692	Contact dermatitis and other eczema			
693	Dermatitis due to substances taken internally			
708	Urticaria			
Attention deficit disorder				
314.0	Without hyperactivity			
314.01	With hyperactivity			
Bladder infection				
595.0	Acute cystitis			
595.9	Cystitis, unspecified			
	Urinary tract infection, site not specified			
599.0	·			
Gastroenteritis	Enteritis due to specified virus			
Gastroenteritis	Enteritis due to specified virus Other organism, not elsewhere classified			
Gastroenteritis 008.6	Other organism, not elsewhere classified			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin Infectious diarrhea			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin			
008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin Infectious diarrhea Diarrhea of presumed infectious origin			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin Infectious diarrhea Diarrhea of presumed infectious origin Varicella, with and without complications			
Gastroenteritis 008.6	Other organism, not elsewhere classified Infectious colitis, enteritis, and gastroenteritis Gastroenteritis of presumed infectious origin Infectious diarrhea Diarrhea of presumed infectious origin			

Table II. Principal injury diagnosis categories and ICD-9-CM codes

Principal injury diagnosis category	Definition of ICD-9-CM code				
Open wound					
870–879	Open wound head, neck, trunk				
880–887	Open wound upper limb				
890–897	Open wound lower limb				
Fracture of upper, lower extremity					
810–819	Fracture upper limb				
820–829	Fracture lower limb				
Scrape, bite, blister, bruise					
910–924	Superficial injury, contusion with intact skin surface				
Dislocations, strains, sprains of joints					
830–839	Dislocation				
840–848	Sprains and strains of joints and adjacent muscles				
Fracture of skull or intracranial injury					
800–804	Fracture of skull				
850-854	Intracranial injury, excluding those with skull fracture				
Poisoning or toxic effect					
960–979	Poisoning by drugs, medicinals and biological substances				
980–989	Toxic effects of substances chiefly nonmedicinal as to source				
Trauma					
958–959	Certain traumatic complications and unspecified injuries				
All other injury	Includes all other injury diagnoses (ICD-9-CM codes				
	800-999) not mentioned in the above categories				

NOTE: ICD-9-CM code numbers include currently existing subcategories. For example, 872 includes 872.00-872.9.

Table III. Civilian noninstitutionalized population by age, sex, and race: United States, average annual 1993-95

Age	All races	Male	Female	White	Black		
	Number in thousands						
Under 15 years of age	57,123	29,236	27,887	45,364	8,870		
Under 5 years	19,647	10,052	9,594	15,541	3,092		
Under 1 year	3,868	1,978	1,889	3,053	607		
1–4 years	15,779	8,074	7,705	12,488	2,485		
5–14 years	37,476	19,183	18,293	29,823	5,778		

NOTE: All races includes races not shown separately. All estimates are consistent with the 1990 census as enumerated, without adjustment for undercoverage.

Source: U.S. Population Estimates, by age, sex, race, and Hispanic origin: 1990–1994 Civilian noninstitutionalized population. PPL-21 Appendix D. U.S. Population Estimates by age, sex, race, and Hispanic origin: 1990–1996. PPL-57. Populations Projection Branch, U.S. Bureau of the Census.

# Vital and Health Statistics series descriptions

- SERIES 1. **Programs and Collection Procedures**—These reports describe the data collection programs of the National Center for Health Statistics. They include descriptions of the methods used to collect and process the data, definitions, and other material necessary for understanding the data.
- SERIES 2. **Data Evaluation and Methods Research**—These reports are studies of new statistical methods and include analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory. These studies also include experimental tests of new survey methods and comparisons of U.S. methodology with those of other countries.
- SERIES 3. Analytical and Epidemiological Studies—These reports present analytical or interpretive studies based on vital and health statistics. These reports carry the analyses further than the expository types of reports in the other series.
- SERIES 4. **Documents and Committee Reports**—These are final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.
- SERIES 5. International Vital and Health Statistics Reports—These reports are analytical or descriptive reports that compare U.S. vital and health statistics with those of other countries or present other international data of relevance to the health statistics system of the United States.
- SERIES 6. Cognition and Survey Measurement—These reports are from the National Laboratory for Collaborative Research in Cognition and Survey Measurement. They use methods of cognitive science to design, evaluate, and test survey instruments.
- SERIES 10. Data From the National Health Interview Survey—These reports contain statistics on illness; unintentional injuries; disability; use of hospital, medical, and other health services; and a wide range of special current health topics covering many aspects of health behaviors, health status, and health care utilization. They are based on data collected in a continuing national household interview survey.
- SERIES 11. Data From the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey—Data from direct examination, testing, and measurement on representative samples of the civilian noninstitutionalized population provide the basis for (1) medically defined total prevalence of specific diseases or conditions in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics, and (2) analyses of trends and relationships among various measurements and between survey periods.
- SERIES 12. Data From the Institutionalized Population Surveys—
  Discontinued in 1975. Reports from these surveys are included in Series 13.
- SERIES 13. Data From the National Health Care Survey—These reports contain statistics on health resources and the public's use of health care resources including ambulatory, hospital, and long-term care services based on data collected directly from health care providers and provider records.

- SERIES 14. Data on Health Resources: Manpower and Facilities—
  Discontinued in 1990. Reports on the numbers, geographic distribution, and characteristics of health resources are now included in Series 13.
- SERIES 15. **Data From Special Surveys**—These reports contain statistics on health and health-related topics collected in special surveys that are not part of the continuing data systems of the National Center for Health Statistics.
- SERIES 16. Compilations of Advance Data From Vital and Health
  Statistics—Advance Data Reports provide early release of
  information from the National Center for Health Statistics'
  health and demographic surveys. They are compiled in the
  order in which they are published. Some of these releases
  may be followed by detailed reports in Series 10–13.
- SERIES 20. **Data on Mortality**—These reports contain statistics on mortality that are not included in regular, annual, or monthly reports. Special analyses by cause of death, age, other demographic variables, and geographic and trend analyses are included.
- SERIES 21. **Data on Natality, Marriage, and Divorce**—These reports contain statistics on natality, marriage, and divorce that are not included in regular, annual, or monthly reports. Special analyses by health and demographic variables and geographic and trend analyses are included.
- SERIES 22. **Data From the National Mortality and Natality Surveys**—
  Discontinued in 1975. Reports from these sample surveys, based on vital records, are now published in Series 20 or 21.
- SERIES 23. Data From the National Survey of Family Growth—
  These reports contain statistics on factors that affect birth rates, including contraception, infertility, cohabitation, marriage, divorce, and remarriage; adoption; use of medical care for family planning and infertility; and related maternal and infant health topics. These statistics are based on national surveys of women of childbearing age.
- SERIES 24. Compilations of Data on Natality, Mortality, Marriage, Divorce, and Induced Terminations of Pregnancy—
  These include advance reports of births, deaths, marriages, and divorces based on final data from the National Vital Statistics System that were published as supplements to the Monthly Vital Statistics Report (MVSR). These reports provide highlights and summaries of detailed data subsequently published in Vital Statistics of the United States. Other supplements to the MVSR published here provide selected findings based on final data from the National Vital Statistics System and may be followed by detailed reports in Series 20 or 21.

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

Data Dissemination Branch National Center for Health Statistics Centers for Disease Control and Prevention 6525 Belcrest Road, Room 1064 Hyattsville, MD 20782-2003

(301) 436-8500

E-mail: nchsquery@cdc.gov Internet: www.cdc.gov/nchswww/

## DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention National Center for Health Statistics 6525 Belcrest Road Hyattsville, Maryland 20782-2003

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE, \$300 STANDARD MAIL (A) POSTAGE & FEES PAID PHS/NCHS PERMIT NO. G-281