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Characteristics of Office-based Physician Visits by Age, 2019

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Abstract

Objective—This report describes care received during office-based physician visits in the United States. Estimates are presented on selected characteristics and compared by age.

Methods—The data presented in this report were collected in the 2019 National Ambulatory Medical Care Survey, a national probability sample survey of visits to nonfederal office-based physicians in the United States. Sample data are weighted to produce annual national estimates of physician visits.

Results—During 2019, an estimated 1.0 billion office-based physician visits occurred in the United States, an overall rate of 320.7 visits per 100 people. The visit rate among females was higher than for males, and the rates for both infants and older adults were higher than the rates for those aged 1–64. Private insurance was the primary expected source of payment for most visits by children under age 18 and adults aged 18–64, while Medicare was the primary expected source of payment for most visits by adults aged 65 and over. Visits for either chronic or pre- or postsurgery care increased with age. Visits for either preventive care or a new problem decreased with age. The percentages of examinations or screenings ordered or provided at physician visits did not differ significantly by age, but nearly one-half of all physician visits (47.6%) included them.

Conclusions—Differences were observed for physician visit rates by age and sex. In addition, visit characteristics—including insurance status, reason for visit, and services—differed by age.

Keywords: health care • insurance • chronic conditions • National Ambulatory Medical Care Survey (NAMCS)

Introduction

In 2019, 87.8% of adults and 97.1% of children in the United States had a usual place to receive health care (1,2). Most children and adults had visited a doctor in the past year (3,4).

In 2019, an estimated 1.0 billion office-based physician visits occurred in the United States (5,6). This report describes visit rates by age and sex. It also describes visit characteristics—including insurance status, reason for visit, and services—by age using data from the

2019 National Ambulatory Medical Care Survey (NAMCS).

Methods

Data for this report are from NAMCS, which is conducted by the National Center for Health Statistics (NCHS). NAMCS is an annual, nationally representative survey of office-based physicians and visits to their practices (5,7). The target universe of NAMCS is physicians classified as providing direct patient care in office-based practices. Radiologists, anesthesiologists, and pathologists are excluded, as are physicians in community health centers. The 2019 sample consisted of 3,000 physicians. Participating physicians provided 8,250 visit records. The participation rate—the percentage of in-scope physicians for whom at least one visit record was completed—was 25.5%. The response rate—the percentage of in-scope physicians for whom at least one-half of their expected number of visit records was completed—was 22.3%. An iterative proportional fitting procedure was used to adjust NAMCS weights for nonresponse bias (5,7).

Five age groups were included in this report: infants under age 1, children aged



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1–17, and adults aged 18–44, 45–64, and 65 and over. Infants have a higher visit rate than older children, so visit rates for both infants and children are presented. When presenting visit characteristics, infants and children are presented together to increase statistical power. Despite this, some of the estimates for children are unreliable. Visit rates for three adult age groups are presented to show the increasing visit rates for adults. When presenting visit characteristics, adults under age 65 are combined to increase statistical power and to separate the Medicare population from other adults. Adults aged 65 and over are eligible for Medicare, while adults under age 65 generally are not.

Data analyses were performed using the statistical packages SAS version 9.4 (SAS Institute, Cary, N.C.) and SAS-callable SUDAAN version 11.0 (RTI International, Research Triangle Park, N.C.). Differences in the distribution of selected characteristics of office-based

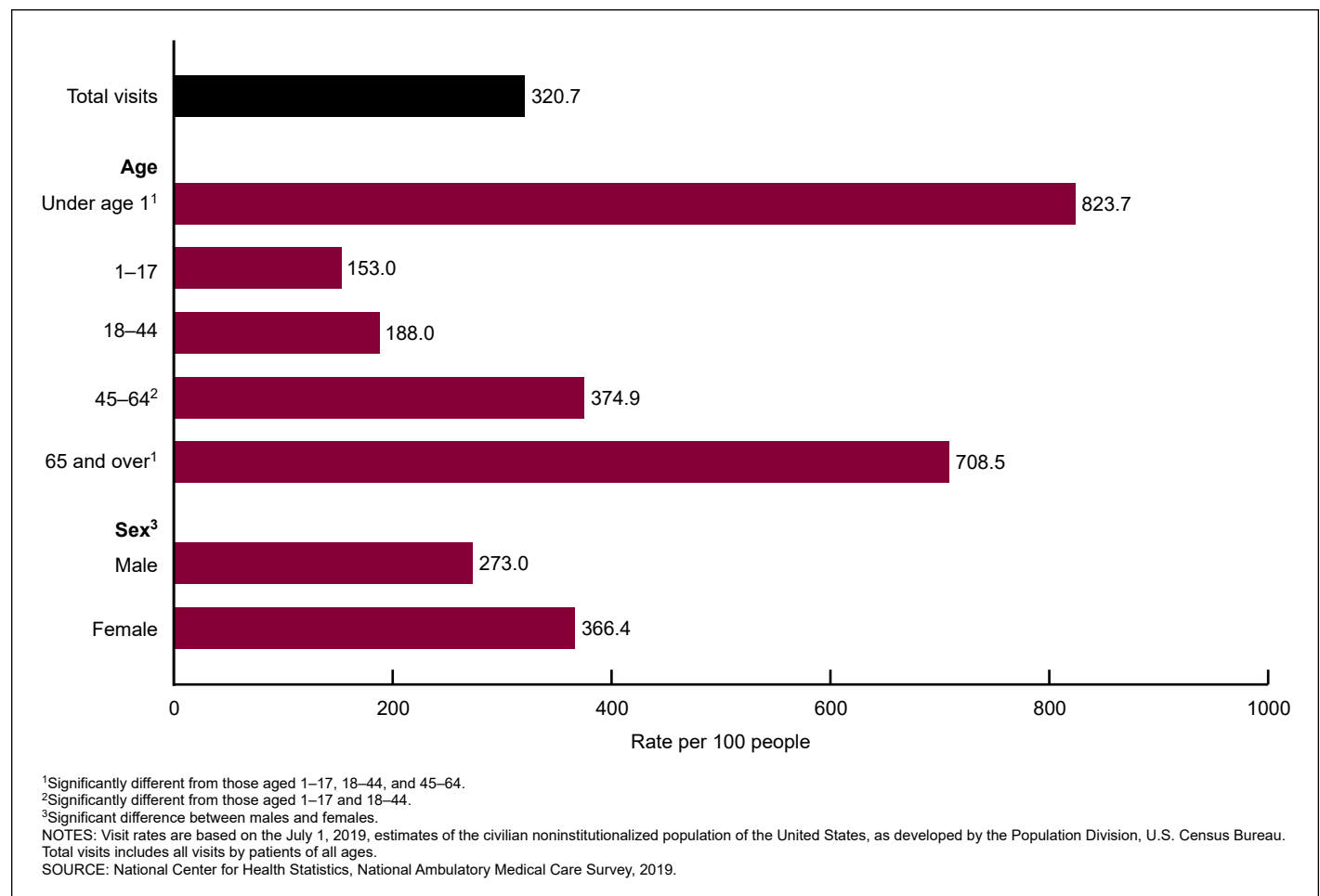
physician visits were based on chi-square tests ($p < 0.05$). If a difference was found to be statistically significant, additional pairwise tests were performed. Statements of difference in paired estimates were based on two-tailed t tests with statistical significance at the $p < 0.05$ level. Terms such as “higher” or “lower” indicate that the differences were statistically significant. Lack of significance for some estimates (visits with no insurance, visits for injury, visits for health education, and visits for examinations and screenings) may be due to low statistical power. All estimates presented meet NCHS data presentation standards for proportions (8). Estimates that did not meet these standards are identified in the tables and presented with an asterisk.

Results

Office-based physician visit rates by patient age and sex

- Figure 1 and Table 1 show office-based physician visit rates by age and sex. The 2019 rate was 320.7 office-based physician visits per 100 people (Figure 1, Table 1).
- The visit rate for both infants under age 1 (823.7 per 100 infants) and adults aged 65 and over (708.5 per 100 adults aged 65 and over) was higher than the rate for children aged 1–17 (153.0 per 100 children aged 1–17), adults aged 18–44 (188.0 per 100 adults aged 18–44), and adults aged 45–64 (374.9 per 100 adults aged 45–64).
- The visit rate for adults aged 45–64 was higher than the rates for children aged 1–17 and adults aged 18–44.
- The visit rate among females (366.4 visits per 100 females) was higher

Figure 1. Office-based physician visit rates, by selected demographics: United States, 2019



than the rate for males (273.0 visits per 100 males).

Primary expected source of payment at office-based physician visits by age

- Private insurance was the primary expected source of payment at nearly one-half (45.9%) of all office-based physician visits, followed by Medicare (30.8%), Medicaid (11.7%), and no insurance (4.0%, estimate does not meet statistical reliability criteria) (Figure 2, Table 2).
- Private insurance was the primary expected source of payment for most visits by children under age 18 (55.7%) and adults aged 18–64 (64.0%), while Medicare was the primary expected source of payment for most visits by adults aged 65 and over (76.0%) (Table 2).
- Medicaid as the primary expected source of payment decreased with increasing age: 38.9% among children under age 18, 11.6% among adults aged 18–64, and 2.0% among adults aged 65 and over.
- Medicare as the primary expected source of payment increased with increasing age: 0.8% among children under age 18, 6.4% among adults aged 18–64, and 76.0% among adults aged 65 and over.
- No insurance or self-pay as the primary expected source of payment did not differ significantly by age.

Major reasons for office-based physician visits by age

- A chronic condition was listed as the major reason for 40.8% of all office-based physician visits, followed by new problem (21.8%), preventive care (21.3%), injury (9.3%), and pre- or postsurgery care (5.7%) (Figure 3, Table 3).
- Visits for either a chronic condition (11.5% for children under age 18, 37.6% for adults aged 18–64, and 56.0% for adults aged 65 and over) or pre- or postsurgery care (1.9% for children under age 18, 6.0% for adults aged 18–64, and 6.7% for adults aged 65 and over) as the major reason for visit increased with age (Table 3).

Figure 2. Office-based physician visits, by primary expected source of payment: United States, 2019

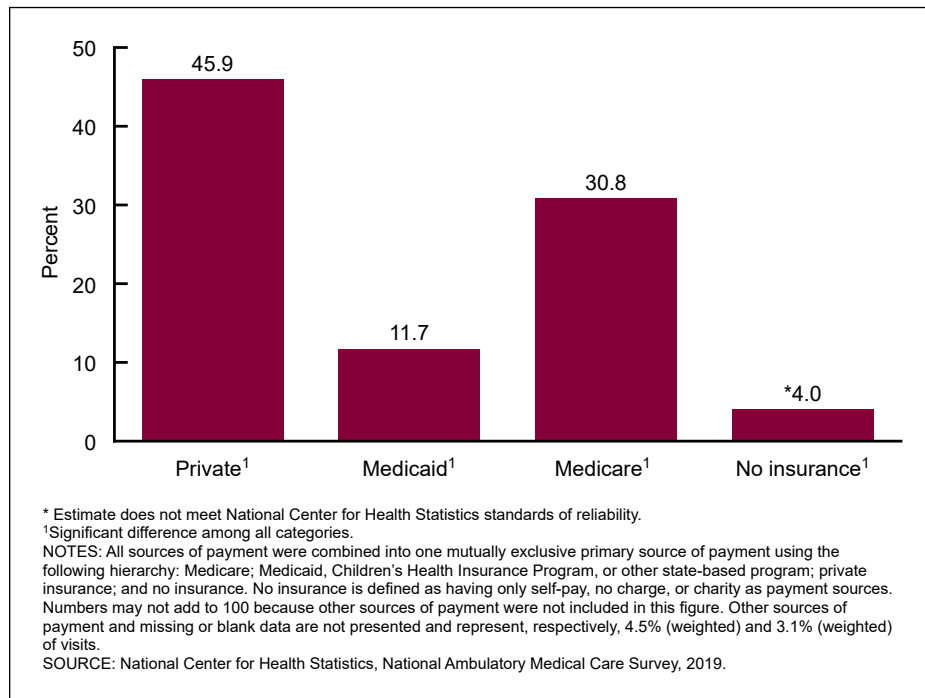
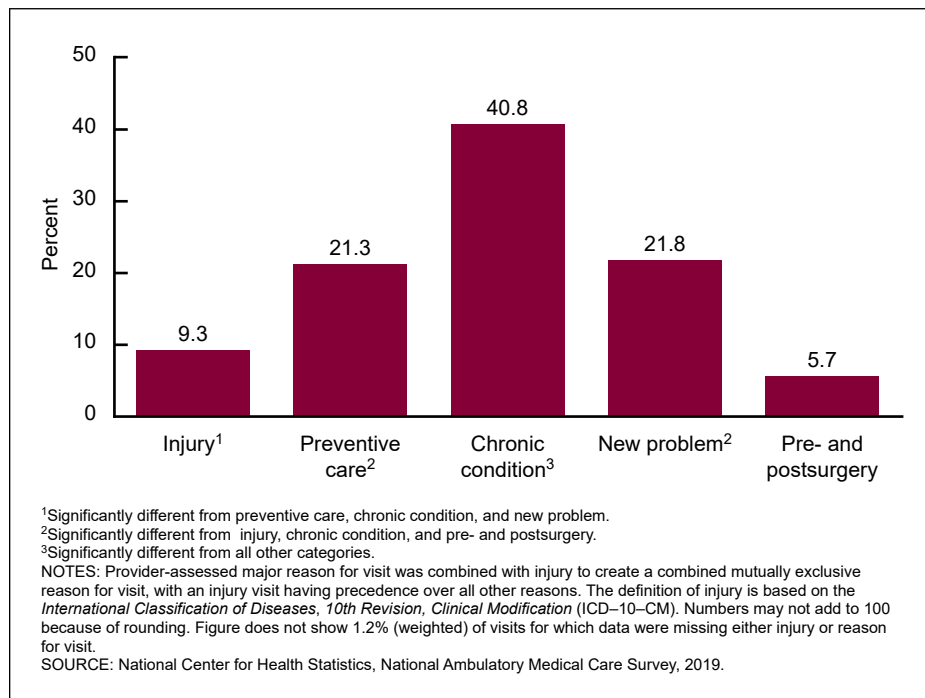


Figure 3. Office-based physician visits, by major reason for visit: United States, 2019



- Visits for preventive care decreased with age: 39.6% for children under age 18, 22.2% for adults aged 18–64, and 13.3% for adults aged 65 and over. This same decreasing pattern was seen for visits for a new problem: 38.4% for children under age 18, 20.8% for adults aged 18–64, and 16.9% for adults aged 65 and over.
- The percentage of visits that listed injury as the major reason for visit did not differ significantly by age.

Services ordered or provided at office-based physician visits by age

- An examination or screening was ordered or provided at nearly one-half (47.6%) of all office-based physician visits, followed by laboratory tests (24.2%), health education or counseling (20.0%), imaging (13.1%), and procedures (12.0%) (Figure 4, Table 4).
- A lower percentage of imaging services was ordered or provided at visits by children under age 18 (5.2%) than both adults aged 18–64 (15.0%) and adults aged 65 and over (13.2%) (Table 4).
- A higher percentage of laboratory tests was ordered or provided at visits by adults aged 18–64 (27.3%) and adults aged 65 and over (22.9%) than children under age 18 (15.6%).
- A higher percentage of procedures was ordered or provided at visits by adults aged 65 and over (14.9%) than children under age 18 (8.1%).
- The percentages of examinations or screenings ordered or provided at visits did not differ significantly by age, but nearly one-half of all visits (47.6%) included them (55.2% for children under age 18, 48.5% for

adults aged 18–64, and 43.5% for adults aged 65 and over).

- The percentages of health education or counseling services ordered or provided at visits did not differ significantly by age, but 20.0% of all visits included them (25.8% for children under age 18, 19.8% for adults aged 18–64, and 18.0% for adults aged 65 and over).

Discussion

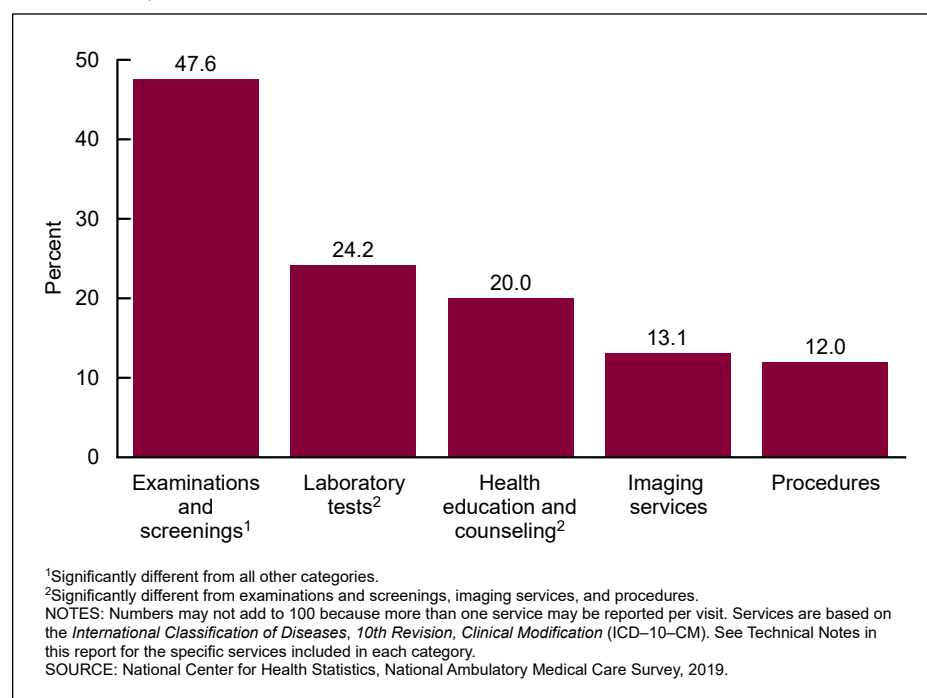
This report presents nationally representative estimates of office-based physician visits in the United States during 2019. The overall rate of office-based physician visits was 320.7 visits per 100 people. The visit rates for infants and older adults were higher than the rates for other age groups. The visit rate for females was higher than the rate for males. Most visits by children under age 18 (55.7%) and adults aged 18–64 (64.0%) listed private insurance as the primary expected source of payment, while most visits by older adults listed Medicare as the primary expected source of payment (76.0%). A chronic condition was the major reason for 40.8% of all office-based physician visits, and visits for chronic conditions increased

as age increased. A new problem or preventive care as the major reason for visit decreased as age increased, while the reverse was true for visits related to pre- or postsurgery care. Nearly one-half (47.6%) of all office-based physician visits included an examination or screening that was ordered or provided.

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Figure 4. Office-based physician visits, by selected services ordered or provided: United States, 2019



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Table 1. Office-based physician visit rates, by selected demographics: United States, 2019

Patient characteristic	Visit rate per 100 people	Standard error	95% confidence interval
Total visits	320.7	14.9	291.5–350.0
Age group (years)			
Under age 1 ¹	823.7	139.6	549.1–1,098.4
1–17	153.0	17.7	118.2–187.9
18–44	188.0	14.7	159.2–216.9
45–64 ²	374.9	28.1	319.5–430.2
65 and over ¹	708.5	45.0	620.0–796.9
Sex ³			
Female	366.4	21.0	325.2–407.6
Male	273.0	17.2	239.0–306.9

¹Significantly different from those aged 1–17, 18–44, and 45–64.

²Significantly different from those aged 1–17 and 18–44.

³Significant difference between male and female.

NOTES: Visit rates are based on the July 1, 2019, estimates of the civilian noninstitutionalized population of the United States, as developed by the U.S. Census Bureau, Population Division. Total visits includes all visits by patients of all ages.

SOURCE: National Center for Health Statistics, National Ambulatory Medical Care Survey, 2019.

Table 2. Primary expected source of payment, by age: United States, 2019

Primary expected source of payment, by age group (years)	Percent	Standard error	95% confidence interval
Total visits			
Private	45.9	2.2	41.5–50.4
Medicaid	11.7	1.5	9.2–14.9
Medicare	30.8	2.0	27.0–34.8
No insurance	*4.0	2.2	1.4–11.2
Under 18			
Private	55.7	5.1	45.6–65.4
Medicaid ¹	38.9	4.8	29.9–48.7
Medicare ²	0.8	0.4	0.3–1.9
No insurance	2.1	0.9	0.9–5.0
18–64			
Private	64.0	4.2	55.4–71.8
Medicaid	11.6	2.1	8.0–16.5
Medicare	6.4	1.1	4.5–8.9
No insurance	*6.2	3.4	2.1–17.1
65 and over			
Private	16.9	1.4	14.3–19.9
Medicaid	2.0	0.5	1.2–3.4
Medicare	76.0	1.8	72.3–79.4
No insurance	1.7	1.0	0.6–5.2

* Estimate does not meet National Center for Health Statistics standards of reliability.

¹Decreasing trend with increasing age.

²Increasing trend with increasing age.

NOTES: All sources of payment were combined into one mutually exclusive primary source of payment using the following hierarchy: Medicare; Medicaid, Children's Health Insurance Program, or other state-based program; private insurance; and no insurance. Total visits includes all visits by patients of all ages. No insurance is defined as having only self-pay, no charge, or charity as payment sources. Other sources of payment and missing or blank data are not presented in this table and represent, respectively, 4.5% (weighted) and 3.1% (weighted) of visits.

SOURCE: National Center for Health Statistics, National Ambulatory Medical Care Survey, 2019.

Table 3. Major reason for office-based physician visit, by age: United States, 2019

Major reason for office visit, by age group (years)	Percent	Standard error	95% confidence interval
Total visits			
Injury	9.3	2.8	5.0–16.6
Preventive care	21.3	1.7	18.2–24.8
Chronic condition	40.8	2.8	35.4–46.4
New problem	21.8	1.2	19.5–24.2
Pre- and postsurgery	5.7	0.7	4.5–7.2
Under 18			
Injury	7.1	1.7	4.4–11.1
Preventive care ¹	39.6	3.7	32.5–47.1
Chronic condition ²	11.5	1.8	8.4–15.6
New problem ¹	38.4	2.9	33.0–44.2
Pre- and postsurgery ²	1.9	0.7	0.9–3.8
18–64			
Injury	*12.3	4.9	5.5–25.3
Preventive care	22.2	2.5	17.7–27.4
Chronic condition	37.6	3.6	30.8–44.9
New problem	20.8	1.7	17.7–24.4
Pre- and postsurgery	6.0	1.1	4.2–8.5
65 and over			
Injury	6.0	1.1	4.1–8.6
Preventive care	13.3	1.6	10.4–16.8
Chronic condition	56.0	3.0	49.9–61.8
New problem	16.9	1.5	14.2–20.1
Pre- and postsurgery	6.7	1.0	5.0–8.8

* Estimate does not meet National Center for Health Statistics standards of reliability.

¹Decreasing trend with increasing age.

²Increasing trend with increasing age.

NOTES: Provider-assessed major reason for visit was combined with injury to create a combined mutually exclusive reason for visit, with an injury visit taking precedence over all other reasons. The definition of injury is based on the *International Classification of Diseases, 10th Revision, Clinical Modification* (ICD–10–CM). Total visits includes all visits by patients of all ages. Numbers may not add to 100% because of rounding. Table does not show 1.2% (weighted) of visits for which data were missing either injury or reason for visit.

SOURCE: National Center for Health Statistics, National Ambulatory Medical Care Survey, 2019.

Table 4. Selected services ordered or provided at office-based physician visits, by age: United States, 2019

Selected services ordered or provided, by age group (years)	Percent	Standard error	95% confidence interval
Total visits			
Examinations and screenings.	47.6	3.4	41.0–54.2
Laboratory tests	24.2	1.7	20.9–27.7
Health education and counseling	20.0	2.0	16.3–24.2
Imaging services	13.1	1.1	11.0–15.4
Procedures	12.0	1.3	9.6–14.8
Under 18			
Examinations and screenings.	55.2	4.4	46.5–63.6
Laboratory tests ¹	15.6	2.4	11.5–20.9
Health education and counseling	25.8	5.3	16.8–37.4
Imaging services ¹	5.2	1.4	3.0–8.7
Procedures ²	8.1	2.4	4.5–14.4
18–64			
Examinations and screenings.	48.5	4.5	39.8–57.3
Laboratory tests	27.3	2.4	22.9–32.2
Health education and counseling	19.8	2.5	15.3–25.2
Imaging services	15.0	1.7	12.0–18.7
Procedures	10.9	1.5	8.3–14.2
65 and over			
Examinations and screenings.	43.5	4.2	35.5–51.7
Laboratory tests	22.9	2.3	18.8–27.6
Health education and counseling	18.0	2.5	13.7–23.4
Imaging services	13.2	1.3	10.8–15.9
Procedures	14.9	2.5	10.7–20.5

¹Significantly different from adults aged 18–64 and 65 and over.

²Significantly different from adults aged 65 and over.

NOTES: More than one service may be reported per visit. Total visits includes all visits by patients of all ages. Numbers may not add to 100% because more than one service may be reported per visit. Total visits includes all visits by patients of all ages. See Technical Notes in this report for the specific services included in each category.

SOURCE: National Center for Health Statistics, National Ambulatory Medical Care Survey, 2019.

Technical Notes

Definition of terms

Major reason for this visit—A variable was created by merging the “INJURY” variable with the provider-assessed major reason for this visit (5). Injury was given preference over all other reasons. The five categories for major reason for this visit included:

- **Chronic condition:** A visit primarily to receive care or examination for a preexisting chronic condition or illness (onset of condition was 3 months or more before this visit). Includes both routine visits and flare-ups (a visit primarily due to a sudden exacerbation of a preexisting chronic condition).
- **Injury:** A visit defined as injury or poisoning related, based on any listed reason for visit and diagnosis (5). In 2019, the definition of injury used the *International Classification of Diseases, 10th Revision, Clinical Modification* to code injury and poisoning diagnoses.
- **New problem:** A visit for a condition or illness having a relatively sudden or recent onset (within 3 months of this visit).
- **Pre- or postsurgery:** A visit primarily for care required before or following surgery (such as presurgery tests or removing sutures).
- **Preventive care:** General medical examinations and routine periodic examinations. Includes prenatal care, annual physicals, well-child examinations, screening, and insurance examinations.

Primary expected source of payment—During data collection, all sources of payment were collected. For patients with more than one source of payment, a hierarchy was used (with Medicare counted first and self-pay and no charge counted last) to collapse payments into one mutually exclusive variable (primary expected source of payment):

- **Medicare:** Partial or full payment by Medicare plan includes payments made directly to the hospital or reimbursed to the patient. Charges covered under a Medicare-sponsored

prepaid plan are included.

- **Medicaid:** Partial or full payment by Medicaid plan includes payments made directly to the hospital or reimbursed to the patient. Charges covered under a Medicaid-sponsored prepaid plan (health management organization [HMO]), “managed Medicaid,” or Children’s Health Insurance Program (CHIP) and other state-based programs are included.
- **Private:** Partial or full payment by a private insurer (such as BlueCross BlueShield) includes payments made directly to the hospital or reimbursed to the patient. Charges covered under a private insurance-sponsored prepaid plan are included.
- **Uninsured:** Includes self-pay and no charge or charity. Self-pay are charges paid by the patient or the patient’s family that will not be reimbursed by a third party. Self-pay includes visits for which the patient is expected to be ultimately responsible for most of the bill, even if the patient never actually pays it. This does not include copayments or deductibles. No charge or charity are visits for which no fee is charged (such as charity, special research, or teaching).
- **Other:** Includes Workers’ Compensation and other sources of payment not covered by another category, such as TRICARE, state and local governments, private charitable organizations, and other liability insurance (such as automobile collision policy coverage).

Selected services—Services ordered or provided during the sampled visit for the purpose of screening (early detection of health problems in asymptomatic individuals) or diagnosis (identification of health problems causing individuals to be symptomatic) are based on definitions used during the data collection process and provided in the documentation (5). Each selected service item was grouped into five categories:

- **Examinations or screenings:** Includes alcohol misuse, breast, depression, domestic violence, foot, neurologic, pelvic, rectal, retinal or eye, skin, and substance misuse.

- **Health education or counseling:** Includes alcohol abuse counseling, asthma, asthma action plan given to patient, diabetes education, diet or nutrition, exercise, family planning or contraception, genetic counseling, growth or development, injury prevention, sexually transmitted disease prevention, stress management, substance abuse counseling, tobacco use or exposure, and weight reduction.
- **Imaging services:** Includes bone mineral density, CT scan, echocardiogram, ultrasound, mammography, MRI, and X-ray.
- **Laboratory tests:** Includes basic metabolic panel, complete blood count, comprehensive metabolic panel, creatinine or renal function panel, culture (blood, throat, urine, or other), glucose, chlamydia test, gonorrhea test, HbA1c, hepatitis testing, HIV test, human papillomavirus DNA test, lipid profile, liver enzymes or hepatic function panel, pap test, pregnancy or HCG test, prostate-specific antigen, rapid strep test, thyroid-stimulating hormone or thyroid panel, urinalysis, and vitamin D test.
- **Procedures:** Includes audiometry, biopsy, cardiac stress test, colonoscopy, cryosurgery or destruction of tissue, electrocardiogram (EKG or ECG), electroencephalogram, electromyogram, excision of tissue, fetal monitoring, peak flow, sigmoidoscopy, spirometry, tonometry, tuberculosis skin testing, and upper gastrointestinal endoscopy.

Visit rates—Calculated by dividing the number of office-based physician visits by estimates of the U.S. civilian noninstitutionalized population (obtained from the U.S. Census Bureau’s Population Division) for selected characteristics, including age group and sex.

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