

Ambulatory Care Among Young Adults in the United States

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Background: Young adults are the most likely age group to be uninsured and have the highest prevalence of substance abuse, motor vehicle accidents, and sexually transmitted diseases, yet little is known about their use of ambulatory care.

Objective: To characterize ambulatory care of young adults.

Design: Cross-sectional data from the National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey.

Setting: Community and hospital-based clinics.

Patients: Nonpregnant young adults age 20 to 29 years.

Measurements: Ambulatory care utilization, types of visits, and preventive care.

Results: Insured young adults had more visits (2.16 [95% CI, 2.14 to 2.19] annual visits per capita) than those without insurance (0.59 [CI, 0.54 to 0.67] annual visits per capita). Young men utilized ambulatory medical care less than adolescents age 15 to 19 years or older adults age 30 to 39 years (1.10, 1.65, and 1.73 annual visits per capita, respectively) and had lower rates of utilization than

young women (1.10 vs. 2.31 annual visits per capita). Young black and Hispanic men had considerably fewer annual visits per capita (0.75 and 0.65, respectively) than did young white men (1.21). Young men had nearly one half the preventive care visits compared with male adolescents or older men (0.11, 0.24, and 0.19 annual visits per capita, respectively) and less than one quarter the visits compared with young women (0.11 vs. 0.48 annual visits per capita). Only 30.6% of visits by young adults included any preventive counseling, and few encounters included counseling directed toward injury prevention (2.4%), mental health (4.1%), or sexually transmitted diseases (2.7%).

Limitation: School-based clinics were not included, and counseling may be underreported.

Conclusion: Young adults use less ambulatory medical care relative to other groups and infrequently receive preventive care directed at the greatest threats to their health. Efforts to ensure appropriate preventive care are needed.

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Young adults face many of the same health care challenges as adolescents, yet fewer resources are available to care for this patient population (1). Although the mortality rate among young adults is more than twice that among adolescents, young adults remain the most likely age group to be uninsured (2, 3). Approximately one third of young adults are uninsured, which hinders access to care and results in delayed treatment and difficulty filling prescription medications (2, 3).

The prevalence of homicide, motor vehicle accidents, substance abuse, and sexually transmitted diseases (STDs) all peak in young adulthood (1, 4, 5). Compared with adolescents, young adults have 3 times the suicide rate; nearly 3 times the incidence of HIV; and higher rates of smoking (41.8% vs. 12.4%), binge drinking (41.8% vs. 9.7%), and illicit drug use (19.7% vs. 9.5%) (1, 5). Similarly, young adults have considerably higher rates of STDs, illicit drug use, alcohol use, and tobacco use than older adults (4, 5). Finally, young adults have the highest rate of serious psychological distress among all adults (17.9%), yet fewer than half (46.9%) of those with a major depressive episode receive treatment (5, 6).

Healthy People 2010 established several national objectives, including reducing mortality, alcohol- and drug-related injuries, motor vehicle accidents, and the incidence of STDs among young adults (7, 8), yet where young adults are receiving care and what preventive services are being provided to help reach these goals are unclear. Although several studies have described health care in adolescents (9–11), little is known about ambulatory care of young adults. A comprehensive understanding of where young adults access care and what

preventive services are provided are needed to guide future initiatives toward improving health care for young adults and achieving the national objectives.

We used data from the National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) between 1996 and 2006 to characterize ambulatory medical care among young adults age 20 to 29 years. We sought to compare health care utilization among young adults with that among adolescents and older adults, to describe ambulatory medical care of young adults (types of visits, reasons for visits, and sites of care), and to examine the provision of preventive care to young adults. On the basis of studies in adolescents (11, 12), we hypothesized that young adults utilize health care less than other age groups and infrequently receive age-appropriate preventive care directed at the most common threats to their health.

METHODS

This study was approved by the University of Rochester Research Subjects Review Board under exempt status (RSRB00026060).

See also:

Print

Editors' Notes 380

Web-Only

Appendix Table

Conversion of graphics into slides

Context

Little is known about how young adults 20 to 29 years of age use ambulatory medical care.

Contribution

The authors found that young adults have fewer ambulatory care visits than adolescents or adults 30 to 39 years of age. In addition, young adults who are male, black, or Hispanic have fewer visits than other young adults.

Implication

Young adults underutilize ambulatory care relative to other age groups.

—The Editors

Design of the NAMCS and NHAMCS

The NAMCS is a national cross-sectional survey of patient visits to nonfederal, office-based physicians in the United States. Similarly, NHAMCS is a cross-sectional survey of patient visits to outpatient departments of general and short-stay hospitals. The surveys both utilize a multi-stage probability design to select a stratified systematic sample of patient visits and use visit weights to extrapolate these encounters to estimates of national utilization of ambulatory medical services (13). The NAMCS uses a 3-stage sampling design based on geographic area, physician practices within the area, and patient visits within the practice (13). The NHAMCS uses a 4-stage probability design based on geographically defined areas, hospitals within these areas, clinics within the outpatient departments, and patient visits to these clinics (14). A comprehensive explanation of the methods used for data collection, sampling, and weighting in NAMCS and NHAMCS are available online at www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm. The protocols used by NAMCS were approved by the National Center for Health Statistics Institutional Review Board (15).

Creation of Variables

We defined young adults as people between 20 and 29 years of age. We chose this age range because it represents a period when many people lose their insurance coverage, it conforms to census data, and it is commonly used by insurers to determine the number of reimbursable visits for preventive care (16). To ensure that our findings were not dependent on the definition of “young adult,” we also ran our key analyses after redefining young adults as people 18 to 24 years of age. To focus our analyses and allow for sex comparisons, we excluded all visits related to pregnancy.

We estimated utilization rates by using visit data from NAMCS and NHAMCS and population data from the U.S. Census (17, 18) between 2000 and 2006 to calculate the number of annual visits per capita for adolescents, young adults, and older adults, stratified by sex, race, and ethnicity. We used the American Community Survey

March Supplements between 2001 and 2007 (in which data are reported for the previous year, that is, 2000 to 2006) to obtain the proportion of young adults without insurance during this period (<http://dataferrett.census.gov>).

We used data from NAMCS and NHAMCS between 1996 and 2006 to characterize types of visits from young adults (acute, chronic, or preventive), the locations where young adults receive care, the specialties of providers seen, and the counseling rendered to young adults during office visits. The NAMCS and NHAMCS recorded the major reason for the patient visit as “acute problem”; “chronic problem, routine”; “chronic problem, flare-up”; “pre/post-surgery”; and “preventive care.” We combined the 2 chronic problem visits in our analysis because both represent similar types of visits for management of chronic disease. We used the reason for visits classification codes to tabulate the principal reason for the ambulatory encounter. If the principal reason for the visit was listed as a follow-up visit or an administrative visit or could not be coded, we used the secondary reason for the visit.

We defined primary care physicians to include physicians practicing in internal medicine, pediatrics, family practice, general practice, general preventive medicine, or public health and general preventive medicine. We defined “public insurance” as Medicaid or Medicare and “uninsured visits” as those with payment listed as no charge, charity care, or self-pay.

Statistical Analysis

We performed all statistical tests and variance estimates by using SAS, version 9.1 (SAS Institute, Cary, North Carolina), and SAS-callable SUDAAN (Research Triangle Institute, Research Triangle Park, North Carolina) functions to appropriately weight visits and account for the complex sampling design (19). All proportions were compared by using an adjusted Wald *F* test that accounted for the complex sampling design.

We did not include data with missing type of visit (2.6%), missing payment type (1.4%), missing reason for visit (6.3%), uncodeable reason for visit (<0.1%), or visit for administrative reason (<0.1%) in analyses involving these variables.

The National Center for Health Statistics considers estimates reliable if the relative SE is less than 30% of the point estimate and considers estimates derived from fewer than 30 total visits unreliable regardless of the relative SE (13). All values reported are based on 30 or more visits, unless otherwise noted. All tests are 2-tailed, and a *P* value less than 0.05 was considered statistically significant.

Role of the Funding Source

This study was not supported by extramural funding.

RESULTS

Between 1996 and 2006, 14 599 physicians (67.3% of eligible physicians) participated in NAMCS. During the

Table 1. Ambulatory Care Visits by Young Adults Age 20 to 29 Years Between 1996 and 2006, by Patient Characteristic*

Characteristic	Ambulatory Care Visits, n (%) [†]
Population	
All young adults	734 000 (100)
NAMCS sample	648 970 (88.4)
NHAMCS sample	85 030 (11.6)
Sex	
Female	487 752 (66.5)
Male	246 247 (33.5)
Race/ethnicity	
White	610 131 (83.1)
Black	89 798 (12.2)
Hispanic [‡]	82 829 (11.3)
Metropolitan	
Urban	630 346 (85.9)
Nonurban	103 654 (14.1)
Region	
Northeast	153 339 (20.9)
Midwest	174 622 (23.8)
South	254 551 (34.7)
West	151 487 (20.6)
Insurance	
Private	426 992 (58.2)
Public	86 771 (11.8)
Uninsured	76 436 (10.4)
Other [§]	143 800 (19.6)

NAMCS = National Ambulatory Medical Care Survey; NHAMCS = National Hospital Ambulatory Medical Care Survey.

* Visits recorded in NAMCS and NHAMCS.

[†] Numbers are thousands of visits and represent weighted national estimates.

[‡] Hispanic ethnicity, any race.

[§] Includes worker's compensation, other source of payment, or unknown source of payment and no response.

same period, 4363 hospitals participated in NHAMCS, representing a 94.0% overall participation rate. A total of 52 709 unweighted visits were recorded by young adults between 1996 and 2006. Table 1 reports weighted characteristics of the data.

Utilization of Ambulatory Care

Figure 1 shows utilization rates among different age groups of white, black, and Hispanic males and females. For males, utilization rates were highest among children and older men, and the lowest utilization rates were seen among young men. Young men had lower rates of annual utilization of ambulatory medical care per capita (1.10 [95% CI, 1.06 to 1.15] annual visits per capita) than male adolescents age 15 to 19 years (1.65 [CI, 1.60 to 1.70]) or older men age 30 to 39 years (1.73 [CI, 1.67 to 1.79]) (Appendix Table, available at www.annals.org). Young men had less than half the rate of per-capita utilization than young women (1.10 [CI, 1.06 to 1.15] vs. 2.31 [CI, 2.26 to 2.35]) (Appendix Table, available at www.annals.org). For both males and females, black and Hispanic individuals had lower utilization than white individuals.

Table 2 shows utilization rates for young adults with and without health insurance. Young adults with insurance had more than triple the rate of health care utilization than those without insurance. In addition, among insured and uninsured young adults, men had lower rates of utilization than women and black men had lower rates of utilization than white men.

Types of Visits

Figure 2 shows visits per capita for acute problems, chronic problems, preventive visits, and pre- and postoperative visits among young men and women. Young men had lower per-capita rates than young women for all types of visits. Visits by young men were more heavily weighted toward acute care than preventive care or care of chronic illnesses. Young black and Hispanic men received half the rate of care for chronic conditions compared with young white men.

Figure 1. Per-capita annual ambulatory care utilization between 2000 and 2006, by age group.

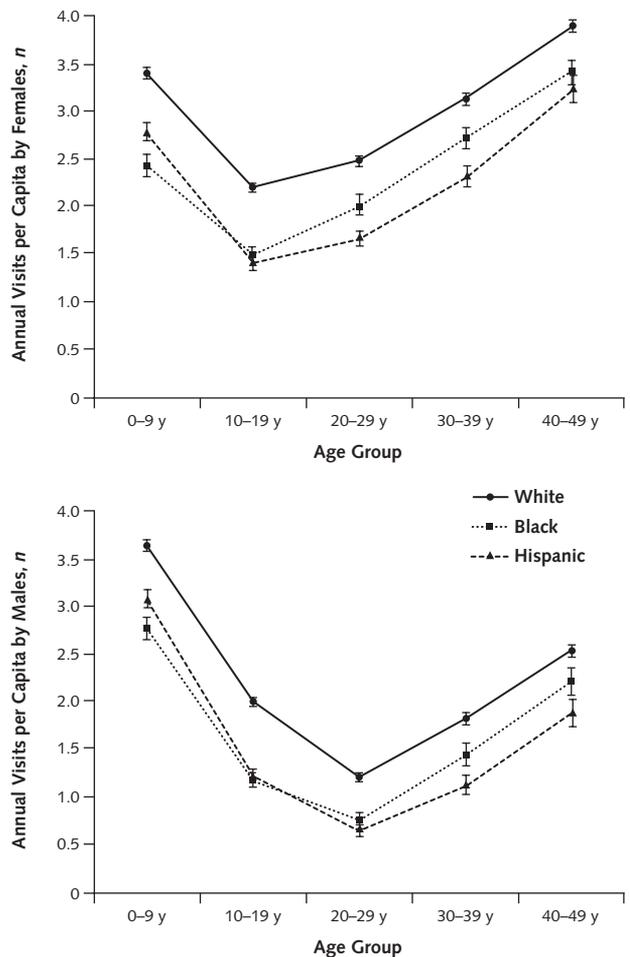


Table 2. Per-Capita Annual Ambulatory Care Visits by Young Adults Age 20 to 29 Years Between 2000 and 2006, by Insurance Status

Patients	Insured Young Adults			Uninsured Young Adults		
	Visits, n*	Population, n†	Visits per Capita (95% CI), n	Visits, n*	Population, n†	Visits per Capita (95% CI), n
All patients						
Total	70 124	32 398	2.16 (2.14–2.19)	8199	13 897	0.59 (0.54–0.67)
Female	47 280	16 796	2.82 (2.76–2.87)	4933	5849	0.84 (0.79–0.89)
Male	22 843	15 569	1.47 (1.41–1.53)	3266	8081	0.40 (0.37–0.44)
White						
Total	58 920	25 647	2.30 (2.26–2.33)	6805	10 459	0.65 (0.63–0.67)
Female	39 183	13 133	2.98 (2.92–3.05)	4074	4344	0.94 (0.88–1.00)
Male	19 737	12 497	1.58 (1.51–1.65)	2731	6133	0.45 (0.40–0.49)
Black						
Total	8177	4274	1.91 (1.73–2.11)	917	2285	0.40 (0.32–0.50)
Female	6069	2361	2.57 (2.47–2.66)	606	992	0.61 (0.53–0.68)
Male	2108	1894	1.11 (1.00–1.23)	312	1312	0.24 (0.19–0.30)

* Visit data were obtained from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey and represent thousands of visits. The average number of visits between 2000 and 2006 is given.

† Population data obtained from the U.S. Census and insurance data obtained from the Community Population Survey. Numbers are thousands of people. Data represent the average population between 2000 and 2006.

Preventive Care and Counseling

Young men had nearly half the rate of preventive care visits (0.11 [CI, 0.10 to 0.13] annual visits per capita) of

male adolescents age 15 to 19 years (0.24 [CI, 0.22 to 0.26]) or men age 30 to 39 years (0.19 [CI, 0.17 to 0.22]). Young men had less than one quarter the rate of visits for preventive care compared with young women (0.48 [CI, 0.46 to 0.50]). When visits for Papanicolaou smears (which were recorded for 12.1% of all female visits) were excluded, young men utilized preventive services at half the rate of young women (0.20 [CI, 0.18 to 0.22]).

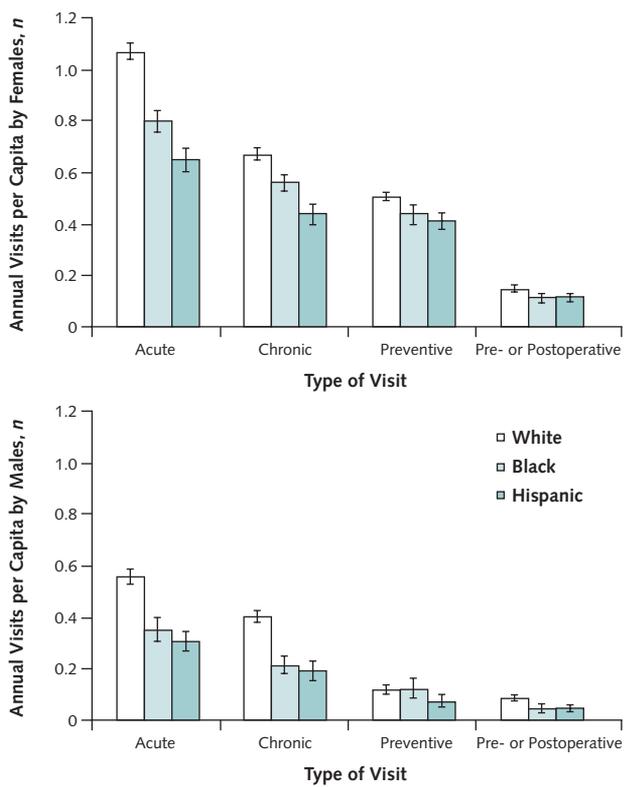
Young adults with insurance had more than 4 times the rate of visits per capita for preventive care compared with those without insurance (0.39 [CI, 0.38 to 0.39] vs. 0.08 [CI, 0.07 to 0.10]). Among young adults without insurance, men had considerably lower rates of preventive care than women (0.04 [CI, 0.03 to 0.05] vs. 0.14 [CI, 0.12 to 0.15]). Similarly, black young adults without insurance had lower rates of preventive care than white young adults (0.06 [CI, 0.04 to 0.08] vs. 0.09 [CI, 0.08 to 0.09]).

Table 3 describes the counseling delivered during health care visits for young adults by different specialties. Some form of counseling occurred at 32.7% (CI, 30.8% to 34.7%) of all visits to primary care providers. Young adults most commonly received counseling directed at diet and exercise and less frequently received counseling directed at injury prevention, smoking, and STDs. Preventive counseling was more likely to occur in primary care offices if patients saw their own primary care physician rather than another physician in the office (35.1% vs. 30.7%; *P* = 0.009).

Types of Providers and Sites of Care

Young women were most commonly seen by primary care physicians (46.7%), but visits to gynecologists (25.6%), specialists or surgeons (23.4%), and psychiatrists

Figure 2. Per-capita annual health care visits by young adults age 20 to 29 years between 2000 and 2006.



(4.3%) accounted for more than half of all visits. Similarly, young men were most commonly seen by primary care providers (57.7%), but a considerable percentage of visits were to specialists or surgeons (35.6%) and psychiatrists (6.7%). There were no apparent trends between 1996 and 2006 in the types of physicians seen (data not shown).

Young adults were most commonly (76.6%) seen in private physician offices. The remainder of visits occurred in health clinics (8.4%); hospital outpatient departments (12.5%); or other sites, including HMOs and faculty practices (2.5%). Young white men were more likely than young black men to receive care in private offices (77.5% vs. 66.2%; $P < 0.001$).

Reasons for Visits

In the ambulatory setting, young men were most commonly seen for musculoskeletal (15.3%), respiratory (12.9%), dermatologic (9.3%), and injury-related visits (8.9%). Young women were most commonly evaluated for respiratory (11.7%), genitourinary (10.5%), musculoskeletal (9.0%), and dermatologic concerns (7.3%).

Effect of Age Definitions

To ensure that our findings were not dependent on the definition of “young adult,” we ran key analyses in which young adults were age 18 to 24 years. We found no considerable change in findings (data not shown).

DISCUSSION

Young adulthood is a unique period, marked by numerous transitions and growing independence (20). Although young adults represent a generally healthy population, their mortality rate is more than twice that of adolescents, and the prevalence of homicide, motor vehicle accidents, substance abuse, and STDs all peak in young adulthood (1, 4–6). Our study suggests that young adults, especially black and Hispanic men, use less ambulatory medical care and infrequently receive preventive care directed at the most substantial threats to their health.

Young men 20 to 29 years of age accessed care less than any other age group, including adolescents. The relative underutilization of ambulatory care among this age group may be driven by numerous factors, including limited access to care, lack of health insurance, and low self-perceived risk among young adults. In addition, young adults frequently do not have a usual source of care (2), which further hinders access to medical services. Our findings are consistent with those of previous studies that demonstrated underutilization and suboptimal preventive counseling in adolescents (11, 12). Our findings provide a new focus on young adulthood and describe sex-, race-, and ethnicity-based patterns of care, as well as rates of preventive care in young adults.

We found that young women had considerably higher rates of utilization for all types of visits than did young men, a finding that is consistent with studies in adolescents (11, 12, 21). This increased utilization did not include visits related to pregnancy and was only partially driven by routine Papanicolaou tests, which accounted for 12% of visits. Visits for reproductive health may, however, increase patients' ability to navigate the health care system and thus provide a framework for women to access health care for general health maintenance, chronic disease management, and acute care. The lack of a similar framework for young adult men, differences in disease perception, concern about health, and societal values all pose considerable challenges to engage young adult males (22, 23).

Young black and Hispanic men accessed ambulatory medical services at considerably lower rates than young white men. This is particularly concerning, given that the overall risk for death is considerably higher among young black and Hispanic adults than young white adults. Ambulatory visits may offer an important opportunity for counseling aimed at reducing risky behaviors and promoting healthy lifestyles (24–26). Efforts to reduce disparities in health care utilization, provide appropriate risk-specific preventive care, and ensure access to a usual source of am-

Table 3. Percentage of Visits During Which Preventive Counseling Was Provided to Young Adults, 1996 to 2006

Type of Counseling	Visits (95% CI), %			
	All Specialties	Primary Care*	Gynecology	Surgeon or Subspecialist
Any	30.6 (29.1–32.1)	32.7 (30.8–34.7)	33.6 (30.3–37.0)	22.9 (20.8–25.0)
Injury†	2.4 (2.0–2.9)	3.1 (2.4–4.0)	0.8 (0.4–1.5)	2.5 (1.9–3.3)
Smoking	3.1 (2.8–3.4)	4.2 (3.7–4.9)	3.1 (2.5–4.0)	1.1 (0.8–1.5)
Exercise	8.2 (7.6–8.9)	9.4 (8.5–10.5)	8.2 (6.9–9.8)	6.6 (5.6–7.7)
Weight reduction‡	3.0 (2.5–3.6)	3.8 (3.1–4.6)	3.4 (2.2–5.2)	1.7 (0.9–2.9)
Mental health	4.1 (3.6–4.6)	4.2 (3.5–5.0)	1.3 (0.9–1.9)	0.6 (0.4–1.0)
STD/HIV§	2.7 (2.2–3.4)	2.6 (2.1–3.3)	7.1 (4.8–10.3)	—
Diet	10.0 (9.2–10.8)	12.4 (11.3–13.7)	12.4 (10.6–14.5)	4.9 (3.9–6.2)

STD = sexually transmitted disease.

* Includes internal medicine, pediatrics, family practice, general practice, general preventive medicine, or public health or general preventive medicine.

† Data were available for 1996–2000 and 2005–2006.

‡ Data were available for 2001–2006.

§ Data were available for 1996–2000.

|| Number of visits did not meet release criteria.

bulatory care are all vital steps toward improving overall health outcomes in young adults.

We found that young adults without health insurance had considerably lower rates of ambulatory health care use than did those with insurance. Insurance alone, however, did not account for all disparities in utilization. Even with health insurance, young men accessed care less than young women and young black adults accessed care less than young white adults. Our results are consistent with previous studies demonstrating that young adults without insurance are more likely to report delayed or missed medical care because of cost and are less likely to have a usual source of care than insured young adults (2, 27, 28). Our findings provide direct evidence that lack of health insurance influences health care utilization in young adults and provides new insight into the preventive care delivered to young adults with and without health insurance.

Young adults, especially men, had few preventive health visits and received alarmingly little preventive counseling. Young men had fewer than one quarter the visits for preventive care of young women and nearly one half the preventive care visits of male adolescents or older men. On average, young men were seen less than once every 9 years for preventive care, and young men without insurance were seen once every 25 years. Overall, approximately 67% of visits to primary care physicians for any reason did not include any documented form of health care counseling. When counseling did occur, little was directed at the most immediate threats to young adults, including accident prevention, substance abuse, mental health concerns, and STDs. Because young adults are seen less regularly than other age groups and visits specifically for preventive care are infrequent, all visits should be considered an opportunity for health education and prevention.

Counseling has been shown to improve tobacco cessation rates, modify high-risk sexual behaviors, and decrease drug abuse (29–32). Several practice guidelines for adolescent preventive care exist (33–35), but guidelines for young adults are less well defined. The U.S. Preventive Services Task Force has specific recommendations for preventive services in adults but no comprehensive framework for young adult care. The American College Health Association provides guidelines and standards of practice for health promotion in college settings (www.acha.org), but publically available comprehensive guidelines are not available. Guidelines are needed for all young adults to ensure appropriate preventive care for this population.

The promotion of comprehensive preventive care for young adults is complicated by the observation that a considerable number of visits from young adults are to providers other than primary care physicians. Overall, we found that more than 40% of visits by young men and more than 50% of visits by young women were to subspecialists, surgeons, psychiatrists, or gynecologists. Although subspecialists may not be focused on providing counseling and preventive care, they may be the only health care providers

with whom the young adult comes in contact, and thus they bear some responsibility to consider preventive care counseling and to facilitate appropriate follow-up with primary care providers.

In contrast to adolescents, young adults garner relatively little attention from researchers, advocacy groups, or policymakers (1, 2). Young adults are the most likely age group to be uninsured, and they have the highest rates of many preventable diseases and the lowest rates of ambulatory care utilization, highlighting a pressing need for action. Unfortunately, few dedicated advocacy groups exist to support the policy interests of young adults. Whereas adolescent health is a defined specialty, no specific specialty takes responsibility for the health care and advocacy for young adults. Greater awareness is needed among health care providers and policymakers to improve access to care and ensure that young adults are provided with appropriate preventive care. Our findings emphasize the need for a national agenda to improve access to care and preventive services for all young adults (1, 3).

Our study is one of few to use nationally representative data with the aim of describing the health care of young adults. The use of the NAMCS and NHAMCS does, however, have several limitations. The NAMCS and NHAMCS are both cross-sectional surveys of patient visits to nonfederal, office-based physicians in the United States. Therefore, we cannot include visits to family-planning centers, college, or school-based clinics. However, most visits to school-based clinics generally occur before 21 years of age, which probably minimizes the effect on our analysis. In addition, counseling may be underreported if it is not adequately documented on the encounter form. Despite evidence of underreporting of counseling (36), the specific amount of counseling that we found, even if underestimated, is clearly inadequate given the preventable risks in this age group. Furthermore, the counseling delivered at visits does not seem to be focused on the most immediate risks to young adults. The low overall rate of visits for preventive care further highlights the finding that preventive care is suboptimal among young adults.

In conclusion, young adults, particularly black and Hispanic men, utilize ambulatory medical care less frequently than all other groups. This relative underutilization of medical care occurs at a time when the risks for homicide, motor vehicle accidents, substance abuse, and STDs all peak. Despite well-documented risks, young adults are infrequently seen for preventive care and do not routinely receive counseling directed at the most common causes of morbidity and mortality in their age group. Given the paucity of visits for preventive care, all visits from young adults should be seen as an opportunity for health education and prevention. Efforts to reduce disparities in health care utilization, improve access, and ensure appropriate preventive care are essential steps toward improving overall health outcomes in young adults.

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Reproducible Research Statement: *Study protocol and statistical code:* Available from Dr. Fortuna (e-mail, Robert_Fortuna@urmc.rochester.edu). *Data set:* Available through the National Center for Health Statistics (www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm).

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Appendix Table. Per-Capita Annual Ambulatory Health Care Visits by Adolescents and Adults, 2000 to 2006

Patients	Adolescents Age 15–19 Years			Young Adults Age 20–29 Years			Older Adults Age 30–39 Years		
	Visits, n*	Population, n†	Visits per Capita (95% CI), n	Visits, n*	Population, n†	Visits per Capita (95% CI), n	Visits, n*	Population, n†	Visits per Capita (95% CI), n
All patients									
Total	45 173	23 992	1.88 (1.82–1.95)	78 323	46 294	1.69 (1.65–1.73)	114 732	49 088	2.34 (2.30–2.38)
Female	24 820	11 669	2.13 (2.07–2.18)	52 214	22 644	2.31 (2.26–2.35)	72 129	24 431	2.95 (2.89–3.01)
Male	20 353	12 324	1.65 (1.60–1.70)	26 109	23 650	1.10 (1.06–1.15)	42 603	24 657	1.73 (1.67–1.79)
White									
Total	38 350	18 577	2.06 (2.02–2.10)	65 725	36 106	1.82 (1.79–1.85)	95 853	38 947	2.46 (2.42–2.50)
Female	20 747	9005	2.30 (2.24–2.37)	43 257	17 476	2.48 (2.42–2.53)	59 840	19 146	3.13 (3.06–3.19)
Male	17 604	9571	1.84 (1.78–1.90)	22 468	18 630	1.21 (1.16–1.26)	36 013	19 801	1.82 (1.76–1.88)
Black									
Total	4773	3662	1.30 (1.14–1.48)	9094	6559	1.39 (1.26–1.53)	13 607	6432	2.12 (1.94–2.31)
Female	2996	1804	1.66 (1.56–1.76)	6675	3353	1.99 (1.92–2.06)	9240	3395	2.72 (2.61–2.83)
Male	1777	1858	0.96 (0.86–1.06)	2419	3206	0.75 (0.68–0.83)	26 203	18 220	1.44 (1.32–1.56)
Hispanic‡									
Total	4577	3835	1.19 (1.02–1.39)	9534	8602	1.11 (0.96–1.27)	78 473	46 631	1.68 (1.49–1.89)
Female	2611	1836	1.42 (1.32–1.52)	6478	3878	1.67 (1.59–1.75)	50 486	21 767	2.32 (2.21–2.43)
Male	1965	1999	0.98 (0.89–1.07)	3056	4724	0.65 (0.58–0.71)	27 987	24 864	1.13 (1.03–1.22)

* Visit data were obtained from the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey and represent thousands of visits. The average number of visits between 2000 and 2006 is given.

† Population data were obtained from the U.S. Census and insurance data were obtained from the Community Population Survey. Numbers are thousands of people. Data represent the average population between 2000 and 2006.

‡ Hispanic ethnicity, any race.