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Original article

Receipt of Preventive Health Services in Young Adults

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A B S T R A C T

Purpose: To examine self-reported rates and disparities in delivery of preventive services to young adults.
Methods: A population-based cross-sectional analysis, of 3,670 and 3,621 young adults aged 18–26 years who responded to California Health Interview Survey (CHIS) in 2005 and CHIS 2007, respectively. The main outcome measures were self-reported receipt of flu vaccination, sexually transmitted disease (STD) screening, cholesterol screening, diet counseling, exercise counseling, and emotional health screening. Multivariate logistic regression was used to examine how age, gender, race/ethnicity, income, insurance, and usual source of care influence the receipt of preventive services.
Results: Delivery rates ranged from 16.7% (flu vaccine) to 50.6% (cholesterol screening). Being female and having a usual source of care significantly increased receipt of services, with female participants more likely to receive STD screening ($p < .001$), cholesterol screening ($p < .01$), emotional health screening ($p < .001$), diet counseling ($p < .01$), and exercise counseling ($p < .05$) than male participants after controlling for age, race/ethnicity, income, insurance, and usual source of care. Young adults with a usual source of care were more likely to receive a flu vaccine ($p < .05$), STD screening ($p < .01$), cholesterol screening ($p < .001$), diet counseling ($p < .05$), and exercise counseling ($p < .05$) than those without a usual source of care after adjusting for age, race/ethnicity, income, and insurance.
Conclusions: Rates of preventive services delivery are generally low. Greater efforts are needed to develop guidelines for young adults to increase the delivery of preventive care to this age-group, and to address the gender and ethnic/racial disparities in preventive services delivery.

IMPLICATIONS AND CONTRIBUTION

This is the first article to examine young adult report of preventive service delivery. Our findings suggest that rates of preventive service delivery are generally low, and having a usual source of care facilitates the receipt of a broad range of preventive care.

Young adults, spanning the age of 18–26 years, have received little attention in the preventive health literature. This is despite the fact that the transition to young adulthood is accompanied by higher mortality and morbidity rates than in adolescence, much of which is attributed to preventable factors, such as binge drinking, substance use, driving under the influence of any substance, weapon possession, risky sexual behaviors, and sedentary lifestyle [1–5]. Unhealthy behaviors tend to continue into middle and late adulthood, predisposing individuals to preventable chronic conditions, such as cardiovascular and respiratory diseases and diabetes.

Interventions that can alter these unhealthy behaviors may have a significant impact on a young person's life, and preventive visits are an optimal time to screen and counsel about health risks [6]. However, the delivery of preventive services to young adults has not received significant attention in both research literature and clinical practice. Although a broad consensus has emerged for clinical guidelines for adolescent preventive services, there are no specific clinical preventive services guidelines that specifically address the young adult age-group [6]. Young adults have been the age-group most likely to be uninsured in the United States [7]. This challenge can be potentially mitigated by the Patient Protection and Affordable Care Act of 2010 (ACA),

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which provides unprecedented expansion of health insurance coverage to young adults up to their 26th birthday, including mandatory coverage for preventive services [8,9]. An important conjecture is whether this increase of access will translate to a corresponding increase in the use of preventive services.

Although multiple studies have examined the receipt of preventive care among adolescents and the general adult population [10–13], only two published studies have focused on young adults' preventive care utilization [14,15]. Both studies used provider-reported data from the National Ambulatory Care Survey and National Hospital Ambulatory Care Survey. Findings from these studies indicate that young adults aged between 20 and 29 years use fewer ambulatory medical and preventive care services compared with children, adolescents, and older adults [14], and less than one-third (32%) of the visits included some form of preventive counseling. Further, male subjects had fewer visits than female participants, and black and Hispanic young adults had fewer visits than other adults [15].

Although provider self-report is one important source of information, patient self-report has been shown to be a valuable indicator of the use and quality of health services both in adult and adolescent literature [16–20]. No study has examined the level of preventive care delivery from a young adult-reported perspective. In addition, although previous research has provided information about the influence of demographic characteristics on ambulatory care visits, the influence of demographic variables on the receipt of specific preventive services, such as diet and exercise counseling, is not known. Moreover, although it has been shown that health insurance is a major factor influencing access to health services among young adults [21], it is not known whether other health care access factors, such as having a usual source of care, influence the receipt of specific preventive services among young adults.

This study addressed these gaps in the literature using a large population health survey, the California Health Interview Survey (CHIS), to examine self-reported rates of preventive service delivery and the relationships between demographic and health care access factors on the receipt of preventive services among young adults. Specifically, the goals of this study were as follows: (1) to determine the percentage of young adults receiving six different preventive services including flu vaccination, sexually transmitted disease (STD) screening, emotional health screening, cholesterol screening, diet counseling, and exercise counseling; and (2) to explore how age, gender, race/ethnicity, household income, insurance status, and presence or absence of usual source of care are related to the frequency of the receipt of each of the preventive services.

Methods

CHIS design and sampling

We examined data from the 2005 and 2007 CHIS that are available for research purposes in the public use files. Although the most recent CHIS data for public use are from 2009, we did not include the 2009 data in this analysis because the variables of interest were not available in that year. CHIS, the largest multiethnic/multilinguistic state population health survey in the United States, is a random digit-dialing survey of the California population that has been conducted every 2 years since 2001. Adults who reside in households are sampled scientifically from every county in the state, and interviews are conducted with one randomly selected adult in the household. Data are weighted to compensate for differential probabilities of selection for households to ensure that the sample is representative of the California population. Detailed description of the sampling methodology can be found in the CHIS 2007 Methodology Series [22]. This study was registered with the Committee on Human Research at University of California, San Francisco under exempt status. All CHIS procedures were approved by the institution review boards of University of California, Los Angeles, the State of California, Westat (data collection organization), and the Federal Office of the Management of the Budget.

Study participants

Young adults from the age of 18 through 26 years who participated in the CHIS 2005 (n = 3,670) and CHIS 2007 (n = 3,621) adult surveys were included in the study. The upper limit of age 26 years was used, as the ACA extended health insurance coverage to this age-group effective from 2010.

Demographics and health risk profile

Variables in the CHIS data set that were used include age, gender, race/ethnicity, household income (household income was reported as a percentage of the federal poverty level [FPL], which was $19,350 and $20,650 for a four-person family in the years 2005 and 2007, respectively), and insurance status (Table 1). Other variables include whether a young adult had at least one sex partner in the past 12 months and whether he/she reported to be overweight/obese. Young adults reported household income as a percentage of FPL. They reported insurance status as currently insured versus not currently insured. CHIS reported participants' overweight/obese status using body mass index (BMI) calculated with self-reported weight and height (kilogram/meter squared). Using this BMI calculation, young adults were categorized as overweight/obese when the BMI was >25 [23].

Health care access variable

To broadly assess the level of health care access, we examined the self-reported rate of the presence or absence of a usual source of care (Table 2).

Receipt of preventive services variables

The survey queried respondents about the receipt of six preventive services (Table 2). They are receipt of a flu vaccine, STD screening, cholesterol screening, diet counseling, and exercise counseling in the past 12 months. It asked about the receipt of emotional health screening at the last routine examination.

Analysis plan

We performed all statistical analyses using Stata version 11 statistical software package (StataCorp LP, College Station, TX) [24]. We applied weights provided by the CHIS investigators to generate population frequency estimates of health care access and receipt of preventive services. Table 2 describes the source of each variable. We used a bivariate logistic regression model on each of the preventive service variables by age category, gender, race/ethnicity, income, insurance status, and usual source of care to yield unadjusted odds ratios. We then conducted multivariate