Published in final edited form as:

J Adolesc Health. 2018 May ; 62(5): 570–576. doi:10.1016/j.jadohealth.2017.11.295.

Reproductive Health Care Utilization of Young Adults Insured as Dependents

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Abstract

Purpose—The common practice of sending an Explanation of Benefits (EOB) to policyholders may inadvertently disclose sensitive services to the parents of dependents, making confidentiality a potential barrier to reproductive health care. This study compares the reproductive health care utilization of young adult dependents and young adult policyholders using nationally representative data collected after full implementation of the Affordable Care Act (ACA).

Methods—Data from 2,108 young adults aged 18–25 in the 2015 National Health Interview Survey were analyzed. Logistic regressions predicted utilization of two preventive services (general doctor visit and flu vaccination) and four reproductive health services (HIV testing, obstetrician/gynecologist visit, hormonal contraceptive use, and Pap testing) from the insurance type of the young adult (dependent, privately-insured policyholder, or Medicaid).

Results—In unadjusted analyses, young adult dependents have lower utilization of HIV tests than their peers who are privately-insured or Medicaid policyholders. Young women dependents have lower utilization of Pap tests than young women on Medicaid. Once controls are included, young adult dependents do not have significantly lower odds of obtaining reproductive health care than privately-insured policyholders. Dependent young men still have marginally lower odds of ever having an HIV test (adjusted odds ratio (AOR) = 0.65, $p = 0.08$) and dependent young women still have marginally lower odds of ever having a Pap test (AOR = 0.58, $p = 0.06$) than comparable Medicaid policyholders.

Conclusions—Despite confidentiality concerns, young adults insured as dependents have similar utilization of several reproductive health services as comparable young adult policyholders.

Keywords

Reproductive health; Dependent coverage expansion; Confidentiality; Young adults; Affordable Care Act; Explanation of Benefits

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Conflict of Interest

I declare no conflicts of interests with regard to this publication, financial or otherwise.

Implications and Contribution

This study finds that young adults insured as dependents on parental insurance plans and their policyholder peers have similar utilization of several reproductive health services, despite the potential for confidentiality breaches that have concerned providers and reproductive health advocates.

The Patient Protection and Affordable Care Act of 2010 (ACA) had significant consequences for young adults and their access to reproductive health care. The proportion of young adults aged 19–25 who were uninsured fell from over 30% in 2009 to 19% in 2014 due to a combination of dependent coverage extension, Medicaid expansion, and the ACA exchanges [1]. Under the law's extension of dependent coverage, which took effect for new plans beginning in September 2010, young adults can remain on their parents' health insurance plans until their 26th birthday [2]. Before the ACA, insurers could limit dependent eligibility to young adults who were living at home, unmarried, still in school, or claimed as a dependent on a parent's tax return, and insurers could exclude young adults who had insurance offered through an employer.¹ Young adults also benefit from contraceptive services and sexually transmitted infection (STI) screenings without cost sharing as part of the essential benefits provision, which went into effect for new private plans in August 2012 [3]. Despite the removal of previous barriers to access, one remains that could impede access to reproductive health for young adults: confidentiality.

Insurance companies typically send an explanation of benefits (EOB) to the policyholder whenever care is provided under the plan. EOBs typically include the patient name, provider name, a description or code for the service, amounts paid by the insurance company, and amounts due [4]. About half of states require insurance companies to send EOBs, and many insurance companies send them even when not required [5]. While this is likely not problematic with most medical services, there is the potential for dependents to have reproductive health services revealed to their parents against their wishes. The Society for Adolescent Health and Medicine, American Academy of Pediatrics, and American College of Obstetricians and Gynecologists all endorse reforms of the insurance claims and billing process out of concern that adolescents and young adults will forgo care due to lack of confidentiality [6].

Several studies consider how adolescents or young adults say they would respond to parental notification, but not their actual behavior. When asked how parental notification would influence their use of these services, adolescent girls often respond that they would switch to nonprescription forms of contraception and delay STI services [7,8]. Among sexually active young adults on parental insurance plans, 14% of those aged 18–19, 8% of those aged 20–22, and 5% of those aged 23–25 report that they would not seek sexual or reproductive health services because of concerns that their parents would find out [9]. Only a handful of studies have studied the effect of confidentiality on realized care. Interviews with young adults in Massachusetts revealed that some dependents rely on condoms rather than prescription contraceptives in order to avoid a record being sent to parents [10]. Among sexually active adolescents and young adults who have not been tested for STIs, confidentiality concerns are commonly given as a reason, especially among those financially dependent on parents [11].

¹Before January 1, 2014, insurers were not required to cover adult children if they were eligible for their own employer-sponsored insurance plans.

This study seeks to compare the reproductive health care utilization of young adult dependents and young adult policyholders with nationally representative data collected after full implementation of the ACA. It is hypothesized that if young adults are concerned with confidentiality, dependents are less likely to have obtained reproductive health care services than young adults not insured through parental plans.

Methods

Data

This study uses data from the 2015 National Health Interview Survey (NHIS) [12]. The NHIS is a nationally representative, cross-sectional sample of the noninstitutionalized adult population in the United States. The 2015 wave is the first NHIS wave after full implementation of the ACA that includes the Cancer supplement, which includes information on ever having a Pap test and current use of hormonal contraception. The secondary analysis of these publicly available, de-identified data was exempt from IRB approval.

Of the total 33,672 sample adults in the NHIS, the sample is restricted to young adults aged 18–25, the age range eligible for dependent coverage (N=3,467). The sample is restricted to young adults who are insured as dependents, private policyholders, or through Medicaid (N=2,398). The question wording in the NHIS does not distinguish whether a married individual living with parents is a dependent on a parent's or a spouse's insurance plan. Due to this limitation, the sample is further restricted to never-married individuals (N=2,311). The sample is restricted to non-proxy cases because the proxy may not know about the individual's utilization of all types of health services (N=2,194). Lastly, the sample is restricted to individuals with complete covariate information, leaving a sample size of 2,075.

Measures

The outcome variables measure health care utilization. The first two, general doctor visited within the past 12 months and flu vaccination (either a shot or spray) within the past 12 months, capture non-sensitive services. The other four variables represent reproductive services that young adults may want to keep private: ever being tested for Human Immunodeficiency Virus (HIV), visiting an obstetrician/gynecologist (OB/GYN) in the past 12 months, currently using hormonal contraceptives (including birth control pills, implants, or shots), and ever having a Pap smear. These reproductive health care services were chosen based on availability in the 2015 NHIS. OB/GYN visits, contraceptive usage, and ever having a Pap test are only measured for women. The number of missing responses ranges from 11 for visiting a general doctor in the past 12 months to 55 for ever being tested for HIV.

If concerns about confidentiality influence young adults' utilization of care, we would expect that dependents have similar utilization of general doctor visits and flu vaccines but significantly less utilization of the sexual and reproductive health services. Of course, these reproductive health services are not equally sensitive. Pap smears are the least sensitive, as they are routinely recommended for women aged 21 and over regardless of sexual activity.

However, young women often confuse Pap tests with STI tests, so they may still avoid this test for confidentiality reasons if they see it as a marker of sexual activity [13–16]. HIV tests are the most sensitive, as they could imply unprotected sex or sex with multiple partners.

The independent variable of interest is dependent status. An individual is classified as a dependent on a parental insurance policy if either (a) he or she lives in the same household as the policyholder and states that the policy is in another family member's name, or (b) he or she resides outside of the policyholder's household and identifies himself or herself as the child of the policyholder.

The covariates include a variety of characteristics that could be associated with health care utilization and insurance choice. Linear and quadratic terms for age are included because both dependent coverage and concerns about confidentiality become less common with age, and these changes may occur in a nonlinear fashion [9]. Gender, race, and ethnicity are included because there is evidence that the expansion of dependent coverage impacted males more than females and non-Hispanic whites more than other racial and ethnic groups [17–20]. Several measures of socioeconomic status (SES) are included: whether the individual has health insurance offered through an employer; educational attainment (less than high school, high school, some college, college); employment status (paid employment, student, other); and log family income.

Coresidence with parents is included, as the dependent provision affected young adults living at home more so than those living elsewhere [21]. It is unclear how living at home would affect confidentiality concerns. Young adults living at home would have insurance documents mailed to the parental home, creating potential opportunities for breaches of confidentiality. At the same time, living with parents could imply a larger supply of in-network providers for dependents than if they were living elsewhere. Cohabitation with a romantic partner is included because there is some evidence that the expansion of dependent coverage decreased the likelihood of cohabitation among young adults [22]. Young adults who cohabit likely have higher utilization of reproductive health services because they are presumably engaging in sexual activity and may be less concerned with confidentiality. Lastly, parental status is included because young adults who are parents, especially mothers, may have had more exposure to reproductive health specialists.

Analysis

Logistic regression is used to predict an individual's probability of each type of health care utilization. All analyses are stratified by gender. Separate comparisons are made between dependents and private policyholders and dependents and young adults insured through Medicaid given the different sociodemographic characteristics of these two populations [20]. Unadjusted models and adjusted models with the set of control variables described above are estimated. For Pap testing, the sample is restricted to women over 21, because the current screening guidelines recommend Pap testing beginning at age 21. To account for the complex sampling design in the NHIS, weighted summary statistics are presented, and the regressions control for region, age, race and ethnicity, which were included in the NHIS sampling design [23].

All analyses are conducted in R version 3.4.0. For the adjusted models, results are pooled from each of the five income imputations using the MICE (Multiple Imputation by Chained Equations) package [24].

Results

Weighted summary statistics are presented in Table 1. The majority of young adults (62%) are insured as dependents, 18% are privately insured as policyholders, and 20% are insured through Medicaid. The mean age of the entire sample is 21.3 years (SD=2.3 years). The average family income is \$69,000 (SD=\$58,200). About 58% are non-Hispanic white, 20% are Hispanic, 15% are non-Hispanic black, and 7% are non-Hispanic Asian or another race. The majority of young adults (64%) are in paid employment, 21% are students and 16% are neither employed nor students. Higher education is common in this group, with 15% having completed college and 49% some college, while 26% have completed high school and 11% have not completed high school. About a third have insurance offered through work. Approximately 61% of young adults live with at least one parent and 12% live with a partner. Around 8% of the young adults are parents.

Compared to privately-insured policyholders, dependents are significantly younger, have higher family income, are more likely to be non-Hispanic white, less likely to be employed, less highly educated, less likely to be offered insurance through an employer, more likely to live with parents, less likely to live with a partner, and less likely to be a parent. Compared to Medicaid policyholders, dependents have higher family income, are more likely to be non-Hispanic white, more likely to be employed or a student, more educated, more likely to have insurance offered through an employer, less likely to live with a partner, and less likely to be a parent.

Tables 2 and 3 present results comparing utilization of dependents to private policyholders and Medicaid policyholders, respectively. Appendix tables A1–A4 present the full regression results.

Compared to private policyholders, dependent women have significantly higher odds of having seen a general doctor in the past 12 months (odds ratio (OR) = 1.52, 95% confidence interval (CI) = 1.09 – 2.11) and significantly lower odds of ever having had an HIV test (OR = 0.65, CI = 0.47 - 0.91). Similarly, dependent men have significantly higher odds of having seen a general doctor in the past 12 months (OR = 1.92, 95% CI = 1.44 - 2.56) and significantly lower odds of ever having had an HIV test (OR = 0.60, 95% CI = 0.43 - 0.83). Once sociodemographic controls are included, dependent men still have significantly higher odds of having been to a general doctor in the past 12 months (adjusted odds ratio (AOR) = 1.73, 95% CI = 1.21 - 2.56), but none of the other services differed significantly between dependents and privately-insured policyholders. In the models predicting ever having had an HIV test, age and coresidence with parents account for the loss of significance of the coefficient on dependent among women, while age accounts for the loss of significance of the coefficient on dependent among men.

In the unadjusted analyses comparing use of care between dependents and young adults insured through Medicaid (table 3), dependent women have lower odds of ever having an HIV Test (OR = 0.37, 95% CI = 0.27 - 0.49), higher odds of using hormonal contraception (OR = 1.45, 95% CI = 1.07 - 1.97), and lower odds of ever having a Pap test (OR = 0.60, 95% CI = 0.38 - 0.93). Dependent men have lower odds of ever having had an HIV test than young men insured on Medicaid (OR = 0.49, 95% CI = 0.33 - 0.72). In the adjusted analyses, these effects are no longer significant at the 5% level, but a couple are significant at the 10% level. Dependent men have 35% lower odds (AOR = 0.65, $p = 0.08$) of ever having had an HIV test than comparable Medicaid policyholders. Dependent women have 42% lower odds of ever having had a Pap test (AOR = 0.58, $p = 0.06$) than comparable Medicaid policyholders. In the model predicting ever had an HIV test among women, parental status and race/ethnicity account for the loss of significance in the coefficient on dependent.

Discussion

Despite the concerns about the potential for confidentiality concerns impeding use of care, there is no significant difference in utilization of reproductive health services between dependents and private policyholders once sociodemographic controls are included. However, there is a marginally significant difference between dependents and young adults insured through Medicaid, with dependent men having lower utilization of HIV tests and dependent women having lower utilization of Pap tests than comparable peers on Medicaid. The different finding observed in comparison to Medicaid policyholders could reflect the lower risk of confidentiality breaches for adults insured through Medicaid, since states often prevent Medicaid from sending EOBs with information about family planning or STI services [25].

The other reproductive health services, hormonal contraceptive use and seeing an OB/GYN in the past 12 months, are used by dependents as much as by privately insured policyholders and Medicaid policyholders. These findings are in contrast to the hypotheses informed by the literature documenting the threat to confidentiality for young adults insured as dependents.

One explanation for these findings is that confidentiality issues are not as important for young adults as previously thought. Young adults that have close relationships with their parents may feel comfortable discussing reproductive health issues with parents or may not mind if their parents see insurance documents. Parents might also encourage their adult children to obtain regular checkups and see specialists for reproductive health care services.

It is possible that young adults do not know enough about health insurance to recognize the threat of confidentiality breaches. The Kaiser Family Foundation's 2013 Kaiser Women's Health Survey revealed that among young women aged 18–25, only 37% were aware that insurance companies send EOBs to policyholders, but 71% rated confidentiality as important [26]. This study is unable to account for young adults' knowledge of threats to confidentiality, but it is an important component of the association between insurance type and use of care.

Another possible explanation is confidentiality concerns do not impact whether young adults receive reproductive health care but rather whether they choose to use their insurance to obtain it. They may take advantage of clinics that provide free or subsidized services and do not require patients to use their insurance. An analysis of data from the 2006–2010 National Survey of Family Growth found that among privately insured women obtaining contraceptives, 82% of teens and 79% of young adults aged 20–24 used their insurance, compared to 93% of women 30 or older [4]. Young women report choosing publicly funded family planning clinics because the services are confidential and they do not need to use their insurance to obtain reproductive health services [10,27]. The finding that young adults insured as dependents have comparable utilization of several reproductive health services as privately insured policyholders and Medicaid policyholders could reflect the subset of dependents with confidentiality concerns seeking out care from confidential sources.

Similar results have been observed in other situations regarding parental notification. When Texas began requiring parental consent for birth control obtained from state-funded family planning clinics in 2003, projections based on adolescents' stated responses to parental notification predicted increases in teenage pregnancies and forgone STI treatment [28]. Even though the law resulted in lower utilization of the state-funded clinics, the law did not result in an increase in teenage pregnancy [29]. Adolescents could have switched to federally-funded clinics, accessed clinics in neighboring states, used condoms, or reduced sexual activity in response to the policy. The Texas case suggests that when confronted with threats to confidentiality, adolescents are capable of finding creative solutions to protect their confidentiality and prevent adverse reproductive outcomes.

Limitations and Future Research

This study has several limitations. Foremost, the results presented are associations, not evidence of causation between dependent insurance and utilization of health services. Though the analysis controls for characteristics associated with insurance type, dependents, private policyholders, and Medicaid policyholders could differ in unobserved ways that influence their use of care. They may have different tolerances for confidentiality breaches and value privacy differently and they may have different needs for reproductive health services.

Given the available data, it is impossible to determine where these services were obtained and whether insurance was used to obtain them. Future research should examine this issue more specifically in order to determine whether dependents are using parental insurance in spite of the risks of parental notification or whether they are using publicly-funded clinics to obtain confidential care. This distinction is important because if dependents seek out ways to avoid using their insurance, insurers benefit by paying for fewer services while publicly-funded clinics are further strained.

Another limitation of this study is the inability to assess whether individuals know about how the insurance billing process could inadvertently reveal services to parents or whether they care about these concerns. Future research could assess whether utilization of

reproductive health services varies by knowledge of confidentiality protections and desire to keep these services private from parents.

Though the NHIS provides a rich source of data on health insurance and utilization, its measures of reproductive health services are quite limited. Future research could examine reliance on non-hormonal contraceptives, use of intrauterine devices (IUDs), testing of other STIs, and abortion as outcomes in which dependents and policyholders might differ. Other sensitive services, including mental health care and substance abuse treatment, are potentially influenced by concerns about confidentiality and should be studied in future research.

Conclusion

This study contributes to the literature on confidentiality and reproductive health care by demonstrating that young adults insured as dependents and young adults insured as policyholders have comparable use of several reproductive health services. It is the first study to compare the reproductive health care utilization of young adults insured as dependents and young adults insured on their own policies with data collected after the full implementation of the Affordable Care Act.

On the whole, it is encouraging that young adults insured as dependents are not forgoing care for reproductive health services. Despite the concerns documented by reproductive health advocates and physicians, confidentiality concerns associated with dependent insurance coverage do not appear to reduce utilization of reproductive health services. However, this finding does not imply that the confidentiality protections for dependents are sufficient. The potential for confidentiality breaches constitutes a real violation of privacy in health care, and insurance billing processes could be modified to ensure confidentiality.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

The author wishes to thank Noreen Goldman and Betsy Armstrong for their comments on previous versions of this article. Research reported in this publication was supported by The Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number P2CHD047879 and Award Number T32HD007163. The content is solely the responsibility of the author and does not necessarily represent the official views of the National Institutes of Health.

List of abbreviations

ACA	Affordable Care Act
EOB	Explanation of benefits
HIV	Human Immunodeficiency Virus
NHIS	National Health Interview Survey

OB/GYN	Obstetrician/Gynecologist
SES	Socioeconomic status
STI	Sexually transmitted infection

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Table 1

Weighted Summary Statistics

	Full sample	Privately-insured dependents	Privately-insured policyholders	Medicaid policyholders	p-value
Sample size	2,075	1,138	499	438	
Age (years)	21.3 (2.3)	21.0 (2.2)	22.8 (1.9)	20.9 (2.2)	0.45
Total Family Income (\$)	69,000 (58,200)	84,900 (63,000)	53,100 (40,300)	35,100 (32,600)	<.001
%					
Insurance Coverage					
Dependent	61.7%				
Private policyholder	18.3%				
Medicaid policyholder	20.0%				
Gender					
Female	47.9%	45.9%	42.1%	59.5%	0.001
Male	52.1%	54.1%	57.9%	40.5%	
Race/Ethnicity					
Non-Hispanic white	57.7%	67.6%	55.0%	29.9%	<.001
Hispanic	20.4%	16.5%	21.6%	31.4%	
Non-Hispanic black	14.7 %	10.3%	12.4%	30.2%	
Non-Hispanic Asian or other race	7.2%	5.7%	11.0%	8.4%	
Employment status					
Paid employment	64.0%	61.7%	88.8%	48.5%	<.001
Student	20.5%	24.8%	8.0%	18.7%	
Other	15.5%	13.5%	3.2%	32.7%	
Educational Attainment					
Less than High School	10.9%	9.0%	4.6%	22.3%	<.001
High School	26.0%	22.9%	23.0%	38.3%	
Some College	48.5%	54.9%	38.9%	37.4%	
College	14.7%	13.2%	33.5%	2.0%	
Employer benefits					
Employer offers coverage	28.6%	21.0%	75.2%	9.5%	<.001

	Full sample	Privately-insured dependents	Privately-insured policyholders	p-value	Medicaid policyholders	p-value
Employer does not offer coverage/not employed	71.4%	79.0%	24.8%		90.5%	
Residence						
Co-residential parent	61.3%	68.9%	31.2%	<.001	65.3%	0.30
Non-co-residential parent	38.7%	31.1%	68.8%		34.7%	
Cohabitation						
Cohabiting with partner	12.0%	7.3%	23.1%	<.001	16.3%	<.001
Not cohabitating with partner	88.0%	92.7%	76.9%		83.7%	
Parental status						
Parent of a child	8.2%	2.5%	6.5%	<.001	27.3%	<.001
Not a parent	91.8%	97.5%	93.5%		72.7%	
Health Care Utilization						
General doctor in past 12 months	60.4%	62.8%	47.9%	<.001	64.5%	0.65
Flu vaccine in past 12 months	26.6%	27.3%	27.1%	0.95	23.9%	0.33
Ever had HIV test	30.2%	23.4%	34.1%	0.001	47.7%	<.001
OB/GYN in past 12 months (women only)	41.7%	38.1%	49.2%	0.07	45.3%	0.18
Currently using hormonal contraceptives (women only)	37.8%	40.0%	39.9%	0.99	31.6%	0.09
Ever had Pap test (women over 21 only)	72.5%	67.2%	77.0%	0.13	80.1%	0.03

Bold values indicate that t-tests or Chi-square tests relative to privately-insured dependents are significant at the 5% level.

Table 2

Odds ratios and 95% confidence intervals from logistic regression analyses assessing the association utilization and dependent insurance (relative to private policyholders)

	General doctor in past 12 months	Flu vaccine in past 12 months	Ever had HIV test	OB/GYN in past 12 months	Using hormonal contraceptives	Ever had Pap test					
Dependent (reference = private policyholder)	1.52 (1.09, 2.11)	1.34 (0.90, 2.00)	1.15 (0.82, 1.62)	1.26 (0.83, 1.90)	0.65 (0.47, 0.91)	1.12 (0.72, 1.73)	0.86 (0.63, 1.19)	1.22 (0.87, 1.70)	1.39 (0.92, 2.10)	0.90 (0.59, 1.36)	1.50 (0.87, 2.58)
Women											
Demographic and SES controls ^a	No	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes ^b
Sample restricted to over 21?	No	No	No	No	No	No	No	No	No	No	Yes
Observations	761	760	740	761	732	498					
Dependent (reference = private policyholder)	1.92 (1.44, 2.56)	1.73 (1.21, 2.47)	1.09 (0.78, 1.52)	1.21 (0.80, 1.82)	0.60 (0.43, 0.83)	0.73 (0.49, 1.11)					
Men											
Demographic and SES controls ^a	No	Yes	No	Yes	No	Yes					
Observations	866	862	852								

Bold values indicate that odds ratios are significant at the 5% level.

^aControls include age, age squared, race/ethnicity, education, employment status, whether insurance is offered at work, region of the U.S., coresidence with parents, cohabitation, parental status, and log family income.

^bParental status is not included in the analysis of Pap tests because all parents who were insured as dependents had a Pap test.

Table 3

Odds ratios and 95% confidence intervals from logistic regression analyses assessing the association between utilization and dependent insurance (relative to Medicaid)

	General doctor in past 12 months		Flu vaccine in past 12 months		Ever had HIV test	OB/GYN in past 12 months		Using hormonal contraceptives		Ever had Pap test		
Women	Dependent (reference = Medicaid)	1.29 (0.95, 1.74)	1.07 (0.72, 1.59)	1.32 (0.97, 1.81)	1.28 (0.85, 1.93)	0.37 (0.27, 0.49)	0.83 (0.62, 1.11)	1.13 (0.76, 1.70)	1.45 (1.07, 1.97)	1.32 (0.89, 1.97)	0.60 (0.38, 0.93)	0.58 (0.32, 1.03)
	Demographic and SES controls ^a	No	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes ^b
	Sample restricted to over 21?	No	No	No	No	No	No	No	No	No	No	Yes
	Observations	831	831	830	830	807	831	831	806	806	503	503
	Men	Dependent (reference = Medicaid)	1.04 (0.73, 1.48)	0.97 (0.64, 1.49)	1.30 (0.85, 2.01)	1.15 (0.70, 1.89)	0.49 (0.33, 0.72)	0.65 (0.41, 1.05)				
	Demographic and SES controls ^{a#}	No	Yes	No	Yes	No	Yes					
	Observations	739	739	735	735	730	730					

Bold values indicate that odds ratios are significant at the 5% level.

^aControls include age, age squared, race/ethnicity, education, employment status, whether insurance is offered at work, region of the U.S., coresidence with parents, cohabitation, parental status, and log family income.

^bParental status is not included in the analysis of Pap tests because all parents who were insured as dependents had a Pap test.