



Editor's Choice

## Concerns About the Cost of Contraception Among Young Women Attending Community College



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Article history: Received 15 July 2020; Received in revised form 2 February 2021; Accepted 11 March 2021

### ABSTRACT

**Introduction:** Contraceptive use is lower among students attending community college than 4-year college students, which may be due to financial barriers to accessing contraceptives. This study examined insurance coverage, access to free or low-cost birth control, and concerns about contraceptive costs among women in community college.

**Methods:** We analyzed data from a study conducted at five community colleges in California and Oregon, which have expanded Medicaid coverage of family planning services for low-income individuals. Participants were students aged 18–25 years who self-identified as female, had vaginal sex, and were not pregnant or trying to become pregnant ( $N = 389$ ). Multivariate analyses were conducted to examine concerns about the cost of contraception among these young women and how cost concerns varied by insurance coverage and access to free or low-cost birth control.

**Results:** Nearly one-half of participants (49%) were concerned about the cost of contraception. In multivariate models, privately insured women had lower odds of being concerned about the cost of birth control than the uninsured (adjusted odds ratio, 0.42; 95% confidence interval, 0.22–0.83), yet women with public insurance had cost concerns similar to those of women without insurance. Women who reported they knew where to get free or low-cost birth control had lower odds of reporting cost concerns (adjusted odds ratio, 0.42; 95% confidence interval, 0.24–0.75), as did the few women enrolled in a state family planning program (adjusted odds ratio, 0.56; 95% confidence interval, 0.32–1.00).

**Conclusions:** Even in states with publicly funded services for young people, concerns about the affordability of contraception were common among women, particularly the uninsured or publicly insured. Addressing students' cost concerns is an important aspect of ensuring access to contraception during their pursuit of higher education.

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This work was supported by a grant from The JPB Foundation. Dr. Brindis' time was supported in part by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) (under #U45MC27709, Adolescent and Young Adult Health Capacity Building Program). The sponsors were not involved in the study design; in the collection, analysis and interpretation of data; in the writing of the report; or in the decision to submit the article for publication.

**Data Access and Responsibility:** Jennifer Yarger, Rosalyn Schroeder, and Cynthia C. Harper had full access to the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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Ensuring access to contraception is an integral part of women's health care (American College of Obstetricians & Gynecologists, 2015), as well as an important indicator of reproductive autonomy (Potter et al., 2019). National data have shown, however, that young women have limited knowledge of available methods and that sexually active 15- to 24-year-olds are less likely to be using contraception than those aged 25–44 years (Craig, Dehlendorf, Borrero, Harper, & Rocca, 2014; Kaye, Suellentrop, & Sloup, 2009; Jones, Mosher, & Daniels, 2012). Lack of insurance and cost remain significant barriers to contraceptive use, particularly the use of prescription contraceptive methods

(Burke, Potter, & White, 2020; Culwell & Feinglass, 2007; Eisenberg, McNicholas, & Peipert, 2013; Grindlay & Grossman, 2016). This study focuses on young women in community colleges to examine their concerns about the cost of accessing desired contraception. In the United States, one-third of undergraduates attend community college (U.S. Department of Education, National Center for Education Statistics, *Integrated Postsecondary Education Data System*, 2018). Community colleges serve as an important avenue into higher education for first-generation college students and many of these students come from families with economic hardship (American Association of Community Colleges, 2020). However, very little is known about their financial realities in seeking contraception.

Although most health behavior research on college students has focused on 4-year students (Pokhrel, Little, & Herzog, 2014), limited research suggests that students attending community college have lower rates of contraceptive use than 4-year college students (Trieu, Bratton, & Hopp Marshak, 2011). In a qualitative study of community college students in California, many participants reported unprotected sex with opposite-sex partners and students had low levels of contraceptive knowledge (Cabral et al., 2018). A study of women attending community college in Texas found that 16% of women at risk of pregnancy were not using a method of contraception and 69% wanted to be using more effective methods. The top reasons for not using a more effective method included not being able to afford the method, not having insurance, or having insurance that did not cover the method (Hopkins et al., 2018). Other research among students at 4-year colleges has found that cost is the most common reason for not using contraception (Huber & Ersek, 2009).

The Affordable Care Act (ACA) led to a substantial reduction in young adults' uninsured rate (Cantor, Monheit, DeLia, & Lloyd, 2012), but people aged 19–25 years remain more likely to be uninsured than other age groups (Berchick, Barnett, & Upton, 2019). Among women with insurance, out-of-pocket expenses for contraceptives have decreased substantially after the implementation of the ACA contraceptive mandate, which required health plans to cover all Food and Drug Administration–approved contraceptive methods and counseling without cost sharing (Law et al., 2016). However, many young adults lack basic knowledge and understanding of health insurance, including the meaning of concepts such as co-payments and deductibles (Tilley, Yarger, & Brindis, 2018; Wong et al., 2015), so they may have misperceptions about the out-of-pocket contraceptive costs.

Publicly funded family planning services are available to those who continue to lack health insurance coverage, are experiencing gaps in coverage, or cannot use their insurance for family planning services owing to confidentiality concerns (Sonfield, Hasstedt, & Gold, 2014). The federal Title X program provides grants to health centers that allow them to provide free or reduced fee family planning and related preventive health services to clients (Fowler, Gable, Wang, & Lasater, 2018). In addition, 24 states, including California and Oregon, have implemented programs to extend Medicaid coverage for family planning services to residents based on their income. Although Medicaid covers individuals up to 138% of the federal poverty level, the programs in California and Oregon cover family planning services for individuals up to 200% and 250% of the federal poverty level, respectively (Guttmacher Institute, 2020). However, young adults may have limited awareness or use of publicly funded family planning services. In the qualitative study of community college students in California, knowledge of the state

family planning program was limited to the few students enrolled in it (Cabral et al., 2018).

In this study, we assessed concerns about the cost of contraception among young women aged 18–25 years who were attending community college in California and Oregon. We examined variation in cost concerns by women's health insurance coverage and access to publicly funded family planning services.

## Methods

### *Study Design and Procedures*

Data for this analysis were collected as part of a larger study of community college students. Between February 2016 and July 2017, students were recruited at five community colleges in the San Francisco Bay Area and Portland, Oregon. Sites were selected based on the diversity of their student body and the college's ability to participate in the research study. The college sites ranged in size from 8,300 to 14,900 students. The student bodies were diverse, with the majority of students in the California sites identifying as people of color (Hispanic, Asian/Pacific Islander, Black, Native American, multiracial), ranging from 67% to 80%; in Portland 30% were students of color and 63% White. All community college sites in the Bay Area had a student health center, participated in California's publicly funded family planning program, and provided condoms and at least one form of emergency contraception. The college in Portland did not have a student health center or provide contraception to students on campus at the time of the study, although a new building to house a student health center was being planned.

Students aged 18–25 years of all genders who were currently enrolled at the community college site were eligible to participate. Research assistants recruited students in centralized campus areas suggested by the health center staff. The research assistants set up a table with flyers and posters about the study, recruited prospective participants, and briefly introduced the study. A trained interviewer met with the student in a designated private area to obtain written informed consent. In total, 1,989 students were screened for eligibility and 1,060 enrolled. One hundred participants were recruited at the site in Portland and 960 participants were recruited at sites in the San Francisco Bay Area. The number of students recruited at each college ranged from 100 to 290. The students who enrolled in the study and those who did not enroll were similar in age and gender.

The larger study measured the impact of an educational intervention on students' birth control knowledge and attitudes. After completing a pretest, participants received a 10-minute educational intervention in which the research assistant used scripted talking points to review youth-friendly educational materials with the participant. The intervention did not include information about how to access birth control or the cost of contraception, aside from noting which methods of emergency contraception could be obtained from a health care provider or at a pharmacy. Following the educational intervention, participants were given a post-test survey. The surveys were self-administered on iPad devices. Participants received \$20 remuneration. The study was approved by the Institutional Review Boards at the University of California, San Francisco and the Oregon Health Sciences University.

## Measures

We used the behavioral model of health service use (Andersen, 1995) to guide our choice of variables focused on cost concerns. The model relates people's use of health services to factors that enable or impede use, in addition to their predisposition to use services and need for care.

### Outcome variable

Our main outcome measure was concern about the cost of contraception. In the pretest, participants were asked whether they “strongly agree,” “agree,” “disagree,” or “strongly disagree” with the following statement: “If I wanted to use birth control, I would worry about the cost.” We created a dichotomous variable equal to 1 if participants indicated “strongly agree” or “agree” and 0 otherwise.

### Independent variables

We categorized participants by their health insurance coverage: private insurance, public insurance, none/don't know. We also included three measures based on questions in the post-test survey. Participants were asked if they knew “where to get birth control for free or low-cost” (yes, no) and if they had heard of their state family planning program (Family PACT in California and CCare in Oregon) (yes, no). Those who indicated that they had heard of their state family planning program also were asked if they participated in the program (yes, no).

### Control variables

We collected information about social and demographic characteristics: age (18–19 years, 20–25 years); self-reported race/ethnicity (White, Black, Hispanic, Asian/Pacific Islander, or Other/Multi-racial), nativity (U.S. born, foreign born); and receipt of public assistance (yes, no).

## Analysis

The analysis population for this study comprises 389 participants who identified as female, had ever had vaginal sex, and were not currently pregnant or trying to conceive. We used  $\chi^2$  statistics to compare concerns about the cost of birth control by insurance status and by each measure of access to free and low-cost birth control. Next, we conducted multivariate analyses using mixed-effects logistic regression models that included random effects for site. All multivariable models controlled for age, race/ethnicity, receipt of public assistance, and nativity.

We estimated a series of three models. In the first model, we included insurance coverage as a predictor of cost concerns. The second model added awareness of where to get free or low-cost contraception, and the third model added participation in the state family planning program. Since foreign-born young people often have lower access to health coverage (Jones & Sonfield, 2016; Tapales, Douglas-Hall, & Whitehead, 2018), we tested interaction terms of foreign born with health insurance and awareness of where to get low-cost birth control, as well as participation and familiarity with state family planning programs. All analyses were performed using Stata 16. Significance levels are reported at a *p* value of less than .05.

## Results

Fourteen percent of participants were uninsured or did not know if they had insurance, 33% had public insurance, and 53%

had private insurance (Table 1). Thirty-seven percent of participants were aged 18–19 years and 63% were aged 20–25 years. The sample was diverse, with 32% Hispanic, 22% Asian/Pacific Islander, 19% White, 16% other/multiracial, and 11% Black participants. One-quarter of participants were born outside of the United States (24%). Twenty-one percent of participants were receiving public assistance, 4% had experienced homelessness in the past 2 years, and nearly one-half (48%) were first-generation college students. Eighty-two percent of participants identified as heterosexual and 8% had children.

Most participants (81%) knew where to get free or low-cost birth control. One-third of participants (34%) had heard of their state family planning program, and 17% participated in the program. Overall, nearly one-half of the participants (49%) were concerned about the cost of birth control (Table 2). Uninsured women (68%) and publicly insured women (52%) were more likely to be concerned about the cost of birth control than privately insured women (42%) (*p* = .002). Sixty-nine percent of participants who did not know where to get free or low-cost birth control were concerned about cost, compared with 44% of participants who did know where to get free or low-cost birth control (*p* < .001). There were no significant differences in cost concerns by awareness of the state family planning program (*p* = .202). However, participants who were not enrolled in the state family planning program were significantly more likely to be concerned about cost than those participating in the program (51% vs. 37%; *p* = .028).

We tested whether there were significant differences in health insurance by nativity and found significantly lower levels of coverage among foreign-born participants. More than one-quarter (26%) of foreign-born participants were uninsured, compared with 10% of U.S.-born participants. Among foreign-born participants, 43% had private insurance, compared with 57% among those born in the U.S. (*p* < .001). There were no significant differences in awareness or use of state family

**Table 1**  
Characteristics of the Study Sample (*N* = 389)

Characteristics	<i>n</i>	%
Age, years		
18–19	142	37
20–25	247	63
Race/ethnicity		
White	74	19
Black	42	11
Hispanic	124	32
Asian/Pacific Islander	87	22
Other/Multiracial	62	16
Foreign born	94	24
Sexual identity		
Heterosexual/straight	320	82
Gay/lesbian	7	2
Bisexual	52	13
Other	10	3
Has children	33	8
Receives public assistance	81	21
Homeless in last 2 years	17	4
First-generation college student	188	48
Type of health insurance		
None/don't know	53	14
Public	129	33
Private	207	53
Knows where to get free or low-cost birth control	317	81
Heard of state family planning program	133	34
Enrolled in state family planning program	68	17

**Table 2**  
Percentage of Participants Concerned About the Cost of Birth Control, by Select Characteristics (N = 389)

Characteristics	n	%	p Value*
All	190	48.8	
Insurance type			.002
None/don't know	36	67.9	
Public	67	51.9	
Private	87	42.0	
Knows where to get free or low-cost birth control			<.001
No	50	69.4	
Yes	140	44.2	
Heard of state family planning program			.202
No	131	51.2	
Yes	59	44.4	
Enrolled in state family planning program			.028
No	165	51.4	
Yes	25	36.8	

\* The significance level was determined by the  $\chi^2$  test.

planning programs by nativity. However, foreign-born participants were less likely to know where to get free or low-cost birth control than U.S. participants (71% vs. 85%;  $p = .003$ ).

In the multivariable logistic regression models, private insurance coverage was negatively associated with concerns about the cost of birth control (adjusted odds ratio [aOR], 0.42; 95% confidence interval [CI], 0.22–0.83) (Table 3, model 1). There were no significant differences in concerns about the cost of contraception between the uninsured and publicly insured. Controlling for insurance status and other social and demographic characteristics, participants who knew where to get free or low-cost birth control had lower odds of being concerned about costs of birth control (aOR, 0.42; 95% CI, 0.24–0.75) (Table 3, model 2). Awareness of the state family planning program was not significantly associated with cost concerns (results not shown), but the odds of being concerned about the cost of birth control were lower among participants enrolled in the state

family planning program (aOR, 0.56; 95% CI, 0.32–1.00) (Table 3, model 3).

There were no significant differences in cost concerns by age or race/ethnicity in all models. In the first model, participants who received public assistance had lower odds of being concerned about the cost of birth control. In all models, foreign-born participants had an odds almost twice as high of facing cost concerns than native-born participants (aOR, 1.95; 95% CI, 1.13–3.34) (Table 3, model 1). We tested for interactions between nativity, health insurance, and awareness of free or low-cost birth control, and the interactions were not statistically significant. We also ran models without including receipt of public assistance in the models, and these yielded similar conclusions.

## Discussion

Results showed that nearly one-half of women attending community college worry about their ability to pay for contraception. Perceptions of the cost of contraception are important to understand and predict, as cost is one important factor women consider when choosing a method (Frost & Darroch, 2008). Foreign-born women were more likely to express cost concerns than U.S.-born women, which is consistent with previous research that found lower utilization of sexual and reproductive health services among foreign-born women (Tapales et al., 2018).

As expected, we found that cost concerns were highest among uninsured women and those who were not sure of their coverage status. However, more than one-half of publicly insured and more than one-third of privately insured women also expressed concern about the cost of contraception. This finding sheds light on previous research at the national level that found no significant change in contraceptive use patterns among sexually active women after the ACA (Bearak & Jones, 2017). Similarly, analysis of data from California found growth in the proportion of low-income women who had health insurance following ACA implementation, yet the proportion who received

**Table 3**  
Mixed-Effects Logistic Regression Models Predicting Concerns About the Cost of Birth Control (N = 389)

Characteristics	(1)		(2)		(3)	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
Age, years						
18–19	Ref.		Ref.		Ref.	
20–25	1.32	0.85–2.04	1.30	0.83–2.02	1.30	0.84–2.02
Race/ethnicity						
White	1.43	0.77–2.68	1.38	0.74–2.60	1.39	
Black	1.16	0.55–2.45	1.13	0.53–2.42	1.21	0.74–2.60
Hispanic	Ref.		Ref.		Ref.	0.57–2.56
Asian/Pacific Islander	1.54	0.83–2.86	1.39	0.74–2.60	1.59	0.85–2.97
Other/Multiracial	1.26	0.65–2.43	1.26	0.65–2.45	1.25	0.65–2.42
Nativity						
U.S. born	Ref.		Ref.		Ref.	
Foreign born	1.95*	1.13–3.34	1.81*	1.05–3.13	1.91*	1.11–3.28
Receives public assistance	0.57*	0.33–1.00	0.58	0.33–1.02	0.60	0.34–1.04
Type of insurance						
None/don't know	Ref.		Ref.		Ref.	
Public	0.79	0.38–1.65	0.78	0.37–1.65	0.80	0.38–1.67
Private	0.42*	0.22–0.83	0.44*	0.22–0.87	0.43*	0.22–0.84
Knows where to get free or low-cost birth control			0.42†	0.24–0.75		
Enrolled in state family planning program					0.56*	0.32–1.00

Abbreviations: aOR, adjusted odds ratio; 95% CI, 95% confidence interval.

\*  $p < .05$ .

†  $p < .01$ .

contraceptive counseling or prescription contraception remained unchanged (Early, Dove, Thiel de Bocanegra, & Schwarz, 2018). Although more women may have insurance coverage, concerns about high deductibles or out-of-pocket spending may be preventing them from using their insurance to access birth control. Insured women may need more education to understand their coverage and, in turn, what they would pay for contraceptive services (Tilley et al., 2018; Wong et al., 2015).

The study was conducted in California and Oregon, two states with robust programs that expand eligibility for Medicaid coverage of family planning services based on income. However, most women were not aware of their state's family planning program, and fewer than one in five were enrolled in the program. Those women who did not know where to get free or low-cost birth control were, not surprisingly, significantly more likely to be concerned about costs. A number of different strategies are needed to educate students about how to access reduced-fee or free contraceptive services through their state family planning program, Title X, Medicaid, or other public programs. Colleges, public health programs, and safety-net health centers should consider establishing partnerships to share accessible and engaging educational resources with students about publicly funded family planning services provided on or near campus. Efforts to link students with free and low-cost contraceptive services may take on even greater importance as the COVID-19 pandemic has led to historic levels of unemployment and, in turn, loss of employer-sponsored health insurance and financial difficulties.

Reducing barriers to contraceptive access may help community college students to complete their education. Although data on the effects of unintended childbearing during community college are sparse, one longitudinal study found that childbearing during community college increased the chances of students dropping out (Bradburn, 2002). In that study, 61% of students who had children while enrolled stopped their education, compared with 37% of those who did not. College administrators can increase students' likelihood of success by supporting students' access to contraceptive care and child care, such as providing all students information about the campus health and child care resources available to them at the time of enrollment.

This study has limitations. First, the study was conducted at colleges in California and Oregon, and our findings may not be generalizable to women in other states. As stated elsewhere in this article, California and Oregon have supportive state policies and programs for funding family planning services and strong safety-net family planning networks, yet many women were worried about the cost of contraception. This factor raises even greater concerns about contraceptive access for students living in states with less supportive policy environments. Second, owing to the sensitive nature of collecting such information, we did not distinguish among the foreign-born women whether they were undocumented, which would likely exacerbate barriers to health coverage. More research is needed to understand the impact of undocumented status on access to contraception among these young women. Third, although our sample was diverse in terms of race/ethnicity, nativity, and socioeconomic characteristics, it was a sample from an intervention study and thus not generalizable to the population at large. Studies are needed with larger, representative samples and among different populations to further explore differences in cost concerns by student characteristics and geographic region. Finally, with cross-sectional data,

teasing out the relationship between concerns about the cost of contraception and actual contraceptive use were beyond the scope of the study. Future research using longitudinal data should examine how cost concerns affect women's contraceptive preferences, whether they seek contraceptive services, and their choice of a provider.

#### Implications for Practice and/or Policy

Concerns about the cost of contraception are common among young women attending community college. Cost concerns are higher among women who are uninsured or publicly insured, yet more than a third of privately insured women are also concerned about the affordability of birth control. Multiple efforts are needed to address financial barriers among the insured and to increase insurance coverage among community college students, such as providing resources to support students' health insurance literacy or connect them with coverage options. At the same time, it remains important to ensure awareness of and access to publicly funded family planning services for students who lack insurance, experience gaps in coverage, or cannot use their insurance plans because of privacy or other concerns. Addressing concerns about contraceptive costs among community college students may help them to experience greater reproductive autonomy and to be able to access contraceptive services when needed as they work toward their educational goals.

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