



ELSEVIER

 JOURNAL OF
**ADOLESCENT
 HEALTH**

www.jahonline.org

Adolescent health brief

Access to Medication Abortion Among California's Public University Students

 Ushma D. Upadhyay, Ph.D., M.P.H.^{a,b,*}, Alice F. Cartwright, M.P.H.^a, and Nicole E. Johns, M.P.H.^c
^a *Advancing New Standards in Reproductive Health (ANSIRH), Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, Oakland, California*
^b *University of California Global Health Institute Center of Expertise on Women's Health, Gender, and Empowerment, Oakland, California*
^c *Center on Gender Equity and Health, Division of Global Public Health, Department of Medicine, University of California, San Diego, California*
Article History: Received February 7, 2018; Accepted April 27, 2018

Keywords: Abortion; College campuses; Student health centers; Medication abortion; Mifepristone


A B S T R A C T

Purpose: A proposed California law will require student health centers at public universities to provide medication abortion. To understand its potential impact, we sought to describe current travel time, costs, and wait times to access care at the nearest abortion facilities.

Methods: We projected total medication abortion use based on campus enrollment figures and age- and state-adjusted abortion rates. We calculated distance and public transit time from campuses to the nearest abortion facility. We contacted existing abortion-providing facilities to determine costs, insurance acceptance, and wait times.

Results: We estimate 322 to 519 California public university students seek medication abortions each month. As many as 62% of students at these universities were more than 30 minutes from the closest abortion facility via public transportation. Average cost of medication abortion was \$604, and average wait time to the first available appointment was one week.

Conclusions: College students face cost, scheduling, and travel barriers to abortion care. Offering medication abortion on campus could reduce these barriers.

IMPLICATIONS AND CONTRIBUTION

Abortion is a commonly needed health service for students attending public universities, but obtaining an abortion may be difficult for students. Offering medication abortion at campus-based student health centers, like other primary healthcare services, could reduce these barriers.

© 2018 Society for Adolescent Health and Medicine. This is an open access article under the CC BY-NC-ND license. (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

California's state legislature is considering legislation that would require campus health centers at California's 34 public universities to provide medication abortion [1]. This includes 11 University of California campuses and 23 California State University campuses, encompassing 737,328 students [2,3].

Medication abortion, also known as medical abortion or the "abortion pill", is available during the first 10 weeks of pregnancy

and involves the use of two medications: mifepristone and misoprostol. Patients take the mifepristone at a clinic or at home and 6–72 hours later they take the misoprostol at home, where they have uterine contractions and the abortion process ensues. A follow-up visit 5–14 days later is recommended.

Access to abortion care may be important to continued college participation and gender equity. Women who have a child while in college are less likely to graduate than those who do not, and 89% of students say that having a child while in school would make it harder to achieve their goals [4,5]. However, it is unknown whether campus-based services are needed. While unintended pregnancy and abortion rates are highest among people aged 18–24, the ages of most college-going students [6], data on abortion incidence among college students are unavailable.

Conflict of interest: The authors have no conflicts of interest to disclose.

* Address correspondence to: Ushma D. Upadhyay, Ph.D., M.P.H., Advancing New Standards in Reproductive Health (ANSIRH), University of California, San Francisco, 1330 Broadway, Suite 1100, Oakland, CA 94612.

E-mail addresses: Ushma.Upadhyay@ucsf.edu, ushma@jhu.edu (U.D. Upadhyay).

1054-139X/© 2018 Society for Adolescent Health and Medicine. This is an open access article under the CC BY-NC-ND license.

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

<https://doi.org/10.1016/j.jadohealth.2018.04.009>

This study aimed to assess medication abortion access among California's public university students. Specifically, we estimated current medication abortion use and travel time, costs, and appointment availability at the abortion facilities closest to each of the 34 campuses.

Methods

Medication abortion demand among California's public university students

We generated projected ranges of monthly medication abortion demand using college-, age-, and state-adjusted abortion rates and estimated rates for medication abortion as preferred abortion type. Age-specific abortion rates were taken from the Guttmacher Institute's most recent nationwide projections; the mean of rates for ages 18–19 (1.8%) and 20–24 (2.8%) was used [6]. We then adjusted for higher rates of abortion in California using the state-specific abortion rate (1.96%, compared with 1.46% nationally, for an adjustment factor of 1.34) [7]. Because these estimates are for all abortion types, we then adjusted for the percent of all abortions which are medication abortions. Nationally, 31% of abortions in 2014 were medication abortions; this figure served as our lower bound [7]. Given increasing popularity of medication abortion and potential higher demand with improved availability, we assumed a high bound of 50% of all abortions as medication abortions. Enrollment figures and percent of campus population that was female (as a proxy for the percent of students with uteri) were obtained from US News & World Report [2,3].

Facility information

In November 2017, two research assistants made “mystery shopper” calls to all 152 abortion-providing facilities in California from a database maintained by University of California, San Francisco's Advancing New Standards in Reproductive Health program to verify the types of abortion provided, cost of abortion, acceptance of state Medicaid and other insurances, wait time until first available medication abortion appointment, and weekend appointment availability. This component of the study was approved by University of California, San Francisco's institutional review board.

Distance and time to closest facility

We calculated driving distance and time from every campus to every facility in the state using the Stata TRAVELTIME3 module, which uses a Google Maps API to calculate driving time and distance between points. For each closest facility, we then calculated public transit time from campus to the facility at a standard day and time (Wednesday at 4 P.M.) using Google Maps.

Results

Monthly usage estimates

We estimated that in total, UC and CSU students obtain 1,038 abortions each month, and with campus availability, 322–519 of those would likely to be medication abortions (see Table 1).

Distance and time to closest facility

Mean driving distance from campus to the nearest abortion-providing facility was 5.5 miles one-way. Fifteen campuses (44%) were further than 5 miles from the nearest facility. Median travel time via public transit was 34 minutes one-way. Twenty two campuses (65%) were more than 30 minutes from the nearest provider via public transit. Population-weighted average distance was 5 miles driving and 38 minutes via public transit one-way. Given that two visits are recommended, population-weighted average total driving distance was 20 miles and average total public transit time was 1 hour 32 minutes.

Facility information

The average out-of-pocket cost of medication abortion at the facilities closest to campus was \$604. Almost all facilities closest to campus accepted state Medicaid; one did not, but the next closest facility was only .05 miles further away. Average wait time until first available appointment was 7 days (range 1–20 days). Only five facilities closest to campus (15%) were ever open on weekends.

Discussion

Projections from this study suggest that many students attending California's public universities need abortion care, but barriers for students include traveling to a facility off-campus or attending an appointment on a weekday, for which they may miss classes. While student health centers also have limited or no weekend hours, many offer the ability to make next day or same day scheduled appointments online, making it easier to fit in an appointment in between classes and obtain care sooner. College students have limited financial resources; they are often paying for tuition and room and board, and have reduced time for employment. While it is not yet known how much students would pay for an on-campus medication abortion, the costs are likely to be the same or lower than those going to an off-campus clinic. If students face delays in accessing a medication abortion for any of these reasons, they may exceed the gestational limit of 10 weeks and no longer be able to have a medication abortion.

Travel time is an important consideration for college students, as medication abortion must be obtained off-campus and usually requires two visits. Public transit time is salient because of low car ownership among college students; weighted by campus enrollment, 28% of UC students and 63% of CSU students have a car on campus [2,3].

This study is limited by an assumption that the closest abortion facility is the one that students are referred to or seek care from. However, some campuses may refer students to a campus-affiliated hospital rather than the closest public abortion facility. Additionally, these findings are limited to the campuses examined here and do not describe all barriers to seeking abortion care that college students may face. Estimates of the numbers of abortions are projections based on general population data, and actual abortion rates may differ for this population. Finally, the proposed legislation applies only to medication abortion, not aspiration abortion. Off-campus facilities may still be desirable to students who would prefer an aspiration abortion or who are not sure what type of abortion they want. Both types of first-trimester abortions could feasibly be offered on campus and ideally would be offered, so that student choice is not artificially constrained.

Table 1
Campus-level enrollment, medication abortion estimates, travel, and closest facility information

Campus type and name	Campus enrollment		Medication abortions per month		Travel to closest provider		Closest facility information		
	Total	% Female	Low estimate	High estimate	Driving (miles)	Public transit (minutes)	First available appointment (days)	Weekend appointment availability	Cost of medication abortion
California State University campuses									
Cal Poly San Luis Obispo	20,944	47	8	13	1.7	23	2	Yes	692
Cal Poly Pomona	23,717	45	8	14	4.9	36	2	No	805
CSU Bakersfield	8,002	60	4	6	7.1	63	5	Yes	580
CSU Channel Islands	6,167	64	3	5	10	64	1	No	787
CSU Dominguez Hills	14,731	63	7	12	4.4	38	–*	No	500
CSU East Bay	14,823	61	7	12	2.4	24	8	No	647
CSU Fresno	24,403	58	11	18	1.9	30	9	No	647
CSU Fullerton	40,235	56	18	29	5.3	82	15	No	656
CSU Long Beach	37,446	56	17	27	4.6	25	2	No	805
CSU Los Angeles	27,681	58	13	21	2.9	23	2	No	450
CSU Maritime Academy	1,120	17	<1	<1	3.7	72	11	No	435
CSU Monterey Bay	7,600	62	4	6	5.1	27	15	No	668
CSU Northridge	40,689	54	17	28	3.6	31	1	No	575
CSU Sacramento	30,284	56	14	22	2.6	31	–*	No	–*
CSU San Bernardino	20,767	60	10	16	11.2	47	20	No	659
CSU San Marcos	14,179	61	7	11	4.1	46	7	No	575
CSU Stanislaus	9,282	65	5	8	15.8	92	4	No	580
Chico State	17,287	53	7	12	2.2	33	8	No	500
Humboldt State	8,116	56	4	6	9.9	46	8	Yes	435
San Diego State	33,778	54	15	23	1.4	18	9	No	575
San Francisco State	30,256	56	13	22	6.2	34	8	No	435
San Jose State	32,773	48	13	20	4.5	33	8	No	668
Sonoma State	8,668	63	4	7	8.2	40	12	No	435
University of California campuses									
UC Berkeley	40,173	52	17	27	4.4	24	1	No	435
UC Davis	35,186	59	17	27	11.8	55	11	No	668
UC Hastings	930	56	<1	1	1.4	20	6	No	700
UC Irvine	33,467	53	14	23	8	48	3	No	500
UC Los Angeles	44,947	57	20	33	3.9	37	2	Yes	580
UC Merced	7,336	51	3	5	5.6	28	–*	No	–*
UC Riverside	21,539	54	9	15	6.2	41	14	No	575
UC San Diego	35,821	48	14	22	5.8	29	4	No	580
UC San Francisco	3,300	64	2	3	2.6	28	3	No	725
UC Santa Barbara	24,346	53	10	17	10.6	46	1	No	787
UC Santa Cruz	17,335	51	7	11	3.3	12	9	Yes	668
Summary statistics									
Combined results: total or population-weighted average	Total	Population-weighted Average	Total	Total	Population-weighted Average	Population-weighted Average	Population-weighted Average	Population-weighted Average	Average
CSU campuses	472,948	55	209	337	4.7	38	7.2	7%	596
UC campuses	264,380	54	113	182	6.6	37	5.0	24%	622
All campuses	737,328	55	322	519	5.4	38	6.4	13%	604

*Closest clinic could not be reached to determine next available appointment and/or cost.

If medication abortion was available on campus, the travel, logistical, and cost burdens to students seeking abortion would likely be greatly reduced. Forcing students to leave campus for abortion when other health services can be obtained on campus disproportionately burdens students who require abortion care. Low-income students are particularly impacted as the cost of abortion, cost of travel, and lost time away from classes may be particularly prohibitive.

Acknowledgments

The authors appreciate research assistance from Athena Edwards at University of California, Los Angeles and Aderayo Soyemi from University of California, Merced. They also thank Rachel Jones, Ph.D. at Guttmacher Institute for running special tabulations. This study was supported by a private anonymous donor. The funder had no role in study design, data

collection, and analysis, decision to publish, or preparation of the manuscript.

References

- [1] California Legislature. SB-320 Public health: public postsecondary education: on-campus student health centers: abortion by medication techniques. 2018.
- [2] U.S. News & World Report. National Universities. Available at: <https://premium.usnews.com/best-colleges/rankings/national-universities>.
- [3] U.S. News & World Report. Regional Universities. Available at: <https://premium.usnews.com/best-colleges/rankings/regional-universities>.
- [4] National Center for Education Statistics. Short-term enrollment in postsecondary education: student background and educational differences in reasons for early departure, 1996-1998. Washington, D.C.: U.S. Department of Education.
- [5] Prentice M, Storin C, Robinson G, 2012. Make it personal: how pregnancy planning and prevention help students complete college. Washington, D.C: American Association of Community Colleges.
- [6] Jones RK, Jerman J. Population group abortion rates and lifetime incidence of abortion: United States, 2008-2014. *Am j Public Health* 2017;107:1904-9.
- [7] Jones RK, Jerman J. Abortion incidence and service availability in the United States, 2014. *Perspect Sex Reproductive Health* 2017;49:17-27.