Crossing the Border for the Pill:
An Analysis of the Decision to Purchase Oral Contraceptives Over-the-Counter from Mexican Pharmacies

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Executive Summary

In 2012, the American College of Obstetricians and Gynecologists published an opinion statement in which they acknowledged that oral contraceptives were safe to be sold over the counter. Although there are several arguments that the lack of insurance of over the counter birth control would create a bigger cost barrier, research shows that women are in fact willing to pay for contraception if it is available over the counter. Some countries, such as Mexico, have this option available and because of the proximity to the United States, many women who live on the southern border take advantage of this. However, there are still some who choose the prescription option. What affects their decision? Is the time it takes to get their birth control more important than the price? What other factors play a role? Data from the Border Contraceptive Access Study (BCAS) was used to find the answers to these questions.

The BCAS was conducted between the cities of El Paso, Texas and Ciudad Juarez, Mexico and compared the experiences of American women who got their pills in clinics in El Paso to those who got their pills over the counter from pharmacies in Ciudad Juarez. In total, 1,046 women were surveyed, 532 of which were clinic users and 514 bought their pills from pharmacies. The questionnaire asked questions regarding sociodemographic characteristics, fertility, contraceptive use, social/sexual behavior, medical history, use of medical services, and health care sources.

In the regression estimate, purchasing in Mexico was the dependent variable and the explanatory variables were cost of contraception, insurance coverage, prescription requirement, feelings about having children in the future, current relationship status, frequency of sex, and whether the woman currently has a prescription for birth control pills.

Results show that prescription requirements are a major barrier to obtaining contraceptives. This effect is so large that if it were eliminated by making birth control pills over the counter most Mexican demand would be eliminated. Personal relationship matters make little difference to the decision about source of pills.

It is recommended that stakeholders (pharmaceutical companies, insurance companies, the FDA, health care providers, and policymakers) collaborate to establish a prescription-to-OTC switch, allowing easier access to oral contraceptives. In addition to that, a time-effect study would be useful to gauge how effective the Affordable Care Act is in combination with an over the counter policy.

Introduction

Over half of the almost 7 million pregnancies in the United States are unintended, yet 11 percent of women at risk of unintended pregnancy are not using any contraceptive method (Guttmacher Institute, 2013). This rate is significantly higher than that of other developed countries and poses a major public health risk. One way to address this issue and reduce the rate of unintended pregnancies is to improve access to birth control.

Currently, preventative contraceptives are not available to purchase over-the-counter in the United States, Canada, and in most of Europe. However, some countries, such as Mexico, have an over the counter (OTC) option available (see Table 1) and because of the proximity to the United States, many women who live on the southern border take advantage of this opportunity and buy birth control pills in bulk and at lower costs. There are many factors that may affect a woman's decision to travel to another country to purchase birth control without a prescription. Studies show that the main barriers to contraception are cost, access, and availability. Women are willing to drive to another country (albeit, a bordering country) to purchase contraceptives over the counter, despite having the option of local health clinics and health care providers from which they could obtain a prescription. The question is, which factors play a role in these decisions? Is cost more important than access to contraceptives? Women's healthcare is currently a very contentious topic in political discourse. Therefore, understanding how and why women make certain healthcare decisions is critical when proposing policy reform.

Table 1: Example of countries with over the counter contraceptive access *(not exhaustive)*

Country	Over the counter contraceptive regulations
Mexico	• OCs are available over the counter in many pharmacies • Pharmacy users have slightly higher continuation rates compared to other women but statistical significance is not reported
Jamaica	• Low-dose OCs have been available behind the counter since 1998 • Access was restricted because of contraindications or younger age
Kuwait	• OCs are sold through pharmacies without prescription
Thailand	• OCs sold over the counter without prescription • OCs dispensed with little or no medical history or counseling
China	• OC available in pharmacy without prescription • No screening required

Source: American College of Obstetricians and Gynecologists, 2012

Literature Review

Over the Counter Contraception

In 2012, the American College of Obstetricians and Gynecologists (ACOG) published a statement (Committee Opinion Number 544) in which they concluded that oral contraceptives[1] were safe to be sold over the counter (OTC) with self-screening for contraindications. They were the first accredited health organization to take a stance on a controversial issue such as contraception. In their statement regarding over the counter access, they noted that oral contraceptives are no more harmful than any other over the counter medication and that women can self-screen for side effects and contraindications. Also, they noted that benefits of over the counter access to multiple pill packs at one time and pill brand choice results in higher rates of continuation.

The most common type of contraceptive method used by women ages 15-44 is the pill (Guttmacher Institute, 2013). Pills are commonly a combination of progestin and estrogen and

[1] Oral contraceptives are defined as hormonal birth control pills containing estrogen and progestin.

work by preventing ovulation (U.S. National Library of Medicine National Institutes of Health, 2012). Although progestin and estrogen are the main ingredient, there are an abundant amount of brands to choose from that have varying levels of hormones and dosages. This also leads to varying prices. Out of pocket costs for birth control pills can range from $9-$112 for one month, depending on brand, pharmacy, and insurance (Celms, 2013). In contrast, over the counter prices in pharmacies in foreign countries generally range from $5-$15 for a single dosage pack (one-month's supply). Publically funded clinics charge approximately $15-$50 for a single dosage pack. (Potter, White, Hopkins, Amastae, & Grossman, 2010).

Contraception Funding and Policy

The women's preventative health care provision under the Affordable Care Act (ACA)—which went into effect August 1, 2012—allows women to receive contraceptives with no cost-sharing and without paying a co-payment or deductible. According to the Women's Preventive Services Guidelines of the Health Resources Services Administration, all FDA approved contraceptive methods are covered if prescribed by a health care provider. Additionally, services related to follow-up and management are included in the guidelines (U.S. Department of Health and Human Services, 2014). This provision applies only to fees, so the patient is still responsible for the monthly premium. The federal Marketplace of the ACA attempts to reduce premiums to those who cannot afford it and several states have expanded their Medicaid program to make more individuals eligible for free healthcare. Many adults in states which have not expanded their Medicaid program[2] with incomes below 100% of the federal poverty level fall into a gap in which their income are too high to get state Medicaid but are too low to qualify for coverage in

[2] Alabama, Alaska, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Montana, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Wisconsin, Wyoming (HealthCare.gov, 2014)

the federal Marketplace (HealthCare.gov, 2014). In these circumstances, women seek out publicly funded local family planning clinics for contraceptives and basic health screenings. These are Title X programs of the Public Health Service Act (U.S. Department of Health and Human Services, 2014). The out of pocket costs for oral contraceptives in publicly funded clinics may range between $15-$50 a month (Sonfield & Kost, 2013) and according to the Guttmacher Institute, 19.1 million women were in need of publicly funded health services in 2010 because they either had an income below 250% of the federal poverty level or were younger than 20. The federal government pays for 90% of these services and the state pays for 10% (Guttmacher Institute, 2013). Between 2000 and 2010, public contraceptive services increased by 46 percent for Hispanic women, 14 percent for black women, and decreased by 3 percent for white women. Hispanic women have the highest rate of teen and unintended pregnancies in the United States (Guttmacher Institute, 2013).

Contraindications

As with all drugs, hormonal contraceptives are not without risk. The most common cited contraindication of oral contraceptives is the increased risk of venous thromboembolism (VTE), or blood clots. However, the rate for women with VTE from oral contraceptives is relatively low (3-10.22/10,000). To put it in context, women who suffer from VTE during pregnancy and in postpartum years is 5-20/10,000 and 40-65/10,000, respectively (American College of Obstetricians and Gynecologists, 2012). Moreover, advancing age, major surgery, immobility, obesity, cigarette smoking, a personal or family history for VTE, inherited disorders of blood clotting, and pregnancy are all indicators for predisposition for venous thromboembolism (The Society of Obstetricians and Gynecologists of Canada, 2013). In a Direct Access Study that compared current family planning clients' self-assessment of contraindications with clinical

assessment, 392 of the 399 participant (females aged 15–45 years) and health care provider pairs came to the same conclusion in regards to the women's healthcare needs (greater than 90%) (Gardner, et al.,2003).

In addition to women's ability to properly self-screen for contraindications, there is some concern that increased access to contraception will increase sexual risk-taking behavior, or will decrease regular screenings for conditions such as cervical and breast cancer or sexually transmitted diseases. Current literature dispels this concern. In August of 2013, the emergency contraceptive pill, commonly known as Plan B, was approved to be sold over the counter in drugstores and pharmacies. It has been shown to benefit patients by increasing their access to the product without negatively affecting their regular contraceptive use or sexual risk-taking behavior (e.g., not using condoms, increased number of sexual partners) (McIntosh, 2011). Furthermore

The Border Contraceptive Access Study

The Border Contraceptive Access Study (BCAS) was conducted by the Population Research Center of the University of Texas at Austin between 2006 and 2008 to address; 1) *whether women can safely and effectively use oral contraceptives without mandatory contact with a healthcare provider;* 2) *if women could effectively screen themselves for contraindications to the pill;* 3) *why women might prefer over the counter pharmacy access instead of obtaining pills at U.S. family planning clinics;* and 4) *who would take advantage of the pharmacy option if it were made available in the U.S* (Potter, et al., 2010). The study was conducted between the cities of El Paso, Texas and Ciudad Juárez, Mexico and compared the experiences of American women who got their pills in clinics in El Paso to those who got their pills over the counter in

Ciudad Juárez. Some clinic users were recruited from family planning providers in El Paso, and pharmacy users were recruited via announcements, flyers, and presentations at community centers (Potter, et al. , 2010). In total, 1,046 American women from El Paso were surveyed, 532 of which were clinic users and 514 bought their pills from Mexican pharmacies. The lengthy questionnaire consisted of 923 questions regarding sociodemographic characteristics, fertility, contraceptive use, social/sexual behavior, medical history, use of medical services, and health care sources. The women who participated in the study were between 18-44 years old and 98% were Hispanic.

The El Paso-Juarez region is the largest bilingual, binational work force in the Western Hemisphere with a combined population of approximately 2.4 million. El Paso has a demographic make-up of approximately 80% Hispanics and is one of the poorest cities in the United States (Potter, et al.,2010).

Research Design

For the purposes of this research, data from the Border Contraceptive Access Study was used to estimate what affected a woman's decision to obtain birth control pills over the counter from pharmacies in Ciudad Juarez. To do this, a regression was estimated, in which purchasing in Mexico was the dependent variable. The explanatory variables were: cost of contraception, insurance coverage, prescription requirement, feelings of having children in the future, current relationship status, frequency of sex, and whether she currently has a prescription.

The cost of contraception was determined by the out of pocket expense of actually purchasing the pills, as well as the cost incurred by travelling to Ciudad Juarez (i.e., fuel). Additionally, the time variable is the opportunity cost involved with travelling to Mexico as

opposed to staying in El Paso. *(Note that in the data, actual time to travel is not estimated, but respondents answer whether time is greater to El Paso or Ciudad Juarez. This is then a dummy variable coded to indicate which city requires less time).*

Insurance coverage and prescription requirement were used (both self-reported by the women) as explanatory variables since the status quo in the United States is that insurance coverage makes obtaining a prescription cheaper. Only 10% of the 1046 participants had insurance coverage that covers birth control, and of the group, the majority was on publicly funded healthcare. The variables of "feelings regarding having children in the future," "current relationship status," and "frequency of sex" were used to determine if and how much these feelings and behaviors affected whether women preferred over the counter access to contraceptives.

Table 3: Regression Results

Bought in Mexico	Coefficient	Standard Error	T-score	P value
Has insurance coverage	0.030	0.031	0.98	0.328
El Paso clinic costs less	-0.265	0.037	-7.06**	<0.001
Needs a prescription	0.614	0.039	15.73**	<0.001
El Paso clinics require less time	-0.064	0.020	-3.22**	0.001
Feelings regarding having children in the future (higher is positive)	0.005	0.005	1.15	0.250
Current relationship status	-0.015	0.017	-0.85	0.394
Frequency of sex with partner	0.008	0.017	0.45	0.654
Have prescription in US	-0.032	0.020	-1.58	0.114
Have prescription in Mexico	0.102	0.027	3.84**	<0.001

***statistically significant at p<0.01*

Table 4: Summary Statistics

Variable	Observation	Mean	Std. Deviation	Min	Max
Bought in Mexico	1046	0.5191205	0.4998733	0	1
Insurance	1046	0.0994264	0.2993768	0	1
El Paso cost less	1046	0.4407266	0.4967117	0	1
Needs Prescription	1046	0.4445507	0.4971536	0	1
El Paso takes less time	1046	0.4550669	0.4982151	0	1
Feelings of having children in the future	1046	2.832696	1.539814	1	5
Current relationship status	1046	0.657438	0.4746918	0	1
Frequency of sex	1046	1.152964	0.6529475	0	3
Missing frequency of sex	1046	0.1042065	0.6056744	0	1
Have prescription in U.S.	1046	0.2045889	0.4035939	0	1
Have prescription in Mexico	1046	0.1386233	0.3457183	0	1

Analysis and Discussion

The estimation shows that if El Paso cost more in money or in time, women are less likely to buy in the U.S. Money and time are standard economic costs, and the results are expected. Given that 52% of the women (the unconditional mean in the data) bought in Mexico, and that the effect of El Paso being more expensive is essentially half of that, about 26 percent—this is the estimated coefficient and the marginal impact on the probability of the purchase in Mexico—it follows that about half of the Mexican demand would be eliminated by lower financial cost. The effect of time cost also matters, but would be more difficult to eliminate, although anything making birth control pills quicker to obtain would make them cheaper for the women. One might have thought El Paso would always take less time, but that is not the women's answers in all cases. Some travel to Ciudad Juarez regularly, and some might have other reasons for finding Mexico to be less time consuming.

The decision to purchase birth control pills in Ciudad Juarez as opposed to El Paso is a proxy for the decision to avoid certain aspects of buying in the U.S. Specifically, many stated

that El Paso was more expensive or took more time. More importantly, 44% did not like having to obtain a prescription. The questions on the survey differentiate money, time, and having to have a prescription. Insurance coverage had no statistically significant estimated effect.

By far the greatest factor is not money or time; instead, it is the requirement to obtain a prescription. This effect is so large that, for example, if it were eliminated by making birth control pills over the counter, even without changing the financial cost, most Mexican demand would be eliminated. This implies that the problems associated with these prescriptions, such as pelvic exams, invasion of privacy, or other non-financial costs, are very important in the decision where to obtain birth control pills. Such a large factor could be assumed to affect women who do not have an alternative country to use. Finally, while a U.S.-specific prescription encourages buying in the U.S., the effect is small, and some women with insurance coverage still go to Ciudad Juarez. Other personal factors could affect the decision of where to obtain birth control pills but generally do not affect that decision. Frequency of sex, being in a relationship with another person, and feelings about becoming pregnant have no marginal impact on where pills are obtained, controlling for costs and the opposition to getting a prescription. Personal relationship matters make little difference to the decision about source of pills.

Limitations

It is important to note that the Affordable Care Act (ACA) was not in place at the time the Border Contraceptive Access Study was conducted. The ACA is making a large impact on women's healthcare and contraceptive coverage, and although the analysis concluded that most women cited a prescription requirement as one of the biggest barriers for acquiring contraceptives, more research is necessary to determine if the new policy affects this perception.

Furthermore, this analysis focused primarily on oral contraceptives because of the predominance of oral contraceptive use. Other types of hormonal contraceptives such as IUDs, vaginal rings, and injections are either not as widely used or (in the case of IUDs and injections) must be administered by a healthcare provider. Therefore, it would not be appropriate to include them into a study regarding over the counter access.

Finally, difficulties with making birth control available over the counter include receiving approval of the drug by the FDA and in turn complying with pharmaceutical companies' patent restrictions. These companies are often willing to sell their product over the counter at full market value, however they are reluctant to be in competition with generic companies, as this would drive down the prices of their product. Health Policy Correspondent Julie Rover points out that brand names are considerably more expensive than their generic competition—often by at least $10 (Rovner, 2014). However, several generic brands are available and in fact, some insurance companies will only pay for the generic pill (not the more expensive brand name) if there is one available (Sonfield & Kost, 2013).

Conclusion

The high rate of unintended pregnancy among teens and women and the barriers to contraception indicate that there is a need for policy reform. The committee opinion in 2012 by the American College of Obstetricians and Gynecologists will have an important impact on the future of over-the-counter contraceptives policy. Since their publication, many other groups have come out in favor of an OTC option.

Unfortunately, many people believe that the use of birth control is associated with high risk sexual behavior and/or they mistake preventative oral contraceptives for a form of drug that induces abortion. Such misconceptions may lead to policy reforms that make obtaining

contraception more difficult and expensive. An over-the-counter option does not guarantee that every woman will take her pills regularly or properly, but by self-screening, she will be able to make those healthcare decisions choices independently.

Recommendation

The high rate of unintended pregnancies is due, in part, because of the lack of access and inability to consistently take contraceptives and the data indicate that prescription requirements are a major barrier to obtaining contraceptives and a reason why women either do not take birth control pills or do not take them regularly. The FDA, pharmaceutical companies, health care providers, policy makers, and other stakeholders should collaborate to make oral contraceptives available over the counter in drugstores and pharmacies without a prescription. The data show that oral contraceptives are generally safe and that women are able to self-screen for contraceptives. Most importantly such a move would increase access to birth control to more women, including those who face social barriers and may be hesitant to seek out health care services (teenagers, illegal immigrants, women who fear social stigmas etc.). New policies should not affect women who have preexisting health conditions which currently require a prescription for contraceptives. A time-effect study would be useful to gauge how effective the ACA is in combination to an over the counter policy.

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