

Barriers to Adolescents' Getting Emergency Contraception Through Pharmacy Access in California: Differences by Language and Region

By Olivia Sampson, Sandy K. Navarro, Amna Khan, Norman Hearst, Tina R. Raine, Marji Gold, Suellen Miller and Heike Thiel de Bocanegra

Olivia Sampson is former research fellow, and Norman Hearst is professor, both in the Department of Family and Community Medicine; Sandy K. Navarro is social scientist, Bixby Center for Reproductive Health Research and Policy; and Amna Khan was a medical student in the School of Medicine—all at the University of California, San Francisco (UCSF). Tina R. Raine and Suellen Miller are associate professors, Department of Obstetrics, Gynecology and Reproductive Sciences, UCSF. Heike Thiel de Bocanegra is academic coordinator and director, Family PACT UCSF Program Support and Evaluation, Bixby Center for Global Reproductive Health, UCSF. Marji Gold is professor, Department of Family and Social Medicine, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, NY.

CONTEXT: In California, emergency contraception is available without a prescription to females younger than 18 through pharmacy access. Timely access to the method is critical to reduce the rate of unintended pregnancy among adolescents, particularly Latinas.

METHODS: In 2005–2006, researchers posing as English- and Spanish-speaking females—who said they either were 15 and had had unprotected intercourse last night or were 18 and had had unprotected sex four days ago—called 115 pharmacy-access pharmacies in California. Each pharmacy received one call using each scenario; a call was considered successful if the caller was told she could come in to obtain the method. Chi-square tests were used to assess differences between subgroups. In-depth interviews with 22 providers and pharmacists were also conducted, and emergent themes were identified.

RESULTS: Thirty-six percent of all calls were successful. Spanish speakers were less successful than English speakers (24% vs. 48%), and callers to rural pharmacies were less successful than callers to urban ones (27% vs. 44%). Although rural pharmacies were more likely to offer Spanish-language services, Spanish-speaking callers to these pharmacies were the least successful of all callers (17%). Spanish speakers were also less successful than English speakers when calling urban pharmacies (30% vs. 57%). Interviews suggested that little cooperation existed between pharmacists and clinicians and that dispensing the method at clinics was a favorable option for adolescents.

CONCLUSIONS: Adolescents face significant barriers to obtaining emergency contraception, but the expansion of Spanish-language services at pharmacies and greater collaboration between providers and pharmacists could improve access.

Perspectives on Sexual and Reproductive Health, 2009, 41(2):110–118, doi: 10.1363/4111009

Despite a general decline in adolescent birthrates in the United States since 1991, the nation continues to have one of the highest adolescent birthrates among industrialized countries, and recent data indicate that U.S. rates have begun to rise since 2006.^{1,2} In California, the birthrate among adolescents mirrors the national trend, but the overall decline has been more modest among Latina adolescents.^{3–5} Poverty and other socioeconomic factors are known to be associated with higher rates of adolescent pregnancy.^{6,7} Adolescent birthrates in California are highest among Latinas and in the largely rural region known as the Central Valley.^{2,8} Two-thirds of the 50,000 annual adolescent births in the state are to Latinas, even though the current numbers of Latina and white females in the 15–19 age-group are similar.^{2,5} Education about, access to and use of effective contraceptives, including emergency contraception, are critical tools in reducing unintended adolescent pregnancy. In addition to helping decrease abortion rates,⁹ reducing the rate of adolescent pregnancy is important because adolescent mothers are less likely than adolescents without children to go to college, and their children are more likely to live in poverty than are children born to older women.¹⁰ Furthermore, pregnant adolescents are less likely than older pregnant women to

receive adequate prenatal care, and lack of such care is associated with poor birth outcomes.^{11,12}

Addressing adolescent pregnancy requires an understanding of the multiple factors involved at the community level, such as social capital, socioeconomic status, sociopolitical climate and access to health services. Our study considers the role of pharmacy access to emergency contraception in reducing unintended pregnancy among adolescents, and focuses on language barriers to such access. We are aware of no studies that have explored Spanish speakers' experiences with seeking emergency contraception through pharmacy access in rural California. Because Latinas are projected to make up more than half of California's adolescents by 2050,¹³ it is important to understand the barriers that some members of this community might face.

BACKGROUND

Facilitating easy access to emergency contraception can help adolescents avert pregnancy when their contraceptive method has failed or they have not used a method. Plan B—a dedicated progestin-only product available in the United States since 1999—is more effective than the Yuzpe regimen of combined oral hormones.¹⁴ Package

labeling indicates that Plan B (two 0.75 mg pills of levonorgestrel) can be used up to 72 hours after unprotected intercourse, and that it is up to 89% effective in preventing pregnancy.¹⁵ Studies have shown that the method is effective up to 120 hours^{16,17} after unprotected intercourse, but how many pharmacists or health care providers offer the method over this longer period is not known. Pharmacy protocols in California, and in most other states, indicate that the method should be offered over this longer period,* although such use is at the discretion of the pharmacist.¹⁸ In 2003, only 8% of California women reported having ever used emergency contraception,¹⁹ and studies have shown that awareness of the method is relatively low among Latina women in the state, particularly those who are foreign-born, without a high school diploma or living below the poverty level.^{20–22}

In August 2006, the U.S. Food and Drug Administration (FDA) permitted pharmacists to dispense Plan B without a physician's prescription to women 18 or older (with proof of age). Nevertheless, barriers to access remain for younger females, those without proper proof of age and those who rely on publicly funded health insurance, like Medi-Cal (the California Medicaid program),[†] for reproductive health services.²³ Plan B costs between \$25 and \$50 without insurance coverage, and this cost presents a financial barrier to some women. Low-income California residents at risk for getting pregnant or causing a pregnancy, including adolescents, may be eligible for the state's publicly funded program Family PACT, which provides clients with emergency contraception and other reproductive health services at no cost through participating clinics; enrolled clients also can obtain emergency contraception at no cost from pharmacies.[‡]

Since 2002 in California, adolescents younger than 18 have been able to obtain emergency contraception from designated pharmacy-access pharmacies without a clinician's prescription.²⁴ Pharmacists can dispense Plan B under a statewide protocol adopted by the State Board of Pharmacy and the Medical Board of California (in 2003), or under a collaborative agreement with a licensed physician (since 2001). At the time of this study, approximately one-fifth of pharmacies in California had enrolled in the pharmacy-access system.²⁵ The state protocol indicates that if no pharmacist certified to provide Plan B is available, staff should refer clients to another pharmacy-access pharmacy or to a local Family PACT clinic.²⁴

Studies of pharmacy access to emergency contraception in California²⁵ and Washington²⁶ have shown that young women like the program because it is convenient and

confidential, and allows timely access; however, studies in California have indicated that women's knowledge about pharmacy access and of which pharmacies participate is lacking.^{25,27} In studies that employed a mystery-shopper approach, emergency contraception was made available on the same day to 20% of English-speaking shoppers in Albuquerque, New Mexico;²⁸ 39% in Jacksonville, Florida;²⁹ and 75% in New York City.³⁰

Qualitative studies have revealed that adolescents find it difficult to request emergency contraception from pharmacists or clinicians because of concerns about being negatively judged or previous negative experiences regarding such requests,³¹ and that clinicians do not regularly discuss or provide emergency contraception in advance of need.³² Quantitative studies have found that clinicians do not discuss the method at well-adolescent checkups,³³ and that some pharmacists feel inadequately trained to serve adolescents.³⁴ Neither advance prescription of nor pharmacy access to emergency contraception increases risky sexual behavior or STDs in adolescents, and easy access to the method does not cause young women to abandon regular forms of contraception;^{35,36} however, clinicians and pharmacists continue to harbor concerns about the provision of the method, especially to adolescents.^{30,32,33}

Most pharmacy-access pharmacies in California are located in urban areas, and some rural counties may have only one.^{24,37} We compared access to emergency contraception in seven rural counties, where adolescent birthrates are the highest in the state (51–70 per 1,000 females aged 15–19), with access in two urban counties, where adolescent birthrates are much lower overall (23–27 per 1,000).³⁸ The rural counties have a collective population of more than three million, and have about 8,000 adolescent births annually;^{3,11} 48–57% of the populations in these counties self-identify as Latino.¹² The urban counties have a similar total population (2.6 million) and report about 2,600 adolescent births per year, but 21–22% of their collective population self-identify as Latino. Because the timeliness of use is critical, we examined how pharmacy staff handled "late" requests and whether the method was being offered up to 120 hours after unprotected intercourse. The study was conducted prior to both the 2006 FDA ruling making Plan B available behind the counter for women 18 or older and the FDA decision in April 2009 to make the method available without prescription to 17-year-old women. Despite these advances in access to Plan B, the findings are still pertinent, since adolescents younger than 17 must use pharmacy access to obtain the method if they do not have a prescription.

*Protocols in other states with pharmacy access (Alaska, Hawaii, Maine, Massachusetts, New Mexico, Vermont and Washington) indicate that the method can be offered for up to 120 hours; pharmacists in New Hampshire may determine when to prescribe the method.

†Medi-Cal covers low-income persons, but does not pay for over-the-counter medications without a prescription; hence, Plan B is not covered if a woman 17 or older asks for it at the pharmacy without a prescription.

‡In California, all Planned Parenthood clinics and many community clinics are Family PACT providers and may enroll eligible clients directly into the program.

§The rural counties are Fresno, Kern, Kings, Madera, Merced and Tulare in the Central Valley, plus Monterey, which was included because it is demographically similar to the others. The two urban counties are Alameda and Contra Costa.

METHODS

The study's main focus was on quantitative data collected from phone calls made by simulated adolescent clients to pharmacies to request emergency contraception. To broaden the scope of the cross-sectional quantitative data, we conducted in-depth interviews with pharmacists and health care providers regarding the provision of the method to adolescents. This mixed methods approach uses a concurrent nested model,³⁸ whereby both quantitative and qualitative data are collected simultaneously, and the qualitative data inform the larger quantitative part of the study. The study was approved by the Committee on Human Research of the University of California, San Francisco.

Mystery-Shopper Data

Three female research assistants in their early 20s, posing as English- or Spanish-speaking adolescents, called 115 pharmacies between August 2005 and April 2006. Phone numbers for the pharmacies were taken from a Web site (<<http://www.ec-help.org>>) that lists, by county, the locations and phone numbers of pharmacists participating in pharmacy access to emergency contraception. All participating pharmacies in the study counties were called; calls lasted 2–3 minutes. The mystery-caller script was written in English, piloted in English, translated into Spanish and then back-translated into English to check for accuracy. The callers were instructed to follow the script and hand-write recipients' responses and comments during the calls. Because small rural pharmacies may have variable weekend hours or may be closed on Sundays, the calls were made during regular business hours, Monday to Friday between 11 A.M. and 4:30 P.M.

Two scenarios were used: In the first, the caller stated that she was 15 and had had unprotected sex the previous night; in the second, the caller stated that she was 18 and had had unprotected sex four days earlier. Each pharmacy received four calls, one in each language describing each scenario, so a total of 460 calls were made. Callers were instructed to call a pharmacy only once, even if they were told to call back at a later time. We chose to vary the supposed timing of the request by the caller's age, with the understanding that this would not allow analysis of the independent impact of age or timing on access to emergency contraception.

These two scenarios were selected to explore as many potential barriers as possible with the fewest phone calls. We assumed that pharmacists would be most comfortable providing emergency contraception according to FDA guidelines (i.e., within 72 hours), and more comfortable telling an 18-year-old than telling a 15-year-old that she could have the method. Thus, we assumed that females who called the morning after unprotected sex and requested emergency contraception would not be refused because of the timing of the request, but that they may be told they were too young to obtain the method without a prescription. And we assumed that older adolescents were less likely to be refused because of their age, but might be told that it was too late to take emergency contraception.

Each call began with "Hello...the condom broke (last night/four nights ago), and I'm afraid to get pregnant. Is there anything I can take?" Following the script, the caller stated her age, then asked whether her parents must be informed and how much the method costs. Callers speaking Spanish were instructed to continue the script as far as possible in Spanish, and not to switch into English, except to say in broken English "Speak Spanish?" If no pharmacy staff or translation service was available to provide services in Spanish, the caller simply ended the call.

A call was considered successful if pharmacy staff told the caller she could come in immediately to obtain emergency contraception from a certified pharmacist. A call was considered unsuccessful if the caller was unable to communicate with pharmacy staff or was told she could not obtain the method; callers wrote down any reasons volunteered for why they could not obtain emergency contraception. If they were told to try another pharmacy or clinic, these responses were categorized as "unsuccessful calls given a referral." Referrals were later categorized as "specific" or "vague," depending on whether the caller was given a phone number, name or address of a clinic or pharmacy. This study did not follow up the referrals because of budget constraints, and because our focus was to determine availability at listed pharmacies at the time of the call.

Data were analyzed using SAS version 9.1; Pearson's chi-square tests were used to determine the significance of differences between subgroups.

Qualitative Data

Callers' handwritten comments on the calls (e.g., noting that they had been put on hold for a long time, or that staff were pleasant or rude) were included as anecdotal impressions to complement the data.

To further expand our understanding of the provision of emergency contraception to adolescents by rural pharmacies, we conducted in-depth interviews with 22 health professionals (clinicians and pharmacists). Initially, health professionals working in the Central Valley were recruited via mailings to pharmacies and clinics; however, because we failed to recruit enough participants in this manner, we turned to a snowball sampling method, in which one researcher telephoned and e-mailed professionals to secure their participation. All but three participants worked in the rural counties; one participant worked outside the study area. The researcher is a female, English-speaking family physician, and this likely affected recruitment, as recruiting family physicians appeared easier than recruiting pharmacists or other providers. Hence, the researcher's language and profession may also have affected the interviews and the themes that emerged.

The researcher developed a semistructured interview guide, and as themes emerged from the interviews and from anecdotal mystery-shopper data, the interview tool was modified to explore pharmacists' and providers' perspectives on their comfort in providing emergency

contraception to adolescents, on the safety of the method for adolescents, on Spanish-language services regarding method provision, on the convenience of prescribing the method to adolescents and on where they thought rural adolescents are most comfortable obtaining the method. After participants gave their consent, interviews were audiotaped, and detailed notes were taken; transcriptions were made immediately afterward. We used QSR N-VIVO2 to analyze the interviews in an interpretive framework and code them for emergent themes. In keeping with the method of grounded theory,³⁹ data collection stopped when saturation of themes had occurred.

RESULTS

Mystery-Shopper Calls

•**Language barriers and regional differences.** Fifty-two percent of the 115 pharmacy-access pharmacies offered Spanish-language services to callers; a higher proportion of rural than of urban pharmacies offered such services (61% vs. 44%; $p < .01$). Overall, 36% of calls to pharmacies were successful (Table 1). Spanish speakers were less successful than English speakers (24% vs. 48%), and callers to rural pharmacies were less successful than callers to urban pharmacies (27% vs. 44%). Even though rural pharmacies were more likely to offer Spanish-language services, Spanish-speaking callers to rural pharmacies were the least successful of all callers (17%). Furthermore, Spanish speakers were less successful than English speakers when calling urban pharmacies (30% vs. 57%), and English speakers who called rural pharmacies had less success than those who called urban pharmacies (37% vs. 57%). In addition, 18-year-old English speakers requesting emergency contraception more than 72 hours after having had unprotected sex were less likely to be successful when calling rural pharmacies than when calling urban pharmacies (32% vs. 58%).

Although the caller's age and the timeliness of the call were not independent factors, there were no significant differences between the scenarios for either language group. Spanish speakers who called the only pharmacy-access pharmacy in the rural county of Tulare had no access to emergency contraception, as this pharmacy offered no Spanish-language services.

Most English-speaking callers were connected directly to the pharmacist, whereas many Spanish speakers were put on hold to wait for a translator. One Spanish speaker had to speak to a male janitor, who then translated the caller's sensitive information about her unprotected intercourse and menstrual history to an English-speaking pharmacist. All callers reported that staff did not initiate interpreter services unless they asked in broken English whether anyone at the pharmacy could speak Spanish. One Spanish-speaking caller heard laughter when she asked to speak to someone in Spanish, and noted feeling she was "being laughed at for daring to ask to be spoken to in Spanish." The same caller noted being spoken to loudly in English, "as if this would help me understand English better."

TABLE 1. Percentage of mystery-shopper phone calls that were considered successful for obtaining emergency contraception from pharmacies, by scenario, according to region of pharmacy, California, 2005–2006

Scenario	All		Rural		Urban	
	N	%	N	%	N	%
All	460	36	212	27**	248	44
Spanish-speaking	230	24††	106	17†	124	30††
Age 15, <24 hours	115	28	53	19	62	35
Age 18, >72 hours	115	20	53	15	62	24
English-speaking	230	48	106	37*	124	57
Age 15, <24 hours	115	50	53	42	62	56
Age 18, >72 hours	115	46	53	32**	62	58

*Significantly different from percentage for urban at $p < .01$. **Significantly different from percentage for urban at $p < .001$. †Significantly different from percentage for English-speaking at $p < .01$. ††Significantly different from percentage for English-speaking at $p < .001$. Notes: A call was considered successful if the caller was told she could come in to obtain the method. Callers simulated two scenarios: They were 15 and had had unprotected sex the previous night, or they were 18 and had had unprotected sex four days earlier.

Spanish-speaking callers considered it helpful when a dial-up translation service was offered or when staff spoke directly to them in broken Spanish.

•**Reasons for method unavailability.** Ninety-seven Spanish speakers could not communicate with pharmacy staff in Spanish and so could not have obtained emergency contraception. The other 198 unsuccessful callers were given a variety of reasons for why the method was unavailable, which we collapsed into six categories (Table 2). Thirty-nine percent of unsuccessful callers were told that no pharmacist certified to dispense the method was on-site. Some of these callers were told that the certified pharmacist was on vacation or not working that day; others were told that a prescription was needed. In cases where staff said that callers needed a prescription, it can be assumed that the pharmacist was out or no longer worked there, or that staff were unaware of the pharmacy-access program. A higher proportion of callers to urban pharmacies than of callers to rural pharmacies

TABLE 2. Percentage distribution of unsuccessful calls, by reason pharmacy staff gave for unavailability of emergency contraception, according to language of caller and region of pharmacy

Reason	Total (N=198)	Language		Region	
		Spanish (N=78)	English (N=120)	Rural (N=119)	Urban (N=79)
No certified pharmacist available	39	41	38	31*	52
Implied ethical reason‡	13	21†	8	20**	1
Too late to use method	11	10	11	12	9
Out of stock	2	1	3	2	3
No reason given	21	9††	29	27	13
No contact made§	14	18	12	8*	23
Total	100	100	100	100	100

*Significantly different from percentage for urban at $p < .01$. **Significantly different from percentage for urban at $p < .001$. †Significantly different from percentage for English-speaking at $p < .01$. ††Significantly different from percentage for English-speaking at $p < .001$. ‡For example, staff thought the caller was too young or the method was unacceptable. §Caller never contacted pharmacy because phone number was disconnected or changed. Note: Results exclude the 97 calls made by Spanish-speaking callers (36 rural and 61 urban) to pharmacies without Spanish-language services.

were told that no certified pharmacist was available (52% vs. 31%).

Thirteen percent of unsuccessful callers said they were denied access because of implied ethical reasons, such as they were too young, they needed to have their parents come in with them or pharmacy staff did not believe the method was acceptable. This reason was reported more often by Spanish speakers than by English speakers (21% vs. 8%), and more often by callers to rural pharmacies than by callers to urban pharmacies (20% vs. 1%). Eleven percent of unsuccessful callers were told that it was too late for them to take the method (all of these callers had said they had had unprotected sex more than 72 hours ago); the proportion did not vary by language or region. Most of these callers were told to see a doctor because 72 hours had passed; however, four were told that nothing could be done and that they “would have to wait to see what happens.”

Only 2% of unsuccessful callers were told that the pharmacy was out of stock, and 21% were given no reason for why the method was not available (9% of Spanish speakers and 29% of English speakers). Among all unsuccessful callers, 14% could not get through to the listed pharmacy because the number had changed or been disconnected (8% of rural callers and 23% of urban callers).

•**Referrals.** Seventy-eight percent of unsuccessful callers (excluding Spanish speakers who could not obtain services in Spanish) received at least one type of referral: Pharmacy staff told them to call either another pharmacy or a clinic to obtain emergency contraception. Referrals were classified as vague (e.g., “Check in the Yellow Pages for another pharmacy,” “Call your doctor,” “Go to a clinic”) or specific (i.e., callers were given the phone number, name or address of a local clinic or pharmacy). Overall, 68% of referrals were specific, and 32% were vague. Fifty-five percent of referrals were to pharmacies, and 45% were to clinics; however, 77% of clinic referrals were vague, whereas 71% of pharmacy referrals included relevant telephone numbers.

•**Costs.** Only 7% of callers were informed that emergency contraception could be obtained for free at Planned Parenthood or local community clinics, and only one caller was specifically told that the method could be obtained without cost through the Family PACT program. Callers reported that pharmacy staff quoted costs of \$25–50 for emergency contraception.

In-Depth Interviews

Interviews were conducted with nine pharmacists and 13 clinical providers (five family doctors, five nurses or nurse practitioners, and three educators or outreach workers at rural clinics). Of the nine pharmacists, four were female, and eight worked in rural communities. Because we used snowball sampling, we ended up with only three pharmacists who were certified to dispense emergency contraception, and one of them was not working in a pharmacy at the time of the study. Eleven of the clinicians were female,

and 11 worked in rural communities; one had never prescribed emergency contraception. The salient themes from the interviews revealed that language, pharmacist availability, pharmacists' knowledge of and clinical comfort regarding the method, and lack of pharmacist-clinician communication and collaboration were barriers to obtaining access to emergency contraception.

•**Language barriers.** Pharmacists who did not speak Spanish said they preferred to refer Spanish-speaking clients to other pharmacies or clinics—even if these were in another county—where they assumed clients would receive Spanish-language services. Community clinicians felt that Spanish-speaking clients received more culturally competent care at clinics because bilingual administrative and medical staff were available. Providers' observations included the following:

“Most of our pharmacies here only have techs that speak Spanish; they don't have a pharmacist [who speaks Spanish]....Generally, their first line is to [tell clients to] come to the clinic....My receptionists and doctors all speak Spanish....It's a pretty open environment here. We try not to put up any barriers.”—*Rural clinician*

“You know, if English isn't your first language...then you aren't going to advocate for yourself [at the pharmacy] so much. You know, you're just going to say ‘Okay, bye.’ ” —*Rural community outreach worker*

•**Rationale for deciding whether to provide emergency contraception.** Some pharmacists did not get certified in the pharmacy-access program because they did not believe that pharmacists should prescribe medication or because of concerns about time constraints or limited space to provide adequate counseling, liability, emergency contraception's health effects on young females and on those who took it too often, or lack of community physician support. Most of the interviewed pharmacists assumed that it was easiest for women to obtain emergency contraception at large pharmacies or at clinics. Moral, religious or ethical concerns were not explicitly stated as reasons for not getting certified; however, pharmacists may not have been comfortable expressing such concerns to the interviewer. The following responses demonstrate why some pharmacists had not gotten certified:

“I don't feel the pharmacy is the right place to counsel about emergency contraception—we can't keep the proper records, [and] we're not set up to counsel and take the time to do this properly. It's a decision that has to be made between the patient and her doctor; it is not something pharmacists should be doing....If someone comes in, then I give them the number and the address of the clinic.” —*Rural pharmacist*

“I had really thought about signing up to certify when [pharmacy access] first came out...., but because of my workload, and because I didn't see the need for it, I didn't see the reason to certify and deal with all the red tape until the service demands it. The main reason I'm not certified is that there are bigger chains across the street and around the corner, and two community clinics nearby,

and I assume they are giving out Plan B...[But] I feel bad when it's Sunday and I have to turn someone away."
—*Rural pharmacist*

"I don't think there's a problem with younger pharmacists, or the middle-aged pharmacists. I think it's more the older pharmacists...I don't think it's a moral thing here... It's just sometimes you get those pharmacists who are in their comfort zone, and they don't want to take on something new."
—*Rural pharmacist*

Viewing emergency contraception as easy to dispense and wanting to help young women prevent unintended pregnancy emerged as themes in interviews with pharmacists who expressed interest in the training or who were already trained to dispense it. These pharmacists wanted to improve access to the method, thought that provision did not take up too much of their time, wanted to be involved in counseling and pregnancy prevention, and believed pharmacists had a role that went "beyond counting pills."

For pharmacists, getting certified to dispense emergency contraception takes additional training and requires self-motivation. In the mystery-shopper survey, professional self-motivation was demonstrated by the fact that many uncertified pharmacists provided phone numbers to help the caller obtain the method, and callers noted that some staff even called another pharmacy to make sure the method was in stock and that someone there could dispense it. One certified pharmacist noted:

"[The] problem for pharmacists is that you have to believe in counseling...because it takes time and backs other things up. Not all pharmacists are willing to sacrifice the time."
—*Urban pharmacist*

•**Pharmacists' knowledge and clinical comfort.** Pharmacists knew that emergency contraception could be taken effectively within 120 hours after unprotected sex, but were uncomfortable providing it beyond 72 hours. They emphasized the importance of women's receiving regular reproductive health care, and preferred that adolescents be seen at a clinic. Pharmacists said they would refer an adolescent to a clinic instead of providing her with emergency contraception if she had diabetes, smoked, had irregular periods or reported repeated use of the method. Several pharmacists explained why they would refer more "complicated" situations to a clinic:

"At least there's a doctor there to consult with in regards to medical conditions. I don't know if I can make the correct choice for them."
—*Rural pharmacist*

"I knew...there was a five-day window period, but the percentages go down...[I would] tell them most of the manufacturers recommend not [taking the method] after 72 hours...I would also refer them to the clinic."
—*Rural pharmacist*

Callers noted that some pharmacists' comments, such as "three days is too late for the morning-after pill," demonstrated a lack of knowledge about the method. In light of the in-depth interviews, some of these comments appear to have been motivated by pharmacists' discomfort. However, other underlying personal reasons may have

affected the refusal to dispense emergency contraception beyond 72 hours. Some callers noted comments such as the following, from staff whom they considered rude and dismissive:

"It will not work after 72 hours...It's called the morning-after pill—haven't you heard? You just have to wait. It won't work!"
—*Rural pharmacy staff*

"We have it here without a prescription, but it's too late for you. It's been too long, so there's nothing you can do. You can only take the pill the day after the unprotected act."
—*Rural pharmacy staff*

•**Pharmacist-clinician communication.** Most clinicians and pharmacists felt that at the community level, communication was lacking between the professions in dispensing emergency contraception. Although pharmacists do not require authorization from a clinician to dispense the method, they expressed a desire to consult with clinicians. For their part, clinicians did not know which pharmacies in their communities provided emergency contraception without a prescription, and some were not even aware that California had a pharmacy-access program. Both pharmacists and clinicians appeared to be confused about pharmacy access: Some clinicians thought all adolescent clients had to pay for the method when using pharmacy access (those enrolled in Family PACT get it free), and some pharmacists thought they could dispense with prescriptive authority only if they had an agreement with a collaborating physician, and did not seem to know there was a statewide protocol for certified pharmacists.

One urban pharmacist reported regularly collaborating with a community clinic. When an adolescent had requested the method but had no insurance, the pharmacist immediately referred her to a nearby clinic, where she registered for Family PACT; the adolescent then returned to the pharmacy to obtain the emergency contraception for free.

•**Clinics or pharmacies as dispensing sites.** The interviewed clinicians worked in public health or community clinics and preferred on-site dispensing of emergency contraception for a number of reasons: They felt pharmacies were not committed to providing access to the method, believed pharmacists were telling clients they had to pay for the method, were concerned that adolescents were not comfortable negotiating the necessary interaction with a pharmacist and thought that adolescents were more comfortable obtaining the method at a community clinic. Rural pharmacists felt that local adolescents did not come to them for emergency contraception, and assumed that adolescents were visiting clinics instead. Several clinicians remarked on adolescents' access:

"They come [to the community clinic] and get it for free...You know, kids are just not used to the whole prescription thing, and how they work. So I think it's just easier to give them the pills."
—*Rural clinician*

"I don't know what's going on with the pharmacies... They were telling people they had to pay. And that just scares a teen away."
—*Rural clinician*

DISCUSSION

Before an adolescent can gain access to emergency contraception, she must perceive herself to be at risk of getting pregnant, want to prevent the pregnancy, know about the method and where to obtain it, be able to afford it or obtain it at reduced or no cost, and be able to negotiate her needs with a health care provider or pharmacist. Furthermore, our study indicates that some adolescents face significant barriers because of language, inadequate pharmacist-clinician collaboration, inconsistent availability of pharmacists certified to prescribe the method and lack of clear referral protocols. In California, these barriers appear to be larger in rural areas and for Spanish speakers than in urban areas and for English speakers. We found that access to emergency contraception was hampered by poor or nonexistent Spanish-language services, and believe that the impact of language barriers on unintended pregnancy among Latinas needs to be further explored. Because pharmacies are often an initial access point in the health care system,²³ strategies need to be developed to address language barriers and improve cultural competency in all pharmacies in California.

As other studies have found,⁴⁰ interviews revealed factors that influenced a pharmacist's motivation to get certified to dispense emergency contraception. While some pharmacists had vague concerns that use of the method would have a negative impact on adolescents' health or sexual behavior, a more common concern was that adequate counseling about the method would take too much time. This led some pharmacists to avoid certification. These same factors may also influence pharmacists' referrals for emergency contraception. For example, a pharmacist's belief about whether pharmacies or clinics should be dispensing the method, as well as knowledge of its effectiveness beyond 72 hours and comfort in dispensing it during that extended period, probably guide whether a client is referred to a clinic or to another pharmacy. Rural pharmacists may feel that referring clients to clinics is a better way to ensure their access to emergency contraception where fewer participating pharmacies exist; this may explain our finding that English-speaking callers who asked for the method beyond 72 hours were less successful when they called rural pharmacies than when they called urban pharmacies. More studies are needed to explore the constraints that rural pharmacies face when deciding whether to dispense emergency contraception, and to determine how to support them in doing so.

Rural clinicians and pharmacists suggested that adolescents might receive better care and counseling at clinics, on the assumption that clinics have more Spanish-language services and that adolescents in rural communities may feel more comfortable seeking confidential care at these sites. A large number of low-income adolescents in California, especially Latinas, lack a regular source of health care.⁴¹⁻⁴³ Pharmacy staff cannot assume that adolescent clients have a regular doctor, and telling them to "call your doctor" could further delay access to emergency contraception. To

shorten delays, pharmacy staff should guide adolescents to a specific clinic by giving them a phone number or an address.

Pharmacies are well positioned to help connect adolescents with community family planning clinics for ongoing care. Our study, however, found that few clinic referrals included specific contact numbers or addresses; this could be because pharmacy staff did not know which clinics adolescents could go to in their community, or because staff assumed that adolescents already had a family planning provider. Strategies are needed to link community clinics with pharmacies and to improve pharmacies' referral protocols. In addition, insurance coverage protocols for adolescents need to be clarified to pharmacy staff, so they can guide adolescents to publicly funded providers to obtain services at no cost. Pharmacists also need to be reminded that emergency contraception can be offered until five days after unprotected sex, and those who are uncomfortable prescribing it beyond 72 hours should know where to direct adolescents to avoid delays. Furthermore, innovative and ongoing education for pharmacists and support staff would be beneficial, especially to those in isolated rural communities. Qualitative studies are needed to better understand how rural adolescents, especially Spanish speakers, feel they would be best served.

In California, adolescents are legally permitted to obtain confidential family planning services from clinic and pharmacy providers. Contrary to some national media criticism of pharmacists,⁴⁴ our study showed that few pharmacists cited age as the reason they would not provide emergency contraception, or told callers that parental notification was required. Although this is encouraging, barring access to emergency contraception services for even one adolescent could lead to one more unintended pregnancy.

Limitations

One limitation of our study is that it did not assess pharmacies' actual provision of emergency contraception; no U.S. mystery-shopper studies in which Spanish speakers enter a pharmacy and request emergency contraception have yet been published. In addition, our callers were in their early 20s, and they may have been more assertive than actual adolescent clients; hence, our results may overestimate callers' success. Another limitation is that we cannot determine whether access differed by callers' age, because age was linked to the timing of the request. Furthermore, because the data were drawn from responses generated by mystery shoppers, we cannot be certain that pharmacy staff volunteered all of the reasons why the method was not made available to callers. Also, we compared access on the basis of rural and urban region rather than zip code; looking at access by zip code might yield different results.³⁷

The qualitative data are limited because they were drawn from a convenience sample, a small number of pharmacists were interviewed and the interviews were conducted

in English. The interviewer's profession and language may also have affected the data collected. For example, pharmacists may have been uncomfortable sharing underlying moral concerns, whereas clinicians—who may have felt less targeted as a professional group for their views on emergency contraception—may have been more open about their thoughts on provision of the method.

Conclusions

Ensuring timely access to emergency contraception is one effective strategy for preventing unintended pregnancy, and though pharmacy access is a critical element in improving the method's availability to adolescents, several logistical issues continue to complicate their access. Our study points out that access to emergency contraception is dependent on a number of factors, and that policy changes alone are not enough to guarantee access at pharmacies. The expansion of Spanish-language services at pharmacies would likely improve timely access, but adolescents must feel comfortable negotiating their needs at these sites. Encouraging and advertising on-site dispensing at clinics, and providing advance prescriptions to adolescents, should not be ignored as important options in improving access to the method, even with its current availability behind the counter. Clinics will probably remain a primary source for access to emergency contraception, but stronger collaborative efforts within the health care community and recognition of pharmacists as key members of the health care system could further improve access. Finally, ensuring that Spanish-language services are widely available at pharmacies would improve access not just to reproductive health care, but also to broader health care services.

REFERENCES

1. Singh S and Darroch JE, Adolescent pregnancy and childbearing: levels and trends in developed countries, *Family Planning Perspectives*, 2000, 32(1):14–23.
2. Child Trends Databank, Teen births, 2008, <<http://childtrends.databank.org/indicators/13TeenBirth.cfm>>, accessed Apr. 5, 2009.
3. Constantine NA and Nevarez CR, No Time for Complacency: teen births in California, Public Health Institute, 2003, <<http://teenbirths.phi.org/TeenBirthsFullReport.pdf>>, accessed Apr. 4, 2009.
4. Constantine NA, Nevarez CR and Jerman P, No Time for Complacency: teen births in California, Public Health Institute, 2008 update, <<http://teenbirths.phi.org/2008TeenBirthsReport.pdf>>, accessed Apr. 5, 2009.
5. Martin JA et al., Births: final data for 2005, *National Vital Statistics Reports*, 2007, Vol. 56, No. 6.
6. Santelli JS et al., Explaining recent declines in adolescent pregnancy in the United States: the contribution of abstinence and improved contraceptive use, *American Journal of Public Health*, 2007, 97(1):150–156.
7. Finer LB and Henshaw SK, Disparities in rates of unintended pregnancy in the United States, 1994 and 2001, *Perspectives on Sexual and Reproductive Health*, 2006, 38(2):90–96.
8. Kids Count Data Center, California teen births (rate per 1,000 females ages 15–19), 2005, <<http://datacenter.kidscount.org/data/bystate/Map.aspx?state=CA&ind=416>>, accessed Mar. 31, 2009.
9. Jones RK, Darroch JE and Henshaw SK, Contraceptive use among U.S. women having abortions in 2000–2001, *Perspectives on Sexual and Reproductive Health*, 2002, 34(6):294–303.
10. Hofferth SL, Reid L and Mott FL, The effects of early childbearing on schooling over time, *Family Planning Perspectives*, 2001, 33(6):259–267.
11. Public Health Institute, Teen births and costs by California counties, 2006, <<http://teenbirths.phi.org/2008CountyTable.pdf>>, accessed Apr. 7, 2009.
12. U.S. Bureau of the Census, State and county quick facts, California, 2009, <<http://quickfacts.census.gov/qfd/states/06000.html>>, accessed Apr. 7, 2009.
13. California Department of Finance, Population projections for California and its counties 2000–2050, by age, gender and race/ethnicity, 2007, <<http://www.dof.ca.gov/HTML/DEMOGRAP/Reports/Papers/Projections/P3/P3.php>>, accessed Sept. 25, 2008.
14. Trussell J, Rodriguez G and Ellertson C, Updated estimates of the effectiveness of the Yuzpe regimen of emergency contraception, *Contraception*, 1999, 59(3):147–151.
15. Ellertson C, Evans M and Ferden S, Extending the time limit for starting the Yuzpe regimen of emergency contraception to 120 hours, *Obstetrics & Gynecology*, 2003, 101(6):1168–1171.
16. Rodrigues I, Grou F and Joly J, Effectiveness of emergency contraception pills between 72 and 120 hours after unprotected sexual intercourse, *American Journal of Obstetrics & Gynecology*, 2001, 184(4):531–537.
17. von Hertzen H et al., Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicentre randomized trial, *Lancet*, 2002, 360(9348):1803–1810.
18. Pharmacy Access Partnership, Models for EC pharmacies, <<http://www.go2ec.org/ModelsForECPharmacies.htm>>, accessed Mar. 27, 2009.
19. Kaiser Family Foundation and SELF magazine, *National Survey of Women About Their Sexual Health*, 2003, <<http://www.kff.org/womenshealth/3341-index.cfm>>, accessed Sept. 20, 2005.
20. Kaiser Family Foundation, *Emergency Contraception in California—Findings from a 2003 Kaiser Family Foundation Survey*, 2004, <<http://www.kff.org/womenshealth/upload/Emergency-Contraception-in-California.pdf>>, accessed Aug. 15, 2005.
21. Foster DG et al., Knowledge of emergency contraception among women aged 18 to 44 in California, *American Journal of Obstetrics & Gynecology*, 2004, 191(1):150–156.
22. Foster DG et al., Trends in knowledge of emergency contraception among women in California, 1999–2004, *Women's Health Issues*, 2007, 17(1):22–28.
23. Monastersky-Madres N and Cohen-Landau S, The continuum of care: a case for pharmacists as key members of the reproductive health care team, editorial, *Contraception*, 2008, 77(3):139–142.
24. Pharmacy Access Partnership, EC protocols, <www.pharmacyaccess.org/ECProtocols.htm>, accessed May 15, 2008.
25. Foster DG et al., Pharmacy access to emergency contraception in California, *Perspectives on Sexual and Reproductive Health*, 2006, 38(1):46–52.
26. Gardner JS et al., Increasing access to emergency contraception through community pharmacies: lessons from Washington State, *Family Planning Perspectives*, 2001, 33(4):172–175.
27. Schwarz EB et al., Knowledge of and perceived access to emergency contraception at two urgent care clinics in California, *Contraception*, 2007, 75(3):209–213.
28. Espey E et al., Emergency contraception: pharmacy access in Albuquerque, New Mexico, *Obstetrics & Gynecology*, 2003, 102(5):918–921.

29. French A and Kaunitz AM, Pharmacy access to emergency hormonal contraception in Jacksonville, FL: a secret shopper survey, *Contraception*, 2007, 75(2):126–130.
30. Bennett W et al., Pharmacists' knowledge and the difficulty of obtaining emergency contraception, *Contraception*, 2003, 68(4):261–267.
31. Free C, Lee RM and Ogden J, Young women's accounts of factors influencing their use and non-use of emergency contraception: in-depth interview study, *BMJ*, 2002, 325(7377):1393–1396.
32. Karasz A, Kirchen NT and Gold M, The visit before the morning after: barriers to preprescribing emergency contraception, *Annals of Family Medicine*, 2004, 2(4):345–350.
33. Wallace JL et al., Emergency contraception: knowledge and attitudes of family medicine providers, *Family Medicine*, 2004, 36(6):417–422.
34. Harper CC et al., Over-the-counter access to emergency contraception for teens, *Contraception*, 2008, 77(4):230–233.
35. Gold MA et al., The effects of advance provision of emergency contraception on adolescent women's sexual and contraceptive behaviors, *Journal of Pediatric and Adolescent Gynecology*, 2004, 17(2):87–96.
36. Raine TR et al., Direct access to emergency contraception through pharmacies and effect on unintended pregnancy and sexually transmitted infections: a randomized control trial, *Journal of the American Medical Association*, 2005, 293(1):54–62.
37. Bigbee JL et al., Pharmacy access to emergency contraception in rural and frontier communities, *Journal of Rural Health*, 2007, 23(4):294–298.
38. Creswell JW, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, second ed., Thousand Oaks, CA: Sage Publications, 2003.
39. Morse JM, *Read Me First for a User's Guide to Qualitative Methods*, Thousand Oaks, CA: Sage Publications, 2002.
40. Sable MR and Schwartz LR, Using the theory of reasoned action to explain physician intention to prescribe emergency contraception, *Perspectives on Sexual and Reproductive Health*, 2006, 38(1):20–27.
41. Guendelman S et al., Overcoming the odds: access to care for immigrant children in working poor families in California, *Maternal and Child Health Journal*, 2005, 9(4):351–360.
42. Rew L, Access to health care for Latina adolescents: a critical review, *Journal of Adolescent Health*, 1998, 23(4):194–204.
43. Solorio MR et al., A comparison of Hispanic and white adolescent females' use of family planning services in California, *Perspectives on Sexual and Reproductive Health*, 2004, 36(4):157–161.
44. Wall LL and Brown D, Current commentary: refusals by pharmacists to dispense emergency contraception, *Obstetrics & Gynecology*, 2006, 107(5):1148–1150.

Acknowledgments

The authors are thankful for the support provided through the Department of Family and Community Medicine and the Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco.

Author contact: oli.sampson@yahoo.com