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RESEARCH

Patient experiences with pharmacist prescribed hormonal contraception in California independent and chain pharmacies

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ABSTRACT

Background: Pharmacist contraception care is an innovative practice that is rapidly expanding with policy changes. There is limited literature describing patient experiences with this pharmacist service.

Objective: The objective of this study is to describe patient experiences using pharmacist-prescribed hormonal contraception in California pharmacies.

Methods: An online survey was conducted among a cross-sectional convenience sample of people of all ages who completed a contraception visit with a pharmacist from December 2017 to January 2019 at a participating independent or chain pharmacy in California. Descriptive statistics were used to analyze data on patient characteristics, experiences and satisfaction with the service, and preventive health screenings.

Results: A total of 160 individuals completed the survey and nearly all were adults (97%) and had started or completed postsecondary education (85%). Most (72%) visited the pharmacy to get a prescription for a contraceptive method they were already using. The most common method prescribed was the pill (90%). The most common reason for seeking a prescription at a pharmacy was because it would be faster than waiting for a doctor's appointment (74%), followed by the location and hours being more convenient (46% and 41%), saving money (28%), and not having a regular doctor (26%). Respondents reported satisfaction with the services overall (97%), level of comfort they felt with the pharmacist (94%), counseling provided (86%), and level of privacy (74%). Nearly all were likely to return to a pharmacist for contraception (96%) and recommend the service to a friend (95%).

Conclusion: Pharmacist prescribing of contraception in community pharmacies provided a convenient access point that was highly acceptable to patients who used it. One area for attention is in the level of privacy during contraception visits. These findings support the effectiveness of direct pharmacy access to contraception and encourage pharmacist contraception prescribing policies and widespread implementation.

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Background

Research indicates that people face many barriers to prescription contraception access in the United States. One-third of adult women who have ever tried to get a prescription for hormonal contraception reported problems obtaining a prescription or refills.[1] Barriers reported include cost or a lack of insurance; challenges obtaining an appointment or getting to a clinic; the clinician requiring a clinic visit, examination, or Papanicolaou (Pap) smear; not having a regular doctor/clinic; and difficulty accessing a pharmacy.[1]

In 2013, California was the first state to pass a legislation expanding pharmacists' scope of practice to specifically

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Key Points

Background:

- Pharmacist contraception care is an innovative practice that is rapidly expanding and available in more than one-quarter of U.S. states following policies specifically authorizing contraception prescribing or more general collaborative practice authorities.
- Little is known about how patients become aware of this service, why they select direct pharmacy access to obtain contraception, their experiences, and their satisfaction with various aspects of the service.

Findings:

- Most patients find out about the pharmacist prescribing service from pharmacy staff or advertising in the pharmacy and chose to get their prescription from a pharmacist because it was faster and more convenient than waiting for a doctor's appointment.
- Patients are generally satisfied with the counseling received, level of comfort with the pharmacist, and the service overall.
- One area for consideration in pharmacist contraception care is in the level of privacy, particularly in chain pharmacies. Satisfaction is higher when visits occur in a private room or semiprivate area.

include prescribing hormonal contraceptives—pill, patch, ring, and injectable—to people of all ages under a statewide protocol that was developed and implemented in April 2016.[2] This innovative pharmacist practice is quickly expanding as more than one-quarter of U.S. states have followed with similar policies.[3] Furthermore, pharmacies in some other states are using general collaborative practice authorities to provide contraceptive care.[3]

Studies have found that most pharmacists are interested and plan to participate in prescribing contraception if given the opportunity.[4-9] Implementation in pharmacies resulted in 5%-11% of California pharmacies offering the service in the first year.[10-12] Characteristics of patients using the service in California and Oregon locations of 1 supermarket-based pharmacy chain revealed patients across a wide age range (13-55 years of age) and geographic locations, most with health insurance, recent primary care, and previous hormonal contraception use.[13] Similarly, Medicaid database queries in Oregon revealed a wide age range of patients (13-49 years of age) using the service.[14,15]

It is critical to determine patient acceptability of pharmacist prescribing services to lower potential barriers to access and use. Ensuring that pharmacist prescribing services meet patients' needs is crucial to the success of this access model and to realizing the overarching goal of eliminating barriers to contraceptive access. At the time of this study, there was no literature regarding patient experiences accessing this innovative pharmacist service.

Objective

The objective of this study is to describe patient experiences accessing contraception via pharmacist prescribing of hormonal contraceptives in California. In particular, the objectives of this study are to characterize the population using this service, determine patient satisfaction and acceptability of this service, and discover patient intentions around utilization of preventive health services.

Methods

Study design

An online survey was conducted among a cross-sectional convenience sample of patients of all ages of pharmacist contraceptive prescribing services from a set of participating pharmacies in California. Survey findings are reported using the Checklist for Reporting Results of Internet E-Surveys and the Strengthening the Reporting of Observational Studies in Epidemiology checklist for cross-sectional studies.[16,17] Our survey was intended for patients who had visited a community pharmacy to get a prescription for a contraceptive method, regardless of the outcome of the visit. Data collection ran from December 2017 to January 2019.

This study recruited from 44 pharmacies—23 chain and 21 independent pharmacies—in California from diverse geographic locations that have implemented pharmacist contraception services (see Figure 1). A list of independent pharmacies, defined as those with fewer than 4 locations, offering this service was identified through calls to licensed pharmacies listed on the California State Board of Pharmacy website. From this list, pharmacies were contacted from a range of regions in California, trying to maximize the diversity of population density and geographic locations. Working with a chain drugstore and a chain grocery store allowed the inclusion of some of their pharmacies with a high volume of visits across diverse geographic locations. Pharmacists were compensated $10 for each recruitment effort, regardless of whether the patient completed the survey, for the first 25 recruitment efforts per pharmacy, in the form of an electronic gift card upon study completion. To promote the contraception services at participating pharmacies, pharmacies were offered custom, print promotional materials, such as posters and palm cards (valued at up to $50). Promotional materials did not mention the study in any form. The chain pharmacies declined all forms of compensation and promotional materials.

Patients were recruited to the study if they visited a pharmacy that was participating in the study to obtain a prescription for hormonal contraception. Upon completing the visit, pharmacists gave patients a palm card that contained information about the study and instructions to complete an online survey. The survey was administered using Qualtrics (Qualtrics, Provo, UT). A unique study code, provided on the palm card, was entered by patients to access the survey, and consequently participants' internet protocol addresses were not tracked. The one-time use codes enabled the research team to identify which pharmacy a participant visited and restricted access to the survey to those with a valid code. Participating pharmacies documented each time a palm card

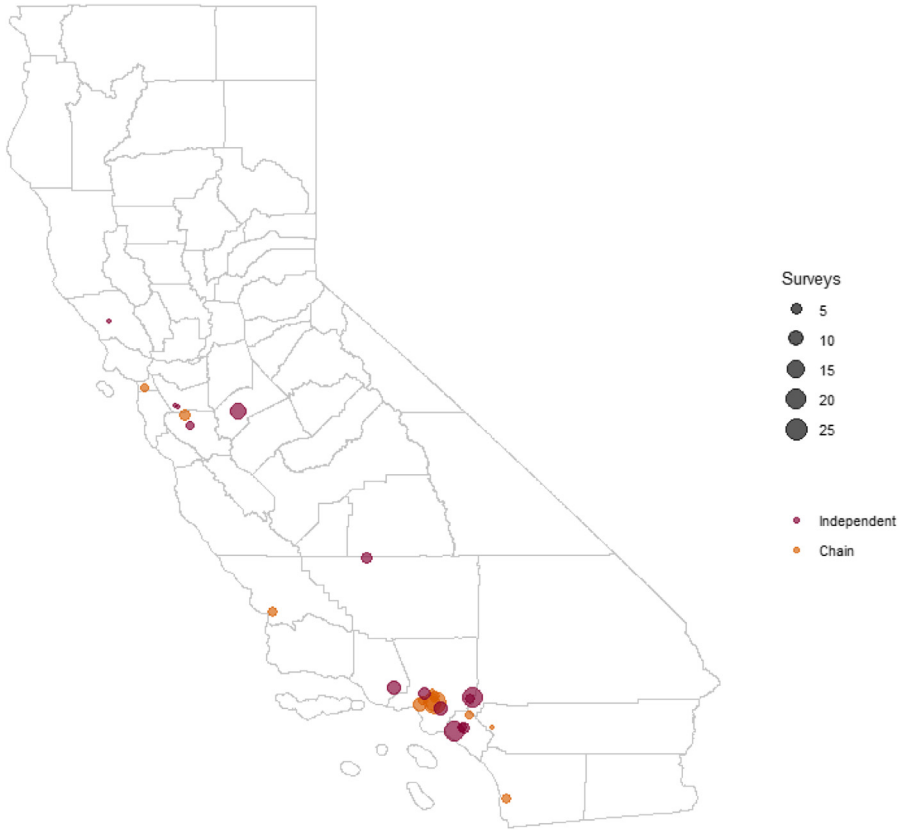

Figure 1. Map of pharmacies where participants were recruited.

was given out along with the assigned study code. Survey respondents received an incentive of $15 in the form of an online gift card to take the survey. The aim was to recruit up to 300 survey participants in the study, the largest sample possible given study resources; however, lower than anticipated volume of visits limited the final sample size.

The survey instrument included 56 questions exploring reasons for the use of pharmacist services, contraceptive methods sought/received, experience with services (including reasons for contraceptive use, how they found out about the service, whether an appointment was needed, cost of the service), acceptability of services (including pharmacist counseling, pharmacist approachability, privacy, cost, overall satisfaction with the visit, likelihood to return), previous use of contraceptives and preventive care, intentions around future preventive health screenings, and basic demographic characteristics. The length of the survey was approximately 15 minutes. Questions were displayed using 10 screens. The survey allowed for a review step (i.e., respondents could go back to revise responses), and respondents could skip any question they did not want to answer. Members of the study team pretested the technical functionality of the survey. The participant consent form described the length of time of the survey, which data were stored and where and for how long, who the investigators were, and the study purpose, among other information. No personal information was collected in this survey; at the end of the survey, participants were redirected to a separate webpage where they were asked to choose the gift card they wanted to receive and an e-mail address at which to receive it. E-mail addresses were stored separately from survey responses and could not be linked to survey responses; all e-mail addresses were deleted at the end of data collection. This study received approval from the University of California San Diego Human Research Protections institutional review board.

Data analysis

Demographic questions, including age, current location of residence, insurance status, race and ethnicity, highest level of education completed, previous births, current relationship status, and if they had enough money to meet basic living needs during the past month, were captured to analyze the composition of the sample. Race and ethnicity categories were constructed using 2 questions—one that asked whether the participant was of Spanish, Hispanic, or Latino descent and another that asked the participant to describe their race. A binary variable was created to describe whether the respondent was covered by insurance. Those who reported they used "cash" or "Medi-Share" were considered not to have insurance.

All questions included in the survey were analyzed descriptively and frequencies of responses were presented. An available case analysis was completed for each question in the analysis, using the nonmissing data available for each question.

One question asked participants to rank the characteristic of contraception most important to them from a list of 9 characteristics (cost, adverse effects, effectiveness at preventing pregnancy, frequency of use, ease of use, privacy of use,

ability to prevent sexually transmitted infections, ability to address other health concerns, and other). Data are presented on which characteristic participants ranked as most important. Whether participants reported that the pharmacist talked to the respondent about that specific characteristic during their visit was also analyzed.

Given the descriptive nature of the objectives of this study, no hypotheses were made a priori; however, after looking descriptively at the data, bivariate analyses of satisfaction with privacy of the visit with the pharmacist and location of the visit were performed. Measures of privacy and where the visit took place by pharmacy type were cross-tabulated. To test the association statistically between satisfaction with privacy and pharmacy type and visit location respectively, 2 bivariate mixed-effect logistic models were run, one that included an indicator variable for whether the visit took place at a chain versus independent pharmacy and another that included where the visit with the pharmacist took place (over the pharmacy counter, in a semiprivate area, in a private room, or other). To control for clustering of respondents within specific pharmacies, a random effect on pharmacy was included. To run this analysis, "very satisfied" and "satisfied" were grouped together and "neutral," "dissatisfied," and "very dissatisfied" were grouped.

Additional measures that were stratified include how long the participant reported spending with the pharmacist and which methods the participant reported the pharmacist talked to them about based on whether the participant reported they were continuing a method or prescribed a new method of contraception. Self-reported likelihood of using preventive services by age were compared for participants younger than 21 years of age and those older than 21 years of age. Stata 15 (StataCorp LLC, College Station, TX) and R statistical software (R Core Team, 2019) were used for data analysis.

Results

Participant characteristics

A total of 32 pharmacies reported handing out palm cards for the study. Of the 29 pharmacies that reported on how many palm cards they gave out, 232 palm cards were distributed. Among the pharmacies that reported how many palm cards were distributed, 159 surveys were recorded among 24 facilities (response rate 69%). Eight surveys from 1 pharmacy were excluded from analysis given the possible duplication or invalid responses. Two additional participants were excluded because they reported getting a prescription for more than 2 methods of hormonal contraception (one reported pill, patch, ring, injection, and emergency contraception, the other reported patch, ring, and injection). Among all pharmacies, a total of 174 participants took the survey from 27 pharmacies; however, after dropping the suspect responses (n = 10) and responses where no survey code was entered (n = 4, consequently the participant could not fill out the rest of the survey), there was a final sample of 160. All 160 participants completed the whole survey. No question had more than 4% of missing data (n = 6). There was a range of 1-27 responses per pharmacy, with an average of 5.9 responses.

More than half of participants (66%) were between the ages 18 and 29 years, 31% were 30 years or older, and very few participants were younger than 18 years (3%). Fourteen percent of participants had a high school degree or less whereas 61% of participants had a college degree or more. Approximately two-fifths of participants identified as non-Hispanic white (43%), 23% as Hispanic white, 21% as Asian, and 5% as black. Participants almost exclusively lived in California (96%) and 63% reported having enough money all of the time to cover their basic needs during the month before their visit. Most participants had health insurance (89%), did not have children (82%), and had been using a method of contraception in the past month (71%) (Table 1).

Primarily, participants sought hormonal contraception to prevent pregnancy (89%), but also to make their periods lighter and more predictable, or skip them (46%), to make cramps less painful (30%), to control acne (21%), or to control mood or headaches (11%). Notably, 57% of participants considered effectiveness the most important characteristic of a contraceptive method whereas 19% thought adverse effects were most important followed by 13% of respondents reporting cost was the most important (Table 2).

Three-quarters of participants reported seeking a prescription for hormonal contraception from a pharmacy because it was faster than waiting for a doctor's appointment (74%); additional reasons included the following: the location was more convenient than visiting a doctor (46%), the hours were more convenient than visiting a doctor (41%), they could save money to not have to pay for the visit to the doctor (28%), and they did not have a regular doctor (26%). Most participants (72%) reported visiting the pharmacy to continue a contraceptive method versus initiating a new contraceptive method (Table 2).

Experience

Participants reported finding out about the pharmacist prescribing service primarily from pharmacy staff or advertising in the pharmacy (69%), friends and family members (16%), online (i.e., Yelp, social media, Bedsider online directory) (12%), or other health care providers (8%) (n = 160). Almost three-quarters of participants (74%) thought finding a pharmacy that offered pharmacist prescribing of hormonal contraception was very easy, 13% thought it was somewhat easy or neither easy nor difficult, and only 6% reported it was difficult or quite difficult to find a pharmacy that offered these services (n = 160). Moreover, 8% reported they did not look for pharmacies other than the pharmacy they visited. A small minority of respondents reported having to make an appointment for their visit (7%) with all but one of these respondents visiting an independent pharmacy (n = 160).

Notably, 79% of participants reported that the pharmacist talked to them about the characteristic of contraception most important to them (n = 156); 28% of participants overall reported talking to the pharmacist about at least 2 methods of contraception, including 50% of those seeking a new method and 17% of participants seeking a continued method (n = 158).

Just less than half of respondents (45%) reported that they had the visit with the pharmacist across the pharmacy counter, 28% reported a semiprivate area, and 26% reported seeing the pharmacist in a private room. The distribution of visit location varied by pharmacy type (Table 3). Among chain pharmacies, 76% of participants reported their visit took place across the pharmacy counter, 15% in a semiprivate area, and 7% in a

Table 1
Participant characteristics (N = 160)

Characteristic	n (%)
Age (y)	
<18	5 (3)
18–24	70 (44)
25–29	36 (22)
30–34	27 (17)
35–39	16 (10)
≥40	6 (4)
Education	
≤High school or less	23 (14)
Some college	39 (25)
Associates or bachelor's degree	56 (35)
Master's degree or higher	41 (26)
Race	
American Indian or Alaska Native	1 (1)
Asian	32 (21)
Black/African American	7 (5)
White, non-Hispanic	66 (43)
White, Hispanic/Latino	36 (23)
Multiracial	10 (6)
Other race	2 (1)
Insurance	
Insurance	142 (89)
No insurance	17 (11)
Enough money to meet basic living needs such as food, housing, and transportation during the past month	
All the time	97 (63)
Most of the time	38 (25)
Some of the time	18 (12)
Never	1 (1)
Relationship status	
Single	37 (23)
In relationship—not living with partner	58 (36)
In relationship—living with partner	34 (21)
Married/civil union	27 (17)
Separated/divorced	4 (2)
Children	
No	132 (82)
Yes	28 (18)
Residence	
California	154 (96)
Other	6 (4)
Using oral contraception in the past month	
No	47 (29)
Yes	113 (71)
Condoms	39 (35)[a]
Pill	84 (74)[a]
Ring	4 (4)[a]
Patch	1 (1)[a]
Withdrawal	9 (8)[a]
Emergency contraception	8 (7)[a]
Preventive care in the last 3 years[b]	
Papanicolaou smear	80 (66)
Breast examination	60 (49)
Pelvic examination	60 (49)
Not sure	4 (3)
None	23 (19)
Tested for chlamydia in last 2 years[c]	
Yes	40 (49)
No	35 (43)
Not sure	7 (9)

[a] Of those using oral contraception in the past month; more than 1 response possible.
[b] Among those older than 21 years of age (n = 122).
[c] Among those younger than 26 years of age (n = 82).

private room; the remaining 2% indicated other. Moreover, 22% of participants who visited an independent pharmacy reported that their visit took place across the pharmacy counter, 37% in a semiprivate area, and 40% in a private room. Approximately 1% of participants provided a response other than those responses listed.

Among those who sought a prescription for continuing their contraceptive method (n = 112), 48% spent 10 minutes or under with the pharmacist, 40% spent between 11 and 20 minutes with the pharmacist, and 12% spent more than 20 minutes; 35% of those seeking a new contraceptive method (n = 43) spent 10 minutes or less with the pharmacist, 44% spent between 11 and 20 minutes, and 21% spent more than 20 minutes. Nearly all respondents (96%) thought the length of time spent with the pharmacist was just right. Only 3% of participants said they had remaining questions that were left unanswered when they left the pharmacy, and 4 of 5 of these participants reported they felt uncomfortable asking their questions (n = 160).

Most participants were prescribed an oral contraceptive (90%) whereas fewer were prescribed the ring (5%), patch (3%), or emergency contraception (4%). One participant (<1%) did not receive a prescription (Table 2).

When asked to rate the cost of the visit, 17% thought the cost was more than they expected, 56% thought it was reasonable or about right, and 28% thought it less than they expected (n = 160). Cost was correlated with overall satisfaction with the overall service. Although 100% and 8% of those who said the cost of the visit was less than expected or was reasonable or about right were satisfied, respectively, 85% of those who thought it was more than expected were satisfied with the service overall.

Satisfaction

Most participants were very satisfied or satisfied with the service overall (97%). Most (86%) felt very satisfied or satisfied with the pharmacist's contraceptive methods counseling. Participants mostly (94%) felt very satisfied or satisfied with their level of comfort with the pharmacist (Figure 2).

Furthermore, 74% of participants felt very satisfied or satisfied with the level of privacy during their visit; 86% of those who had visited an independent pharmacy reported they were very satisfied or satisfied with the level of privacy during their visit compared with 58% of those who visited a chain pharmacy ($P = 0.004$). Satisfaction with privacy was higher among those who were in a semiprivate location (91%, $P < 0.001$) for their visit and a private room for their visit (98%, $P < 0.001$) than those who reported their visit took place over the pharmacy counter (50%) (Table 3).

Nearly all participants reported they were very likely or likely to return to a pharmacist for contraception (96%) and very likely or likely to recommend the service to a friend (95%) (n = 160).

Preventive health screenings

In the 3 years before the survey, 66% of participants older than the age of 21 years reported having received a Pap smear

Table 2
Goals and experiences with the birth control visit with a pharmacist

Survey item	n (%)[a]
Reasons for going to a pharmacist to get oral contraception (n = 160)	
I was able to get my prescription faster than waiting for doctor's appointment	119 (74)
Location was more convenient than visiting a doctor	74 (46)
Hours were more convenient than visiting a doctor	66 (41)
To save money to not have to pay for a visit to the doctor	44 (28)
Don't have a regular doctor	41 (26)
Did not want pelvic/physical examination or Papanicolaou smear to get oral contraception	25 (16)
There was a pharmacist I knew and trusted	22 (14)
Other	8 (5)
Goal before coming in for birth control visit (n = 155)	
Continue a method already using	112 (72)
Start a new method	43 (28)
Reasons for using birth control[a] (n = 160)	
Prevent pregnancy	142 (89)
Make period lighter, more predictable, or skip	74 (46)
Control acne	33 (21)
Control mood or headaches	18 (11)
Prevent sexually transmitted diseases	6 (4)
Other	3 (2)
Top 5 most important characteristic of a birth control method[b] (n = 156)	
Effectiveness	89 (57)
Adverse effects	30 (19)
Cost	20 (13)
Ease of use	6 (4)
Other health reasons	5 (3)
Methods prescribed by pharmacist[a] (n = 159)	
Pill	143 (90)
Ring	8 (5)
Patch	5 (3)
Injection	0 (0)

[a] More than 1 response possible.
[b] Frequency with which characteristic listed was the most important characteristic of birth control. Respondents were presented with 9 options and asked to rank them in order of importance.

and 49% had received a breast examination or a pelvic examination (Table 1). Notably, 19% of participants older than the age of 21 years reported that they had not received a breast examination, a pelvic examination, or a Pap smear in the previous 3 years. Nearly half (49%) of those younger than 26 years of age reported having been tested for chlamydia in the past 2 years.

Overall, 78% of respondents older than the age of 21 years reported having at least one of the preventive health screenings they were asked about, and the remaining 22% said they had not or did not know.

Among all participants, when asked about plans for future preventive care seeking, 75% had plans to get preventive care in the next year, and 91% had plans to get it within the next 3 years (n = 159).

Discussion

This sample of people who went to a community pharmacy to conveniently access contraception in California reported generally positive experiences and very high levels of satisfaction with the pharmacists' services. Most participants went to the pharmacist for a contraception prescription because it was faster than going to a clinic and was convenient and were continuing a method they were already using. The majority obtained a prescription for the pill. These findings add to the existing literature regarding patient experiences accessing this innovative pharmacist service.[18]

Previous studies describing patient characteristics and experiences were limited by methodologies consisting of health record reviews and insurance database analysis. The only other study to assess patient experiences using patient surveys was conducted during an overlapping period of time from January to November 2019, although patient perspectives younger than the age of 18 years were not included.[16] This aforementioned study and our study both found the primary reason for selecting direct pharmacy access to obtain contraception were timeliness/no appointment needed, followed by convenience and not having a regular doctor/provider.[18]

The patients who participated in our study were similar with regard to age and insurance status to those who accessed the service in a grocery store chain in California and Oregon.[13] Participants in our study had higher levels of education than those from a similar study in California, Colorado, Hawaii and Oregon.[18] We also found that participants in our study reflected California state demographics relatively well with few exceptions. We documented a higher proportion of non-Hispanic white patients and Asian patients and a lower proportion of Hispanic white patients than represented in the overall state population.[19] Additional research is needed to understand whether these differences are a function of our sample or a reflection of differences in care seeking or barriers faced by different groups.

It should be noted that most patients using pharmacist prescribing of contraception in this study (72%) desired to continue their current contraceptive method. This is reflected

Table 3
Location of visit with pharmacist by pharmacy type and relationship with satisfaction with privacy

Location of visit	n (%)	Chain (n = 68)	Total (N = 160)
Independent (n = 92)			
Private room	37 (40)	5 (7)	42 (26)
Semiprivate area	34 (37)	10 (15)	44 (28)
Across the pharmacy counter	20 (22)	52 (76)	72 (45)
Other	1 (1)	1 (1)	2 (1)
Very satisfied or satisfied with privacy (n = 117)			
Private room, n = 42	41 (98)		
Semiprivate area, n = 44	40 (91)		
Across the pharmacy counter, n = 72	35 (49)		
Other, n = 2	1 (50)		

Note: Values are n (%). Column percentages given in columns independent and chain.
Table percentages reflect the proportion of patients who were satisfied with privacy by the location of the visit.

in the duration of the visit at the pharmacy where less time was spent for visits to continue a method (48%, < 10 minutes; 40%, 11-20 minutes) compared with visits to initiate or change a method (35%, < 10 minutes; 44%, 11-20 minutes). In a previous study of time spent on visits with a standardized patient in Oregon pharmacies, visits to initiate a new method lasted roughly 18 minutes and visits where the patient needed to be referred to another health care provider lasted roughly 14 minutes.[20] This information can inform implementation in pharmacies and workflow considerations.

Given that most participants had insurance at the time of their participation, our study suggests that pharmacists prescribing of contraception plays a vital role in health care regardless of patient access to a traditional provider. Pharmacists are able to provide fast and convenient access to contraception, whereas patients may need to wait for an appointment to see a traditional provider to obtain contraception. This is a benefit to individuals who do not have a regular health care provider or who do not need to see their provider for anything besides contraception. The high satisfaction with the service and willingness to return in the future shows that cost was not a setback for patients. The percentage of patients without insurance who participated in this survey (11%) is similar to the percentage of women of reproductive age in California without insurance in 2017 (9%).[21]

Patients using the pharmacist prescribing service in California in our study and those using the service in California, Colorado, Hawaii, or Oregon in another study were similarly highly likely to report that they would see the pharmacist again (96% and 100%, respectively) and recommend this pharmacist service to a friend (95% and 98%, respectively).[18] In that multistate study, patients obtaining contraception directly from a pharmacy were significantly more likely to return to the same provider ($P = 0.007$) and recommend the provider to a friend ($P = 0.04$) than those who obtained contraception from a clinic.[18]

One area for consideration in pharmacist prescribing services is in the level of privacy during contraception visits. Participants who received care over the counter reported

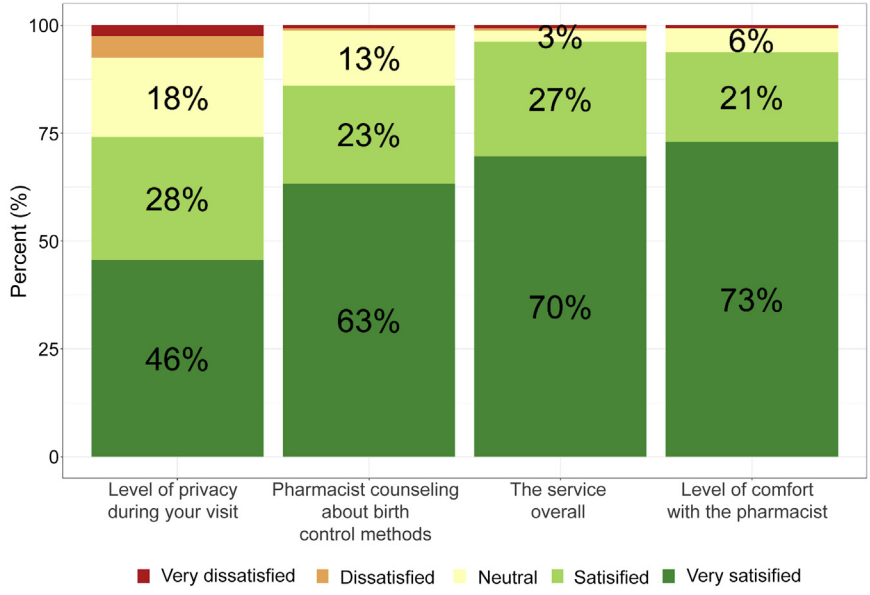

Figure 2. Patient satisfaction with the experience at the pharmacy. *5% and 3% of participants were dissatisfied or very dissatisfied with the level of privacy. Less than 1% of participants were either dissatisfied or very dissatisfied with pharmacist counseling about oral contraception methods, the service overall, or the level of comfort with the pharmacist.

significantly lower satisfaction with privacy than those who had their visit in a private room or semiprivate location. However, satisfaction with privacy was still high and did not seem to affect overall satisfaction with the service. This study was not designed to assess whether the privacy setting or lack thereof in some pharmacies may have prevented some people from using the service and is a topic that should be explored in future research. Ensuring privacy may be of particular importance to ensure that pharmacist prescribing services are acceptable to young clients.[22,23]

Most participants in this study reported at least some sort of preventive health care in the past 3 years. Slightly fewer participants at the age of 21 years and older in this study (66%) reported cervical cancer screenings in the previous 3 years than the national average of those up-to-date with cervical cancer screening (73.5% in 2019), defined as having a Pap test within the past 3 years for all women at the age of 21-65 years or having a Pap test, with or without an human papillomavirus test, in the past 5 years for women aged 30-65 years.[24] More participants in our study younger than 26 years of age (49%) reported chlamydia testing in the previous 2 years than another study that found 26% of insured U.S. women aged 15-25 years having been tested for chlamydia over a 5-year period.[25] In the Border Contraceptive Access Study, which took place from December 2006 to February 2008, a larger proportion of U.S. women who obtained pills over the counter in Mexico had Pap smears (91%) and sexually transmitted disease testing (72%) and other preventive screening such as pelvic and breast examinations (89% and 89%, respectively).[25] The lower proportion of cervical cancer screenings and other preventive screenings in our study, albeit high interest in obtaining future preventive services, suggest this population may have lower access to regular health care, and information and education on preventive health screenings from pharmacists could be beneficial for this population.

There were limitations to this study. Recruitment for this study was limited to 44 pharmacies that agreed to assist with recruitment efforts, and results may not represent experiences at other pharmacies. Many of the participating pharmacies had recently begun offering the service and had limited patient volume for the service. Owing to the high patient traffic along with management and staff turnover at chain pharmacies, pharmacists at these locations may not have remembered to provide the study invitation to each eligible patient.

Overall, the high levels of satisfaction with counseling and the pharmacist prescribing service overall support pharmacist contraception prescribing policies in California and other states and may encourage more widespread implementation in states with existing policies. Pharmacist prescribing services can fills gaps in access to contraceptive services by providing convenient, cost-effective, and accessible services. Further study of patient experiences in all states with pharmacist prescribing of hormonal contraception is warranted, along with studies of public awareness, clinical service implementation, and payment for pharmacist services from health plans. After this study in April 2019, California's Medicaid program, Medi-Cal, began providing coverage as directed by a legislative mandate for pharmacist contraception services (restricted to Emergency and Management office visit codes reflecting straightforward medical decision making).[26,27] The impact of insurance status on preferences for access to contraception, particularly use of direct pharmacy access, warrants further investigation.

Conclusion

Overall, pharmacist prescribing of contraception in community pharmacies provided a convenient access point for hormonal contraception that was highly acceptable to patients who used it. This study identified that one area for attention is the level of privacy during contraception visits. These findings support direct pharmacy access and encourage broad policy development and implementation. The expansion of pharmacists' roles and utilization of community pharmacies as access points for contraception and other reproductive health care services may provide individual patient and public health benefits.

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