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Self-Reported Participation in Voluntary Nonprescription Syringe Sales in California's Central Valley

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Abstract

Background—California Bill 41 (SB41), effective January 2012, is an HIV/HCV prevention measure designed to expand syringe access among injection drug users (IDUs) by allowing pharmacies to sell syringes without a prescription.

Objective—To assess self-reported implementation of SB41 and identify any barriers amenable to intervention.

Design—Interviewer-administered survey.

Setting—Fresno and Kern counties, California.

Participants—Pharmacists and other pharmacy staff (N=404) at 212 pharmacies.

Main outcome measure—Self-reported nonprescription pharmacy sales to known or suspected IDUs.

Results—Overall, 29.3% of participants said their pharmacy would sell nonprescription syringes to a known or suspected IDU while a far higher proportion (79.3%) would sell nonprescription syringes to a person with diabetes. More than half said their pharmacy requires nonprescription syringe purchasers to enter their signature and/or name and address in a log book though not required under SB41. Less than two of every three (61.1%) participants knew that it is legal to sell nonprescription syringes to IDUs. This knowledge, as well as having syringe sales practices based on both store policy and discretion, were positively associated with IDU syringe sales after controlling for other factors. Working at an independent pharmacy, agreeing that only people with “medical conditions” like diabetes should be able to buy syringes, and viewing syringe sales to IDUs as “not good business” were independently but negatively associated with IDU syringe sales.

Conclusion—This study complements an earlier syringe purchase trial documenting low participation in voluntary nonprescription syringe sales under SB41 in Fresno and Kern counties. In the absence of legislation requiring mandatory syringe sales, interventions should be developed

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to increase knowledge of the law and frame addiction as a medical condition, with a special focus on independent pharmacies. Informational interventions should stress the need to eliminate log book documentation requirements, which may serve as a barrier to IDU purchase.

Keywords

Injection drug use; HIV; HCV; syringe access; pharmacies; California

INTRODUCTION

Parenteral transmission of blood borne viruses like HIV and Hepatitis C is a growing concern in the context of the evolving U.S. drug abuse “epidemic.” Syringe sharing among injection drug users (IDUs) contributes substantially to HIV prevalence in the U.S.; 11% of males and 23% of females currently living with HIV directly attribute their infection to injection drug use.¹ A 2015 outbreak of at least 188 HIV cases among IDUs in a small Indiana county² demonstrated that rural communities, many of which have been particularly hard-hit by the prescription opioid epidemic, require more vigorous preventive interventions to stem injection-related HIV transmission. An effort by the Centers for Disease Control and Prevention (CDC) following the Indiana outbreak to identify counties most vulnerable to HIV and Hepatitis C virus (HCV) determined that the 220 most vulnerable counties were “overwhelmingly rural.”³ Similarly, a 2015 study documented a 364% increase in the number of acute HCV cases among persons aged 30 years in four predominantly rural states (Kentucky, Tennessee, Virginia, and West Virginia); 73% of individuals who reported a risk category attributed their HCV infection to injection drug use, and HCV rates in nonurban areas were double those in urban areas.⁴

HIV and HCV transmission among IDUs can be prevented by reducing syringe sharing through expanded access to sterile syringes.⁵ In general, there are two sources of sterile syringes available to IDUs, depending upon the prevailing laws of the state and/or locality: syringe exchange programs (SEPs) and pharmacies. SEPs distribute sterile syringes and collect used syringes for proper disposal. As of 2013, there were 204 known SEPs nationwide.⁶ Many of these programs operate on limited schedules and provide services within limited geographic areas due to inadequate funding and/or legal restrictions, and there are substantially fewer programs in non-urban areas compared to urban areas.⁶ A second source of nonprescription syringes is retail pharmacies. At least 16 states have laws explicitly allowing nonprescription syringe sales and most of the remaining states have laws that do not specifically preclude syringe sales to adults without a prescription.⁷ Unlike SEPs, pharmacies are ubiquitous and therefore are well positioned to fill a much needed gap in syringe access where nonprescription syringe sales are allowed by law, with the added benefit of bringing IDUs into contact with trained health professionals – pharmacists – who can provide counseling and linkages to relevant services like drug treatment and HIV/HCV testing and treatment.

A variety of U.S.-based studies have investigated the uptake of nonprescription syringe sales at retail pharmacies and identified barriers to broader implementation⁸. Those employing syringe purchase trials document varying levels of pharmacy participation where

nonprescription syringe sales are legal, ranging from 21–77%^{9–15}. Other studies have sought to characterize the reasons for low pharmacy participation in nonprescription syringe sales. These studies identify lack of knowledge regarding syringe sales laws, concerns regarding theft and staff/customer safety, negative attitudes toward drug users, concerns that selling syringes increases drug use, lack of adequate private counseling space, and concerns about safe syringe disposal as barriers to wider adoption of nonprescription syringe sales^{16–26}. Notably, levels of pharmacy participation and reasons for non-participation differ across study sites. California Senate Bill 41 (SB41), which went into effect on January 1, 2012, was designed to expand syringe access across California by allowing nonprescription syringe sales at pharmacies. Under the law pharmacies may, without any prior registration or authorization, sell syringes to customers 18 years old without a prescription. The law also allows possession of syringes purchased at a pharmacy, protecting purchasers from arrest on drug paraphernalia charges. SB41 requires that pharmacies provide nonprescription syringe purchasers with safe syringe disposal options, such as onsite disposal or sharps containers for purchase, as well as written or verbal counseling on how to safely dispose of syringes and how to access drug treatment and HIV/HCV testing and treatment. SB41 originally limited the number of syringes that could be purchased to 30; Assembly Bill 1743 (AB1743) further expanded access by eliminating the 30-syringe maximum, thus allowing purchase and possession of an unlimited number of syringes.

Notably SB41 allows, but does not require, pharmacies to sell nonprescription syringes. A syringe purchase trial conducted during the pilot program that preceded SB41 documented successful purchases at only 21% and 63% of pilot pharmacies in Los Angeles and San Francisco, respectively, suggesting that more proactive efforts to promote voluntary nonprescription sales were required.⁹ Subsequently, our research team conducted a syringe purchase trial in 2013 in California's predominantly rural Central Valley region as a first step towards assessing SB41 implementation. This purchase trial, which included all 248 retail pharmacies in Fresno and Kern counties, documented successful nonprescription syringe purchases at only 21% of pharmacies.¹⁵ Overall, 30% of purchase attempts involved being asked what the syringe was for and 20% were asked about their diabetes status and/or for proof of diabetes. Successful attempts often required purchasers to sign or record other identifying information in a log book (although this is not required by law) and almost half (46%) of the purchase attempts failed because the pharmacy required a prescription. These findings suggest that nonprescription syringe sales in the Central Valley remain limited and that interventions are needed to expand syringe access under SB41 to achieve its intended goal of reducing injection-related HIV/HCV transmission across California.

To obtain additional insights into pharmacy syringe sales practices and the reasons for limited nonprescription syringe sales in this region, and to inform future interventions designed to expand these sales, we conducted a follow-up survey at all retail pharmacies in Fresno and Kern counties.

OBJECTIVE

To characterize self-reported syringe sales policies at retail pharmacies in Fresno and Kern counties, two inland California counties that have high rates of injection drug use and

limited access to SEPs, and identify factors associated with nonprescription syringe sales to known or suspected IDUs.

METHODS

Study Setting

California's Central Valley is a largely rural and agricultural region with a long history of illicit drug transport, manufacturing, and abuse. The Valley is situated along a major transit route that carries illicit drugs heading northward from Mexico and historically has been the home of methamphetamine "super labs" that serve as the primary source of domestic methamphetamine production in the United States.²⁷ The region is a designated High Intensity Drug Trafficking Area (HIDTA) and in a study of 96 U.S. metropolitan statistical areas (MSAs) the Fresno and Bakersfield (Kern County) MSAs ranked second (2.95%) and fourth (2.40%), respectively, in prevalence of injection drug use.²⁸ Despite these indicators, the Central Valley is vastly underserved by SEPs; other than Sacramento, the only established SEP in the Central Valley is a three-hour drive south in Fresno, which operates only two hours per week but nonetheless distributed 926,000 syringes in 2016 (December 31, 2016 personal communication from D Blanchard, Director of Fresno Needle Exchange Program). IDUs in the region are disproportionately affected by HIV/AIDS, with injection drug use accounting for 22% of all cumulative AIDS cases in Fresno (48% of all female cases)²⁹ and 26% of cumulative HIV/AIDS cases in Kern (32% of all female cases)³⁰ compared to just 9% of cumulative HIV/AIDS cases statewide.³¹

Pharmacy Selection and Recruitment

Between April and July 2013 we conducted a syringe purchase trial to generate an objective measure of nonprescription syringe sales at all retail pharmacies in Fresno and Kern counties.¹⁵ To identify pharmacies we used the California Board of Pharmacy's web-based license verification search tool (http://www.pharmacy.ca.gov/about/verify_lic.shtml). We eliminated pharmacies without current licenses and pharmacies that do not sell to the general public (e.g., members-only HMO pharmacies, correctional facilities) as these pharmacies would be inaccessible to most IDUs. In cases where eligibility could not be determined we called the pharmacy to clarify the nature of their operations. Overall, we made purchase attempts at 248 pharmacies in Fresno and Kern County between April and July 2013. These pharmacies constituted our sample for the subsequent pharmacy survey.

Between February and August 2014 trained data collectors returned to each pharmacy to implement the follow-up survey. They approached the pharmacy counter and attempted to recruit one pharmacist and one non-pharmacist staff member (e.g., pharmacy technician, counter clerk) to participate in an interviewer-administered, anonymous survey regarding current pharmacy practices and thoughts regarding customers who may use illicit drugs. Participants provided informed consent and received a \$10 gift card (e.g., Starbucks, Target) as a token of appreciation for their participation. Data collection and analysis were conducted while the author was at the Pacific Institute for Research and Evaluation (PIRE), and the study was approved by PIRE's Institutional Review Board (IRB).

Data collection

Each participant completed a brief (<10 minutes) survey adapted from prior surveys conducted elsewhere by the investigators^{23,32} and insights gained from the syringe purchase trial.¹⁵ The survey included questions on demographics and work history followed by questions designed to characterize policies and practices related to syringe sales. Specific questions regarding nonprescription syringe sales were included the following, with response options “yes,” “sometimes,” and “no”:

- “At this pharmacy, would you sell syringes to a person who has no prescription but is known to the pharmacist as diabetic, has purchased insulin at the pharmacy before, or has other proof of diabetes?”
- “At this pharmacy, would you sell syringes to a person who has no prescription but is 18 or over, has a valid photo ID, and is a known or suspected injector of illicit drugs?”

These were followed by questions about specific sales requirements related to nonprescription syringe sales (e.g., requiring signature in a log book) and whether the pharmacy provided the information required under SB41 (e.g., proper syringe disposal, HIV/HCV prevention and treatment, drug treatment). The final portion of the survey contained Likert-scaled responses to statements regarding knowledge, attitudes, and beliefs regarding syringe sales, IDUs, and the role of pharmacies in HIV/HCV prevention (strongly agree, agree, disagree, strongly disagree). The survey instrument is in Appendix 1, available on JAPhA.org as supplemental content.

Data were collected on Google Nexus 7 tablets programmed using PenDragon™ Software.³³ At the end of each day, the tablets were synced wirelessly to a centralized server and the data were stored in a database for subsequent analysis.

Data Analysis

Data were summarized using descriptive statistics. We compared self-reported sales practices by a) pharmacy type (chain vs. independent/other; “other” included three pharmacies of which one was hospital-based and two self-identified as a “community” or “retail” pharmacies) and b) respondent type (pharmacists vs. non-pharmacist), using the Pearson’s chi-square test. Due to the small number of “sometimes” responses we combined these with “yes” responses to create binary yes/no outcome variables describing nonprescription syringe sales practices. We used responses to the question regarding sales to IDUs (“...would you sell syringes to a person who...is a known or suspected injector of illicit drugs?”) as our outcome of primary interest. We then conducted a univariate analysis of factors associated with self-reported sales to IDUs using Wilcoxon rank-sum tests for continuous variables and the Pearson’s chi-square test for categorical variables. Likert-scaled responses to knowledge, attitudes, and beliefs questions were collapsed to create binary variables (i.e., agree/strongly agree vs. disagree/strongly disagree). Variables significant at <.10 in the univariate analysis were manually entered into a multiple logistic regression model in a forward stepwise fashion to identify factors independently associated with the outcome variable at a significance level $p<.05$. We also tested for interactions by

pharmacy and respondent type. All data analyses were performed using Stata statistical software.³⁴

RESULTS

Of 248 pharmacies in purchase trial, six had closed. We completed interviews with 404 participants at 215 of the remaining 242 pharmacies (pharmacy response rate 88.8%). Half (50.5%) of the respondents were pharmacists; 67.6% of these pharmacists were male, median age was 40 years (interquartile range [IQR]: 32–55 years), median time as a pharmacist was 10 years (IQR: 4–26 years) and median time working at their current pharmacy was 3 years (IQR: 1–7 years). The remaining participants were staff who self-identified as a pharmacy tech (84.5%), pharmacy clerk (14.0%), or other position (1.5%). These participants were predominantly female (81.5%), median age was 30 years (IQR: 26–38 years), and median time working at their current pharmacy was 3 years (IQR: 1–7 years). Overall, 72.0% of respondents self-identified as working at a chain pharmacy and 28.0% at an independent/other pharmacy.

Eighteen participants said their pharmacy did not sell syringes (n=11), that they only sold prefilled syringes (n=5), or responded “don’t know” (n=1) or “refused” (n=1) to questions about whether syringes were available for purchase at their pharmacy. The remaining 386 participants provided information on their pharmacy’s syringe sales practices.

Overall, 306 (79.3%) said their pharmacy would sell syringes without prescription to diabetics while only 113 (29.3%) said their pharmacy would sell syringes to known or suspected IDUs. These sales practices were reportedly governed by established store policy (44.6%), the seller’s discretion (11.9%), or a combination of both (41.2%). Table 1 presents specific practices regarding nonprescription syringe sales. A majority said their pharmacy would have the purchaser to sign a log book and/or require the purchaser’s name and address to be entered into a log book. Similarly, a majority provided nonprescription syringe purchasers with information on safe disposal and appropriate disposal options, but only one in four said their pharmacy provides the purchaser with the information on drug treatment and/or information on HIV/HCV that is required under SB41. In comparing pharmacy and respondent types (data not shown), we found that participants at independent/other pharmacies were significantly more likely than those at chain pharmacies to require a log book signature (70.5% vs. 49.8%, $p<.01$) or name and address in a log book (72.1% vs. 49.0%, $p<.01$), as were non-pharmacists compared to pharmacists (63.7% vs. 45.1%, $p<.01$; 60.3% vs. 47.6%, $p=.03$). Pharmacists were significantly more likely than non-pharmacists to provide information on drug treatment (31.7% vs. 21.2%, $p=.04$) and HIV/HCV testing and treatment (31.1% vs. 19.2%, $p=.02$).

Table 2 compares the characteristics and knowledge, attitudes, and beliefs of participants who reported that their pharmacy sells nonprescription syringes to IDUs to those who did not. There were significant ($p<.05$) differences by respondent type and pharmacy type, with pharmacists and those who worked at chain pharmacies being more likely to report IDU syringe sales. The basis for pharmacy practice (i.e., policy, discretion, or both) was also significantly associated with IDU syringe sales practices. With regard to knowledge,

attitudes, and beliefs, only 61.1% of respondents knew that it was legal to sell syringes to adult IDUs without a prescription and this knowledge was significantly associated with self-reported IDU sales. More than half (53.6%) thought that only individuals with “a medical condition like diabetes” should be able to buy syringes and this view was negatively associated with IDU syringe sales, as was expressing concern that selling syringe to IDUs encourages drug use. A large majority of participants (>80%) agreed that pharmacies can be an important informational resource for IDUs, and this attitude was significantly associated with IDU syringe sales; however, although a majority agreed that pharmacies that sell syringes to IDUs should provide information on drug treatment and HIV/HCV, a majority (>60%) also expressed concern that getting this information would make some purchasers uncomfortable and expressing this concern was negatively associated with IDU syringe sales. Notably, concerns regarding disruptive IDU customers and viewing selling syringes to IDUs as being “not good business” were negatively associated with IDU syringe sales.

Table 3 shows the factors independently associated with self-reported nonprescription syringe sales to IDUs. After controlling for other factors, participants from independent pharmacies were less likely to report IDU syringe sales, as were participants who thought only people with a “medical condition like diabetes” should be able to buy syringes and those who felt selling syringes to IDUs is “not good business.” Knowing that syringes can be sold without a prescription was positively associated with nonprescription syringe sales to IDUs, as was having sales practices based on a mix of store policies and discretion compared to store policy only. There were no significant interactions by pharmacy or respondent type.

Discussion

Expanding sterile syringe access is a critical component of efforts to reduce HIV/HCV transmission among IDUs. Pharmacies have an important role to play in expanding syringe access, particularly in regions where SEPs are limited. In this study, conducted in a region that is largely rural and underserved by SEPs, less than one in three respondents said their pharmacy would sell nonprescription syringes to a known or suspected IDU. This suggests that that SB41 is not reaching its full potential as a voluntary HIV/HCV prevention measure.

Our study identified a number of ways in which interventions might improve SB41 participation. First, more than one in three participants did not know it is legal to sell nonprescription syringes, while participants who did know it was legal were significantly more likely to report IDU syringe sales. Since SB41’s passage, the California Department of Public Health (CDPH) has issued multiple official correspondences to local health officers and HIV/AIDS community stakeholders statewide regarding the new nonprescription syringe sales laws. CDPH also maintains a website with detailed information on sterile syringe access in California,³⁵ including a Nonprescription Syringe Fact Sheet for Pharmacists that is cross-posted to the California State Board of Pharmacy’s website,³⁶ and has developed a continuing education webinar series about SB41 and its benefits that is available through the California Pharmacists Association website.³⁷ In addition, the California Board of Pharmacy has publicized the law to pharmacists through its periodic newsletter, *The Script*.³⁸ However, our survey findings and the low syringe purchase rate in

our prior purchase trial indicate that more proactive efforts are needed to directly inform pharmacists about the law. This problem is not unique to our study site; studies dating back almost two decades among pharmacists have found knowledge of nonprescription syringe sales laws to be deficient,^{16,21,22,24,25,39,40} yet to date there has been little if any research regarding the most effective ways to disseminate information about these laws. Efforts to identify optimal information dissemination approaches for nonprescription syringe sales laws is critical to achieving their intended purpose. In addition to providing information about the content of these laws (e.g., provision of information on drug treatment and HIV/HCV information, which was low in our study despite high levels of support), interventions should include information about what the laws do not contain; for example, the California law does not require syringe purchasers to record identifiable information in a log book but a majority of our study participants required some sort of log book documentation. This serves as a disincentive to syringe purchase, as IDUs fear this information could be shared with law enforcement as has been documented in at least one prior study.³⁹

Second, our findings suggest that interventions to improve nonprescription syringe sales at pharmacies should go beyond improving knowledge of the law to address attitudes, most prominently how pharmacists and other pharmacy staff view drug addiction. The number of participants in our study who reported nonprescription syringes sales to persons with diabetes was more than double the number that reported selling syringes to IDUs, and a majority said that only people with a “medical condition like diabetes” should be able to buy syringes – a view that was negatively and independently associated with IDU syringe sales. The implication that many of our participants did not view addiction as a “medical condition” is highly concerning given that leading medical associations including the American Association of Addiction Medicine, the American Medical Association, the American Psychiatric Association, and the American Nurses Association, as well as federal agencies like the Office of National Drug Control Policy and the National Institute on Drug Abuse, have formally stated that drug dependence is a chronic and relapsing brain disease that, much like Type II diabetes and other chronic conditions like heart disease, is caused by a combination of behavioral, environmental, and biological factors.^{41–46} Pharmacists are among the most accessible and trusted health care providers;⁴⁷ it is critical that they view addiction as medical condition if they are to optimally contribute to the health of IDUs, who are frequently underserved and marginalized by other sectors of the health care system.

At the same time, we must acknowledge that pharmacies are in a complex position with regard to illicit drug use. On one hand, in the midst of an unprecedented opioid epidemic, pharmacists are increasingly called upon by law enforcement agencies to be what Chiarello⁴⁸ has termed “legal gatekeepers” tasked with monitoring for fraudulent or altered opioid prescriptions. Concurrently, pharmacists serve as “medical gatekeepers” whose purpose is to help the sick and serve as healthcare providers who assist their patients in healing. Viewing IDUs as individuals with a medical condition is therefore critical to negotiating the balance between these legal and medical gatekeeper roles in favor of the medical role of preventing HIV/HCV and other injection-related morbidities. We hypothesize that interventions that work to reframe nonprescription syringe sales as a medical intervention for the medically ill rather than one that facilitates illegal behavior will

be most effective in expanding pharmacy-based syringe sales. Although not significant in our final model, we note that almost half of our participants agreed with the statement “I am concerned that providing syringes to IDUs encourages drug use.” In fact, there are no studies that support this concern; rather, multiple studies have shown that expanding pharmacy-based syringe sales is associated with reductions in syringe sharing.^{49–52} Interventions should emphasize this point to reassure pharmacists that selling syringes has a positive impact on health and is therefore consistent with their goals as community health providers.

Chiarello notes that pharmacists also serve in a “fiscal gatekeeper” role,^{48,53} and this is reflected in our study findings. A majority of our participants agreed with the statement “selling syringes to IDUs is not good business for pharmacies like mine” and this attitude was significantly inversely associated with IDU syringe sales. The vast majority of prior studies have found that business-related concerns are a factor in pharmacist decision making regarding nonprescription syringe sales. These include concerns about increased crime, drug use, and/or discarded syringes in and/or around the pharmacy; IDUs causing disruptions in the pharmacy; IDUs causing discomfort or even “danger” to staff and/or customers; and fear of community disapproval resulting in decreased revenues.^{24,25,54–58} Yet we are aware of only one study, conducted in California, which has investigated these concerns. Specifically, a study by Stopka et al.⁵⁹ in Los Angeles found nonprescription syringe sales under the California pilot program were inversely associated with overall crime rates. Interventions designed to improve syringe sales participation need to directly acknowledge and address these business-related concerns; these efforts might include working with pharmacists and staff to more comfortably and effectively engage with IDU customers and developing outreach to IDUs that stresses the importance of appropriate conduct in and around the pharmacies that serve their health care needs.

Third, we found that independent pharmacies may warrant special emphasis in any intervention efforts designed to improve nonprescription syringe sales participation. Just over ten percent of independents reported selling syringes to IDUs compared to more than half of chain pharmacies, and independent status was negatively associated with selling syringes after controlling for other factors. Other studies have also found a negative association between independent pharmacies and nonprescription syringe sales.^{18,56} The reasons for this association are unclear; we did not find any interactions by pharmacy type in our model, however we note that in our univariate analysis participants at independent pharmacies were significantly more likely than those at chains to express knowledge, attitudes, and beliefs that have been negatively associated with nonprescription syringes sales. These include not knowing that nonprescription syringe sales to IDUs are legal, thinking that only individuals with medical conditions like diabetes should be able to buy syringes, and thinking that selling syringes encourages drug use (data not shown). As independent pharmacies may be the only pharmacies available to IDUs in some rural communities, it is critical that these pharmacies be included in any interventions to promote syringe access.

Finally, we found that respondents whose syringe sales policies were based on a combination of store policy and personal discretion had a significantly higher odds of selling to IDUs than those who relied on store policy or discretion alone. The reasons for this

cannot be discerned from our study and warrant further investigation. However, we do note that only a very small number of respondents (one in ten) who reported their syringe sales decisions are based on discretion alone; store policy therefore factors into syringe sales decisions in the vast majority of cases and store addressing policies that may discourage or prohibit these sales should be addressed in any future interventions in addition to targeting the knowledge, attitudes, and beliefs of individual pharmacists and pharmacy staff.

Very few prior studies have attempted pharmacy-based interventions to expand syringe access. A study in New York City that provided informational and promotional materials and a training workshop following the establishment of an Expanded Syringe Access Demonstration Program significantly addressed pharmacists concerns about street discarded syringes but not willingness to sell nonprescription syringes or concerns about sales contributing to increased drug use.⁶⁰ A subsequent intervention by the same research team involving group and individual trainings with pharmacists and pharmacy staff significantly reduced concerns regarding community loitering but not business concerns or concerns about encouraging drug use.⁶¹ Our study provides additional insights into the factors that limit participation in nonprescription syringe sales following implementation of a law designed to expand syringe access and makes recommendations for improving subsequent interventions that should be tested in both urban and rural areas.

Limitations

Like all studies, ours is subject to limitations. First, we asked participants whether they would sell to IDUs with a valid photo ID in an effort to make the circumstances of the purchase scenario as clear as possible and thus promote uniformity in interpretations. While requesting an ID to confirm the age of the purchaser (at least 18 years) is justified under SB41, in reality many IDUs do not have a valid photo ID. Our findings therefore likely overestimate the self-reported availability of nonprescription syringes to IDUs in Fresno and Kern counties under “real world” circumstances. Second, it is important to note that these sales practices are self-reported and, due to socially desirable reporting, may over- or underestimate pharmacy-based syringe access. Indeed, our purchase trial in the same sample of pharmacies a year earlier found a lower syringe purchase success rate than would be encountered based on the self-reports from this survey. Third, our study was a cross-sectional survey and therefore the statistically significant associations based on the survey should not be viewed as causal. Finally, our findings should not be generalized to other California counties. As demonstrated in a syringe purchase trial in San Francisco and Los Angeles,⁹ nonprescription syringe sales can vary widely across the state and therefore different counties and/or regions require individual assessments.

Conclusion

This study complements an earlier syringe purchase trial documenting low participation in voluntary nonprescription syringe sales under SB41 in Fresno and Kern counties. In the absence of legislation requiring mandatory syringe sales, interventions are needed that will improve knowledge of SB41 and its requirements among pharmacists and pharmacy staff and effectively address their concerns regarding the impact of nonprescription syringe sales’

on business concerns and patient drug use. These interventions are particularly important for independent pharmacies, which may serve as the only potential source of sterile syringes for IDUs in rural areas.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Key Points

Background

- California Senate Bill 41 (SB 41) is designed to prevent HIV/HCV transmission among injection drug users (IDUs) by allowing pharmacies to sell syringes without a prescription. These sales are voluntary, and a prior syringe purchase trial found that only 21% of pharmacies in Fresno and Kern counties sell nonprescription syringes.
- In this study, we returned to all pharmacies involved in the purchase trial to survey pharmacists and staff about their syringe sales practices and their knowledge, attitudes, and beliefs regarding syringe sales, IDUs, and the role of pharmacies in HIV/HCV prevention.

Findings

- Only 29.3% of respondents said their pharmacy would sell nonprescription syringes to known or suspected IDUs; in contrast, 79.3% would sell to a person with diabetes.
- Knowledge of the legality of syringe sales under SB41 was positively associated with IDU syringe sales. Working at an independent pharmacy, agreeing that only people with “medical conditions” like diabetes should be able to buy syringes, and viewing syringe sales to IDUs as “not good business” were independently but negatively associated with IDU syringe sales. This study identified specific issues that should be addressed in interventions designed to expand participation in nonprescription syringe sales. Notably, our study is among the first to examine these issues in a predominantly rural area in the context of the current opioid epidemic.

Table 1

Self-reported nonprescription syringe sales practices, Fresno and Kern counties

	Sells nonprescription syringes to diabetics and/or IDUs N=310 (%)
Pharmacy requires nonprescription syringe purchaser to:	
Sign a log book	167 (53.9)
Record their name and address in a log book	166 (53.6)
Pharmacy provides nonprescription syringe purchaser with:	
Information on how to safely dispose of used syringes	246 (79.4)
Safe disposal options like on-site syringe disposal or sharps containers for purchase	280 (90.3)
Information on how to access drug abuse treatment	83 (26.8)
Information on how to access HIV and Hepatitis C testing and treatment	79 (25.5)

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Table 2

Factors associated with self-reported nonprescription syringes to IDUs, Fresno and Kern counties

	Total N=386 (%)	Sell to IDUs N=113 (%)	Do not sell to IDUs N=273 (%)	p-value
Median age (IQR)	34 (28–47)	35 (30–43)	34 (28–51)	.968
Sex				
Male	164 (42.7)	53 (46.9)	111 (40.7)	.283
Female	220 (57.3)	60 (53.1)	160 (58.6)	
Pharmacist				
Yes	192 (49.7)	65 (57.5)	127 (46.5)	.049
No	194 (50.3)	48 (42.5)	146 (53.5)	
Pharmacy type				
Chain	281 (89.4)	101 (89.4)	180 (65.9)	<.001
Independent/other	105 (27.2)	12 (10.6)	93 (34.1)	
Number of pharmacists at location (IQR)	2 (2–3)	2 (2–3)	2 (2–4)	.936
Sales policies based on:				
Store policy only	172 (45.6)	34 (31.2)	138 (51.5)	<.001
Discretion only	46 (12.2)	12 (11.0)	34 (12.7)	
Both	159 (42.2)	63 (57.8)	96 (35.8)	
<i>Agree/strongly agree that:</i>				
It is legal for IDUs 18 years old to purchase a syringe in a pharmacy without a prescription	236 (61.1)	94 (83.2)	142 (52.0)	<.001
Selling syringes to IDUs prevents infections like HIV and HCV	325 (84.2)	101 (89.4)	224 (82.1)	.072
Only people who have a medical condition like diabetes should be able to buy syringes	207 (53.6)	34 (30.1)	173 (63.4)	<.001
I am concerned that providing syringes to IDUs encourages drug use.	233 (60.4)	47 (41.6)	186 (68.1)	<.001
IDUs are a disruption to my pharmacy	155 (40.2)	34 (30.1)	121 (44.3)	.009
Selling syringes to IDUs is not good business for pharmacies like mine	201 (52.1)	31 (27.4)	170 (62.3)	<.001
Pharmacies that sell syringes to IDUs should provide information on how to get drug treatment	316 (81.9)	91 (80.5)	225 (82.4)	.662
Pharmacies that sell syringes to IDUs should provide information on how to prevent infection with HIV/HCV	338 (87.6)	96 (85.0)	242 (88.6)	.318
Pharmacies can be an important resource for IDUs who may not access health care in the community	317 (82.1)	100 (88.5)	217 (79.5)	.036
I am willing to provide information/resources to IDUs who purchase syringes at my pharmacy	324 (83.9)	104 (92.0)	220 (80.6)	.005
I am concerned that some people purchasing syringes without a prescription would feel uncomfortable if given HIV related information/resources	264 (68.4)	68 (60.2)	196 (71.8)	.025
I am concerned that some people purchasing syringes without a prescription would feel uncomfortable if given information on how to access drug treatment	268 (69.4)	68 (60.2)	200 (73.3)	.011

Table 3

Factors associated with self-reported nonprescription syringe sales to IDUs, Fresno and Kern counties

	AOR (95% CI)
Pharmacy type	
Chain	1.00
Independent/other	0.29 (0.14, 0.59)
Sales policies based on:	
Store policy only	1.00
Discretion only	1.37 (0.59, 3.20)
Both	3.08 (1.75, 5.40)
It is legal for IDUs 18 years old to purchase a syringe in a pharmacy without a prescription	3.38 (1.83, 6.26)
Only people who have a medical condition like diabetes should be able to buy syringes	0.44 (0.25, 0.76)
Selling syringes to IDUs is not good business for pharmacies like mine	0.36 (0.21, 0.63)

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