

The Impact of Legalizing Syringe Exchange Programs on Arrests Among Injection Drug Users in California

Alexis N. Martinez, Ricky N. Bluthenthal, Jennifer Lorvick,
Rachel Anderson, Neil Flynn, and Alex H. Kral

ABSTRACT Legislation passed in 2000 allowed syringe exchange programs (SEPs) in California to operate legally if local jurisdictions declare a local HIV public health emergency. Nonetheless, even in locales where SEPs are legal, the possession of drug paraphernalia, including syringes, remained illegal. The objective of this paper is to examine the association between the legal status of SEPs and individual arrest or citation for drug paraphernalia among injection drug users (IDUs) in California from 2001 to 2003. Using data from three annual cross-sections (2001-03) of IDUs attending 24 SEPs in 16 California counties (N=1,578), we found that overall, 14% of IDUs in our sample reported arrest or citation for paraphernalia in the 6 months before the interview. Further analysis found that 17% of IDUs attending a legal SEP (defined at the county level) reported arrest or citation for drug paraphernalia compared to 10% of IDUs attending an illegal SEP ($p=0.001$). In multivariate analysis, the adjusted odds ratio of arrest or citation for drug paraphernalia was 1.6 [95% confidence interval (CI)=1.2, 2.3] for IDUs attending legal SEPs compared to IDUs attending illegal SEPs, after controlling for race/ethnicity, age, homelessness, illegal income, injection of amphetamines, years of injection drug use, frequency of SEP use, and number of needles received at last visit. IDUs attending SEPs with legal status may be more visible to police, and hence, more subject to arrest or citation for paraphernalia. These findings suggest that legislative efforts to decriminalize the operation of SEPs without concurrent decriminalization of syringe possession may result in higher odds of arrest among SEP clients, with potentially deleterious implications for the health and well-being of IDUs. More comprehensive approaches to removing barriers to accessing sterile syringes are needed if our public health goals for reducing new HIV/HCV infections are to be obtained.

KEYWORDS Law enforcement, HIV, Arrests, Injection drug use, Syringe exchange programs, Policy.

Martinez is with the Center for AIDS Prevention Studies, University of California, San Francisco, 50 Beale Street, Suite 1300, San Francisco, CA 94105, USA; Bluthenthal is with the Drug Policy Research Center, RAND, Santa Monica, CA, USA and the Urban Community Research Center, Department of Sociology, California State University Dominguez Hills, Carson, CA, USA; Lorvick is with the Urban Health Program, RTI International, San Francisco, CA, USA; Anderson is with the Sacramento Area Needle Exchange, Sacramento, CA, USA; Flynn is with the Department of Internal Medicine, University of California, Davis, CA, USA; Kral is with the Urban Health Program, RTI International, San Francisco, CA, USA and the Department of Family and Community Medicine, University of California, San Francisco, CA, USA.

Correspondence: Alexis N. Martinez, Center for AIDS Prevention Studies, University of California, San Francisco, 50 Beale Street, Suite 1300, San Francisco, CA 94105, USA. (E-mail:alexis.martinez@ucsf.edu)

INTRODUCTION

The criminalization of drug use in the United States places injection drug users (IDUs) at risk for arrest on a daily basis. As such, IDUs often cycle through the criminal justice system, repeatedly facing arrest and incarceration for nonviolent drug offenses.¹⁻¹⁰ Law enforcement strategies to deter street-based drug use and drug sales may heighten individual risk for HIV, hepatitis C (HCV), and other injection-related infections via direct and indirect mechanisms.^{5,11-14} Specifically, the criminal justice system may influence the spread of infectious diseases through threats to the stability of syringe exchange programs (SEPs), HIV-related risk during incarceration, changes in socioeconomic stability of IDUs relating to arrest, incarceration, and conviction of a drug felony, and displacement of drug markets into new neighborhoods.

Police arrest of SEP volunteers and participants and concentrated arrest activities in areas where SEPs operate can significantly reduce SEP utilization among IDUs.^{15,16} IDUs who do not use SEPs engage in higher levels of syringe sharing¹⁷⁻¹⁹ and are more vulnerable to the street purchase of potentially used syringes or multiple reuse of a single syringe. Incarceration has also been associated with HIV risk as a result of continued drug use without access to sterile syringes and unprotected sex without access to condoms.^{13,14,20,21} Arrest and incarceration may indirectly heighten HIV risk through the disruption of housing, income, employment, and social/sexual networks among IDUs.^{2,12,22,23} Conviction of a drug felony carries with it a disqualification from government assistance in the form of food stamps, housing, general assistance (GA), and temporary assistance to needy families (TANF).²⁴⁻²⁸ Fear of further interaction with law enforcement and the need to earn income through alternative strategies such as street-based sex work may lead to the disruption and reconstitution of new social networks for IDUs and elevate levels of unprotected sex and syringe sharing.^{22,23,29}

Changes at the legislative level have the potential to transform the risk environment of IDUs by decriminalizing aspects of injection drug use that are designed to improve conditions of access to sterile syringes and reduce the likelihood of HIV transmission among injection drug users. The California state legislature passed and the governor signed Assembly Bill 136 (AB 136) in 2000, allowing local governments to authorize the operation of SEPs within their jurisdictions^{30,31}. Under the law, local governments, employees, and authorized contractors that provide exchange services are protected from criminal prosecution if there has been a declaration of a "local emergency due to the existence of a critical local public health crisis."³² The public health emergency must be renewed in each jurisdiction every 14 to 21 days. Although AB 136 authorized the legal operation of SEPs in local jurisdictions to protect volunteers and employees from being arrested, the possession of drug paraphernalia, including syringes, remained illegal for IDUs.

In this paper, we examine whether or not arrest or citation among IDUs, specifically for drug paraphernalia, is associated with the legalization of SEPs at the county level in California. AB 136 permitted local jurisdictions to authorize the operation of SEPs only after a declaration of local emergency, and as a result, we

were able to compare the prevalence of arrest or citation for drug paraphernalia among IDUs in counties with legal SEPs and the prevalence in counties with illegal SEPs.

METHODS

This paper presents analyses on data collected from the California Syringe Exchange Program (CalSEP) study. CalSEP sought to assess the impact of AB 136 on SEP clients, programs, and cost. The CalSEP study sampled clients from 24 SEPs in California in 16 different counties (Alameda, Contra Costa, Fresno, Humboldt, Los Angeles, Marin, Mendocino, Monterey, Sacramento, San Diego, Santa Cruz, Santa Clara, San Francisco, San Mateo, Santa Barbara, and Sonoma) across three annual cross-sections from 2001 to 2003 (Figure 1). Counties ranged in size from a low of 62,500 residents (Mendocino, 2003) to a high of 6,359,500 residents (Los Angeles, 2003).³³ The average number of syringes exchanged at the 24 SEPs in our study ranged from <2,000 per year to more than 1 million for 2001 to 2002. A cross-section of SEP clients was sampled from each of the 24 SEPs annually for 3 years. Each SEP was sampled three separate times. An average of 66 clients (range 43 to 75) were recruited from each of 24 SEPs from 2001 to 2003 ($N=1,578$).

Study participants were eligible for a quantitative interview and HIV test if they reported injecting drugs in the past 30 days. SEP clients were approached by research staff and recruited into the study during the operating hours of each program. Study participants were not randomly recruited into the study due to logistic and program characteristics (e.g., SEPs with a few clients required that every willing client be interviewed). For SEPs that operated more than one site, recruitment of participants was proportional to the number of clients each site served relative to the overall SEP. After eligibility criteria were met and informed consent was given, each participant was interviewed by a trained research interviewer/HIV counselor in a private space.

The standardized interview lasted about 30 min and elicited information about demographics, socioeconomic status, drug use history and practices, history of SEP use, and arrest and incarceration history. Answers were entered by interviewers into a software program (QDS, NOVA Research, Bethesda, MD) on laptop computers. The interviews were conducted using QDS software to help reduce the likelihood of data entry errors by coordinating skip patterns and running consistency and validity checks. After the interview, each participant received HIV risk reduction counseling, an oral HIV test, and referrals for social and medical services as needed. Each participant was paid US\$10 for participating in the study. HIV test results and follow-up counseling were scheduled for 1 to 2 weeks later. Study methods were approved by the Committees on Human Research at RAND, University of California, San Francisco, and University of California, Davis.

During the study period, additional data was collected from each of the 24 SEPs and 16 counties represented in the sample. Study personnel conducted semi-structured, open-ended interviews with the Executive Director of each SEP annually for 3 years. Information gathered from these interviews was organized into discrete

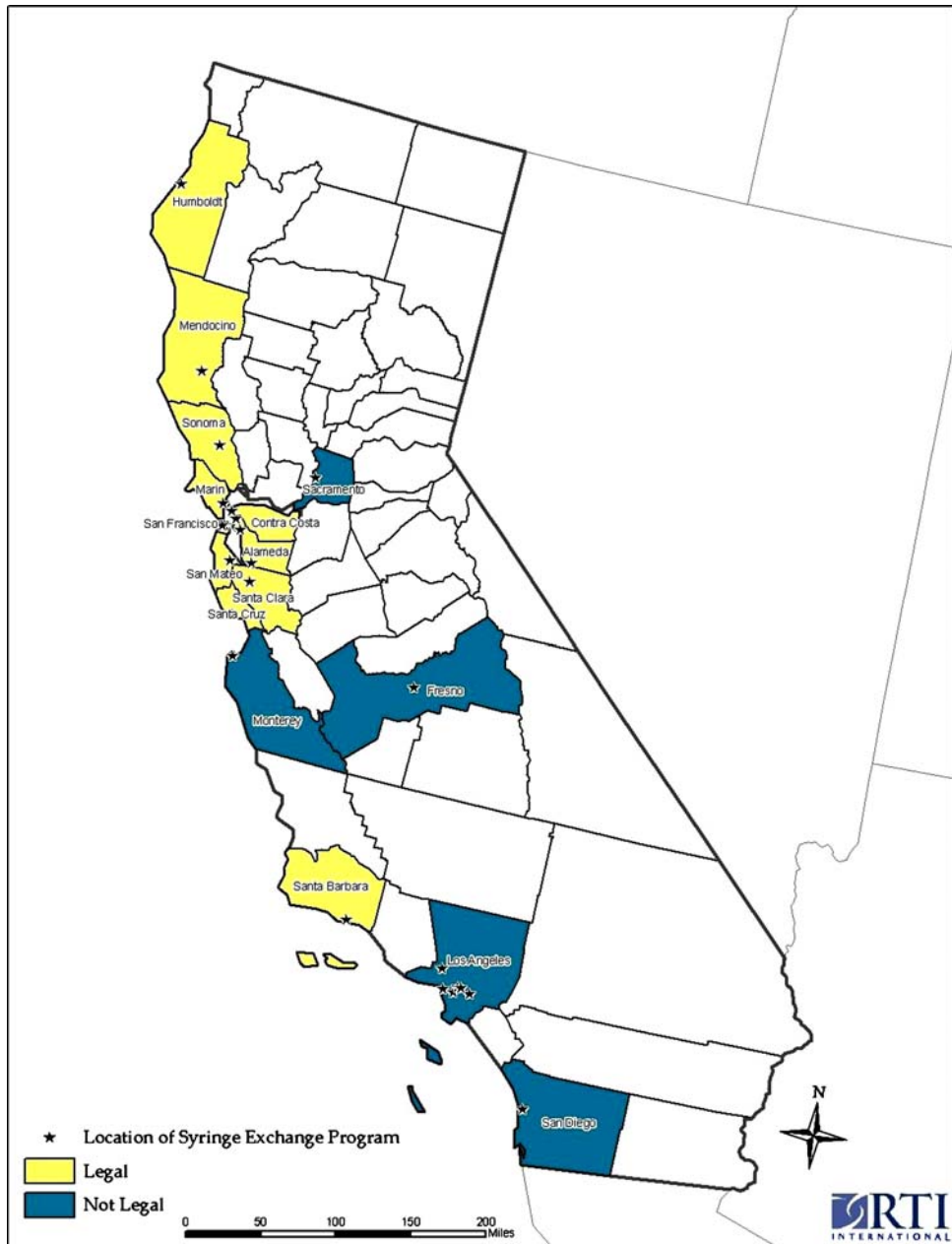


FIGURE 1. California syringe exchange programs by county and AB 136 legal status.

variables that include history of police harassment of the program, syringe dispensation policy, and type of syringe delivery system (fixed site vs. delivery). The history of police harassment variable measured whether the program observed or experienced police contact related to operation of the SEP, IDUs using the SEP or police presence near SEP sites.

Secondary data on the 16 counties included in the sample was gathered from the California Department of Justice (DOJ). This data included (1) the rate of felony drug arrests per 100,000 adults in each county, (2) the rate of misdemeanor arrests for “other drugs” per 100,000 adults in each county, and (3) the number of sworn law enforcement officers per 100,000 adults in each county. For each of these county-level measures, the population represented in the denominator is defined by the DOJ as the number of “at-risk” 18- to 69-year-old adults or those who were not incarcerated, living in each county for each of the years of the study period (2001–2003). The California DOJ defines felony drug arrests as “arrests for drug offenses including narcotics, marijuana, dangerous drugs, and other drug offenses.” Misdemeanor arrests for “other drugs” represents a category separate from marijuana and refers to “other drug offenses such as possession of paraphernalia.”³³

Statistical Analysis

This paper analyzes the association between SEP legal status (defined at the county level) and self-reported individual arrest or citation for drug paraphernalia in the 6 months before being interviewed. Although individual study participants may have potentially used more than one SEP during the 6 months before the interview, it is unlikely that use of multiple SEPs would have occurred in two separate counties that differ by authorization of AB 136. Descriptive statistics are presented using individual-level data elicited from interviews with IDUs, SEP-level data from interviews with Executive Directors, and county-level data from the California DOJ. Four individual-level measures of arrest or police contact (all with 6 months time-frame) are compared by legal status of SEP programs using the chi-square test of association. These measures include: (1) overall arrest, (2) arrest or citation for drug paraphernalia, (3) arrest to/from SEP, and (4) confiscation of drug paraphernalia without arrest or citation. All subsequent bivariate and multivariate analyses focus solely on the measure of arrest or citation for drug paraphernalia.

Bivariate statistics were performed to identify any individual-level variables that may potentially confound the association between SEP legal status and the main outcome. The individual-level variables examined for confounding include theoretically and empirically relevant factors that may have been associated with the SEP legal status and/or being arrested or cited for drug paraphernalia. The potential confounding variables include individual socio-demographics (age, race/ethnicity, housing status, sources of income, trading sex for cash or drugs, frequency and history of drug use, frequency of SEP use).

Variables at the SEP level and the county level were also assessed as potential confounders to explanatory variables and main outcome using both theoretical and empirical evidence. For example, we hypothesized that drug enforcement strategies at the county level may also contribute to differences in individual arrests. Likewise, operational characteristics of SEPs, such as distribution policy and history of police harassment, may also contribute to differences in individual arrests. For the county level variables, median rates of drug arrests for the entire study period (2001–2003) were calculated for the purposes of making county comparisons with a single measure. The Mann–Whitney Rank-Sum test was used to compare the number of sworn law enforcement officers, rate of misdemeanor drug arrests, and rate of felony drug arrests to determine if a statistically significant difference exists among counties that implemented AB 136 and those that did not. Likewise, chi-square tests of association were used to compare selected operational characteristics of SEPs

including history of police harassment of the program, syringe dispensation policy, and type of syringe delivery system (fixed site vs. delivery).

Variables determined to be statistically significantly associated with both legal status and arrest at the $p < 0.10$ level in bivariate analysis were entered as potential confounders in a multivariate logistic regression model. Arrest or citation for drug paraphernalia was the outcome, and the main explanatory variable was legal status of SEPs. The final model included all individual-level variables that remained significant at the $p < 0.05$ level.

RESULTS

Of the 16 counties represented by the sample, 11 had legalized the operation of SEPs by enacting AB 136 (Santa Barbara, Contra Costa, Marin, Alameda, San Francisco, Humboldt, Mendocino, Santa Clara, San Mateo, Sonoma, Santa Cruz) before the onset of the study in 2001. Fifty-nine percent ($N=935$) of the study sample was recruited from these 11 counties. The remaining 41% ($N=643$) of the sample was recruited from SEPs that operate illegally in the five counties that did not enact AB 136 (Sacramento, San Diego, Fresno, Los Angeles, Monterey) during the study period (Figure 1).

SEP Client Demographics

The majority of the sample was male (69%), and more than half of the participants identified “White” as their primary race (53%). Twenty percent of the sample identified as “Black” and 20% identified as “Latino/a.” The remaining 7% identified as “Native American” (4%), “Asian/Pacific Islander” (0.5%), or “Other race/ethnicity” (2.5%). Fifteen percent of the sample was under 30 years of age, and the majority (74%) had been injecting drugs for at least 10 years. Socioeconomically, the sample was predominately poor and unstably housed. Forty-seven percent identified as homeless. Although 43% reported income from a job in the past 6 months, whether full-time, part-time, or one-time, 63% of the sample reported an income of less than US\$1,000 per month. Furthermore, 25% of the sample received some form of welfare assistance (GA, TANF, food stamps), and 35% reported a source of illegal income in the past 6 months.

Arrest and SEP Legal Status

Twenty-eight percent of IDUs in our sample reported at least one arrest, drug-related or not, during the 6 months before the interview. Fourteen percent reported being arrested or cited specifically for the possession of drug paraphernalia in the past 6 months. Of these arrests or citations for drug paraphernalia, 19% were

TABLE 1 Prevalence of interaction with law enforcement in the past 6 months among IDUs by legal status of SEP ($N=1,578$)

Variable	Legal SEP (%) ($n=935$)	Illegal SEP (%) ($n=643$)	<i>p</i> value
Arrests (all)	32	21	0.001
Arrests or citations for drug paraphernalia	17	10	0.001
Arrests en route to/from SEP	3.6	1.4	0.01
Confiscation of drug paraphernalia without arrest	12.7	7.6	0.001

reportedly en route to or from a SEP. Finally, 11% of IDUs in our sample reported being stopped by police and having their drug paraphernalia confiscated without being arrested or cited.

Arrest or citation was more common among IDUs who used legal SEPs than those who used illegal SEPs (Table 1). For all four measures, the odds of arrest or police contact were higher for clients of legal SEPs compared to clients of illegal SEPs (Table 1), including arrest or citation for drug paraphernalia. Additional characteristics at the individual level that were significantly associated with arrest or citation for possession of drug paraphernalia include race/ethnicity (African American and Latino), being 30 years of age or younger, homelessness, source of illegal income, injection of amphetamines in the past 30 days, injection of drugs for more than 10 years, frequency of SEP use in the past 6 months, and number of needles received at last visit to an SEP (Table 2). In addition, it is worthwhile to note that there was no significant difference in arrest for drug paraphernalia by gender.

Urban location, history of police harassment of the program, syringe dispensation policy, and type of syringe delivery system (fixed site vs. delivery) did not confound the relationship between SEP legal status and arrest or citation for drug paraphernalia (Table 3). Furthermore, we assessed whether drug enforcement strategies implemented by police departments confounded our main analysis. There were no statistically significant differences observed between the rates of felony drug arrests, rates of misdemeanor arrests for “other drugs,” or rates of sworn law enforcement officers between counties with legal SEPs and illegal SEPs (Table 4).

To further assess the relationship between SEP legal status and arrest or citation for drug paraphernalia, we conducted a multivariate analysis that included all significant individual level variables identified as possible confounding variables in bivariate analysis. The adjusted odds of being arrested or cited for drug paraphernalia among study participants attending an SEP with legal status was 1.6 times the odds of being arrested or cited among those attending an SEP with illegal status (95% confidence interval=1.2, 2.3), once we controlled for potential confounding variables (Table 5).

DISCUSSION

We found that the odds of being arrested or cited for drug paraphernalia in a 6-month period were significantly higher for clients of legal SEPs when compared to clients of illegal SEPs. Although both illegal and legal SEPs operate in neighborhoods with heavy drug use and drug sales, policing strategies may be heavily concentrated around the known presence of a legal SEP. Illegal SEPs may operate in more hidden venues or use program methods, such as syringe exchange delivery and satellite exchange models to reduce or eliminate exposure to law enforcement.³⁴

The notion of “visibility” is also meaningful to the interpretation of our findings. Whether or not IDUs stand out in a community may contribute to their likelihood of arrest. The decriminalization of SEPs in selected California counties may have heightened the visibility of legal SEPs, and consequently, the visibility of IDUs who use them. The counties or city governments that authorized AB 136 may have done so in response to the status and severity of drug use and HIV/AIDS epidemics occurring in a specific locale.

TABLE 2 Individual characteristics and arrests for drug paraphernalia (N=1,578)

Characteristic	Percent arrested (%)	<i>p</i> value
Biological Sex		
Male	14	
Female	14	0.8
Race		
White	16	Ref
African American	11	0.03
Latino	10	0.02
Other	16	0.9
Age		
Under 30 years	23	0.001
Over 30 years	12	
Homeless		
Yes	19	0.001
No	9	
Traded sex for cash or drugs in past 6 months		
Yes	15	0.7
No	14	
Illegal Income in past 30 days		
Yes	19	0.001
No	11	
Injection of heroin in past 30 days		
Yes	14	0.2
No	11	
Injection of amphetamines in past 30 days		
Yes	18	0.001
No	11	
Years of injection drug use		
Less than 10	18	
10 or more	12	0.003
Number of times to SEP in the past 6 months		
0–6	9	Ref
7–20	15	0.01
21–49	15	0.004
50+	30	0.001
Mean number of needles received in last visit		
<10	16	Ref
10–29	16	0.06
30–99	13	0.2
100+	18	0.02
Mean number of injections in past 30 days		
<30	15	Ref
30–89	12	0.5
90+	15	0.5

TABLE 3 SEP characteristics by SEP legal status (N=24)

Characteristic	Legal SEPs (%) N=14	Illegal SEPs (%) N=10	<i>p</i> value
Fixed site	100	80	0.16
Delivery	7	20	0.37
Unlimited needle distribution	14	20	0.56
Police/client harassment	57	50	0.53
Urban location	86	100	0.30

The continued arrest of IDUs for possession of syringes quite possibly undermines the effectiveness of this policy change. Our findings suggest that the legalization of SEPs without the legalization of syringe possession may have contributed to the observed difference in arrests and citations for drug paraphernalia among IDUs, with potential implications for greater HIV/HCV risk. It is important to consider how legislation directed at decriminalizing elements of drug use may also heighten the visibility of a previously “hidden” population. Intensified policing in disadvantaged neighborhoods may coincide with locations of SEPs, especially those with legal status, and thereby, produce heightened surveillance for the IDUs that use them. Further inquiry might assess the overall net effect of such legislation in stabilizing access to sterile syringes and increasing the number of sterile syringes in a community, despite involvement in the criminal justice system for IDUs. It is worth noting that at least one study has found that where SEPs, pharmacy sales, and syringe possession are legal, IDUs reported significantly lower police contact related to drug paraphernalia laws as compared to areas where SEPs were legal and syringe possession remained illegal.³⁵

California’s recently enacted Senate Bill 1159 contains a decriminalization clause that allows individuals to carry up to 10 syringes legally (with proof of receipt from an “authorized” source), in counties that authorize the bill. The cap of 10 syringes is meant to coincide with the cap imposed on pharmacies as the legal limit of syringes that can be sold at one time without a prescription. However, several SEPs provide well above the 10 syringes that IDUs may legally carry.

Based on our data of reported number of syringes received at the most recent SEP visit, 65% of clients in our sample were given more than 10 syringes and would therefore remain subject to arrest for drug paraphernalia after leaving an SEP despite enactment of SB 1159. Thus, legalizing the possession of 10 syringes might inhibit the acquisition of sufficient syringes to reduce injection-related HIV risk. In addition, in counties that do not opt to authorize SB 1159, IDUs will continue to be

TABLE 4 Selected county characteristics by SEP legal status, 2001–2003 (N=16)

Characteristic	Median		<i>p</i> value
	Legal N=11	Illegal N=5	
Sworn law enforcement officers per 100,000 adults	249.1	276.2	0.28
Felony drug-related arrests per 100,000 adults	420.9	530.7	0.46
Misdemeanor drug-related arrests per 100,000 adults	290.8	291.4	0.53

TABLE 5 Multivariate model of relationship between SEP legal status and arrest or citation for drug paraphernalia, among injection drug users (N=1,578)

Characteristic	Arrest for drug paraphernalia
Legal status	1.6 (1.2, 2.3)
Adjusted for	
Race/ethnicity	NS
Under 30 years	1.5 (1.10, 2.2)
Homeless	1.9 (1.4, 2.6)
Illegal income	1.6 (1.2, 2.1)
Injection of methamphetamines in the past 30 days	1.5 (1.1, 2.0)
Frequency of SEP use in past the 6 months	NS
Needles received at last SEP visit	NS

subject to arrest for the possession of any number of syringes. Since the passage of SB 1159 in 2004, 14 out of 58 California counties have legalized pharmacy sales, and thereby, decriminalized possession of up to 10 syringes.³⁶

Our findings suggest that arrests for drug paraphernalia detract from the efforts at the legislative level to provide IDUs with sterile syringes and may do harm to drug users by increasing the odds of their involvement in the criminal justice system. Our unanticipated findings compound the need to recognize the transformation of policy as subject to the interplay of local factors that facilitate or inhibit the process by which laws “on the books” become implemented on the street.³⁷ Local or regional law enforcement strategies aimed at curbing the trafficking and use of illicit drugs, and socioeconomic and spatial characteristics of neighborhoods may significantly impact the successful implementation of legislation aimed at decriminalizing HIV prevention for IDUs.^{19,38} It is important to address how local issues such as the behavior of community police officers, county-wide law enforcement practices, and neighborhood conditions, may interact and vary according to the social, political, and economic structure of each locale.

Changes to the law as written may have little impact on the behavior of individual police officers, and therefore, mandates the need for further research and intervention with law enforcement given their powerful role in either facilitating or inhibiting the success of drug-related policies. Several reports have documented significant declines in SEP use after police crackdowns or heightened street-level police intervention.^{8,16} Previous research on a police crackdown in one New York City precinct found that IDUs often associated the experience of physical, psychological, and sexual abuse with crackdown tactics and perceived prejudice by individual officers.³⁹ It is important to work with police departments to shift norms and practices of dealing with IDUs and educate officers to recent changes in laws relating to the operation of SEPs and possession of drug paraphernalia. Furthermore, it is imperative that individuals who are most likely to benefit from these policy changes are aware of their legal rights, such as the legal limit of carrying up to 10 syringes that have been purchased from an authorized source.

Several limitations need to be considered when interpreting these data. With the exception of the implementation of AB 136 and the county-level arrest data, all of our data is self-reported. Previous studies have found that there is high reliability of self-reported data among IDUs interviewed in nonclinical settings.^{40,41} The social desirability of responses may result in an underestimation of reported arrest or citation for drug paraphernalia for all study participants, though it is unclear

whether any reporting bias differs by SEP location. In addition, our sampling frame did not randomly sample clients of SEPs, and thus, our findings are not generalizable to all IDUs or clients of SEPs in other states. The data presented in these analyses are cross-sectional and do not allow us to determine causality between use of a legal or illegal SEP and arrest or citation for paraphernalia in a 6-month time period. It is plausible that arrests or citations among clients of legal SEPs were significantly higher than arrests or citations among drug paraphernalia among clients of illegal SEPs before the enactment of AB 136. Changes in drug-related arrests around SEPs after the implementation of AB 136 could not be assessed in this study; however, we did not observe a significant change in arrests or citations for drug-paraphernalia from 1 year to another during the study period, 2001 to 2003.

The analyses presented in this paper demonstrate an association between legal SEPs and arrest or citation for drug paraphernalia in a cross-section of IDUs in 16 California counties, after adjusting for all potential confounding variables. In summary, we observed that clients of legal SEPs continue to get arrested for possessing drug paraphernalia. Lessons to be learned from passage of this significant legislation is how to facilitate its successful implementation without harm to the individuals most likely to benefit and to serve as guide to the passage of similar legislation in states considering the legalization of SEPs and/or other drug-related legislation. Recognition of the multiple levels involved in the process may result in a reduction of arrests for drug paraphernalia and protect the health and well-being of IDUs. A comprehensive approach to the implementation of new drug policy, and its evaluation, is needed for the successful removal of barriers to using sterile syringes and reducing the number of new HIV/HCV infections among IDUs.

ACKNOWLEDGEMENT

The authors would like to thank the Centers for Disease Control and Prevention for funding the California Syringe Exchange Program Study (Grant# R06/CCR918667) and the National Institute of Drug Abuse (Grant #DA14210). We also thank project coordinators Mary-Lou Gilbert and Andrea Scott, the syringe exchange programs and their clients that participated in this study.

REFERENCES

1. Macalino GE, Hou JC, Kumar MS, Taylor LE, Sumantera IG, Rich JD. Hepatitis C infection and incarcerated populations. *Int J Drug Policy*. 2004;15(2):103–114, 2004/4.
2. Curry AD, Latkin CA. Gender differences in street economy and social network correlates of arrest among heroin injectors in Baltimore, Maryland. *J Urban Health*. 2003;80(3):482–493, Sep.
3. Rotily M, Delorme C, Galinier A, Escaffre N, Moatti JP. HIV risk behavior in prison and factors related to reincarceration among injecting drug users. *Presse Med*. 2000;29(28):1549–1556, Sep 30.
4. Clear TR, Rose DR, Ryder JA. Incarceration and the community: The problem of removing and returning offenders. *Crime Delinq*. 2001;47(3):335–351, Jul.
5. Estebanez P, Zunzunegui MV, Aguilar MD, Russell N, Cifuentes I, Hankins C. The role of prisons in the HIV epidemic among female injecting drug users. *Aids Care—Psychological and Socio-Medical Aspects of Aids/Hiv*. 2002;14(1):95–104, Feb.

6. Strathdee SA, Patrick DM, Archibald CP, et al. Social determinants predict needle-sharing behaviour among injection drug users in Vancouver, Canada. *Addiction*. 1997;92(10):1339–1347.
7. McClelland GM, Teplin LA, Abram KM, Jacobs N. HIV and AIDS risk behaviors among female jail detainees: implications for public health policy. *Am J Public Health*. 2002;92(5):818–825, May.
8. Wood E, Kerr T, Small W, Jones J, Schechter MT, Tyndall MW. The impact of a police presence on access to needle exchange programs. *J Acquir Immune Defic Syndr*. 2003;34(1):116–118, Sep 1.
9. Wood E, Spittal PM, Small W, et al. Displacement of Canada's largest public illicit drug market in response to a police crackdown. *Can Med Assoc J*. 2004;170(10):1551–1556, May 11.
10. Wood E, Tyndall MW, Spittal P, et al. Impact of supply-side policies for control of illicit drugs in the face of the AIDS and overdose epidemics: investigation of a massive heroin seizure. *Can Med Assoc J*. 2003;168:165–169.
11. Case P, Meehan T, Jones TS. Arrests and incarceration of injection drug users for syringe possession in Massachusetts: implications for HIV prevention. *J Acquir Immune Defic Syndr Human Retrovirol*. 1998;18:S71–S75, Jul.
12. Galea S, Vlahov D. Social determinants and the health of drug users: socioeconomic status, homelessness, and incarceration. *Public Health Rep*. 2002;117(3):S135–S145.
13. Choopanya K, Des Jarlais DC, Vanichseni S, et al. Incarceration and risk for HIV infection among injection drug users in Bangkok. *J Acquir Immune Defic Syndr*. 2002; 29(1):86–94, Jan 1.
14. Beyrer C, Jittiwutikarn J, Teokul W, et al. Drug use, increasing incarceration rates, and prison-associated HIV risks in Thailand. *AIDS Behav*. 2003;7(2):153–161, Jun.
15. Bluthenthal RN, Kral AH, Lorvick J, Watters JK. Impact of law enforcement on syringe exchange programs: a look at Oakland and San Francisco. *Med Anthropol*. 1997; 18(1):61–83, Dec.
16. Davis CG, Burris S, Kraut-Becher J, Lynch KG, Metzger DS. Effects of an intensive street-level police intervention on syringe exchange program use in Philadelphia, Pa. *Am J Public Health*. 2005;95:233–236, February.
17. Bluthenthal RN, Lorvick J, Kral AH, Erringer EA, Kahn JG. Collateral damage in the war on drugs: HIV risk behaviors among injection drug users. *Int J Drug Policy*. 1999; 10:25–38.
18. Bluthenthal RN, Kral AH, Erringer EA, Edlin BR. Drug paraphernalia laws and injection-related infectious disease risk among drug injectors. *J Drug Issues*. 1999; 29(1):1–16, Win.
19. Grund JPC, Heckathorn DD, Broadhead RS, Anthony DL. In Eastern Connecticut, Idus purchase syringes from pharmacies but don't carry syringes. *J Acquir Immune Defic Syndr Human Retrovirol*. 1995;10(1):104–105, Sep 1.
20. Buavirat A, Sacks R, Chiamwongpaet S. HIV risk behaviors during incarceration among intravenous-drug users in Bangkok, Thailand: A qualitative approach. *AIDS Public Policy J*. 2002;17(3):77–89, Fal.
21. Hammett TM, Harmon P, Rhodes W. The burden of infectious disease among inmates of and releases from US correctional facilities, 1997. *Am J Public Health*. 2002;92(11): 1789–1794, Nov.
22. Friedman SR, Kottiri BJ, Neaigus A, Curtis R, Vermund SH, Des Jarlais DC. Network-related mechanisms may help explain long-term HIV-1 seroprevalence levels that remain high but do not approach population-group saturation. *Am J Epidemiol*. 2000;152:913–922.
23. Rhodes T, Mikhailova L, Sarang A, et al. Situational factors influencing drug injecting, risk reduction and syringe exchange in Togliatti City, Russian Federation: A qualitative study of micro risk environment. *Soc Sci Med*. 2003;57(1):39–54, Jul.
24. Levi R, Appel J. *Collateral Consequences: Denial Of Basic Social Services Based Upon Drug Use*. San Francisco: Drug Policy Alliance; 2003, June.

25. Davies S, Tanner J. The long arm of the law: Effects of labeling on employment. *Sociol Q.* 2003;44(3):385–404, Sum.
26. Nagin D, Waldfoegel J. The effect of conviction on income through the life cycle. *Int Rev Law Econ.* 1998;18(1):25–40, Mar.
27. Bushway SD. The impact of an arrest on the job stability of young white American men. *J Res Crime Delinq.* 1998;35(4):454–479, Nov.
28. Kerley KR, Copes H. The effects of criminal justice contact on employment stability for white-collar and street-level offenders. *Int J Offender Ther Comp Criminol* 2004;48(1): 65–84, Feb.
29. Blankenship KM, Koester S. Criminal law, policing policy, and HIV risk in female street sex workers and injection drug users. *J Law Med Ethics.* 2002;30(4):548–559, Win.
30. *Needle Exchange Authorization Law in California*; 2000.
31. Bluthenthal RN, Heinzerling K, Anderson R, Flynn N, Kral AH. *Legalization of Syringe Exchange Programs in California: Mixed Results From a Local Approach to HIV Prevention.* Am J Public Health. 2005 (in press).
32. Collins C, Summers T. *Syringe Exchange and AB 136: The Dynamics of Local Consideration in Six California Communities.* Menlo Park: The Henry J. Kaiser Family Foundation; 2002.
33. Prashad U, Collins B, et al. Crime in California. *Criminal Justice Statistics Center Report Series.* Sacramento, California Department of Justice, Bureau of Criminal Information and Analysis; 2003:1–7.
34. Anderson RL, Clancy L, Flynn N, Kral AH, Bluthenthal RN. Delivering syringe exchange services through “Satellite Exchangers”: Sacramento area needle exchange, USA. *Int J Drug Policy.* 2003;14:461–463.
35. Bluthenthal RN, Malik MR, Grau LE, Singer M, Marshall P, Heimer R. Sterile syringe access conditions and variations in HIV risk among drug injectors in three cities. *Addiction.* 2004;99(9):1136–1146, Sep.
36. Backes G. Counties authorizing SB1159. In: Martinez AN, ed. *Drug Policy Alliance*; 2005.
37. Burris S, Blankenship KM, Donoghoe M, et al. Addressing the “risk environment” for injection drug users: the mysterious case of the missing cop. *Milbank Q.* 2004;82(1): 125–156.
38. Beletsky L, Macalino GE, Burris S. Attitudes of police officers towards syringe access, occupational needle-sticks, and drug use: a qualitative study of one city police department in the United States. *Int J Drug Policy.* 2005;16(4):267–274, Aug.
39. Cooper H, Moore L, Gruskin S, Krieger N. Characterizing perceived police violence: implications for public health. *Am J Public Health.* 2004;94(7):1109–1118, Jul.
40. Weatherby N, Needle RH, Cesari H. Validity of self-reported drug use among injection drug users recruited through street outreach. *Eval Plann.* 1994;17:347–355.
41. Watters JK, Needle R, Brown BS, Weatherby N, Booth R, Williams M. The self-reporting of cocaine use. *JAMA.* 1992;268(17):2375–2376, November 4.