Published in final edited form as:

Int J Drug Policy. 2010 November ; 21(6): 459–465. doi:10.1016/j.drugpo.2010.06.006.

Managing *la malilla*: Exploring drug treatment experiences among injection drug users in Tijuana, Mexico, and their implications for drug law reform

Jennifer Syvertsen^{a,b}, Robin A. Pollini^{b,*}, Remedios Lozada^c, Alicia Vera^b, Gudelia Rangel^{b,d}, and Steffanie A. Strathdee^b

^aDepartment of Anthropology, University of South Florida, United States

^bDivision of Global Public Health, Department of Medicine, University of California San Diego, United States

^cPro-COMUSIDA, Tijuana, Mexico

^dUniversidad Autonoma de Baja California, Campus Tijuana, and El Colegio de la Frontera del Norte, Tijuana, Mexico

Abstract

Background—In August 2009, Mexico reformed its drug laws and decriminalized small quantities of drugs for personal use; offenders caught three times will be mandated to enter drug treatment. However, little is known about the quality or effectiveness of drug treatment programs in Mexico. We examined injection drug users' (IDUs) experiences in drug treatment in Tijuana, Mexico, with the goal of informing program planning and policy.

Methods—We examined qualitative and quantitative data from *Proyecto El Cuete*, a multi-phased research study on HIV risk among IDUs in Tijuana. Phase I consisted of 20 in-depth interviews and Phase II employed respondent-driven sampling to recruit 222 IDUs for a quantitative survey. We also reviewed national drug policy documents, surveillance data, and media reports to situate drug users' experiences within the broader sociopolitical context.

Results—Participants in the qualitative study were 50% male with a mean age of 32; most injected heroin (85.0%) and methamphetamine (60.0%). The quantitative sample was 91.4% male with a mean age of 35; 98.2% injected heroin and 83.7% injected heroin and methamphetamine together. The majority of participants reported receiving treatment: residential treatment was most common, followed by methadone; other types of services were infrequently reported. Participants' perceptions of program acceptability and effectiveness were mixed. Mistreatment emerged as a theme in the qualitative interviews and was reported by 21.6% of Phase II participants, primarily physical (72.0%) and verbal (52.0%) abuse.

Conclusions—Our results point to the need for political, economic, and social investment in the drug treatment system before offenders are sentenced to treatment under the revised national drug law. Resources are needed to strengthen program quality and ensure accountability. The public

© 2010 Elsevier B.V. All rights reserved.

*Corresponding author at: Division of Global Public Health, Department of Medicine, University of California San Diego, Department of Medicine, 9500 Gilman Drive, MC 0507, La Jolla, CA 92093-0507, United States. Tel.: +1 858 534 0710; fax: +1 858 534 7566. rpollini@ucsd.edu (R.A. Pollini).

Conflict of interest

None

health impact of the new legislation that attempts to bring drug treatment to the forefront of national drug policy should be systematically evaluated.

Keywords

Drug treatment; Drug law reform; Mexico

Introduction

The border cities of Northern Mexico serve as important transit routes for illegal drugs bound for the United States, but drug use is also on the rise within Mexico (Brouwer et al., 2006; Instituto Nacional de Salud Pública, 2008; National Drug Intelligence Center, 2009). Between 2002 and 2007, the population aged 12–65 reporting illegal drug use rose from 4.6% to 5.2%, and rates were notably higher along the northern border (Instituto Nacional de Salud Pública, 2008). Tijuana, a city of over 1.4 million residents just south of San Diego, California (INEGI, 2005), has the highest rate of drug consumption in Mexico, as nearly 20% of the population reports lifetime use (Hernández Ávila, Rangel Gómez, & Ruiz y Ávila, 2008). Tijuana also has one of the fastest growing populations of injection drug users (IDUs) in Mexico, with approximately 10,000 IDUs residing in the city (Magis-Rodriguez et al., 2005; Magis-Rodriguez, Marques, & Touze, 2002), and among the highest HIV rates in Mexico, as an estimated one of every 116 adults ages 15–49 may be HIV positive (Iniguez-Stevens et al., 2009). After men who have sex with men (MSM), much of the HIV epidemic is driven by injection drug use (Iniguez-Stevens et al., 2009; Magis-Rodriguez, Bravo Garcia, Gayet Serrano, Rivera Reyes, & De Luca, 2008). Few studies, however, have evaluated the drug treatment system in Tijuana or its role in addressing this growing health crisis (Bucardo et al., 2005). Recent changes in national drug legislation underscore the urgency to examine drug treatment as a public health centred alternative to incarceration.

In August 2009, Mexico passed comprehensive drug reform legislation that brings drug treatment to the forefront of national policy and discussion. The modifications to the drug law decriminalize possession of small quantities of drugs; it is now legal, for example, to carry up to 50 mg of heroin, 500 mg of cocaine, and 5 g of cannabis for personal consumption. The law specifies that persons apprehended for possessing sub-threshold amounts of these drugs will be released with a police record noting that they received ‘no penal action’ and they may be given treatment referrals. Upon the third offence, they will be required to enter drug treatment. Although it is federal law, individual states are responsible for its enactment and treatment provision at the local level. Federal and state authorities have until August 2010 to make adjustments to the legislation, and will be required to have the necessary drug treatment infrastructure in place by August 2012 (NOM-028, 2009).

This paper examines the drug treatment system in Tijuana to identify potential issues of program quality and effectiveness that should be addressed under this new law. We first provide an overview of Mexican drug treatment policy and treatment surveillance data to set the context, and then draw on qualitative and quantitative data to examine drug treatment experiences from the perspective of IDUs in *El Cuete*, a study of HIV risk in Tijuana. The *El Cuete* data presented here were collected in 2004 and 2005, prior to the passage of the new legislation, and thus provide important insight into the state of drug treatment leading up to this historical shift in policy. The goal of this paper is to construct a contextualized understanding of drug treatment in Tijuana that can inform the implementation of a revised national drug policy designed to reduce the harms associated with drug use and offer an alternative to the routine incarceration of drug offenders.

Methods

We consulted multiple data sources, which allowed us to alternate between different materials in an iterative process of discovering and confirming themes. We examined policy documents to assess changes to the law, and surveillance data to assess government regulation of treatment programs, types of programs that are currently available, and patient characteristics. We also examined qualitative and quantitative data from an ongoing study of IDUs, a socially marginalized population often subject to repeated arrest (Pollini et al., 2008; Strathdee et al., 2008), to explore how treatment programs are experienced by those likely to be impacted by the legislative changes. Qualitative research can provide rich insight into drug users' lived experiences and inform the development of quantitative surveys (Nichter, Quintero, Nichter, Mock, & Shakib, 2004). By triangulating multiple data sources, we were able to build a more complete understanding of drug treatment that situates IDUs' personal experiences within a larger and rapidly shifting sociopolitical context.

Policy review

We reviewed the text of the revised drug legislation and assessed epidemiologic data on drug treatment from the federal drug agency, the National Council against Addictions (*CONADIC* in Spanish). We then examined state level data from Baja California, where Tijuana is located, including treatment admissions and treatment program accreditation data from the Secretary of Health of Baja California and the Psychiatric Institute of the State of Baja California. We searched online news sources from 2004 to present for stories about drug treatment to corroborate our evidence and further investigate themes.

Qualitative procedures: El Cuete Phase I

In 2004, we used targeted sampling methods (Watters & Biernacki, 1989) to recruit 20 IDUs in Tijuana for interviewer administered semi-structured interviews. The survey collected information on socio-demographics, drug use, treatment history, and HIV risk behaviours. Drug treatment questions included "tell me about the last time you or someone you knew entered a treatment program," and probes about program types, availability, and costs. We also asked about knowledge, availability, and cost of methadone treatment. Interviews lasted approximately one hour and were tape recorded, transcribed verbatim, and translated into English for analysis. Participants were compensated \$20.

Quantitative procedures: El Cuete Phase II

In 2005, we recruited 222 IDUs in Tijuana for a cross-sectional study of HIV prevalence and risk behaviours using respondent-driven sampling (RDS) (Heckathorn, 1997), as described elsewhere (Frost et al., 2006). Eligibility criteria were restricted to individuals 18 years or older who injected illicit drugs within the past month. The survey lasted approximately one hour and participants received \$10 for the interview and \$5 per eligible recruit. Respondents were asked about their health knowledge and behaviour, drug use, sexual practices, and HIV risk behaviours. Questions about drug treatment included lifetime treatment experiences and type of programs accessed. Because mistreatment emerged as a theme in our initial interviews, we included questions about mistreatment in this interview.

Data analysis

The authors reviewed the policy documents and epidemiologic reports to identify key changes in the law, outline governmental oversight of treatment, and summarize key characteristics of facilities and patient admissions. For the qualitative portion of the study, the first author read through all of the transcripts to identify and summarize emergent themes. Transcripts were loaded into Atlas.ti (ATLAS.ti, 2007) to code for themes

inductively (identifying salient themes arising from the text) and deductively (based on predetermined categories according to our treatment questions). We compiled a codebook and selected quotes that illustrated each theme. The quantitative analysis focused on drug treatment questions from the Phase II survey; we ran the sample socio-demographic and treatment characteristics with SAS, version 9.2 (SAS, 2009).

Results

Drug treatment in Mexico

Drug treatment policy in Mexico operates at federal, state, and municipal levels. Since 2000, all institutions offering drug treatment have been subject to the National Policy for the Prevention, Treatment, and Control of Addictions, which was updated in 2009 (*NOM-028-SSA2-2009*, or *NOM-028*, from here forward). *NOM-028* classifies the available treatment modalities in Mexico as outpatient or residential, each of which may offer professional medical care, “ayuda mutua” (mutual assistance), mixed models, or alternative methods of treatment (*NOM-028*, 2009). The professional (medical) model is managed by health professionals and includes emergency care and hospitalization. Ayuda mutua programs provide peer support based on the 12-step model of recovery and do not offer professional care services. The mixed model combines professional and ayuda mutua treatment in settings such as therapeutic communities and halfway houses, and alternative models provide complementary or alternative methods of treatment (*NOM-028*, 2009).

Drug treatment program accreditation in Mexico is tied to compliance with *NOM-028*; programs that meet at least 80% of the minimum criteria for standards of care are accredited and entitled to receive at least partial government funding. *NOM-028* outlines the standards required of each treatment modality and also outlines patients’ rights. Accreditation and enforcement is charged to the respective state governments in which they are located. In Baja California, the Psychiatric Institute of the State of Baja California oversees the training, monitoring, and evaluation of drug rehabilitation in the state. In 2002, the Interdisciplinary Commission of Rehabilitation Centers (*CICER* in Spanish) was formed to enforce standards and manage financial assistance for rehabilitation institutions, improve the quality of services, and strengthen coordination between government and social sectors (Instituto de Psiquiatria del Estado de Baja California, n.d.).

State government data indicate that Tijuana has 63 registered drug rehabilitation facilities with a 3255 bed capacity. Of these, there are 57 residential ayuda mutua facilities, three professional programs, two mixed programs, and one methadone clinic (Secretaria de Salud de Baja California, 2009). Average compliance with *NOM-028* varied by modality, from over 90% among mixed and professional models to 71% among ayuda mutua programs. The methadone clinic was not included in the compliance statistics (Secretaria de Salud de Baja California, 2009). The majority of admissions in 2008 were to religious (22.4%) and non-religious centres (20.7%), followed by private doctors (16.7%), “other” (14.9%), private clinics (13.2%), and methadone (3.5%). Typical admissions were male, single, and unemployed. More than half (53%) were admitted for methamphetamine abuse, 20% for heroin, and 19% for alcohol (Secretaria de Salud de Baja California, 2009).

It is important to note that official statistics do not reflect information from all treatment facilities. Programs may be funded by multiple sources and operated by different entities, including federal, state or municipal governments, private or religious institutions, or even by informal groups (e.g. run out of a private home). Programs may not be registered or accredited by government authorities, and thus may not adhere to official standards, function under government oversight, or report surveillance data. In contrast to the 63 agencies reported above, we obtained a list of 138 registered centres from the Tijuana municipal

government. It is likely, however, that the number of centres in operation is even higher and no data are publically available regarding these programs' compliance with NOM-028. This points to the need to systematically survey all treatment facilities in Tijuana and underscores the importance of examining complementary data sources, including patient perspectives.

Quantitative and qualitative study findings from El Cuete

The socio-demographic characteristics of the study participants are shown in Table 1. Our results are organized by three major themes: treatment participation, treatment modalities, and experiences of mistreatment and abuse.

Treatment participation

A significant number of participants had ever received treatment for a drug-related problem: nearly all Phase I participants (90%) reported a history of treatment, as did over half (51%) in Phase II (mean lifetime admissions 3; range: 0–20). In qualitative interviews, most IDUs indicated voluntarily seeking treatment, often motivated by child custody situations, homelessness, or feeling tired of using. We did not specifically ask about forced versus voluntary treatment admissions in either phase of the study. However, two of the qualitative participants reported knowing someone who was committed involuntarily and another was himself committed against his will. According to a 23-year-old female participant: "I was ... in my friend's home when they came from a rehabilitation center and they almost knocked down all the walls of his room, they came in with a bat, and they took him to the center using force." From our interviews it appears that drug users' families typically commit the individual. A 42-year-old female participant noted that programs in Mexico, where families forcefully commit other family members and decide when they should be released, differed from those in the United States. Another participant committed involuntarily described feeling resentful and perceived his admission as a mechanism of social control:

I don't see it as any help ... the family members use these places [drug rehab centers] to get rid of one, but ... I don't see a lot of help coming out of them because truthfully the addict can't be helped by anybody if he doesn't want to help himself, and if you put someone in a rehab center against his will ... it won't do any good, it will only affect his character, it will alter his personality, he will feel hate towards the people who put him there... (44-year-old male)

Treatment modalities

The most widely accessed form of drug treatment among IDUs in Tijuana was residential rehabilitation centres, followed by methadone; access of other services was less common. Participants' experiences suggest mixed results in terms of program quality and effectiveness.

Residential treatment centres—Phase I participants most often discussed treatment in residential centres, and of the Phase II participants who had ever been in treatment, 80.4% reported treatment in a residential treatment centre (Table 2).

Residential programs typically lasted 3 months or longer. A number were described as religious or Christian organizations that accepted people unable to pay, which made this modality the first choice for those without economic resources. Other programs calculated payment on a sliding scale.

Participants often found the rehabilitation centres – with their provision of basic needs and separation from the street life – conducive to the recovery process. Some centres provided medication, specifically Rivotril and Darvon, for short-term detoxification. Rivotril are

benzodiazepines used to treat anxiety and Darvon (propoxyphene hydrochloride) is a narcotic analgesic used for mild to moderate pain. Both are controlled substances in Mexico and thus necessitate a medical doctor on staff (which is required for all programs under NOM-028). Medication to manage the *malilla*, or heroin withdrawal, was important to participants and fear of *malilla* often served as a barrier to treatment entry and retention. Participants reported that religious centres typically did not provide medication for detoxification.

Another important theme was the centrality of “meetings” in the residential centres, which appeared to follow the 12-step model. One 22-year-old male who reported being in treatment seven times in four different centres described his experiences as “meeting after meeting after meeting.” Some centres offered activities in addition to meetings, and several participants responded well to the structured environment and schedule. As described by one participant, after an initial period of adjustment, the lessons of the 12-step program helped him reconsider his addiction:

... you have to get the hang of it, you get an explanation of what the disease is. I take it as a study because you start at the bottom, like when you go to kindergarten and then primary school, then secondary, and it's like 12 stations, 12 steps, it's not just memorizing them, it's applying them. (38-year-old male)

Other participants, however, criticized the self-help approach as insensitive to their life circumstances. The ideas of valuing one's place in life presents challenges for those whose lives have been marked by material deprivation and emotional trauma, as is the case for many IDUs in Tijuana:

[The programs] have their ways of doing things and it's like abstinence, so that you can value your home and your damn bed, with the springs out, bathing with cold water, I don't like that ... They call it feeling the cold water now that you're not high, but even when I was drugged I felt the water, they want you to value that and I don't see it that way. Value what? What do you deserve? ... Even in drugs the human being deserves to be comfortable, see? (22-year-old female, Tijuana)

Methadone—Methadone – often referred to by participants as “*the juice*” – was widely recognized but used less frequently than residential centres, often viewed with suspicion, and perceived as expensive by Phase I participants. In Phase II, 19.6% of participants ever in treatment reported enrolment in a “methadone or other maintenance program.”

The majority of Phase I participants (85%) had heard of methadone and knew of a program location, but only a few had used methadone or knew someone who had. Instead, they based their assessment on information from others. This speaks to the strong influence that “folk knowledge” plays in drug users' understandings and expectations of methadone (Agar, 1985; Goldsmith, Hunt, Lipton, & Strug, 1984). Among those who had used it, perceived effectiveness was mixed and only one participant, a 39-year-old male, was openly positive about his 2-month treatment experience and claimed he was “cured ... about 60%.” Yet this sentiment leaves open questions about program retention and effectiveness, and contributes to community perceptions that methadone is ineffective in treating heroin dependence.

Participants often described methadone as stronger, more addictive, and producing more severe withdrawal symptoms than heroin. One 18-year-old female reported that she was “really hooked” on methadone and that her son was born “hooked.” Another 44-year-old male echoed a similar sentiment in saying, “getting hooked on methadone is worse than using heroin.”

Methadone maintenance programs in Tijuana charge for the initial medical consultation and about U.S. \$7 for each dose of methadone, typically taken daily. Participants were acutely aware of methadone's cost and cited it as a barrier to care. Procuring and paying for a treatment (methadone) to be ingested daily at a clinic in lieu of procuring a substance with similar pharmacological effects (heroin) defied the commonsense of some IDUs; one 42-year-old female pointed out that she could purchase three doses of heroin for the cost of one dose of methadone.

Other treatment modalities—Other types of drug treatment (e.g. jail, self-help meetings) were less widely accessed than residential programs or methadone (Table 2). They were not frequently discussed in the qualitative interviews except when listing treatment options in Tijuana. IDUs may access residential programs more frequently because of the perception that other options are not available. Homelessness may also be a driving factor favouring residential treatment among this population.

Experiences of mistreatment in programs

Perceptions of mistreatment in treatment programs emerged inductively as a theme in the qualitative interviews. Nearly half of Phase I participants ($n = 9$) spontaneously talked about mistreatment that they or someone else experienced in a treatment program. Such reports prompted us to ask about mistreatment in the quantitative survey: of the 111 Phase II participants who had ever been in treatment, 21.6% reported being mistreated in a program. Physical (72.0%) and verbal (52.0%) abuse were most prevalent (Table 3).

Examples of physical abuse included striking the patients. Verbal abuse included swearing, yelling, talking down to the participants, and making them feel insignificant or that they deserved to suffer. Participants also complained about the quantity and quality of food, restricted family visitation, limited or no access to medications, and not receiving medical attention for other health conditions. Participants viewed their mistreatment as another manifestation of their vulnerability and marginalization in society. According to one 18-year-old female:

... where I was at they would hit them [other patients], hit them bad and when the family came to visit they told them that they fell down the stairs, they would get smart with them, would abuse their power....

Several other participants described themselves as being treated like “animals” in the centres. Females spoke more frequently of mistreatment in the qualitative interviews. We did not find any significant gender differences in the quantitative data, but this may be due to the small sample size (10% were females). Thus, it remains unclear if females fare worse than males in certain programs because of gender discrimination or other gender-specific factors. In sum, the data suggest that programs can be punitive in nature, and some cross the line to abuse.

Discussion

Political, economic, and social investment in drug treatment in Mexico is particularly important at this juncture given the recent passage of legislation that decriminalizes specified quantities of drugs and mandates drug treatment. Already, this legislation has been met with praise and criticism about its potential unintended consequences (Grillo, 2009; Lacey, 2009). Proponents believe it will re-direct law enforcement efforts to drug dealers and traffickers, while shifting towards a harm reduction approach to managing drug dependence (Bustamante-Moreno, Izazola-Licea, & Rodriguez-Ajenjo, in press). Opponents are concerned that the law will promote increases in drug availability, frequency of use,

overdose, and involvement in gangs and the drug economy. A scarcity of methadone maintenance treatment and questions about the integrity of some residential drug treatment programs across Mexico (Bolanos, 2009; Dibble & Cearley, 2004; Salazar, 2009) may also impede its successful implementation. The new legislation requires an effective and accountable treatment system, backed by sufficient fiscal and human resources, to provide options acceptable to the target population. Our study describes how drug users experienced treatment and perceived its effectiveness prior to the passage of this historic law, and thus provides important insights to guide policy implementation and programming.

Most IDUs in our study had experience with drug treatment. The majority of participants in the qualitative interviews entered treatment on their own accord, but in Mexico there appears to be a cultural precedent of coerced residential treatment, particularly by family members, which some IDUs may resent and others may appreciate. As such, volition is important to consider in evaluating the new law's impact. Decades of study on coerced and legally mandated treatment have yielded mixed results because of the complexity of factors to consider (Klag, O'Callaghan, & Creed, 2005). Evaluation of the new law in this context should query individuals' prior involuntary admissions, consider users' current readiness for treatment, and follow up to assess if mandated treatment yields sustainable recovery or resentment and relapse.

Residential programs that incorporated an *ayuda mutua* or the 12-step model were most commonly accessed. The majority of state registered programs in Baja California are classified as *ayuda mutua*, and nationally there is an emphasis in the NOM-028 legislation on *ayuda mutua* programs as a major treatment modality (CONADIC, n.d.). While residential *ayuda mutua* programs may be the dominant form of treatment in Tijuana, our results suggest that some IDUs did not respond favourably to this modality. It may be that other treatment options are more appropriate and should be explored in this context.

We are unsure about the scope of medical, psychological, and social services provided in many programs. For example, our data suggest that often programs do not offer medication for detoxification. The programs that did appear to offer short-term regimens of Rivotril and Darvon. Evaluation of this short-term detoxification method is not well documented in the literature; articles about Darvon (or closely related Darvocet) for addiction treatment appeared in the 1970s (Inaba, Gay, Whitehead, Newmeyer, & Bergin, 1974), but its use has since waned and it is unclear why this particular combination is used in Mexico or how effective it is. We need a clear idea of the medical care and other services that are available, and appropriate funding and training needs to be available to treatment staff to ensure that evidence-based, appropriate treatment options reach all drug users.

Most Phase I participants were aware of methadone but few had used it; in Phase II, nearly 20% of those who reported treatment had used methadone. Tijuana IDUs' methadone experiences and perceptions parallel studies elsewhere which show that street level understanding of methadone often contrasts with official public health discourse (Agar & Stephens, 1975; Bourgois, 2000; Fraser, 1997; Koester, Anderson, & Hoffer, 1999). Participants viewed methadone maintenance with suspicion, not seeing substitution as "real" treatment, and expressed fears that methadone produces worse *malilla* than heroin.

A large body of literature has documented positive treatment outcomes for methadone, including reductions in risky injection behaviour and reduced HIV transmission (Hartel & Schoenbaum, 1998; Lynn, David, Paul, & David, 2005; Schwartz, Brooner, Montoya, Currens, & Hayes, 1999; Wong, Lee, Lim, & Low, 2003). Currently, however, there is a scarcity of methadone maintenance programs across Mexico. The federal drug control program, CONADIC, is planning nation-wide expansion of publicly funded methadone

programs (Bustamante-Moreno et al., in press), but our findings suggest that program expansion is not enough; there is also a need to address IDUs' concerns regarding methadone to fully capitalize on its effectiveness. In addition, discussions of methadone as an available treatment option under the new law are currently underway, but the role and financing of this modality remains unclear (personal communication, Dr. Lozada, June 4, 2010). Given that participants cited methadone's cost as a barrier to its use, economic assistance should be considered as part of the scale-up of programs.

The financing of the new legislation is an important discussion point. At the time of publication, individuals mandated to treatment or their relatives are responsible for the cost of rehabilitation (personal communication, Dr. Lozada, June 4, 2010). Accredited drug treatment programs will continue to receive federal funds to cover some expenses for individuals in treatment, but it is unclear whether state and municipal authorities will have to contribute to the costs of providing services to individuals mandated to treatment under the new law. Currently, there is no line item in Baja California's budget to cover such expenses. There are, however, encouraging policy developments such as the "Seguro Popular," the public assistance health insurance program in Mexico, which recently added "drug rehabilitation through psychological counselling and 12-step programs" to its list of services covered (personal communication, Dr. Martinez, June 4, 2010). In addition, authorities in the state of Queretaro recently announced that a portion of funds from drug-related asset seizures and alcohol taxes will be set aside to help finance treatment for qualified drug dependent individuals (Wagner, 2010). While this fund is not specifically earmarked for mandated treatment under the new law, it could be allocated toward this end. Regardless, it remains unclear how mandated treatment will be funded.

Finally, participants in both phases reported mistreatment in drug treatment programs. Our findings represent a key strength of using qualitative methods to inform a subsequent quantitative survey: mistreatment emerged organically as a theme in the Phase I qualitative interviews and we subsequently quantified this in a larger sample. More than one-fifth of Phase II participants with a treatment history reported mistreatment. Female IDUs spoke more often about mistreatment in the qualitative interviews, although they were not statistically more likely to report mistreatment in Phase II. Our findings suggest that females face a particularly difficult time in recovery; perhaps mistreatment does not happen more often, but the salience of the theme in the qualitative data suggest that such incidents are particularly damaging. Female IDUs have physical, psychological, and social needs distinct from male IDUs and treatment programs should be sensitive to these needs (WHO, 2008).

Emergent studies are documenting incidents of mistreatment and abuse of drug using populations (Cohen & Amon, 2008; Human Rights Watch, 2010; International Harm Reduction Development Program, 2009; Koester, 2008; Mayhew et al., 2009). Not only are such incidents unacceptable human rights violations, but rumours of abuse in drug treatment programs may prevent other individuals from seeking help. Similar reports have surfaced throughout Mexico, such as four centres that were shut down in 2004 in Baja California due to allegations of physical and psychological abuse against teenage residents (COFEPRIS, 2004; Dibble & Cearley, 2004). More recently, reports of abuse and patients being treated like "slaves" at a centre in Mexico City were exposed by the press (Bolanos, 2009).

Wolfe and Saucier (2010) call for an "honest examination of what has been allowed to pass as drug treatment" internationally and urge policy makers and researchers to advocate for evidence-based practices and humane approaches to treating drug dependent individuals. Across Mexico, only about 30% of the 1730 drug rehabilitation centres meet the NOM-028 certification standards to operate, though the nature of these violations is not transparent (Salazar, 2009). The situation in Tijuana is not entirely clear either, but accreditation data

suggest that violations – though we are unsure as to what types – occur in some rehabilitation programs. The head of CICER, the state accreditation agency, has said that more than half of the rehabilitation centres exploit their patients for profit by sending them into the streets to raise money. He also said that unregulated centres opened unchecked throughout the city, and recommended that at least 40 centres be closed for violations (Cruz, 2009). Taken together with our participants' reports of mistreatment, allegations of abuse at drug rehabilitation centres throughout Mexico need to be systematically investigated and addressed before drug users are committed to such facilities under the revised drug policy.

Our study has limitations. *El Cuete* was not designed to address drug treatment, thus questions about treatment were limited. Furthermore, we were only able to present data from active drug users' points of view. Further research is needed to capture provider points of view and assess disjuncture in experiences between patients and providers.

In conclusion, the historic change in Mexican drug law underscores the need for further research and investment in the drug treatment system in Tijuana and throughout Mexico. We need to understand and address treatment system capacity, quality of service provision, and allegations of mistreatment so that we can critically evaluate treatment outcomes rather than place the onus of blame on individual drug users for failing to comply with a deficient system (Wolfe & Saucier, 2010). We also need to more fully understand drug users' experiences in treatment and establish a systematic way to measure the public health impact of the new legislation that considers individual users' social needs and quality of life in the recovery process. Such an evaluation should include examining the potential of drug treatment, including methadone, as a means to reduce the spread of diseases like HIV and improve the health of individuals already infected. Our analysis represents an important first step in learning about drug treatment in Mexico at a time when new legislation is bringing treatment to the forefront of national discussion. Effective management of *la malilla* is critical to IDU engagement and success in treatment under this historical shift in Mexican drug policy.

Acknowledgments

This research was funded by the National Institute on Drug Abuse (DA09225-S11) and the UCSD Center for AIDS Research, which is funded by the National Institute of Health (AI36214-06). Ms. Syvertsen was funded by a fellowship from the Hispanic-Serving Health Professions Schools and Dr. Pollini is funded by K01DA022923. The authors would like to thank all of the participants, the field team in Tijuana, and the transcriptionists and translators for making this project possible. We also extend our gratitude to the reviewers whose comments greatly improved this manuscript.

References

- Agar MH. Folks and professionals: Different models for the interpretation of drug use. *Substance Use & Misuse*. 1985; 20(1):173–182.
- Agar MH, Stephens RC. The methadone street scene: The addict's view. *Psychiatry*. 1975; 38(4):381. [PubMed: 1187897]
- ATLAS.ti. ATLAS.ti Scientific Software Development. 2007
- Bolanos C. Rescata la PGJ a 107 “esclavos”. *El Universal*. 2009 Available from <http://www.eluniversal.com.mx/ciudad/98949.html>.
- Bourgois P. Disciplining addictions: The bio-politics of methadone and heroin in the United States. *Culture, Medicine and Psychiatry*. 2000; 24:165–195.
- Brouwer KC, Case P, Ramos R, Magis-Rodríguez C, Bucardo J, Patterson TL, et al. Trends in production, trafficking, and consumption of methamphetamine and cocaine in Mexico. *Substance Use & Misuse*. 2006; 41(5):707–727. [PubMed: 16603456]

- Bucardo J, Brouwer KC, Magis-Rodríguez C, Ramos R, Fraga M, Perez SG, et al. Historical trends in the production and consumption of illicit drugs in Mexico: Implications for the prevention of blood borne infections. *Drug and Alcohol Dependence*. 2005; 79(3):281–293. [PubMed: 16102372]
- Bustamante-Moreno JG, Izazola-Licea JA, Rodríguez-Ajenjo C. Tackling HIV and drug addiction in Mexico. *Lancet*. (in press).
- COFEPRIS. Desalojan Centros de rehabilitación Clandestinos. 2004 Available from <http://www.cofepris.gob.mx/work/sites/cfp/resources/LocalContent/395/3/b4.pdf>.
- Cohen JE, Amon JJ. Health and human rights concerns of drug users in detention in Guangxi Province, China. *PLoS Medicine*. 2008; 5(12):e234. [PubMed: 19071954]
- Consejo Nacional contra las Adicciones (CONADIC). (n.d.). Guía para la aplicación de la NOM-028-SSA2-1999, para la Prevención, Tratamiento y Control de las Adicciones.
- Cruz N. Mayoría de Centros de rehabilitación explotan a los adictos. *El Sol de Tijuana*. 2009 Available from <http://www.oem.com.mx/esto/notas/n1040499.htm>.
- Dibble S, Cearley A. Questions swirl around closure of teen centers: Mexican officials, school staff under scrutiny since raids. *San Diego Union Tribune*. 2004 Available from http://legacy.signonsandiego.com/uniontrib/20040919/news_20040919n20040919raid.html.
- Fraser J. Methadone clinic culture: The everyday realities of female methadone clients. *Qualitative Health Research*. 1997; 7(1):121.
- Frost SDW, Brouwer KC, Firestone Cruz MA, Ramos R, Ramos ME, Lozada RM, et al. Respondent-driven sampling of injection drug users in two US–Mexico border cities: Recruitment dynamics and impact on estimates of HIV and syphilis prevalence. *Journal of Urban Health*. 2006; 83:83–97.
- Goldsmith DS, Hunt DE, Lipton DS, Strug DL. Methadone folklore: Beliefs about side effects and their impact on treatment. *Human Organization*. 1984; 43(4):330–340.
- Grillo I. Mexico's new drug law may set an example. *Time*. 2009 Available from <http://www.time.com/time/world/article/0%2C8599%2C1918725%2C00.html>.
- Hartel DM, Schoenbaum EE. Methadone treatment protects against HIV infection: Two decades of experience in the Bronx, New York City. *Public Health Reports*. 1998; 113:107–115. [PubMed: 9722816]
- Heckathorn DD. Respondent-driven sampling: A new approach to the study of hidden populations. *Social Problems*. 1997:174–199.
- Hernández Ávila, M.; Rangel Gómez, G.; Ruiz y Ávila, EB. Condiciones de salud en la frontera norte de México. Mexico City: Comisión de Salud Fronteriza México-Estados Unidos, Instituto Nacional de Salud Pública, El Colegio de la Frontera; 2008.
- Human Rights Watch. Skin on the cable: The illegal arrest, arbitrary detention, and torture of people who use drugs in Cambodia. New York: Human Rights Watch; 2010.
- Inaba DS, Gay GR, Whitehead CA, Newmeyer JA, Bergin D. The use of propoxyphene napsylate in the treatment of heroin and methadone addiction. *Western Journal of Medicine*. 1974; 121(2):106. [PubMed: 4847425]
- INEGI. XII Censo General de Población y Vivienda. 2005
- Iniguez-Stevens E, Brouwer KC, Hogg RS, Patterson TL, Lozada R, Magis-Rodríguez C, et al. Estimating the 2006 prevalence of HIV by gender and risk groups in Tijuana, Mexico. *Gaceta Medica de Mexico*. 2009; 145(3):189. [PubMed: 19685824]
- Instituto de Psiquiatría del Estado de Baja California. Centros de Rehabilitación, n.d. Available from http://www.ipebc.gob.mx/main.php?id_cont=61&id_pagina=47.
- Instituto Nacional de Salud Pública. Encuesta Nacional de Adicciones 2008. Cuernavaca, Morelos, Mexico: Instituto Nacional de Salud Pública; 2008.
- International Harm Reduction Development Program. Human rights abuses in the name of drug treatment: Reports from the field. New York: Open Society Institute; 2009.
- Klag S, O'Callaghan F, Creed P. The use of legal coercion in the treatment of substance abusers: A an overview and critical analysis of thirty years of research. *Substance Use & Misuse*. 2005; 40(12): 1777–1795. [PubMed: 16419556]

- Koester S. The disconnect between China's public health and public security responses to injection drug use, the consequences for human rights. *PLoS Medicine*. 2008; 5(12):e240. [PubMed: 19071956]
- Koester S, Anderson K, Hoffer L. Active heroin injectors' perceptions and use of methadone maintenance treatment: Cynical performance or self-prescribed risk reduction? *Substance Use & Misuse*. 1999; 34(14):2135–2153. [PubMed: 10573308]
- Lacey M. In Mexico, ambivalence on a drug law. *New York Times*. 2009 Available from <http://www.nytimes.com/2009/08/24/world/americas/24mexico.html?pagewanted=1&hp>.
- Lynn ES, David SM, Paul JF, David AF. Decreasing international HIV transmission: The role of expanding access to opioid agonist therapies for injection drug users. *Addiction*. 2005; 100(2): 150–158. [PubMed: 15679744]
- Magis-Rodriguez, C.; Bravo Garcia, E.; Gayet Serrano, C.; Rivera Reyes, P.; De Luca, M. El VIH y el SIDA en Mexico al 2008: Hallazgos, tendencias y reflexiones. Mexico City: Centro Nacional para la Prevencion y Control del VIH/SIDA (CENSIDA); 2008.
- Magis-Rodriguez C, Brouwer KC, Morales S, Gayet C, Lozada R, Ortiz-Mondragon R, et al. HIV prevalence and correlates of receptive needle sharing among injection drug users in the Mexican–U.S. border city of Tijuana. *Journal of Psychoactive Drugs*. 2005; 37(3):333–339. [PubMed: 16295018]
- Magis-Rodriguez C, Marques LF, Touze G. HIV and injection drug use in Latin America. *AIDS*. 2002; 16(Suppl. 3):34–41.
- Mayhew S, Collumbien M, Qureshi A, Platt L, Rafiq N, Faisal A, et al. Protecting the unprotected: Mixed-method research on drug use, sex work and rights in Pakistan's fight against HIV/AIDS. *British Medical Journal*. 2009; 85(Suppl. 2):ii31–ii36.
- National Drug Intelligence Center. California Border Alliance Group drug market analysis, 2009. Washington, DC: National Drug Intelligence Center, U.S. Department of Justice; 2009.
- Nichter M, Quintero G, Nichter M, Mock J, Shakib S. Qualitative research: Contributions to the study of drug use, drug abuse, and drug use(r)-related interventions. *Substance Use & Misuse*. 2004; 39(10–12):1907–1969. [PubMed: 15587954]
- NOM-028. Mexico City, Mexico: 2009. Modificación a la Norma Oficial Mexicana NOM-028-SSA2-1999, Para la prevención, tratamiento y control de las adicciones, para quedar como Norma Oficial Mexicana NOM-028-SSA2-2009, Para la prevención, tratamiento y control de las adicciones.
- Pollini RA, Brouwer KC, Lozada RM, Ramos R, Cruz MF, Magis-Rodriguez C, et al. Syringe possession arrests are associated with receptive syringe sharing in two Mexico–US border cities. *Addiction*. 2008; 103(1):101. [PubMed: 18028520]
- Salazar E. Sin certificar, 70% de centros de rehabilitación en México. *Noticieros Televisa*. 2009 Available from <http://www2.esmas.com/noticierostelevisa/mexico/nacional/101858/sin-certificar-70-centros-rehabilitacion-mexico>.
- SAS. Version 9.2. Cary, NC: 2009.
- Schwartz RP, Brooner RK, Montoya ID, Currens M, Hayes M. A 12-year follow-up of amethadone medical maintenance program. *American Journal on Addictions*. 1999; 8(4):293–299. [PubMed: 10598212]
- Secretaria de Salud de Baja California. Observatorio Estatal de las Adicciones, 2009: Baja California. Mexicali, B.C.: Secretaria de Salud de Baja California; 2009.
- Strathdee SA, Lozada R, Pollini RA, Brouwer KC, Mantsios A, Abramovitz DA, et al. Individual, social, and environmental influences associated with HIV infection among injection drug users in Tijuana, Mexico. *Journal of Acquired Immune Deficiency Syndromes*. 2008; 47(3):369. [PubMed: 18176320]
- Wagner H. Pagarán becas para rehabilitar a adictos. *Diario de Querétaro*. 2010 Available from <http://www.oem.com.mx/diariodequeretaro/notas/n1674089.htm>.
- Watters J, Biernacki P. Targeted sampling: Options for the study of hidden populations. *Social Problems*. 1989; 36:416–430.

- Wolfe D, Saucier R. In rehabilitation's name? Ending institutionalised cruelty and degrading treatment of people who use drugs. *International Journal of Drug Policy*. 2010; 21(3):145–148. [PubMed: 20144540]
- Wong KH, Lee SS, Lim WL, Low HK. Adherence to methadone is associated with a lower level of HIV-related risk behaviors in drug users. *Journal of Substance Abuse Treatment*. 2003; 24(3):233–239. [PubMed: 12810144]
- World Health Organization. Principles of drug dependence treatment. Geneva: WHO; 2008.

Table 1

El Cuete Phases I and II: Socio-demographic and drug use characteristics.

	Phase I n = 20	%	Phase II n = 222	%
Male	10	50.0	203	91.4
Female	10	50.0	19	8.6
Mean age	32.1	sd: 9.9	35	sd: 7.9
<i>Civil status</i>				
Unmarried	9	44.0	146	65.8
Married/common law	8	40.0	51	23.0
Separated/divorced	3	16.0	21	9.5
Widowed	0	0	4	1.8
<i>Injected in the past 6 months</i>				
Heroin	17	85.0	217	99.1
Methamphetamine	15	75.0	98	66.7
Methamphetamine/heroin	12	60.0	144	83.7
Cocaine	4	20.0	30	20.3
Cocaine/heroin	3	15.0	69	43.1
Tranquilizers	5	25.0	2	12.5

Table 2

El Cuete Phase II: In which type(s) of drug or alcohol treatment programs have you ever been enrolled?

	<i>n</i> = 111	%
Rehabilitation centre	90	80.4
Methadone/other maintenance	22	19.6
Jail/prison	11	9.8
<i>Self-help meetings</i>		
Narcotics anonymous	10	8.9
Alcoholics anonymous	7	6.3
Cocaine anonymous	0	0
Detoxification without medication	7	6.3
Inpatient treatment	5	4.5
Drug free outpatient	3	2.7
Outpatient emergency department	2	1.8
Other	3	2.7

Table 3

El Cuete Phase II: What kind of mistreatment did you experience from the staff of drug or alcohol treatment programs?

Type of mistreatment	<i>n</i> = 25	%
Physical abuse	18	72.0
Verbal abuse	13	52.0
Refused medication	2	8.0
Robbed	2	8.0
Physically restrained	1	4.0
Sexual abuse	1	4.0
Other	2	8.0