



Institutional stakeholder perceptions of barriers to addiction treatment under Mexico's drug policy reform

Dan Werb, Steffanie A. Strathdee, Emilo Meza, Maria Gudelia Rangel Gomez, Lawrence Palinkas, Maria Elena Medina-Mora & Leo Beletsky

To cite this article: Dan Werb, Steffanie A. Strathdee, Emilo Meza, Maria Gudelia Rangel Gomez, Lawrence Palinkas, Maria Elena Medina-Mora & Leo Beletsky (2015): Institutional stakeholder perceptions of barriers to addiction treatment under Mexico's drug policy reform, *Global Public Health*, DOI: [10.1080/17441692.2015.1093524](https://doi.org/10.1080/17441692.2015.1093524)

To link to this article: <http://dx.doi.org/10.1080/17441692.2015.1093524>



Published online: 13 Dec 2015.



Submit your article to this journal [↗](#)



Article views: 24



View related articles [↗](#)



View Crossmark data [↗](#)

Institutional stakeholder perceptions of barriers to addiction treatment under Mexico's drug policy reform

Dan Werb^{a,b}, Steffanie A. Strathdee^a, Emilo Meza^a, Maria Gudelia Rangel Gomez^c, Lawrence Palinkas^d, Maria Elena Medina-Mora^e and Leo Beletsky^{a,f}

^aDepartment of Medicine, University of California San Diego, San Diego, CA, USA; ^bBC Centre for Excellence in HIV/AIDS, St. Paul's Hospital, Vancouver, Canada; ^cHospital General de Tijuana, Tijuana, Mexico; ^dSchool of Social Work, University of Southern California, San Diego, CA, USA; ^eInstituto Nacional de Psiquiatría, Mexico City, Mexico; ^fSchool of Law & Bouvé College of Health Sciences, Northeastern University, Boston, MA, USA

ABSTRACT

Mexico has experienced disproportionate drug-related harms given its role as a production and transit zone for illegal drugs destined primarily for the USA. In response, in 2009, the Mexican federal government passed legislation mandating pre-arrest diversion of drug-dependent individuals towards addiction treatment. However, this federal law was not specific about how the scale-up of the addiction treatment sector was to be operationalised. We therefore conducted in-depth qualitative interviews with key 'interactors' in fields affected by the federal legislation, including participants from the law enforcement, public health, addiction treatment, and governmental administration sectors. Among 19 participants from the municipal, state and federal levels were interviewed and multiple barriers to policy reform were identified. First, there is a lack of institutional expertise to implement the reform. Second, the operationalisation of the reform was not accompanied by a coordinated action plan. Third, the law is an unfunded mandate. Institutional barriers are likely hampering the implementation of Mexico's policy reform. Addressing the concerns expressed by interactors through the scale-up of services, the provision of increased training and education programmes for stakeholders and a coordinated action plan to operationalise the policy reform are likely needed to improve the policy reform process.

ARTICLE HISTORY

Received 15 September 2014
Accepted 30 March 2015

KEYWORDS

Mexico; drug policy reform; addiction treatment; institutional barriers; Tijuana

Introduction

There are currently 30 countries experimenting with some form of deregulation or decriminalisation of drug use. With few exceptions, however (Greenwald, 2009), little empirical data exist regarding the most effective implementation strategies for drug policy reform, or how such strategies have been operationalised. There is also increasing interest in the development of novel drug policies in the wake of the failures of enforcement-based approaches (Quah et al., 2014; Werb et al., 2013). As such, policy-makers now require evidence regarding the barriers that may exist within governments and other institutions

developing complex drug policy systems based on reducing health and social harms related to drug use.

Mexico, historically a transit zone for the flow of illegal drugs into the USA from Latin America (Bucardo et al., 2005), is currently experiencing a range of severe drug-related harms. These include ongoing illegal drug use (UNODC, 2013), drug dependence among the country's drug-using populations (Strathdee, Magis-Rodriguez, Mays, Jimenez, & Patterson, 2012; Syvertsen et al., 2010), and concomitant harms such as an increased risk of HIV and hepatitis C (Moreno, Licea, & Rodriguez-Ajenjo, 2010; UNODC, 2013). In 2006, then-President Felipe Calderón launched a military operation to curtail illegal drug trafficking across Mexico (Sullivan & Elkus, 2008; Thomson, 2011; Tuckman, 2012). This Mexican 'war on drugs' is estimated to have resulted in the deaths of as many as 100,000 people (Tuckman, 2012). Mexico also continues to experience severe drug-related harms in urban centres along its northern border (Beletsky, Lozada, et al., 2013; Strathdee et al., 2012; Volkmann et al., 2011). For example, Tijuana is the largest municipality in the northwestern border state of Baja California and includes a sizable population of people who inject drugs (PWID), estimated at as many as 10,000 individuals (Brouwer et al., 2006; Magis-Rodríguez et al., 2005). Deportation of individuals from the USA, however, has in recent years contributed to an expansion of this population, given the large number of American deportees who arrive each day in Tijuana (Carroll, 2014; Primerisima, 2011). Tijuana has experienced severe drug-related harms primarily among PWID living in an area known as 'El Bordo', consisting of a section of the abandoned Tijuana Canal adjacent to the Mexico-US border. PWID inhabiting this area experience high prevalence of both HIV and hepatitis C, with 10% of female PWID and 4% of male PWID HIV-seropositive (Strathdee, Lozada, Pollini, et al., 2008; White et al., 2007).

In the wake of the massive unintended negative consequences resulting from this militarised approach, the Mexican Government subsequently sought to reorient the country's drug policy towards minimising the public health impacts of drug harms. As such, in August 2009, Mexico's federal government passed the *ley de narcomenudeo* or "drug dealing law". This legislation updated the criminal sanctions for charges of drug possession for personal consumption and charges of drug possession for the purposes of drug dealing (Consejo Nacional contras las Adicciones, 2010). Specifically, this law set quantity thresholds for the possession of major illegal drugs such as heroin, cocaine, and methamphetamine. If individuals are found in possession of illegal drug amounts under the quantity thresholds, they are released with a warning and the possession is deemed for personal use. However, upon the third drug possession infraction, individuals are provided with a choice: face criminal sanctions (i.e. incarceration) or enter addiction treatment (Moreno et al., 2010). In some states, such as Baja California, no option for jail time exists upon the third infraction and individuals are automatically mandated to compulsory addiction treatment. The law does not mandate jail time for those who fail treatment (Consejo Nacional contras las Adicciones, 2010). Despite this emphasis on increasing access to addiction treatment, PWID in Tijuana have reported pervasive barriers to effective addiction treatment. For instance, 22% of a sample of 111 PWID in Tijuana reported experiencing mistreatment within an addiction treatment centre in 2005, with over two-thirds reporting physical abuse and over half reporting verbal abuse (Syvertsen et al., 2010). While 85% of this sample reported heroin use, only 20% reported ever having been enrolled in a methadone maintenance therapy (MMT) programme, which a large

body of scientific research has shown is effective in managing opioid dependence (Amato, Davoli, Ferri, & Ali, 2002; Mattick, Breen, Kimber, & Davoli, 2009). More recently, among a cohort of 637 PWID in Tijuana surveyed in 2011, while 47% reported a self-perceived need for addiction treatment, only 7.5% reported accessing MMT in the previous six months, despite the fact that over 90% of the sample reported opioid use (Werb, Wagner, Beletsky, & Strathdee, 2014).

The *ley de narcomenudeo* codified a fundamental refocusing of Mexico's policy response away from a punitive approach and towards a public health model to treat drug dependence. The law was intended to increase addiction treatment uptake, but requires substantial scale-up of addiction treatment services across Mexico to be effective. Similarly, its effectiveness relies on participation by police and judges, who under the law represent key entry points for the diversion of drug-dependent individuals into addiction treatment (Moreno et al., 2010). More broadly, this transition from an enforcement-based model towards a public health model requires interfacing and collaboration between a wide-ranging set of institutional stakeholders to be effective.

While the *ley de narcomenudeo* legislation was passed in August 2009 by the federal government, Mexican states were given a grace period of 3 years to comply (Baja California passed the *ley de narcomenudeo* in the state legislature in August 2010). This was done given the complex nature of the drug policy reform and the substantial resources required to provide sufficient addiction treatment services to those mandated to attend (Consejo Nacional contras las Adicciones, 2010). Despite the fact that this deadline has lapsed, however, states such as Baja California continue to face a variety of institutional barriers to reform, which have resulted in a slow pace of treatment scale-up, with low levels of enrolment in addiction treatment (Secretaría de Salud, 2012). For instance, while 79 treatment centres were certified within the city of Tijuana, only three clinics currently offer MMT (Comisión interdisciplinaria de centros de rehabilitación, 2011) and only one of these is a public programme. Given the severe drug-related harms that continue to be experienced in cities such as Tijuana (Beletsky et al., 2012; Beletsky, Lozada, et al., 2013; Brouwer et al., 2012; Kori, Roth, Lozada, Vera, & Brouwer, 2013; Strathdee et al., 2012; Werb et al., 2014), identifying specific barriers to this reform and treatment resource allocation may aid stakeholders in ensuring that relevant institutions are able to meaningfully adopt the tenets of the law and provide the treatment and support services that drug-dependent individuals require.

Unfortunately, to date no research exists that explains the misalignment between the goals of the reform and its implementation. This study addresses this gap in the existing literature by presenting results of interviews conducted with a variety of institutional stakeholders both impacted by and participating in Mexico's drug policy reform in the state of Baja California. Our key aim was to identify perceived barriers to the provision and scale-up of addiction treatment in the state of Baja California under the *ley de narcomenudeo*.

Methods

Sampling and recruitment

We interviewed a cross-section of stakeholders in Tijuana tasked with instrumental roles in the implementation of the *ley de narcomenudeo*. For this study, participants consisted of

a convenience sample of individuals based on jurisdictional and sector affiliation. Jurisdictionally, we sampled interactors at the municipal, state, and federal levels. In terms of sector affiliation, we covered areas directly related to Mexico's drug policy reform such as policing and criminal justice, public health and addiction treatment, and the judiciary.

Data collection and analysis

Interactors were interviewed between June 2011 and January 2012, which fell within the 'grace period' during which Mexican states were mandated to prepare for the full implementation of the drug policy reform. Verbal consent was obtained and a semi-structured interview was conducted using a topic guide. A trained qualitative researcher (E.M.) conducted the interviews, which lasted approximately 30–40 minutes each. The final version of the interview guide and the study protocol were reviewed and approved by the University of California San Diego Human Research Protection Program.

All respondents agreed to have the interviews digitally recorded. Recordings were professionally transcribed and translated, and the transcripts were verified against the audio record. The authors then analysed and coded the transcripts using Atlas.ti (Scientific Software Development, Berlin, Germany). Emergent themes, trends, and frameworks were tallied by L.B., E.M., and D.W. using a grounded hermeneutic approach (Addison, 1999), wherein the framework for interpretation of findings is revised continually as data are collected, coded, and analysed. To ensure the anonymity of the study participants, individual identifying information was removed from interview transcripts.

Results

Sample

The sample consisted of 19 individuals drawn from all three levels of government (4 [21%] municipal, 10 [53%] state, and 5 [26%] federal). Sample participants were actively working in sectors involved in the drug policy reform, including the public health sector (6, 32%; including civil servants in leadership roles in the municipal department against addictions and governmental public health sector), law enforcement (6, 32%; including law enforcement officers from Tijuana's municipal police department, state justice department officials, and members of Mexico's federal police force), and the judiciary (7, 37%; including members of the state Attorney General's office, and both state and federal judges).

Major findings

Three major themes emerged from the qualitative data:

- (1) Lack of institutional expertise in the process to identify and triage drug-dependent individuals to addiction treatment as a key barrier to the implementation of the *ley de narcomenudeo*.
- (2) Lack of a coordinated action plan outlining judiciary responsibility between federal and state governments, as well as other institutional stakeholders compromise the capacity of institutions to operationalise the *ley de narcomenudeo*.

- (3) Concerns that the law was primarily an unfunded mandate as a critical impediment to implementation.

Lack of institutional expertise

Ten interactors (53%) representing all three jurisdictional strata (i.e. municipal, state, and federal) expressed concerns regarding a lack of institutional expertise in assessing drug dependence. Many also communicated concerns regarding the scientific basis of the drug quantity thresholds, which interactors perceived as arbitrary.

With respect to a lack of institutional expertise, there was also widespread confusion regarding how the treatment diversion mechanism was to be operationalised under the law. While the quantity thresholds create legal distinctions between drug dealers and drug users, interactors expressed concerns around how the legal system would distinguish between recreational drug users and drug-dependent individuals (i.e. those dealt with at the state level). One individual working with the municipal department against addictions in Tijuana stated that,

the law is very clear, but we lack information; the first being when someone arrives before the municipal judge, and they only go on the quantity to see ... if they're a problematic user or if they're a drug dealer ... if this 'John Doe' is intoxicated, the municipal judge is not a medical expert who can determine if this is a user ...

Additionally, one individual with 33 years of experience working in the non-governmental organisation sector at the federal level suggested that such concerns extend beyond the courtroom, and reflect a lack of training in addictions among scientific personnel:

Who decides that the individual really is sick? That would be the first part. Inside of the courtrooms or the investigative prosecution offices: who? The forensic doctor would have to be trained, because the reality is that often we find ourselves with great forensics doctors, but they are unfamiliar with the subject ...

Multiple participants also noted that the severity of drug dependence varies across individuals. As such, distinguishing drug users from drug dealers on the basis of a set quantity of drugs appeared arbitrary. For one individual with 12 years of experience in the state justice department in Baja California, this seeming arbitrariness was underlined by the differences in quantity thresholds before and after the law's enactment:

They increased the amounts of allowable consumption [with the *ley de narcomenudeo*]. Before it was a smaller amount, now they increased it. [After the law reform] a person with a certain amount, I do not remember exactly how much, is caught and let free even though that person has twice the legal amount that existed [prior to the law reform], and the consumption itself is now deemed 'normal'. In the first [policy] change they made [prior to the *ley de narcomenudeo*], the amount doubled – we increased the amount made for consumption. And now with the law as stated, it is even higher, it is too much. Actually, the person who consumes the limit [under the current law] would be sick or have serious problems, and is definitely a re-seller [drug dealer].

Further, an individual with 9 years of experience in the state health sector suggested that the concept of quantity thresholds was altogether unrelated to the assessment of drug dependence:

What they [i.e., the federal government] say to us, is to consider from the point of view of health, a) what the symptoms of development of drug consumption are, b) what the consequences of drug consumption are, and c) how addicted this person is to the drug; and none of these three variants directly relate to the quantity of the drug; it is merely a technical and legal situation, establishing those quantities, right?

According to one individual with 42 years of experience working in state law enforcement, further gaps existed regarding the lack of medical and scientific expertise in assessing dependence:

[I]t is an area that we are not managing, [and] it is one of the worries of the training, that the personnel that will be dedicated to specifically that area – the diagnosing and identification of substances – should receive even more training than that which they already have. I would consider that we require more training in these specific areas: towards the doctors to diagnose, and the chemists to identify the substances and the components of the drugs.

This sentiment was echoed by one individual working in law enforcement at the federal level, who specifically cited the lack of adequate treatment facilities as a major impediment:

From my point of view, there are not the conditions to provide this care/treatment because we do not have institutions to take care of drug users during the terms of treatment established by the law. We are still working with the health authorities, but obviously they do not have the facilities yet.

Lack of a coordinated action plan for sentencing and diversion

As is evident, while the intention of the law is to ground Mexico's drug policy firmly in a public health approach to treating drug dependence, the operationalisation of this aim was perceived by some to be ill-conceived. Indeed, the lack of a policy to assess dependence was perceived by over one-third of interactors (7, 37%) to be symptomatic of a broader lack of clear operational guidelines in the *ley de narcomenudeo*. This in turn hampered the development of appropriate training for individuals in relevant sectors. One interactor with 13 years' experience working in the office of the federal Attorney General further suggested that the lack of training and education of stakeholders from the outset had severely hampered the policy reform:

The Reform begins and everyone is speculating about how they are supposed to proceed. After two years, after resources were spent, during which time people were released because of confusion by judges – that whole series of situations would not have happened if the direction of the legal framework had been clearly established from the outset.

Complicating matters further was the fact that in some cases a determination of drug dependence based on quantity thresholds could be, according to some interactors, overruled by other factors – but that there was no clear operational guideline on when and how this was to be carried out. As described by an individual working at the federal attorney general's office:

The Law speaks of coordination, about how they need to inform us (the federal government); it speaks of prevention, and who is supposed to address it. Of course, nothing occurs, because they (the state judiciary) are still not exercising jurisdiction, at least here (in Baja California).

This lack of a coordinated action plan had, according to some interactors, effectively crippled the capacity of the state government to implement the *ley de narcomenudeo*. One individual working in Mexico's federal department of justice described the situation as, essentially, an implementation impasse:

I think that the majority of the state entities haven't done anything. What is happening is that already there is in practice the conflict of authority, where the federal judges, once the one-year period elapses, say, since the authority or jurisdiction is concurrent, a common law judge or judge of general jurisdiction (state judge) must be familiar with this matter. And the common law judge rejects the authority, citing questions, at best very valid, of practicality, but not legal, saying 'I don't have the instrumentation necessary to take charge of these types of crimes', and they even say, 'my regulations don't permit me to try these types of crimes; within the federal authorities' penal codes, they are still not foreseen or accounted for'. So they cite these types of questions.

The law reform as an unfunded mandate

While interactors generally agreed that the separation of jurisdictions (i.e. criminal vs. health) in the realm of drug use was in principle positive, 10 interactors (53%) representing all three levels of government expressed concerns over the lack of additional resources provided to the state government and judiciary given its increased responsibilities. According to one individual working at the Baja California state justice department, this represented a critical oversight in implementation:

The federal idea is not bad, even if we disagree with the amount [of the quantity thresholds], although we disagree with the formulas. The problem is that it is a law, which directs the state to take responsibility for something without the money or tools to do it. That is why I predict it will not work ... The idea is not bad, the problem is that the Federation gives the responsibility to the states without resources. Even the Federals, with information and money, cannot handle these responsibilities of the country. But now, they move the responsibility to the State without money.

Additionally, as related by one individual working in the justice department of the state of Baja California:

Q: My first question would be how you perceive the support of the Federal Government in aiding the State to perform or to adapt its responsibilities under the new legal framework?

A: It really is useless. All they say is, 'This is the law and you must apply it.'

Q: There have been increases in budgets?

A: There is not even a proposal (to increase the budget).

For some interactors, the lack of resource allocation had compounded another systemic issue: the lack of knowledge of the responsibilities of various stakeholders at the state and municipal levels under the law reform. According to one state law enforcement official, for example, the state government did not have enough information to even begin to assess what resources were required:

What is the internal procedure by which we will set about to enact the reforms? And what will we need for this procedure – more human resources, more technological resources, more economic resources? Or will I also have to specifically ask the federation [i.e., federal government], 'I need this amount for this'? So that is the worry that exists right now: what do I have to do? And what am I going to need to do it?

Discussion

Respondents interviewed during the 'grace period' for the implementation of the *ley de narcomenudeo* in Baja California identified a number of perceived barriers to the implementation of this drug policy reform. First, over half reported that a lack of scientific and technical expertise in assessing drug dependence was hampering the triaging of drug-dependent individuals into relevant services. Further, one-third perceived that the reform lacked a coordinated action plan, thereby reducing the capacity of stakeholder institutions to increase treatment uptake. Finally, over half of respondents also identified the fact that the law was primarily unfunded as a key barrier to the operationalisation of a drug treatment diversion system within the drug policy reform. Slightly over one-fifth (4, 21%) reported all three barriers, while the same proportion reported none. Despite these perceived barriers, support for the drug policy reform was widespread (18, 95%).

It is worthwhile contrasting the use of quantity thresholds in Mexico's drug policy reform with the drug decriminalisation approach undertaken by Portugal. In 2001, much like Mexico, Portugal decriminalised the possession of drugs for personal consumption in an effort to reduce drug-related health harms (Greenwald, 2009). However, unlike the Mexican *ley de narcomenudeo*'s use of set quantities, the Portuguese drug decriminalisation statute defines the amount of drugs for personal consumption as 'not exceeding the quantity required for an average individual consumption during a period of 10 days'. Accordingly, under the Portuguese system, drug trafficking is defined as 'possession of more than the average dose for ten days of use' (Greenwald, 2009). This general wording can be contrasted with Mexico, where the set quantity threshold for heroin is 50 mg (Robertson et al., 2014). As is evident, the wording of the *descriminalização* (i.e. decriminalisation) law in Portugal provides a greater degree of judicial flexibility in triaging individuals towards either addiction treatment or federal prosecution for drug trafficking. It also likely better reflects the wide variance in drug dependence experienced by individuals and the concomitant variance in the quantity of drugs that dependent individuals may require for personal consumption.

Given the disconnect that interactors perceived between the 'law on the books' and the realities of drug dependence in Mexico, amending the *ley de narcomenudeo* to provide greater judicial discretion by removing set quantity thresholds may be required to ensure that all individuals who require addiction treatment are appropriately diverted. A modification of the law in this manner may also address concerns from stakeholders regarding the arbitrariness of the quantity thresholds, and thereby improve meaningful institutional adoption of the policy reform. However, this approach may also compromise judicial fairness because the assessment of the intent of possession (i.e. drug dependence vs. drug dealing) is left to individual judges. As such, the involvement of scientific experts trained in addiction would be required to reduce potential arbitrariness in diversion to treatment or jail. Indeed, interactors from all three levels of government expressed concerns regarding the sources of scientific expertise for assessing drug dependence, as well as where this assessment was to occur within the judicial process. Specifically, many appeared sceptical that those who were asked to assess drug dependence were properly trained. Given this concern, those working to implement the *ley de narcomenudeo* should seek to ensure that proper training of medical personnel and others involved in evaluating addiction meets accepted international standards.

While having appropriately trained scientific personnel was highlighted as crucial to the success of the policy reform, law enforcement plays perhaps the most vital role within the drug policy reform as the first point of contact for drug-dependent individuals requiring addiction treatment. However, research suggests that police in Mexican settings such as Tijuana continue to apply arbitrary policing tactics in an effort to increase public order among populations of PWID (Werb et al., 2014). In some cases, these tactics – such as periodic crackdowns on areas inhabited by PWID, the extra-judicial confiscation of syringes, as well as assaults and extortion – have been shown to heighten the risks for negative drug-related outcomes (Beletsky, Lozada, et al., 2013; Strathdee, Lozada, Ojeda, et al., 2008; Volkmann et al., 2011). Further, they are likely to reduce the willingness of PWID to access existing public health services for fear of police interference, as has been observed elsewhere (Bluthenthal, Kral, Lorvick, & Watters, 1997; Cooper, Bossak, Tempalski, Des Jarlais, & Friedman, 2009). Given their expanded role, police officers must be provided with a set of tools and training to ensure that interactions with drug-dependent individuals are safe, constructive, and that officers are able to effectively divert individuals requiring addiction treatment to appropriate services. Similar training programmes in other settings adopting public health-focused drug policies have been shown to significantly increase occupational safety knowledge among police officers engaging with drug-using populations (Beletsky, Thomas, Shumskaya, Artamonova, & Smeilyanskaya, 2013), and have also been shown to significantly increase police intentions to refer individuals to relevant health services (Beletsky, Thomas, et al., 2013). Encouragingly, the Tijuana police department has recently expressed enthusiasm for a mandated addictions and harm reduction training programme, which will be evaluated as part of a binational partnership that includes members of our team.

Interactors working at all levels of government were particularly vocal regarding the impossibility of triaging drug-dependent individuals to addiction treatment without a funded scale-up of treatment services. For some, this reflected a failure of the federal government to support the increased responsibilities of the state under the policy reform. Further, two interactors working at the state level also questioned the effectiveness of the addiction treatment offered within the state of Baja California. While all treatment centres in Baja California are the subject of ongoing evaluation by the state and federal government to ensure that they meet a minimum standard of cleanliness and abide by a code of conduct in their interactions with clients, less is known regarding the effectiveness of a range of treatment options offered in the state, including *ayuda mutual* (i.e. ‘mutual aid’) centres, 12-step recovery, and Narcotics Anonymous, among other approaches. Problematically, as noted above, only three clinics currently offer MMT (Comisión interdisciplinaria de centros de rehabilitación, 2011), despite a large body of evidence indicating that MMT is effective at enabling opioid-dependent individuals to stabilise, reduce, and abstain from use of opioids (Amato et al., 2002; Mattick et al., 2009). Providing funding to scale up evidence-based addiction treatment such as MMT should therefore be a priority in the ongoing implementation of the *ley de narcomenudeo*.

Conclusion

Mexico’s *ley de narcomenudeo* was widely supported among a sample of key interactors drawn from one of Mexico’s 31 states. Nonetheless, many participants identified a

range of concerns that contribute to persistent barriers to meaningful drug policy reform. While participants were drawn from three separate levels of government and represented multiple sectors, they were all located in Baja California and these results may therefore not be generalisable across Mexico. As such, more research would be needed to determine if local reservations about the law reform were echoed elsewhere in Mexico. Nevertheless, the results suggest that a coordinated action plan is likely required to clearly delineate the responsibilities of all institutional stakeholders involved in the reform in Mexican settings where implementation has been delayed. A coordinated action plan in the state should also involve education programmes for cadets and active duty law enforcement given the central role that they play as the first point of contact for drug-dependent individuals seeking addiction treatment through the drug policy reform mechanism. Similarly, training for the judiciary on assessing drug dependence as well as clearer sentencing guidelines related to drug dependence would likely help address the lack of institutional expertise highlighted by participants. Such a plan will also necessarily require secure, dedicated, and ongoing funding from the federal government to support the increased responsibilities of state- and municipal-level institutional actors in mitigating ongoing drug-related harms, including the provision of evidence-based addiction treatment such as MMT. Nationally, evidence-based benchmarks for scientific expertise in assessing drug dependence are also likely required. While this demands the allocation of substantial resources, the data presented herein suggest that without such a commitment, the effectiveness of Mexico's drug policy reform may be severely compromised.

Acknowledgments

All authors contributed substantially to the study. Leo Beletsky designed the study. Emilio Reza carried out the interviews and collected data. Dan Werb prepared the initial draft of this article and all authors contributed to and approved the final version. Leo Beletsky had full access to all the data in the study and had final responsibility for the decision to submit for publication. No funding source played a role in the content of the manuscript or the decision to submit to Lancet Global Health.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The authors express their sincere thanks to the US National Institute on Drug Abuse (NIDA) for support through grant R37 DA019829 and a CHAMPS mechanism. Dan Werb is supported by the Canadian Institutes of Health Research.

References

- Addison, R. B. (1999). A grounded hermeneutic editing approach. *Doing qualitative research*, 2, 145–161. doi:10.1016/j.socscimed.2010.03.017
- Amato, L., Davoli, M., Ferri, M., & Ali, R. (2002). Methadone at tapered doses for the management of opioid withdrawal. *Cochrane Database of Systematic Reviews*, (1), Article no.CD003409. doi:10.1002/14651858.CD003409.pub4

- Beletsky, L., Lozada, R., Gaines, T., Abramovitz, D., Staines, H., Vera, ... Strathdee, S. A. (2013). Syringe confiscation as an HIV risk factor: The public health implications of arbitrary policing in Tijuana and Ciudad Juarez, Mexico. *Journal of Urban Health*, 1–15. doi:10.1007/s11524-012-9741-3
- Beletsky, L., Martinez, G., Gaines, T., Nguyen, L., Lozada, R., Rangel, G., ... Strathdee, S. A. (2012). Mexico's northern border conflict: collateral damage to health and human rights of vulnerable groups. *Revista Panamericana de Salud Pública*, 31(5), 403–410.
- Beletsky, L., Thomas, R., Shumskaya, N., Artamonova, I., & Smelyanskaya, M. (2013). Police education as a component of national HIV response: Lessons from Kyrgyzstan. *Drug and Alcohol Dependence*, 132, S48–S52. doi:10.1016/j.drugalcdep.2013.06.027
- Bluthenthal, R. N., Kral, A. H., Lorvick, J., & Watters, J. K. (1997). Impact of law enforcement on syringe exchange programs: A look at Oakland and San Francisco. *Med Anthropology*, 18(1), 61.
- Brouwer, K. C., Rusch, M. L., Weeks, J. R., Lozada, R., Vera, A., Magis-Rodriguez, C., & Strathdee, S. A. (2012). Spatial epidemiology of HIV among injection drug users in Tijuana, Mexico. *Annals of the Association of American Geographers*, 102(5), 1190–1199.
- Brouwer, K. C., Strathdee, S. A., Magis-Rodriguez, C., Bravo-Garcia, E., Gayet, C., Patterson, T. L., ... Hogg, R. S. (2006). Estimated numbers of men and women infected with HIV/AIDS in Tijuana, Mexico. *J Urban Health*, 83(2), 299–307.
- Bucardo, J., Brouwer, K. C., Magis-Rodriguez, C., Ramos, R., Fraga, M., Perez, S. G., ... Strathdee, S. A. (2005). Historical trends in the production and consumption of illicit drugs in Mexico: implications for the prevention of blood borne infections. *Drug and Alcohol Dependence*, 79(3), 281–293.
- Carroll, R. (2014). Stuck in Tijuana hoping for a miracle: The deportees with nowhere to go. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2014/apr/11/undocumented-migrants-stuck-tijuana-mexico-us>
- Comisión interdisciplinaria de centros de rehabilitación. (2011). *Cédula de visita voluntaria para Centros de Rehabilitación en Adicciones*. Instituto de psiquiatria del estado de Baja California. Retrieved February 13, 2015, from <http://ipebc.gob.mx/centros-de-rehabilitacion/>
- Consejo Nacional contras las Adicciones. (2010). Normatividad y Legislación: CONADIC. Retrieved February 13, 2015, from <http://www.conadic.salud.gob.mx/interior/normas.html>
- Cooper, H. L. F., Bossak, B., Tempalski, B., Des Jarlais, D. C., & Friedman, S. R. (2009). Geographic approaches to quantifying the risk environment: Drug-related law enforcement and access to syringe exchange programmes. *International Journal of Drug Policy*, 20(3), 217–226. doi:10.1016/j.drugpo.2008.08.008
- Greenwald, G. (2009). *Drug decriminalization in Portugal: Lessons for creating fair and successful drug policies*. Washington, DC: Cato Institute.
- Kori, N., Roth, A. M., Lozada, R., Vera, A., & Brouwer, K. C. (2013). Correlates of injecting in an HIV incidence hotspot among substance users in Tijuana, Mexico. *International Journal of Drug Policy*. doi:10.1016/j.drugpo.2013.12.005
- Magis-Rodriguez, C., Brouwer, K. C., Morales, S., Gayet, C., Lozada, R., Ortiz-Mondragón, R., ... Strathdee, S. A. (2005). HIV prevalence and correlates of receptive needle sharing among injection drug users in the Mexican-US border city of Tijuana. *Journal of Psychoactive Drugs*, 37(3), 333–339.
- Mattick, R. P., Breen, C., Kimber, J., & Davoli, M. (2009). Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database of Systematic Reviews*, (2), CD002209. doi:10.1002/14651858.CD002209.pub2
- Moreno, J. G. B., Licea, J. A. I., & Rodriguez-Ajenjo, C. (2010). Tackling HIV and drug addiction in Mexico. *Lancet*, 376(9740), 493. doi:10.1016/S0140-6736(10)60883-5
- Primerisima, R. I. (2011). Migrantes viven en alcantarillas de Tijuana: Uniradio. Retrieved February 13, 2015, from <http://www.radiolaprimerisima.com/noticias/103624/migrantes-viven-en-alcantarillas-de-tijuana>
- Quah, D., Collins, J., Becerra, L. H. A., Caulkins, J., Csete, J., Drucker, E., ... Ziskind, J. (2014). *Ending the drug wars*. London: London School of Economics.

- Robertson, A. M., Garfein, R. S., Wagner, K. D., Mehta, S. R., Magis-Rodriguez, C., Cuevas-Mota, J., ... Strathdee, S. A. (2014). Evaluating the impact of Mexico's drug policy reforms on people who inject drugs in Tijuana, BC, Mexico, and San Diego, CA, United States: A binational mixed methods research agenda. *Harm Reduction Journal*, 11(1), 4. doi:10.1186/1477-7517-11-4
- Secretaría de Salud. (2012). *Sistema de Vigilancia Epidemiológica de las Adicciones (SISVEA)*. Mexico City: Instituto Nacional de Salud Pública.
- Strathdee, S. A., Lozada, R., Pollini, R. A., Brouwer, K. C., Mantsios, A., Abramovitz, D. A., ... Alvelais, J. (2008). Individual, social, and environmental influences associated with HIV infection among injection drug users in Tijuana, Mexico. *Journal of Acquired Immune Deficiency Syndromes*, 47(3), 369. doi:10.1097/QAI.0b013e318160d5ae
- Strathdee, S. A., Magis-Rodriguez, C., Mays, V. M., Jimenez, R., & Patterson, T. L. (2012). The emerging HIV epidemic on the Mexico-US border: an international case study characterizing the role of epidemiology in surveillance and response. *Annals Epidemiol*, 22(6), 426–438. doi:10.1016/j.annepidem.2012.04.002
- Sullivan, J. P., & Elkus, A. (2008). State of Siege: Mexico's Criminal Insurgency. *Small Wars Journal*, 1(7), 1–2.
- Syvertsen, J., Pollini, R. A., Lozada, R., Vera, A., Rangel, G., & Strathdee, S. A. (2010). Managing "la malilla": Exploring drug treatment experiences among injection drug users in Tijuana, Mexico, and their implications for drug law reform. *International Journal of Drug Policy*, 21(6), 459–465. doi:10.1016/j.drugpo.2010.06.006
- Thomson, A. (2011, April 22). Mexico drug war toll rises with mass graves. *Financial Times*. Retrieved from <http://www.ft.com/cms/s/0/51244962-6d08-11e0-83fe-00144feab49a.html-axzz1Kk7rrKKs>
- Tuckman, J. (2012). Mexico drug war continues to rage in region where president fired first salvo. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2012/nov/30/mexico-drug-war-tierra-caliente-calderon>
- UNODC. (2013). *World Drug Report 2013*. Vienna: United Nations Office on Drugs and Crime.
- Volkman, T., Lozada, R., Anderson, C. M., Patterson, T. L., Vera, A., & Strathdee, S. A. (2011). Factors associated with drug-related harms related to policing in Tijuana, Mexico. *Harm Reduction Journal*, 8(1), 7. doi:10.1186/1477-7517-8-7
- Werb, D., Kerr, T., Nosyk, B., Strathdee, S., Montaner, J., & Wood, E. (2013). The temporal relationship between drug supply indicators: an audit of international government surveillance systems. *BMJ Open*, 3, 8. doi:10.1136/bmjopen-2013-003077
- Werb, D., Wagner, K. D., Beletsky, L., Gonzalez-Zuniga, P., Rangel, G., & Strathdee, S. (2014). Police bribery and access to methadone maintenance therapy within the context of drug policy reform in Tijuana, Mexico. *Drug and Alcohol Dependence*, 148, 221–225. doi:10.1016/j.drugalcdep.2015.01.011
- White, E. F., Garfein, R. S., Brouwer, K. C., Lozada, R., Ramos, R., Firestone-Cruz, M., ... Strathdee, S. A. (2007). Prevalence of hepatitis C virus and HIV infection among injection drug users in two Mexican cities bordering the US. *Salud Pública de México*, 49(3), 165–172.