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The Spatial-Temporal Pattern of Policing Following a Drug Policy Reform: Triangulating Self-Reported Arrests With Official Crime Statistics

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Abstract

Background—In 2009, Mexico enacted a drug policy reform (*Narcomenudeo*) designed to divert persons possessing small amounts of illicit drugs to treatment rather than incarceration. To assess reform impact, this study examines the spatial-temporal trends of drug-related policing in Tijuana, Mexico post-enactment.

Method—Location of self-reported arrests (N=1,160) among a prospective, community-recruited cohort of people who inject drugs (PWID) in Tijuana (N=552) was mapped across city neighborhoods. Official police reports detailing drug-related arrests was triangulated with PWID self-reported arrests. Exploratory spatial data analysis examined the distribution of arrests and spatial association between both datasets across three successive years, 2011–2013.

Results—In 2011, over half of PWID reported being detained but not officially charged with a criminal offense; in 2013, 90% of arrests led to criminal charges. Official drug-related arrests increased by 67.8% ($p < 0.01$) from 2011 to 2013 despite overall arrest rates remaining stable throughout Tijuana. For each successive year, we identified a high degree of spatial association between the location of self-reported and official arrests ($p < 0.05$).

Conclusion—Two independent data sources suggest that intensity of drug law enforcement had risen in Tijuana despite the promulgation of a public health-oriented drug policy reform. The highest concentrations of arrests were in areas traditionally characterized by higher rates of drug

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crime. High correlation between self-reported and official arrest data underscores opportunities for future research on the role of policing as a structural determinant of public health.

Keywords

drug policy; police; drug laws; spatial-temporal analysis; Mexico

INTRODUCTION

From 2007–2012, Mexico experienced a surge in drug-related violence, which left over 100,000 individuals dead (Espinal-Enriquez & Larralde, 2015). As part of its response, in November 2009, the Mexican government passed a public health-oriented drug policy that reformed its handling of illicit drug use. Known as the *Narcomenudeo* reform (i.e., “drug dealing in very small quantities”), the federal policy sought to prioritize a harm reduction approach by decriminalizing the possession of small amounts of illicit drugs for personal consumption and diverting drug-using individuals to treatment instead of incarceration (Consejo Nacional Contras las Addicciones, 2010). Under the reform, police are not to arrest individuals found to be in possession of drugs under a specified threshold. Instead, police are required to report these individuals to health authorities and upon a third apprehension to refer these individuals to drug treatment. Thus, the reform is intended to free up Mexico’s limited law enforcement resources away from minor drug offenders and towards large-scale dealers and traffickers (Moreno, Licea, & Ajenjo, 2010; Werb et al., 2014).

For areas with a legacy of elevated drug-related violence, the drug policy reform provided the promise of a more balanced approach to the policing of drug markets while also improving public safety. These potential benefits held special relevance to locales situated along major drug trafficking routes, such as Tijuana, Mexico. However, this legislation came at a time of major law enforcement deployment in Mexico’s struggle with drug cartels, which precipitated human right violations throughout the country (Meyer, 2014). For example, in Tijuana, people who inject drugs (PWID) are generally affected by arbitrary and abusive policing practices with recent studies questioning whether the policing of low-level drug offenders had changed under Mexico’s drug policy reform (Beletsky et al., 2015; Gaines et al., 2015; Pinedo, Burgos, et al., 2015). More broadly, these studies reflect a considerable global evidence base highlighting pervasive implementation gaps in the enforcement of drug policies and other laws (Burris et al., 2004; Global Commission on Drug Policy, 2015; Kerr, Small, & Wood, 2005; Werb, Rowell, et al., 2011; Strathdee, Beletsky, Kerr, 2015).

Although intensified policing in places where drugs are consumed would appear to increase public safety, research has demonstrated that it inadvertently exacerbates health risk among PWID (Pollini et al., 2008; Werb et al., 2008; Strathdee et al., 2011; Volkmann et al., 2011). However, these and other studies (Cooper, Bossak, Tempalski, Jarlais, & Friedman, 2009; Cooper, Des Jarlais, et al., 2012) have generally relied on either self-report or official crime statistics to understand the role of place, in terms of the physical setting, on the health of PWID. To our knowledge, no studies have combined multiple sources of data that report on drug-related policing activities even though different sources of data have the potential to fill

in gaps regarding physical spaces and its association with negative health outcomes for PWID. It is rare and difficult for information related to criminalized activity, such as illicit drug use, to be collected (Peters, Kremling, & Hunt, 2015); and geographic data recording such criminalized activity are seldom triangulated from multiple data sources (Hibdon & Groff, 2014).

Accordingly, the current study has two major goals. First, we examine the spatial-temporal patterns of drug-related arrests across three successive years (2011–2013) in Tijuana, Mexico, as states and municipalities were provided a one-year grace period to implement the reform. Based on local news reports of police raids in places with street-based PWID (Nieves, 2014; Archibold, 2014; Quiones, 2014), we hypothesize that policing practices around low-level drug and nondrug related offenses increased (rather than decreased) during the 3-year period, and that drug-related arrests would be highest in neighborhoods with open-air drug markets. Second, we sought to determine whether official crime statistics, provided through police activity reports, could approximate self-reports of drug users' encounters with police, given the potential methodological implications of employing official crime statistics as an alternative to survey data collection. We hypothesize a spatial overlap between the two data sources based on prior studies demonstrating greater police presence in places frequented by PWID in other settings (Cooper et al., 2009; Cooper et al., 2012).

METHODS

Units of Analysis

The units of analysis for this study are *colonias* or administrative neighborhood units (n=724) in Tijuana that vary in size and population density. According to the 2010 Mexican Census, there are 1.5 million people in Tijuana with a median of 5,220 people per square kilometer per *colonia* (interquartile range: 2,155 – 8,935). Approximately 13% (n=96) of the *colonias* have a population count less than 10, and these *colonias* are generally located in rural or highly industrialized areas. *Colonias* are nested within larger geographic regions called *delegaciones*; administrative boundaries that divide Tijuana into nine boroughs that also vary in land area (range: 17.8 km^2 – 103.7 km^2) and population size (83,886 – 445,934). The current study was approved by the Institutional Review Board of the University of California, San Diego and the Ethics Board of the Colegio de la Frontera Norte, Tijuana.

Data Sources

Self-Reported Arrest Data—Beginning in 2011, PWID residing in Tijuana were enrolled into a prospective cohort study (*Proyecto El Cuete IV*) examining the social epidemiology of HIV and other infectious disease. The methods have been described elsewhere (Robertson et al., 2014) but in brief, individuals were recruited in neighborhoods throughout Tijuana where PWID were known to reside. Eligibility criteria included being 18 years or older; being a Spanish or English speaker; having injected illicit drugs within the past month; having no plans to move from the city in the next 24 months; currently not participating in other intervention studies; and providing informed consent. At baseline and

every 6 months thereafter, participants completed an interviewer-administered survey. Those who reported being arrested for any offense were asked to provide the date and geographic location of the respective arrest. Location was confirmed by showing participants Google Street View maps to identify the exact geographical coordinates of the arrest, which were then recorded (Beletsky et al., 2015). In the current study, a total of 552 cohort participants reported 1,160 arrest incidents within Tijuana city limits from January 1, 2011 to December 31, 2013. These self-reported arrests were aggregated to the *colonia*-level for each respective year and used in subsequent analysis.

Official Crime Statistics—Police activity reports reflecting the number of drug possession stops and arrests that included the possession, sale, and/or distribution of illegal drugs, was obtained from the Tijuana Municipal Police Department, hereafter referred to as official drug-related arrests. The department provided this information in tabular form detailing the monthly number of official drug-related arrests by *colonia* covering the period from January 1, 2011 to December 31, 2013, as part of a Memorandum of Understanding between the Tijuana Municipal Police Department and the Division of Global Public Health at the University of California San Diego. We converted the textual information identifying *colonias* with an arrest into a digital geographic representation using digital maps (i.e., shapefiles) provided by the Tijuana Municipal Planning Institute. There were a total of 8,727 official drug-related arrests recorded in the police activity reports from 2011–2013 of which 8,025 were successfully matched to a *colonia* using the maps provided by the Tijuana Municipal Planning Institute.

Dependent Variable—The dependent variable is the number of self-reported and official drug-related arrests at the *colonia*-level occurring from 2011–2013 identified from the community-recruited cohort of PWID and the Tijuana Municipal Police Department.

Exploratory Spatial Data Analysis—We applied multiple analytic methods to examine the spatial-temporal patterns of self-report and official drug-related arrests. First, we described the distribution of self-reported arrests among the cohort of PWID in terms of arrest frequency, reason for arrest, and criminal charges resulting from the arrest. Similarly, we generated descriptive statistics on official drug-related arrests by calculating arrest rates at the *delegacion*-level. We chose not to construct an arrest rate at the *colonia*-level since arrest rates would have been artificially inflated by including *colonias* with smaller population sizes (i.e., population < 10).

Second, we applied a GIS-based analysis to identify hotspots of official drug-related arrests (i.e., counts of drug-related arrests per year). The Getis-Ord Gi* statistics measures statistically significant spatial clustering of high values (i.e., hotspots of arrests) or low values (i.e., coldspots of arrests) by returning a z-score for each *colonia*. Large z-scores (GiZScore > 1.96; $p<0.05$) identified clusters of hotspots while low z-scores (GIZScore < −1.96; $p< 0.05$) identified clusters of coldspots. Further, limiting the analysis to *colonias* identified as hotspots, we examined trends in the monthly counts of official arrests from 2011–2013 using a generalized linear model with a negative binomial distribution and Newey West standard errors to account for serial autocorrelation and heteroscedasticity of the error terms (Newey & West, 1987). The purpose of this analysis was to address our first

hypothesis of determining whether the same neighborhoods, particularly those known to have open air drug markets, were consistently identified as hotspots of drug-related arrests during the study period. Regression analysis was carried out in STATA 11 (StataCorp, LP, College Station, TX, USA).

Third, we assessed the spatial-temporal relationship of official drug-related arrests between 2011 and 2013 using the Global Bivariate Moran's I statistic generated in GeoDa (Anselin, Syabri, & Kho, 2006). This statistic quantifies spatial autocorrelation by determining to what extent the number of official drug-related arrests in one location at one point in time is linearly associated with a weighted average of official drug-related arrests of neighboring locations at a different point in time (i.e., spatial lag of arrests). Significant autocorrelation ($p<0.05$) indicated spatial clustering of official drug-related arrests over time.

Lastly, we analyzed spatial similarities between self-reported and official arrests by layering the geographical coordinates of PWID self-reported arrest incidents onto the map generated from the hotspot analysis of official drug-related arrests. For each successive year, the Pearson correlation coefficient was calculated to measure the degree of association between the number of self-reported arrests and official drug-related arrests within the same *colonia*. The Global Bivariate Moran's I statistic was then calculated to determine whether self-reported arrests and official drug-related arrests spatially clustered such that a high (or low) number of arrests in both data sets were located in and around the same *colonias*; statistical significance of the Moran's I statistic was based on a permutation test ($p<0.05$). The purpose of this analysis was to address our second hypothesis of determining whether police activity reports, could approximate self-reports of drug users' encounters with police. The spatial analyses were carried out in ArcMap 10.1 and GeoDA.

RESULTS

Patterns of Self-Reported Arrests

Of the 552 PWID arrested from 2011–2013, 38.8% (n=214) were arrested once, 29.7% (n=164) were arrested twice, and 31.5% (n=174) were arrested three to five times during the study period; this resulted in a total of 1,160 arrest incidents. Approximately 14% (n=78) of PWID were arrested and charged with possession of drugs or drug paraphernalia over the 3-year period but none had a drug-related apprehension prior to their initial drug-related arrest (data not shown due to small cell sizes).

The distribution of the 1,160 arrest incidents reported by PWID is shown in Table 1. In 2011, 42% of the self-reported arrests were detainments in which PWID were apprehended by the police, perceivably often lacking any official reason, and eventually released with no subsequent criminal charges. But in 2013, arrest incidents overwhelmingly led to criminal charges with the majority (70.3%) being linked to a minor offense. Approximately 14% (n=159) of all self-reported arrests from 2011–2013 involved drugs or drug paraphernalia possession (Table 1). Half of these arrests (53%, n = 85) led to charges of drug possession, loitering, trespassing, disturbing the peace, or lack of proper identification whereas the remaining incidents were charged with some other criminal offenses (11%, n = 18) or detainment (35%, n = 56).

Patterns of Official Arrest Rates

Table 2 displays the rate of official drug-related arrests from 2011 to 2013 in Tijuana, Mexico. Overall, rates increased during this period from 162.5 per 100,000 in 2011 to 272.7 per 100,000 in 2013. The highest rate of drug possession arrests were reported in the Centro *delegacion* (an area with several open air drug markets) with arrests ranging from 532.7 in 2011 to 820 in 2013 per 100,000.

Hotspots of Official Arrests

At the *colonia*-level, we observed significant hotspots of official drug-related arrests, most of which were located along the Mexico-U.S. border and primarily in the Centro *delegacion*, which also had the highest number of self-reported arrests by PWID (Figure 1).

The number of hotspots varied over the 3-year period and accounted for 22.6% to 30.9% of all the official drug-related arrests in Tijuana (Table 3). Within hotspots, the number of official drug-related arrests increased annually and this trend was significant over the study period according to the negative binomial regression [β_{year}(s.e.) = 0.11(0.32); $p < 0.01$]. In contrast, the number of overall official arrests occurring within hotspots, including violent and property offenses, decreased over the 3-year period from 3,545 in 2011 (or 24.7% of all arrests in Tijuana) to 2,478 (or 16% of all arrest in Tijuana) and this decreasing trend was significant [β_{year}(s.e.) = 0.18(0.32); $p < 0.01$].

In total, 24 *colonias* were identified as hotspots of official drug-related arrests with over four-fifths (n=20) of these *colonias* observed as hotspots across multiple years. Of these 20 *colonias*, 45% experienced an increase in drug-related arrests, 35% had a decrease, and 20% experienced no change. Notably, the decrease of drug-related arrests was not substantial since arrests within these *colonias* declined by 1 to 4 arrests (the median decrease was 1). However, the increase of drug-related arrests was quite noticeable, with *colonias* experiencing as little as 1 additional arrest to as many as 202 additional arrests (the median increase was 7); and according to the Wilcoxon matched-pairs signed rank test, the differences between 2011 and 2013 were significant ($p = 0.012$). None of the *colonias* met the criteria of being a significant coldspot (i.e., all colonias had a GiZScore > −1.96).

Spatial Autocorrelation of Official and Self-Reported Arrests

Results from the global bivariate Moran's I demonstrate a significant and positive spatial autocorrelation (Table 4) indicating that the pattern of official drug-related arrests at the *colonia*-level are associated across space and over time (i.e., arrests in one *colonia* are associated with arrests in neighboring *colonias* over time). Pearson's correlation coefficients measuring the association of arrest between official and PWID self-reported data were estimated as 0.785, 0.710, and 0.851 for 2011, 2102, and 2013, respectively, suggesting moderate to high levels of correlation between the two data sources. The global bivariate Moran's I further indicated significant spatial clustering of arrest patterns between self-reported and official arrest data (Table 4); *colonias* with a high number of self-reported arrests were surrounded by *colonias* with similarly high number of official drug-related arrests.

DISCUSSION

This study found that the policing of drug users and the location of drug-related arrests were consistently concentrated in a small number of *colonias* in Tijuana and that this spatial pattern remained stable over three successive years. In general, *colonias* (i.e., neighborhoods) with a high number of self-reported arrests were also characterized by a high number of official drug-related arrests. Further, although police recorded a similar number of arrests for violent and property offenses over the 3-year period, we found that the number of drug-related arrests increased almost 2-fold during this timeframe. In 2011, 13.5% of all arrests in Tijuana were drug-related; in 2013, two years after the drug decriminalization reform was enacted, 22% of all arrests were drug-related.

These findings have two major implications. First, they suggest that despite passage of the *Narcomenudeo* reform, which prioritizes a public health response to drug-related harms in Mexico, drug-related policing appears to have intensified, particularly in neighborhoods with known street-based drug markets. Although the concentration of drug crimes within a limited number of neighborhoods is a commonly observed phenomenon in Mexico (Espinal-Enriquez & Larralde, 2015; Espinosa & Rubin, 2015; Vilalta, 2009) and elsewhere (Rengert & Lockwood, 2009), the remarkable consistency in the arrest patterns reported by PWID, in both hotspots and non-hotspots of official drug-related arrests, may indicate that police are using discretionary tools to maintain public order. Notably, less than half of the arrests reported by PWID led to criminal charges in 2011. However, this changed markedly in 2013 when 90% of self-reported arrests resulted in a criminal offense that was most often minor (i.e., loitering, trespassing, disturbing the peace, and lacking proper identification). Further, PWID who possessed drugs or drug paraphernalia at the time of their arrest were more likely to be charged with a crime than they were to be released by police, despite the *Narcomenudeo* reform that focuses on diverting drug-dependent individuals to treatment.

Collectively, these analyses parallel our prior findings that the tenets of the *Narcomenudeo* reform have not been meaningfully adopted by law enforcement in Tijuana (Beletsky et al., 2015; Werb et al., 2015). These results also highlight the challenge of implementing a drug policy reform where the “law on the books” can drastically differ from policing practices on the street (Burris et al., 2004). It may be that in an attempt to reduce more serious crimes, Tijuana police adopted a zero-tolerance approach by aggressively policing low-level nondrug related offenses in places with high drug activity (e.g., among PWID, using city ordinances to criminalize minor offenses such as loitering and vagrancy). This is concerning since intensified policing in places where drugs are consumed can present additional barriers to accessing medical care and harm reduction services among PWID, as has been observed in Tijuana (Pinedo, Burgos, Ojeda, Fitzgerald, & Ojeda, 2015) and elsewhere (Hammett et al., 2014).

Apprehending drug users has been a policing tactic used in other settings to disrupt illicit drug markets and maintain order and safety (Dixon & Coffin, 1999; Wagner, Simon-Freeman, & Bluthenthal, 2013; Werb et al., 2011). Although this might seem to deter criminal behavior, evidence shows that leaning on stringent law enforcement tactics does not reduce drug-related crime (Braga, Welsh, & Schnell, 2015) and instead may displace drug

markets (Kerr et al., 2005). Further, although we found that hotspots of official drug-related arrests remained concentrated in the same *colonias* from 2011–2013, prior evidence suggests that "police sweeps" in places where PWID reside and use drugs may lead to displacement, thus increasing risk behaviors for blood-borne infections in new settings (Brouwer et al., 2012). Therefore, effective implementation of the *Narcomenudeo* reform necessitates better police management and training that has shown promise in other drug use settings (Beletsky, Agrawal, et al., 2011).

To that end, our research team is currently implementing a police education program to align policing practices with HIV prevention efforts in Tijuana (Strathdee et al., 2015). Although the initial results are positive (Beletsky et al., 2016), institutional barriers, including an inadequate system that keeps track of prior drug offenses, insufficient expertise to assess drug dependence, and lack of funding for scaling up addiction treatment and policing, must be addressed to ensure that Tijuana's criminal justice system has the resources to appropriately respond and implement the drug policy reform (Werb et al., 2015).

The second major finding is the potential utility of geospatial data from official crime statistics to identify places where high risk activity may be occurring and where interventions designed to align police practices with public health should be prioritized. Although surveys of illicit drug users provide the most accurate assessment of their encounters with law enforcement, the costs and limitations of surveying such hard-to-reach populations (Rudolph et al., 2011) can be prohibitive in many settings (Spooner & Flaherty, 1993). Official crime statistics, by contrast, are routinely collected in many settings at the population level but likely oversamples highly marginalized subgroups of PWID (i.e., homeless) and under samples others (i.e., drug users that regularly migrate across settings) (Linton, Jennings, Latkin, Gomez, & Mehta, 2014). Nevertheless, our results are promising in that we observed a modest and positive spatial autocorrelation in the number of arrests reported by PWID and those reported by police. In general, the number of self-reported arrests increased in places where the number of official drug-related arrests increased.

Given that official crime statistics are generally accessible to the public through freedom of information initiatives, this potentially represents an opportunity to save resources by foregoing primary research with high risk groups, which can be difficult and resource intensive. Further, as found in this study, different data sources can provide similar information of where the policing of drug-related crime is occurring and as a result can be useful for evaluating drug policies that impact populations of PWID. Consequently, official crime statistics should be considered among those investigating HIV risk associated with drug use and the criminal justice system and particularly among those who are working in settings in which self-reported PWID data are not available.

This study is subject to limitations consistent with the use of self-reported and criminal justice data. First, official police activity reports did not distinguish between arrest for possession versus sale or distribution of drugs and therefore we cannot conclude which, if any, type of drug-related arrest was responsible for the overall increase. Second, approximately 8% (n=702) of all the official drug-related arrests could not be linked to a *colonia* due to police activity reports providing locations that were not geographically

identifiable in the maps obtained from the Tijuana Municipal Planning Institute. Nevertheless, these data did provide insight into which *colonias* experienced an increase in drug-related policing activities following the drug policy reform, which we also found to be positively correlated with PWID self-reported arrests. Third, while we had access to official police activity reports from the Tijuana police department, we note that other law enforcement agencies (i.e., federal, state, and military police) were also policing drug-related activity in Tijuana during the study period. Our analysis, though, was likely unaffected given that less than 5% (n=47) of the sample of PWID self-reported arrests were carried out by federal or state agencies, suggesting that the majority of street-level policing was being conducted by the Tijuana Municipal Police Department during the 3-year period. Lastly, the spatial patterns of both self-reported and official arrests we observed are limited to Tijuana and cannot be generalized to other parts of Mexico for which the federal drug policy reform applies.

In summary, although this study is more descriptive and exploratory, rather than explanatory, its strength is in providing a spatial-temporal analysis of drug-related arrest patterns that could help to improve the management and accountability of police departments, as well as provide confirmation of the utility of official crime statistics to triangulate self-reported data collected among PWID. This, in turn, holds promise for improving the reliability of future studies examining the legal and policing environment shaping drug-related harms.

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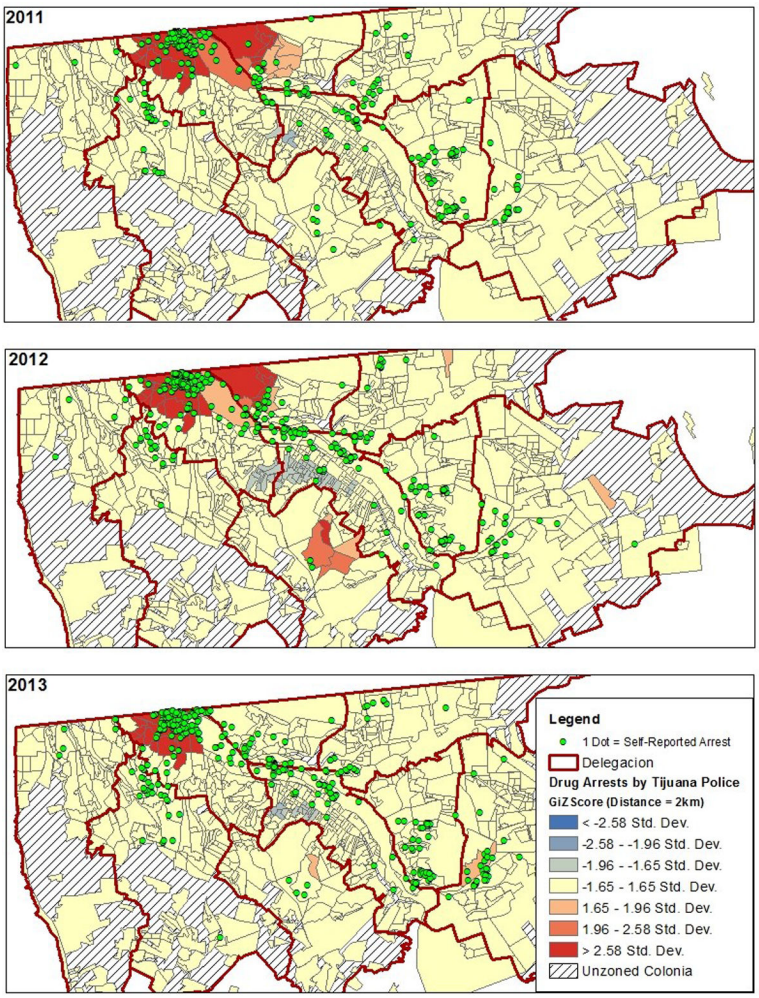

Figure 1.

Hotspot analysis on the number of official drug-related arrests by *colonia* with the point location of PWID self-reported arrest for any offense in Tijuana, Mexico, 2011–2013

Table 1

Distribution of PWID Self-Reported Arrests in Tijuana from 2011–2013 (n=1,160)

Variable	Year		
	2011 n=323 % (n)	2012 n= 382 % (n)	2013 n = 455 % (n)
Type of offense			
No Charge	57.7 (186)	42.9 (164)	10.3 (47)
Minor [a]	26.6 (86)	31.4 (120)	70.3 (320)
Drug or drug paraphernalia possession	6.2 (20)	8.4 (32)	6.8 (31)
Other [b]	9.6 (31)	17.3 (66)	12.5 (57)
Drugs or Needle possession at time of arrest	16.4 (53)	18.6 (71)	7.7 (35)

[a] arrests for loitering, trespassing, disturbing the peace, and lack of proper identification

[b] arrests for weapon possession, public intoxication, stealing, resisting arrest, violating parole, routine check, being in a conflict zone, and drug selling/trafficking.

Table 2

Official drug-related arrest rate per 100,000 population in Tijuana, Mexico from 2011–2013

Delegacion	**Population**	**Land Area Km^2**	**No. of *Colonias***	**2011**	**2012**	**2013**
Centenario	140,291	37.9	75	144.7	233.1	171.9
Centro	119,388	24.9	86	532.7	589.7	820.0
Cerro Colorado	112,517	23.5	52	111.1	153.8	200.9
La Mesa	150,300	30.5	156	140.4	233.5	320.7
Mesa de Otay	83,886	17.8	41	426.8	441.1	243.2
Playas de Tijuana	138,837	61.7	95	67.0	167.8	206.0
San Antonio de los Buenos	211,100	62.5	68	123.2	175.3	267.7
Sanchez Taboada	191,740	42.6	73	121.5	207.6	199.8
La Presa	445,934	103.7	78	105.6	172.7	219.9
Overall	1,593,993	405.2	724	162.5	231.87	272.7

Table 3

Number of official arrests and official drug-related arrests from 2011–2013

	Year		
Characteristics	**2011**	**2012**	**2013**
Total number of arrests[a] in Tijuana	14,659	20,283	15,459
Total number of drug-related arrests in Tijuana	1,985	2,634	3,406
Number of *colonias* identified as hotspots of drug-related arrests	21	23	12
Total arrests in hotspots	3,545	3,116	2,478
Total drug-related arrests in hotspots	613	710	769

[a]Includes arrests rape, murder, assault, robbery, gun possession, burglary, auto theft, domestic violence, human trafficking, and others.

Table 4

Spatial autocorrelation of official drug-related arrests and spatial association between self-reported and official arrests, 2011–2013

Variable	Spatial Lag[a]	Bivariate Moran's I	p-value
Spatial-Temporal Association			
Drug-related arrests in 2011	Drug-related arrest in 2012	0.1809	0.004
Drug-related arrests in 2011	Drug-related arrests in 2013	0.1680	0.008
Drug-related arrests in 2012	Drug-related arrests in 2013	0.1544	0.006
Spatial Dependency			
Self-reported arrest in 2011	Drug-related arrest in 2011	0.2076	0.005
Self-reported arrest in 2012	Drug-related arrest in 2012	0.1942	0.006
Self-reported arrest in 2013	Drug-related arrest in 2013	0.1959	0.005

[a]Spatial lag reflects an average of the number of arrests in neighboring *colonias*