

El mundo de las Drogas en México y el camino por recorrer

The Drug Scene in Mexico and the Road Ahead

MARÍA ELENA MEDINA-MORA, TANIA REAL

National Institute of Psychiatry Ramón de la Fuente Muñiz, México.

Resumen

México es un país afectado por las drogas en todos los aspectos: es un *país productor* de drogas como la heroína, la marihuana y las metanfetaminas, principalmente para los mercados externos, aunque también hay una demanda interna en crecimiento; es un *país de tránsito* para la cocaína, que ha encontrado una vía, a través del corredor de Centro América y México, en su camino hacia los mercados tanto externos como para el abastecimiento interno. Y, como resultado de la creciente disponibilidad de sustancias y de un entorno social favorable, ha devenido un *país consumidor* donde el uso experimental y la dependencia a las drogas ilegales, aunque siguen siendo bajos, se han incrementado. El abuso/dependencia de sustancias legales como el alcohol y el tabaco son los principales problemas de abuso de sustancias; sólo el abuso de los medicamentos se mantiene bajo y relativamente estable, principalmente como resultado de la baja disponibilidad para fines médicos y, por lo tanto, con poco margen para la desviación. Los *costos sociales* son considerables y, como ocurre en otros países de la región, la violencia es la característica dominante en el mundo de las drogas, viéndose incrementada a partir de 2008.

Dentro de estos importantes retos para la salud y la seguridad, es cierto también que se han realizado esfuerzos continuos y significativos, desde 1972, mediante programas de reducción de la demanda a nivel nacional y adaptados a las circunstancias cambiantes. Este editorial pretende relatar la historia de las transiciones de la droga en México y los programas que se han implementado, y se analizan las áreas de oportunidad para un nuevo enfoque.

Palabras clave: México, drogas, epidemiología, determinantes sociales, políticas públicas.

Abstract

Mexico is a country affected by drugs in every aspect: it is a *drug producing* country of heroin, marihuana and methamphetamines, mainly for external markets but also for the growing internal demand; it is a *transit country* for cocaine that has found its way through the Central American and Mexican corridor on its way to external markets and for the internal supply. As a result of the increasing availability of substances and a favorable social environment, it has become a *consuming country*; drug experimentation use and dependence of illegal drugs, although still low, have increased. The abuse/dependence of legal substances such as alcohol and tobacco are the main substance abuse problems; only the abuse of pharmaceuticals remains low and relatively stable, mainly as a result of low availability for medical purposes and therefore limited scope for deviation. *Social costs* are considerable, as happens in other countries in the region, violence being the most prevailing characteristic of the drug scene, increasing from 2008 onwards.

Within these important challenges for health and security, it is also true that significant, continuous efforts have been made by demand reduction programs at the national level since 1972 and adapted to the changing circumstances. This editorial seeks to tell the story of drug transitions in Mexico and the programs that have been implemented and discusses areas of opportunity for a new approach.

Key words: Mexico, drugs, epidemiology, social determinants, public policy.

Enviar correspondencia a:

María Elena Medina-Mora, General Director. National Institute of Psychiatry Ramón de la Fuente Muñiz, México. Calzada México Xochimilco 101, México DF 14370. E-mail: medinam@imp.edu.mx.

The drug scene varies from one country to another and between the geographical regions and groups within each country: It is characterized by specific interrelations between supply and demand, the context in which it is embedded and prevailing public policies; it is also a dynamic phenomenon that requires continue monitoring.

Mexico has undergone a significant urbanization process. In 1930, 67% of the population lived in rural areas, whereas today 76% of the population lives in urban areas. This transition was due to an improvement in the quality of life; between 1992 and 2006, the percentage of persons 15 years and older that had failed to complete elementary school fell from 64.8% to 44.8% (CONEVAL, 2008). Poverty among Mexican youth (16-24 years of age) ranked below the regional average, and had one of the highest indices of decline between 1996 and 2004 (CEPAL, 2010). Overall mortality risk was reduced from 1930 and 2000, by 84% for males and 86% for females, while life expectancy rose from 67 years in 1992 to 74.6 years in 2006 (CONAPO, 2010).

The above mentioned positive trends failed to include an improvement in equality. The OECD (2011) estimated that the average income of the richest 10% of the population is 27 times that of the poorest; the Gini coefficient, (the standard measure of income inequality that ranges from 0, when the whole population has the same income, to 1 when all income goes to only one person), averaged 0.476 in late 2000, with household incomes increasing faster among the richest 10% between the mid 1980s and the late 2000s with an average annual change of 1.7%, twice as high as that observed in the lowest decile, (0.8%).

The younger population has gained in education; the average number of years of education for the group between 15 and 29 years of age is 9.7 years, compared for example, to 7.8 for those between 45 and 59 years of age (INEGI, 2005). But the gap is still large, mainly affecting those in the lowest levels of income. Within the highest income quintile, 85% of males and 86% of females between 13 and 19 years of age attend school; whereas within the lowest quintile this is only true for 62% of males and 59% of females within this age group. The gap is wider among those between 20 and 24 years of age; 59% of males and 48% of females within the highest income group and only 14.5% and 14.3% of the lowest income group continue their education. Moreover, although the country had a low increase in unemployment (3.6% to 3.7%), Mexican youth was unevenly affected with a higher proportion of those between 15 and 29 years of age becoming unemployed (5.8% to 6.3%) (CEPAL, 2010).

Rates of insecurity have increased, with 77% of the population living in the 14 largest cities in the country perceiving that their cities are not secure places and 81% has reporting that their life styles has been modified for this reason (ICESI, 2009). Between 2000 and 2007, violence rates, including mortality from homicides, fell by 17%. Unfortunately this

trend was reversed in 2008, with the percentage of homicide deaths increasing 1.5 times that year as compared to 2007, reaching the highest level in 2011, when it was three times higher than in 2007, with an escalation in the proportion of youth (INEGI, 2011). Homicides began to decline in 2012 (Guerrero, 2012) with 13% fewer homicides in the first quarter of 2013 compared to the same period in 2012 (IMCO, 2013).

This adverse environment has significantly affected adolescents and young adults at a higher risk for drug involvement, with 54% of the population having experienced an adverse event before reaching the age of 18 and half experiencing more than one. Approximately one out of every five have witnessed family violence (20%) or physical abuse (19%), with those reporting having experienced neglect or criminal activity among relatives, reporting 3.8 and 4.1 adverse events on average. Among these the most severely affected are those not enrolled in the school system, whose mothers were under 21 when they gave birth, who have or more siblings and have parents with fewer years of schooling. Having experienced physical abuse or being a witness of violence increased the likelihood of drug dependence 2.2 and 2.6 times respectively (Benjet et al., 2010).

Psychiatric comorbidity studies show a cohort effect with an increase in mental health problems including substance abuse and dependence in the younger generations (Medina-Mora et al., 2005, 2006, 2007; Fleiz, Borges, Rojas, Benjet, & Medina-Mora, 2007; Benjet et al., 2009). Early onset has been associated with an increased risk of dependence, with two years of difference between those that developed dependence and those that did not fulfill the criteria. On average those that developed abuse/dependence started before the age of 17 years as compared with an average age of onset of 19 among those that experimented with or used drugs but did not developed the disorder (SSA, 2008).

Early onset of psychiatric problems has been associated with higher odds of dependence; having experienced anxiety or affective disorders increases the likelihood of a substance abuse disorder by between 3 and 10 times (Medina-Mora, Borges, Benjet, Lara, & Berglund, 2007; Medina-Mora et al., 2008; Kessler et al., 2001).

Factors in the environment have also influenced the changing drug scene. Odds ratios for substance abuse are 3.5 times higher for adolescents that are not enrolled in the school system and are unemployed as compared to those that are full-time students (Benjet et al., 2012). As in other countries, availability of substances, low perception of risk, having friends and siblings using drugs increase the risk of experimentation and continuous use (Villatoro et al., 2012).

How extended is drug use?

The extent of drug use has been studied in Mexico since the 1970's. Trends of use have been documented through

school and household surveys, special population studies and statistics from patients in treatment. National household surveys show that the opportunity to use drugs and rates of ever use have displayed an upward trend. Exposure to opportunities for using drugs increased significantly from 2008 when 29% of males and 7.6% of females reported that they had been offered drugs for free or to buy, to 2011 when rates were 37% for males and 9.7% for females. When only adolescents from 12 to 17 years of age are considered, the differences are more obvious; with opportunities increasing from 7% to 13% among females and from 13% to 21% among males.

Annual prevalence rates are low. The 2011 National Household Survey conducted among the population ages 12 to 65, found rates of use of 2% for any drug and 1.7% when only illegal drugs including inhalants were included. Marihuana was the most frequently consumed drug with a prevalence of 1.4% followed by cocaine, 0.5% (SSA, 2012).

Changes in the drug scene from 1988 to 2011 are documented for the national urban population ages 12 to 65. In 2011, there were 2.17 experimenters or regular users of marihuana and 11 users of cocaine for each one that reported use in the 1988 survey; overall there were 2.5 persons that had experimented or used any drug in 2011 for each one in 1988.

Annual prevalence rates have been more stable, indicating that the proportion of people that only experiment with drugs or stop using them is equal to the proportion of new cases, one exception being cocaine use, which increased significantly from 1988 (0.2%) to 1998 (0.5%). This trend, also observed in school surveys and patients in treatment, is consistent with changes in availability mainly due to the change in the Caribbean route for cocaine from the Andean region to the United States to the Central America and Mexico corridor.

In 2002 there was a decrease in drug use rates (from 1.8% to 1.4%) mainly due to lower rates of marihuana use that decreased from 1% to 0.6%. Rates increased again in 2008 (1.9% for any drug and 1.2% for marihuana) while from 2008 to 2011, a new increase in rates of use of marihuana was observed among males (1.7% in 2008 and 2.2% in 2011).

Surveys and registers of patients in treatment reported a significant decrease of cocaine use, use among students in Mexico City dropped from 2000 to 2006 and remained stable after this year, the register of cases of cocaine use in patients in treatment or arrested in the same site, also decreased after 2007, the same trend was observed in patients in treatment in the northern border and in seizures of cocaine that dropped after 2009. At the same time, marihuana use shows a continuous increase.

Age of first use dropped from 23.6 years in 2002 to 20 in 2008 for females and from 19.8 to 18.3 for males during the same period, with no changes being reported from 2008 to 2011. Rates of dependence in 2011 were 1.3% for males and

0.2% for females, yet only 20% of males and 9% of females received professional treatment. Following a significant investment in services for this problem, a major change in the quality of treatment received was observed (SSA, 2008; SSA, 2011) and a reduction in the treatment gap is expected.

In Mexico, rates of treatment demand display significant regional variations in the type of drug problem the country is facing. Registers of treatment demand by non-governmental organizations that attended 627,127 events from 1994 to 2011 show that alcohol was the substance that most often required people to seek treatment (30%), followed by cocaine (18.1%) crystal meth (14.3%), heroin (13.1%) and marihuana (11.2%). There are major differences by region. In the south, alcohol is the main problem for 58.7% of the cases in treatment, followed by marihuana (15.4%), cocaine (13%) and inhalants (4.8%); in the central region alcohol (44.4%), marihuana (18.7%) cocaine (11.9) and inhalants (11.6%) cause users to seek treatment, whereas in the northern states, the situation is quite different, with crystal meth (31.2%) occupying first place, followed by alcohol (22.1%), heroin (15.6%) and cocaine (9.9%) (SISVEA, 2011).

In the 2008 National Survey, 0.2% of the total population reported injecting drugs, with 37.6% sharing syringes; 1.6% of males and 0.6% of females ages 15 to 29 diagnosed with HIV were infected by drug injection. HIV rates are still low, with most users infected by hepatitis C; the increase in heroin use particularly by being injected is a strong indication for prevention (SSA 2008).

The Road Ahead

The new government's program, following the path of former administrations and WHO recommendations, has called for effective universal coverage and prevention. It is hoped that mental disorders, particularly those derived from substance abuse, will be included and that a public health approach will be adopted.

The challenges facing the implementation of an integrated drug policy are significant. Mexico has a complex problem, with increasing drug availability, high levels of violence related to drug trafficking and an expected increase in rates of delinquency, especially robbery, derived from an emerging problem of drug distribution for internal markets and increase in substance abuse including crack cocaine. The country has experienced major unwanted costs of drug policies, which points to the need for creative ways of dealing with crime and corruption that reduce the risk of violence, with development programs and community coalitions being two of the new strategies adopted in the National Strategy.

As mentioned earlier, drug use prevalence is low. Annual marihuana prevalence is amongst the lowest in the region, being 13 times lower than that reported in the United States, less than half the rate reported in Brazil and Colombia

and higher only than that observed in Ecuador. Cocaine use rates are similar to those reported in Peru, Venezuela and Ecuador and half those reported in Bolivia and Colombia (UNODC, 2011), although rates are increasing for heroin, crack, cocaine and methamphetamines. Consistent with the higher proportion of persons at risk and of persons that experiment with drugs, the government has made a significant effort to increase prevention and treatment by opening over 300 youth centers with a prevention orientation that includes the detection of youth at risk in schools referred for intervention, organized into a network of over 100 drug treatment facilities. However, only one official methadone center has been set up, while good practices in harm reduction programs, available mainly in states on the border with the United States, must be extended to other affected sites (Strathdee, et al., 2012).

The environment is ripe for the escalation of the problem with a large proportion of persons at risk of using drugs and developing dependence, an example being the significant number mainly of children and adolescents with untreated mental disorders (Medina Mora, et al., 2008) that require improved and more sustainable prevention efforts. The treatment system needs to be adapted to meet the new challenges; persons with severe dependence are not usually included in the professional treatment services financed by the government and instead left in the hands of civil society groups that often lack funding for professional care and housing (CONADIC, 2011).

Moreover, the treatment program has followed the model of specialized facilities not integrated into the global health system. Consequently, screening and brief advice or interventions are not provided in primary care and drug treatment is not usually provided at general or specialized hospitals. Increasing heroin use rates requires detoxification services and substitution treatment at general hospitals. A new paradigm of integrated services able to fulfill the multiple needs of persons with dependence rather than focusing on diseases would help advance universal coverage. Due to the significant costs of addiction to those affected, programs require integrated interventions that should include development or the reinforcement of social and labor skills and medical care for diseases related to substance abuse.

There is a lack of treatment in jails, overpopulated with persons with drug dependence (Cravito, et al., 2003). Furthermore, the above mentioned data related to the increase in drug use and drug distribution for local markets together with the modifications of health and penal regulations allow the suspension of penal action for drug users possessing drugs for personal use (limited to the amount prescribed by law) with the possibility of treatment after the third arrest as an alternative to imprisonment call for the expansion of treatment options with an emphasis on hard-core drug users, underserved populations, mainly poor and margin-

alized groups usually attended by civil society and those with co morbid mental disorders.

The challenges for drug regulation are even greater. Significant advances have been achieved in relation to tobacco regulations (smoke-free environments, raising prices through taxes, prohibition of advertising, etc.), but with the exception of initiatives to implement breathalyzers to prevent drug driving in certain cities, there has been a general failure to endorse regulations in relation to alcohol that includes the lack of special protection measures for underage youth, (by way of an example, alcohol is sold in a national chain of convenience stores open 24 hours per day, where the ban on selling alcohol to underage youth is not always observed).

Alcohol consumption is not a daily practice; the typical pattern of drinking is linked to high quantities of alcohol per drinking occasion, particularly among males (53% of males between the ages of 18 and 65 and 17% of adolescents between the ages of 12 and 17 report an intake of 5 or more drinks per occasion) and to a lesser extent among females (21% and 12% respectively report an intake of 4 or more drinks per occasion). However, smaller differences are observed between underage males and females (1 female for every 1.4 males) than among the population aged 18, the legal age for alcohol consumption (1 female for every 2.5 males). Between 2002 and 2011, alcohol dependence increased significantly, reaching 6.6% among the population between 12 and 65 years of age in 2011 (SSA, 2011).

The legal market of pharmaceuticals is fairly controlled with significant reductions in non-prescription use being reported after the UN International Convention controls were implemented (for example, in Mexico City between 1974 and 1998, rates of ever use of narcotics without a prescription fell from 1.57% to 0.07% among the population ages 12 to 65, while the use of tranquilizers declined from 0.54 to 0.05% (Medina Mora, 1976; SS 1998)). However, it is also true that government policy has focused more on controlling deviation than on ensuring availability for medical purposes. In 2010, INCB reported that the statistical daily doses of drugs consumed in Mexico was 85, considerably less than the estimated needs related to the age distribution of the population and cancer mortality rates, compared to 295 in Colombia and 8072 in Spain (INCB, 2010).

This low rate of non-prescription drug use might change due to the fact that drug dealers are now selling also psychotropic substances (CIDE, 2012) and because of the legal provisions to increase the quality of medical care, one of the standards being the availability of drugs for patients that require palliative care. Availability of psychotropic medication for persons with mental disorders a large proportion of whom were not protected by workers' health systems and previously lacked public alternatives for treatment are now included in the Popular Insurance Scheme which includes out-patient pharmaceutical treatment and psychotherapy. Mexico has a window of opportunity to keep use within me-

dical limits by endorsing and introducing policies such as the education of doctors, pharmacists and the families of patients under treatment and reinforcing the monitoring of places where pharmaceuticals are distributed among other measures.

The amount of drugs permitted by law for personal use must be revisited and evaluated with a view to preventing drug dealing, which is the spirit of this law, and also to avoiding the unwanted consequence of incarcerating drug users. A recent study undertaken among the inmates of federal prisons, showed a high incarceration rates due to health-related offenses (58% of males and 80% of females), 38% of whom were arrested for drug possession; in 59% of these cases, the drug for which they were sentenced was marihuana.

Some of the answers can be found in the evidence now available and that derived from new research initiatives, an area that requires more funding. There is a need for science-based and culturally-adapted prevention and treatment models developed and evaluated within community services. There is a need to find ways to implement policies that reduce the risk of violence, consolidate the development of marginalized communities as part of the goals of alleviating poverty, develop rural areas, which would help reduce migration to urban communities and the US, provide education and employment alternatives for youth in urban and marginalized communities, increase security in neighborhoods and strengthen actions designed to reduce inequity. These actions would be the most effective means of achieving demand reduction. A public health approach designed to improve the wellbeing of the population would be a promising strategy.

Conflict of interests

Authors declare that they do not have conflict of interests

References

- Benjet, C., Borges, G., Medina-Mora, M. E., Zambrano, J., Cruz, C., & Méndez, E. (2009). Descriptive epidemiology of chronic childhood adversity in Mexican adolescents. *Journal of Adolescent Health*, 45, 483-489. doi: 10.1016/j.jadohealth.2009.03.002.
- Benjet, C., Borges, G., & Medina-Mora, M. E. (2010). Chronic childhood adversity and onset of psychopathology during three life stages: childhood, adolescence and adulthood. *Journal of Psychiatric Research*, 44, 732-740. doi: 10.1016/j.jpsychires.2010.01.004.
- Benjet, C., Hernández, D., Borges, G., Méndez, E., Medina-Mora, M. E., & Aguilar-Gaxiola, S. (2012). Youth who neither study nor work: Mental health, education and employment. *Salud Pública de México*, 54, 410-417.
- Centro de Investigación y Docencia Económicas (CIDE) (2012). Resultados de la Primera Encuesta realizada a Población Interna en Centros Federales de Readaptación Social. México D.F., http://publiceconomics.files.wordpress.com/2013/01/encuesta_internos_cefereo_2012.pdf, Last open, 12062013.
- Comisión Económica para América Latina y el Caribe. (2010). *Panorama Social de América Latina*. División de Desarrollo Social y la División de Estadística y Proyecciones Económicas de la Comisión Económica para América Latina y el Caribe. Santiago de Chile: Centro Latinoamericano y Caribeño de Demografía. Fondo de Población de las Naciones Unidas.
- Consejo Nacional contra las Adicciones, Centro Nacional para la Prevención y el Control de las Adicciones, Comisión Interamericana para el control del Abuso de Drogas, Organización de Estado Americanos. (2011). *Diagnóstico Nacional de Servicios Residenciales de las Adicciones: Perfil del Recurso Humano vinculado al Tratamiento de Personas con Problemas Relacionados al Abuso y Dependencia de Drogas y Perfil del Usuario*. México: Autor.
- Consejo Nacional de Población (2010). *Indicadores Sociodemográficos*. Mexico: CONAPO.
- Consejo Nacional de México de Evaluación de la Política de Desarrollo Social (2008). Informe de Evaluación de la Política de Desarrollo Social en México 2008. México: CONEVAL.
- Cravioto, P., Medina-Mora, M. E., De la Rosa, B., Galván, F., & Tapia-Conyer, R. (2003). Patrones de consumo de heroína en una cárcel de la frontera norte de México: barreras de acceso a tratamiento. *Salud Pública de México*, 45, 181-190.
- Fleiz, C.; Borges, G.; Rojas, E.; Benjet, C. & Medina-Mora, M. E. (2007). Uso de alcohol, tabaco y drogas en población mexicana, un estudio de cohortes. *Salud Mental*, 30, 63-72.
- Guerrero E. (2012). *La Estrategia Fallida. Nexos en línea*. Retrieved at: <http://www.nexos.com.mx/?P=leerarticulo&Article=2103067>.
- Instituto Ciudadano de Estudios sobre la Inseguridad. (2009). *Encuesta Nacional sobre Inseguridad 2009. Resultados nacionales y por entidad federativa*. México: ICESI.
- Instituto Mexicano para la Competitividad A.C. (2013). *Reporte sobre violencia en México*. Retrieved at <http://www.imco.org.mx>.
- Instituto Nacional de Estadística y Geografía (2005). *Censos y Conteos de Población y Vivienda de 1895 a 2005*. México, D.F.: INEGI. Retrieved at <http://www.inegi.org.mx>
- Instituto Nacional de Estadística y Geografía (2011). *Estadísticas de Mortalidad. Causas de defunción*. México, D.F.: INEGI. Retrieved at: <http://www.inegi.org.mx/sistemas/sisep/default.aspx?t=mvio22&s=est&c=22652>.
- Instituto Nacional de Estadística y Geografía & Consejo Nacional de Evaluación de la Política de Desarrollo So-

- cial (INEGI-CONEVAL) (2008). *Módulo de Condiciones Socioeconómicas. Encuesta Nacional de Ingresos y Gastos de los Hogares (MCS-ENIGH)*. Mexico: INEGI, CONEVAL
- International Narcotics Control Board. (2010). *Report of the International Narcotics Control Board for 2010*. Vienna: United Nations.
- Kessler, R. C., Aguilar-Gaxiola, S., Berglund, P. A., Caraveo-Anduaga, J. J., DeWit, D. J., Greenfield, S. F.,... Vega, W. A. (2001). Patterns and predictors of treatment seeking after onset of a substance use disorder. *Archives of General Psychiatry*, 58, 1065-71.
- Medina-Mora, M. E. (1976). *Estudio piloto sobre la epidemiología de la Farmacodependencia en el D.F*. Tesis Profesional para obtener el grado de Licenciatura. Facultad de Psicología, Universidad Iberoamericana, 1976.
- Medina-Mora, M. E., Borges, G., Lara, C., Benjet, C., Blanco, J., Fleiz, C.,... Zambrano, J. (2005). Prevalence, service use, and demographic correlates of 12-month DSM-IV psychiatric disorders in Mexico: results from the Mexican National Comorbidity Survey. *Psychological Medicine*, 35, 1773-83.
- Medina-Mora, M. E., Borges, G., Fleiz, C., Benjet, C., Rojas, E., Zambrano, J., Villatoro J., & Aguilar, S. (2006). Prevalence and correlates of drug use disorders in Mexico. *Revista Panamericana de Salud Pública*, 19, 265-276.
- Medina-Mora, M. E., Borges, G., Benjet, C., Lara, C., & Berglund, P. (2007). Psychiatric disorders in Mexico: lifetime prevalence in a nationally representative sample. *British Journal of Psychiatry*, 190, 521-528.
- Medina-Mora, M. E., Rojas, E., Borges, G., Vázquez, L., Fleiz, C., & Real T. (2008). Comorbidity: Depression and substance abuse. In S. Aguilar-Gaxiola & T. Gullotta (Eds.), *Depression in Latinos. Assessment, Treatment and Prevention*. (pp.73-92) New York: Springer.
- Sistema de Vigilancia Epidemiológica de las Adicciones (2011). *Reporte Nacional 2011*. Secretaría de Salud, Dirección General de Epidemiología. México. Retrieved at http://www.epidemiologia.salud.gob.mx/doctos/infoepid/inf_sisvea/informes_sisvea_2011.pdf
- Organisation for Economic Co-operation and Development. (2011). *Divided we stand: Why inequity keeps rising. An Overview of Growing Income Inequalities in OECD Countries: Main findings*. OECD. Retrieved at www.oecd.org/els/social/inequality.
- Secretaría de Salud, Consejo Nacional Contra las Adicciones, Instituto Nacional de Psiquiatría Ramón de la Fuente, Instituto Nacional de Salud Pública (2008). *Encuesta Nacional de Adicciones 2008*. México: Secretaría de Salud, Consejo Nacional Contra las Adicciones, Instituto Nacional de Psiquiatría Ramón de la Fuente, Instituto Nacional de Salud Pública.
- Secretaría de Salud, Centro Nacional para la Prevención de las Adicciones, Comisión Nacional contra las Adicciones, Instituto Nacional de Salud Pública, Instituto Nacional de Psiquiatría. (2012). *Encuesta Nacional de Adicciones 2011*. México: Secretaría de Salud. Centro Nacional para la Prevención de las Adicciones. Comisión Nacional contra las Adicciones. Instituto Nacional de Salud Pública. Instituto Nacional de Psiquiatría.
- United Nations Office on Drugs and Crime. (2011). *World Drug Report 2011*. United Nations. Retrieved at http://www.unodc.org/documents/data-and-analysis/WDR2011/World_Drug_Report_2011_ebook.pdf
- Strathdee, S., Magis, C., Mays, V., Jimenez, R., & Patterson, T. (2012). The Emerging HIV Epidemic on the Mexico-U.S. Border: An International case study characterizing the role of epidemiology in surveillance and response. *Epidemiology International HIV Policy Development*, 22, 426-438. doi: 10.1016/j.annepidem.2012.04.002.
- Villatoro, J., Medina-Mora, ME., Fleiz, C., Moreno, M., Robles, N., Bustos, M.,... Amador, N. (2012). El consumo de drogas en México: Resultados de la Encuesta Nacional de Adicciones, 2011. *Salud Mental*, 12, 447-457.