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at BROOKINGS

Back in the National Spotlight: An Assessment of Recent Changes in Drug Use and Drug Policies in the United States

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Improving Global Drug Policy: Comparative Perspectives and UNGASS 2016

EXECUTIVE SUMMARY

Key Findings

- Drugs are back in the national spotlight in the United States, but for different reasons than they were 25 years ago.
- Over the past decade, the United States' marijuana consumption rapidly escalated, heroin consumption increased, at least in part as a byproduct of a prescription opioid epidemic, and cocaine consumption plummeted.
- In addition to the unprecedented changes in marijuana policies in the United States, there have been other noteworthy changes to U.S. drug policies at both the state and federal levels over the past decade.
- Recent actions taken by U.S. states and the administration of President Barack Obama Administration are intensifying discussions about drug policy alternatives in the United States and abroad.

Policy Recommendations

- We are optimistic that changes in treatment quality and accessibility will significantly improve social welfare.
- We are encouraged by recent efforts to reduce the length of incarceration for non-violent drug offenders and by evidence suggesting that criminal justice resources can be reallocated to create credible deterrent threats that reduce both incarceration and crime at the same time.
- The Obama administration's commitment to some harm reduction approaches also seems promising, but these efforts—as well as the others just mentioned—should be rigorously evaluated.

Introduction

Drugs are back in the national spotlight in the United States, but for different reasons than they were 25 years ago.[1] In 1989, a plurality of respondents to a Gallup poll (27 percent) selected drugs as "the most important problem facing this country today," largely driven by fears about crack cocaine and the associated market violence.[2] When the same question was posed in 2014, only 1 percent of respondents chose drugs or drug abuse as the most important problem.[3] Perceptions about drugs are closely linked with crime, and the violent crime rate plummeted by more than 50 percent during this period.[4] While there are still overt drug markets in urban areas that generate crime and disorder, this is not what is driving discussions at the state and federal levels.

Today, discussions about drugs in the United States are largely driven by marijuana and opioids. The passage of ballot initiatives in Colorado and Washington to remove the prohibition on marijuana and allow for-profit companies to produce and distribute it for non-medical purposes was unprecedented (see Mark Kleiman's contribution to this project for more information about these legalization initiatives and other approaches to liberalizing marijuana laws).[5] While marijuana remains illegal under federal law, the administration of President Barack Obama has decided to tolerate state-legal marijuana activities as long as they have "strong and effective regulatory and enforcement systems."[6] This approach has sent a signal to other states and jurisdictions that it is acceptable to discuss alternatives to prohibition.[7]

Medical marijuana also remains a serious topic of conversation throughout the country. It received a boost in 2013 when famous TV personality—and one-time candidate for Surgeon General—Dr. Sanjay Gupta aired a special report about the medical benefits, largely focused on one of the (non-intoxicating) cannabinoids, cannabidiol (CBD).[8] Since the show aired, more than 10 states have passed CBD-only laws, and clinical trials are underway to assess the efficacy of a CBD extract (Epidiolex) to reduce seizures among children.[9] More recently, current Surgeon General Vivek Murthy brought attention to the issue when he remarked that, "We have some preliminary data showing that for certain medical conditions and symptoms, that marijuana can be helpful."[10]

The fact that drug overdoses are now responsible for more deaths than traffic crashes in the United States also generates a lot of discussion.[11] This is partially attributable to a significant decline in auto fatalities, but there also has been a surge in deaths involving prescription opioids (e.g., oxycodone). The ubiquity of prescription opioids, suggestions that it serves as a gateway to heroin, and increased use of the phrase "heroin epidemic" by policymakers and journalists are also keeping drugs in the news. Indeed, when Vermont's Governor Peter Shumlin dedicated his

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[1] We thank Jonathan P. Caulkins, Brian Jackson, Peter H. Reuter, and the editors for their useful comments. The views presented here reflect solely those of the authors.

[2] University at Albany, Hidelang Criminal Justice Research Center, *Sourcebook of Criminal Justice Statistics*, Table 2.1.2012, http://www.albany.edu/sourcebook/pdf/t212012.pdf. The Gallup responses from 1984-2012 are compiled here.

[3] "Most Important Problem," Gallup, http://www.gallup.com/poll/1675/most-important-problem.aspx.

[4] U.S. Department of Justice, *Criminal Justice Information Services Annual Report 2014* (Washington, DC: Federal Bureau of Investigation, U.S. Department of Justice, 2014).

[5] Mark A.R. Kleiman, *Legal Commercial Cannabis Sales in Colorado and Washington: What Can We Learn?* (Washington, DC: Brookings Institution, 2015).

[6] James M. Cole (Deputy Attorney General), *Memorandum for All United States Attorneys: Guidance Regarding Marijuana Enforcement* (Washington, DC: U.S. Department of Justice, 2013), http://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf.

[7] Beau Kilmer, "The U.S. Federal Government Tolerates Marijuana Legalization: Will it Last?" *Internationale Politik und Gesellschaft*, August 18, 2014, http://www.ipg-journal.de/schwerpunkt-des-monats/internationale-drogenpolitik/artikel/detail/legalize-it-541/.

[8] "Gupta Opts Out of Surgeon General Consideration," *CNN*, March 5, 2009, http://www.cnn.com/2009/POLITICS/03/05/gupta.surgeon.general/index.html.

[9] John Ingold, "Lawmakers in 11 States Approve Low-THC Medical Marijuana Bills," *Denver Post*, June 30, 2014, http://www.denverpost.com/marijuana/ci_26059454/lawmakers-11-states-approve-low-thc-medical-marijuana.

[10] Juliet Lapidos, "'Marijuana Can Be Helpful,' Admits Surgeon General," *New York Times,* February 5, 2015, http://takingnote.blogs.nytimes.com/2015/02/05/marijuana-can-be-helpful-admits-surgeon-general/?_r=0.

[11] "Prescription Drug Overdose Data," Center for Disease Control and Prevention (CDC), http://www.cdc.gov/drugoverdose/data/overdose.html.

entire 2014 State of the State address to heroin and prescription drug abuse, it intensified public discussion about the opioid problem throughout the country.[12]

In the short run, there is little reason to believe that drugs are going to become less of an issue in the United States. High-profile discussions will likely continue as states, including California and Massachusetts, will probably vote on marijuana legalization in 2016, marijuana prohibition could become an issue in the 2016 presidential election, and countries in Latin America and the Caribbean seriously debate drug policy. There will also be series of well-publicized events leading up to and occurring at the 2016 Special Session of the United Nations General Assembly on the World Drug Problem (UNGASS 2016).

No one knows what the United States will do at UNGASS 2016, but it is useful to review the current landscape and recent policy changes as background for such speculations. The next section of this paper discusses trends in U.S. drug consumption, production, and trafficking, highlighting the striking finding that consumption of cocaine in the U.S. dropped 50 percent between 2006 and 2010. Indeed, according to Caulkins et al., this downturn "competes with the 2001 Australian heroin drought as the greatest 'success' in modern recorded drug history at the population level."[13] This is followed by an overview of U.S. drug policies and four noteworthy changes to drug policies in the United States. The paper concludes with thoughts about the international conventions and UNGASS 2016.

Drug Consumption, Production, and Trafficking in the United States

Consumption

Since the price for illegal drugs jumps dramatically once they enter the United States, most of the money spent at the retail level goes to domestic traffickers and suppliers. Figure 1 shows that aggregate U.S. expenditures on cocaine, heroin, marijuana, and methamphetamine were generally stable over the period 2000-2010 at roughly $100 billion per annum; however, there was a seismic shift in the composition of expenditures.[14] The value of the retail illicit market for marijuana increased by one-third between 2004 and 2010, while the value of the cocaine market was cut in half over the decade, and fell by nearly one-third between 2006 and 2010.

Cocaine. From the mid-1980s to the mid-2000s, the market for cocaine was the largest of all illicit drugs in the United States. Though consumption peaked in the early-1990s, in 2000 the market was still worth roughly $60 billion in today's dollars. However, the market declined rapidly in value, and even more so in quantity consumed. Between 2000 and 2006, total quantity consumed remained around 300 metric tons (mt) of pure cocaine (e.g., 2 kilograms of adulterated cocaine that is 50 percent pure cocaine counts as 1 pure kilogram). Yet the size of the market in real dollar terms fell by over 20 percent, and over the next five years consumption dropped by 50 percent and expenditures fell by another 34 percent.[15]

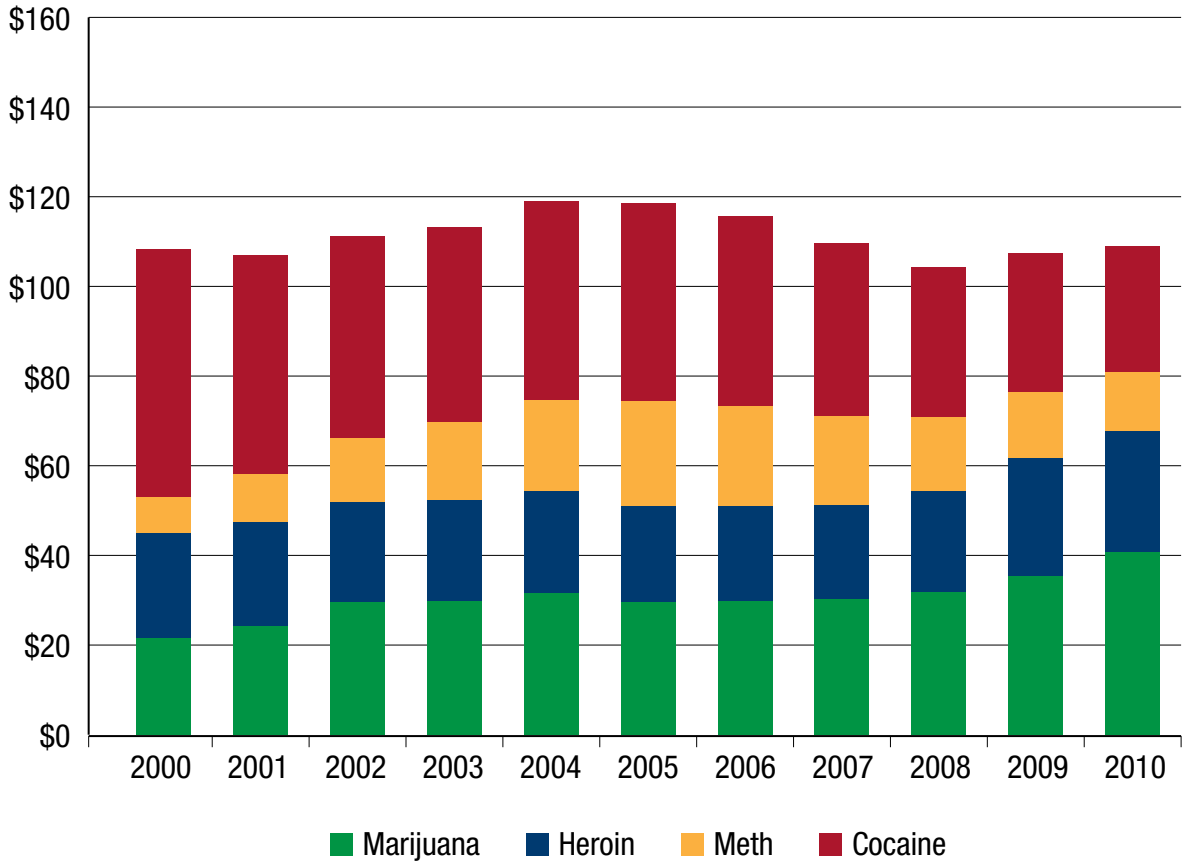
[12] Katharine Seelye, "In Annual Speech, Vermont Governor Shifts Focus to Drug Abuse," *New York Times,* January 8, 2014, http://www.nytimes.com/2014/01/09/us/in-annual-speech-vermont-governor-shifts-focus-to-drug-abuse.html.

[13] Jonathan P. Caulkins et al., "Cocaine's Fall and Marijuana's Rise: Questions and Insights Based on New Estimates of Consumption and Expenditures in US Drug Markets," *Addiction* (2014), doi: http://dx.doi.org/10.1111/add.12628.

[14] Office of National Drug Control Policy (ONDCP), *What America's Users Spend on Illegal Drugs, 2000–2010* (Washington, DC: Executive Office of the President, 2014), https://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/wausid_results_report.pdf.

[15] Ibid; and Beau Kilmer et al., *How Big is the U.S. Market for Illegal Drugs?* RAND Corporation Research Briefs, no. RB-9770-ONDCP (Santa Monica, CA: RAND Corporation, 2014), http://www.rand.org/pubs/research_briefs/RB9770.html.

Figure 1. Annual Spending on the Major Illegal Drugs in the United States: Relatively Stable Levels but Changing Composition (in 2010 dollars)



Source: ONDCP, 2014

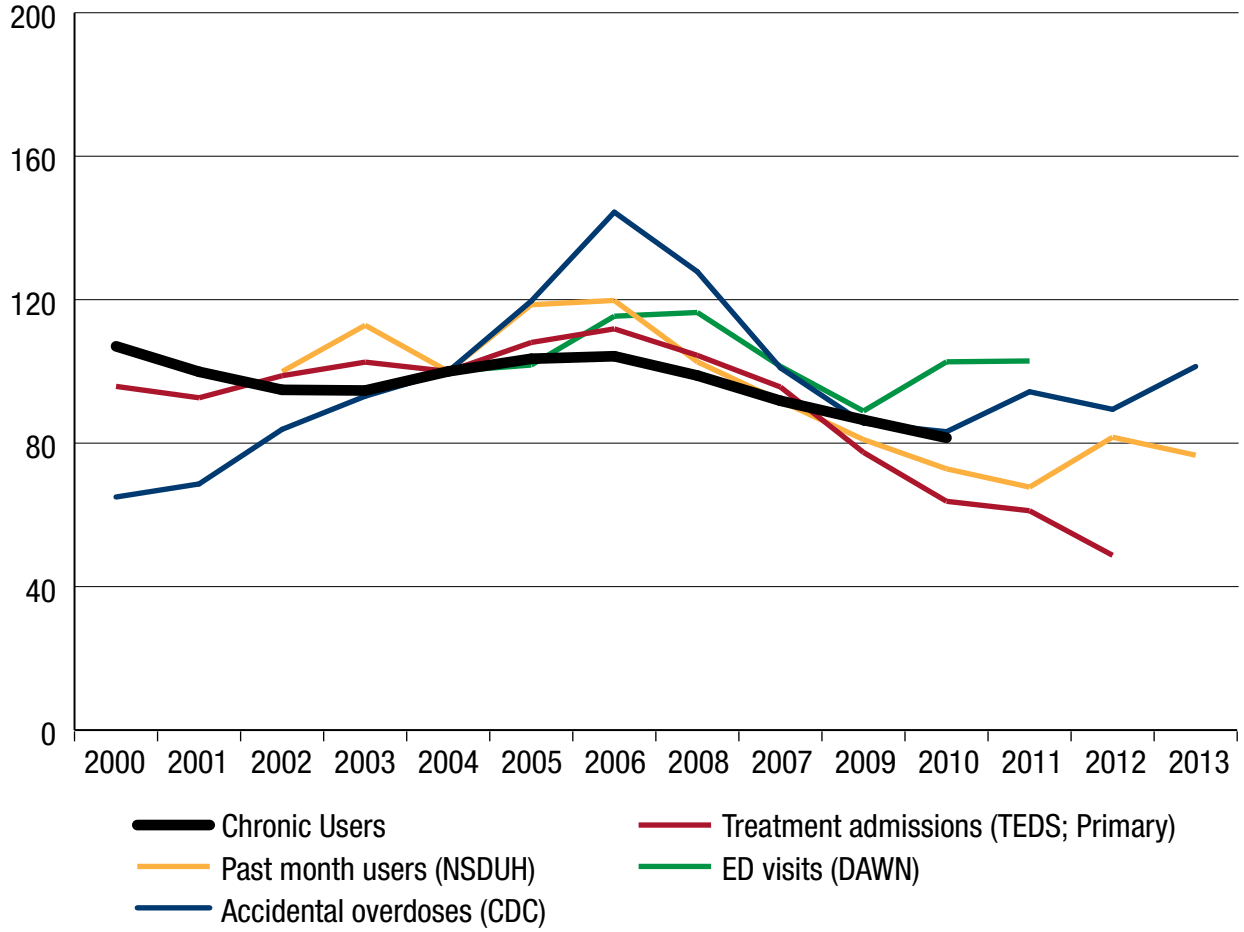
Figure 2 shows that the number of "chronic" cocaine users (a term defined by the federal government as those using at least four times in the prior month) was generally flat between 2000 and 2006, but declined rapidly from 2006 to 2010.[16] Data on consumption and use-related harms since 2010 are inconsistent. The rate of cocaine treatment admissions continued on an uninterrupted downward trajectory, but emergency department visits from 2011 matched 2010 levels, and accidental overdose deaths involving cocaine rose by over 20 percent to 4,700 between 2010 and 2013.[17] Past-month use estimates from the National Survey on Drug Use and Health (NSDUH) household survey, which largely captures non-dependent users, hovered around 2010 levels between 2011 and 2013.[18]

[16] ONDCP, *What America's Users Spend on Illegal Drugs, 2000–2010*.

[17] CDC, *Multiple Cause of Death Files 1999-2013* (Atlanta, GA: CDC, 2014), http://wonder.cdc.gov/mcd-icd10.html. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics. Using CDC WONDER mortality data, we define cause of death based on the multiple cause of death (MCD) ICD-10 codes for cocaine (T40.5), heroin (T40.1), methamphetamine, and other psychostimulants with abuse potential (T43.6), and prescription painkillers (the sum of T40.2, T40.3, and T40.4) with accidental poisoning as the underlying cause of death (X40-X49). These counts represent all cases where each drug is listed as a cause of death; the CDC notes that any single death may have up to 20 causes.

[18] Substance Abuse and Mental Health Services Administration (SAMHSA), *National Survey on Drug Use and Health, 2010* (Ann Arbor, MI: Inter-University Consortium for Political and Social Research [ICPSR], 2010), doi: http://doi.org/10.3886/ICPSR32722.v5; SAMHSA, *National Survey on Drug Use and Health, 2011* (Ann Arbor, MI: Inter-University Consortium for Political and Social Research, 2011), doi: http://doi.org/10.3886/ICPSR34481.v3; and SAMHSA, *National Survey on Drug Use and Health, 2013* (Ann Arbor, MI: ICPSR, 2013), doi: http://doi.org/10.3886/ICPSR35509.v1.

Figure 2. Indicators of Cocaine Use in the United States, 2000-2013



Sources: ONDCP, 2014; Substance Abuse and Mental Health Services Administration (SAMHSA) *Treatment Episode Data Set (TEDS)*, 2000-2012; SAMHSA, *National Survey on Drug Use and Health (NSDUH)*, 2002-2013; SAMHSA, *Drug Abuse Warning Network (DAWN)*, 2004-2011; CDC, 2014

A recent article offered four possible hypotheses for the decline in U.S. cocaine consumption: a decrease in Colombian coca available for cocaine production; the crackdown and violence in Mexico; an increase in non-U.S. demand for cocaine; and a decrease in U.S. demand for cocaine.[19] The authors suspected that some combination of supply-side factors likely accounted for much of the U.S. decline, but do not make any statements about the roles of particular supply-side phenomena. They also noted that these hypotheses are neither exhaustive nor mutually exclusive, and at least two other explanations have also been offered: increased interdiction efforts in Colombia[20] and precursor chemical controls by the United States.[21]

At this point it is not possible to say how much of the decline in U.S. cocaine consumption can be attributed to policy decisions. In fact, there may have been a "perfect storm" with the rapid increase in manual

[19] Caulkins et al., "Cocaine's Fall and Marijuana's Rise."

[20] Daniel Mejía, *Plan Colombia: An Analysis of Effectiveness and Costs* (Washington, DC: Brookings Institution, 2015).

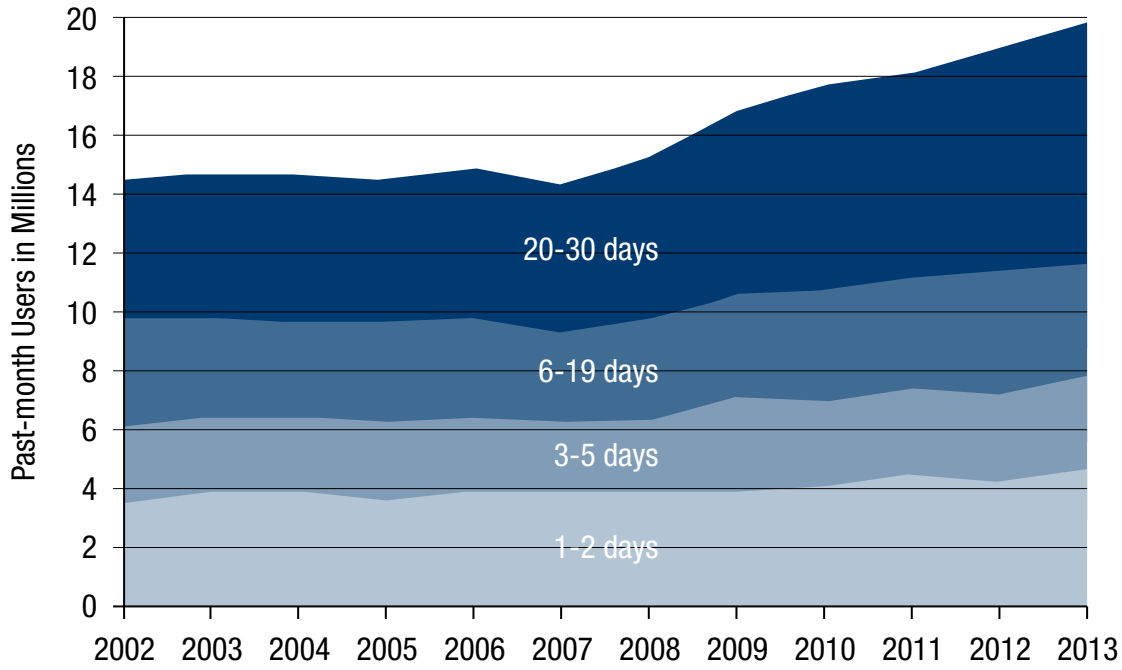
[21] James K. Cunningham, Russell C. Callaghan, and Lon-Mu Liu, "US Federal Cocaine Essential ("Precursor") Chemical Regulation Impacts on US Cocaine Availability: An Intervention Time Series Analysis With Temporal Replication," *Addiction* 110, no. 5 (2015): 805-20, doi: http://dx.doi.org/10.1111/add.12839. Ongoing work by Peter Reuter considers the possibility of a positive feedback loop as enforcement against sellers became more intense as a result of the initial demand drop.

eradication, increase in Colombian interdiction, reduced availability of sodium permanganate, instability in Mexico, and an increase in non-U.S. demand. Together, these events may have had more of an effect on cocaine consumption in the United States than any event would have had on its own, but this is very much an open question.

Marijuana. Approximately $40 billion was spent on marijuana in 2010, and more than 20 million people in the U.S. consume marijuana each month.[22] The number of self-reported past-month marijuana users was flat from 2002 to 2007, but rose significantly from 2007 through 2013 (Figure 3). However, counts of these so-called "current" users paint a picture that is at best incomplete, if not misleading, because consumption is dominated by daily/near-daily users; their numbers were growing much more rapidly and are now up seven-fold since the nadir in the early 1990s.[23] While changes in public sentiment about marijuana and medical marijuana laws (especially those that allow dispensaries) likely account for some of the increase,[24] decreases in the cost per hour of marijuana intoxication could also play a role.[25] Changing public perceptions about marijuana could also contribute by making survey respondents more honest about their consumption. Yet considering that the number of daily/near-daily users increased much more than the other past-month users, this is unlikely to be the major contributor.

Methamphetamine. Consumption estimates for methamphetamine contain significant uncertainty due to a lack of data covering non-urban areas where methamphetamine tends to be more common. Nevertheless, the overarching trends across treatment

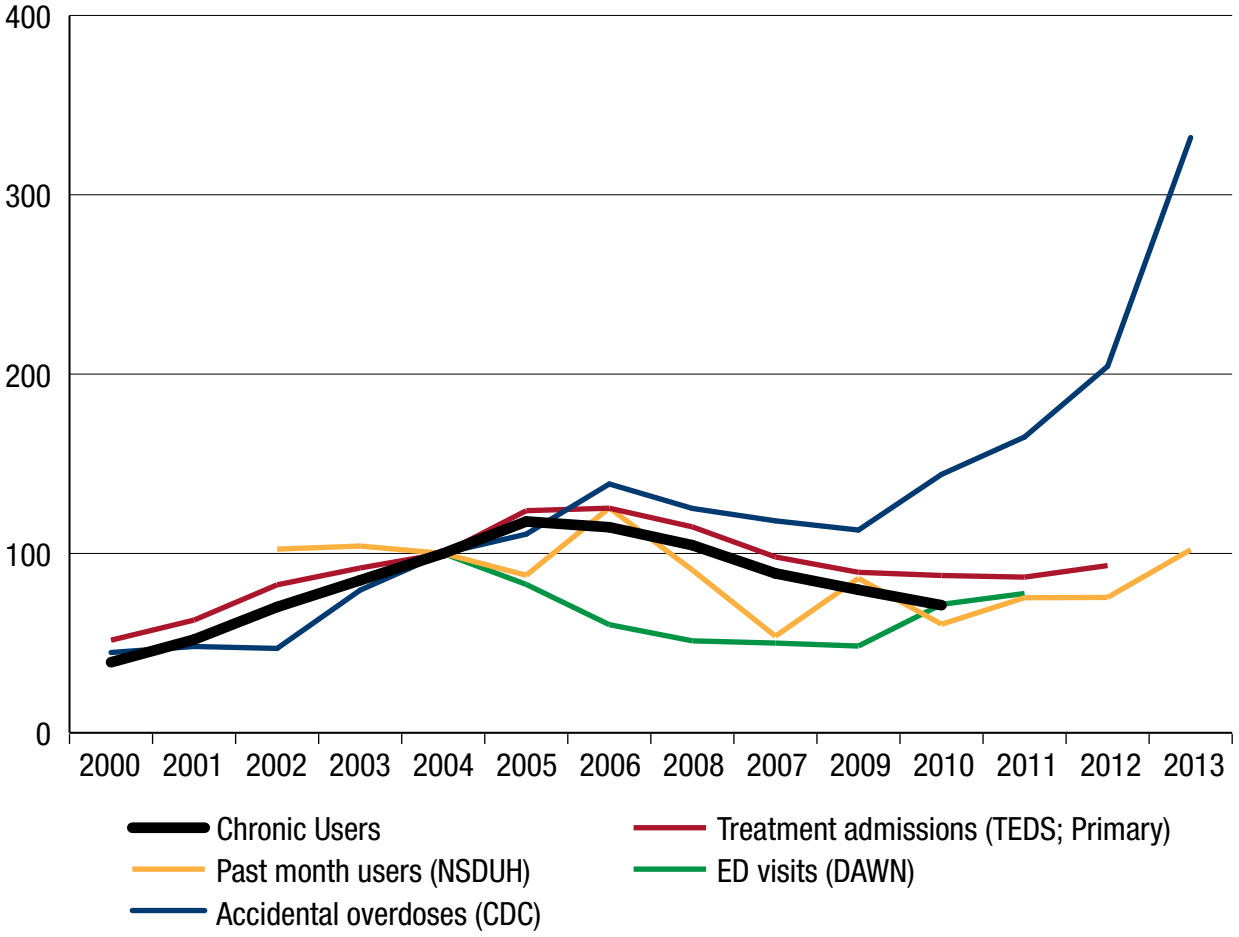
Figure 3. Self-Reported Marijuana Use Rose Rapidly Between 2007 and 2013



Source: SAMHSA NSDUH, 2002-2013

[22] ONDCP, *What America's Users Spend on Illegal Drugs, 2000–2010*.
[23] Caulkins et al., "Cocaine's Fall and Marijuana's Rise"; and Jonathan P. Caulkins, e-mail communication with Beau Kilmer, February 24, 2015.
[24] D. Mark Anderson and Daniel I. Rees, "Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption," *Journal of Law and Economics* 56, no. 2 (2011): 333-369, http://medicalmarijuana.procon.org/sourcefiles/medical-marijuana-laws-traffic-fatalities-and-alcohol-consumption.pdf; and Rosalie L. Pacula et al., "Assessing the Effects of Medical Marijuana Laws on Marijuana Use: The Devil is in the Details," *Journal of Policy Analysis and Management* 34, no. 1 (2015): 7-31, doi: http://dx.doi.org/10.1002/pam.21804.
[25] Caulkins et al., "Cocaine's Fall and Marijuana's Rise."

Figure 4. Indicators of Methamphetamine Use in the United States, 2000-2013



Sources: ONDCP, 2014; SAMHSA TEDS, 2000-2012; SAMHSA NSDUH, 2002-2013; SAMHSA DAWN, 2004-2011; CDC, 2014

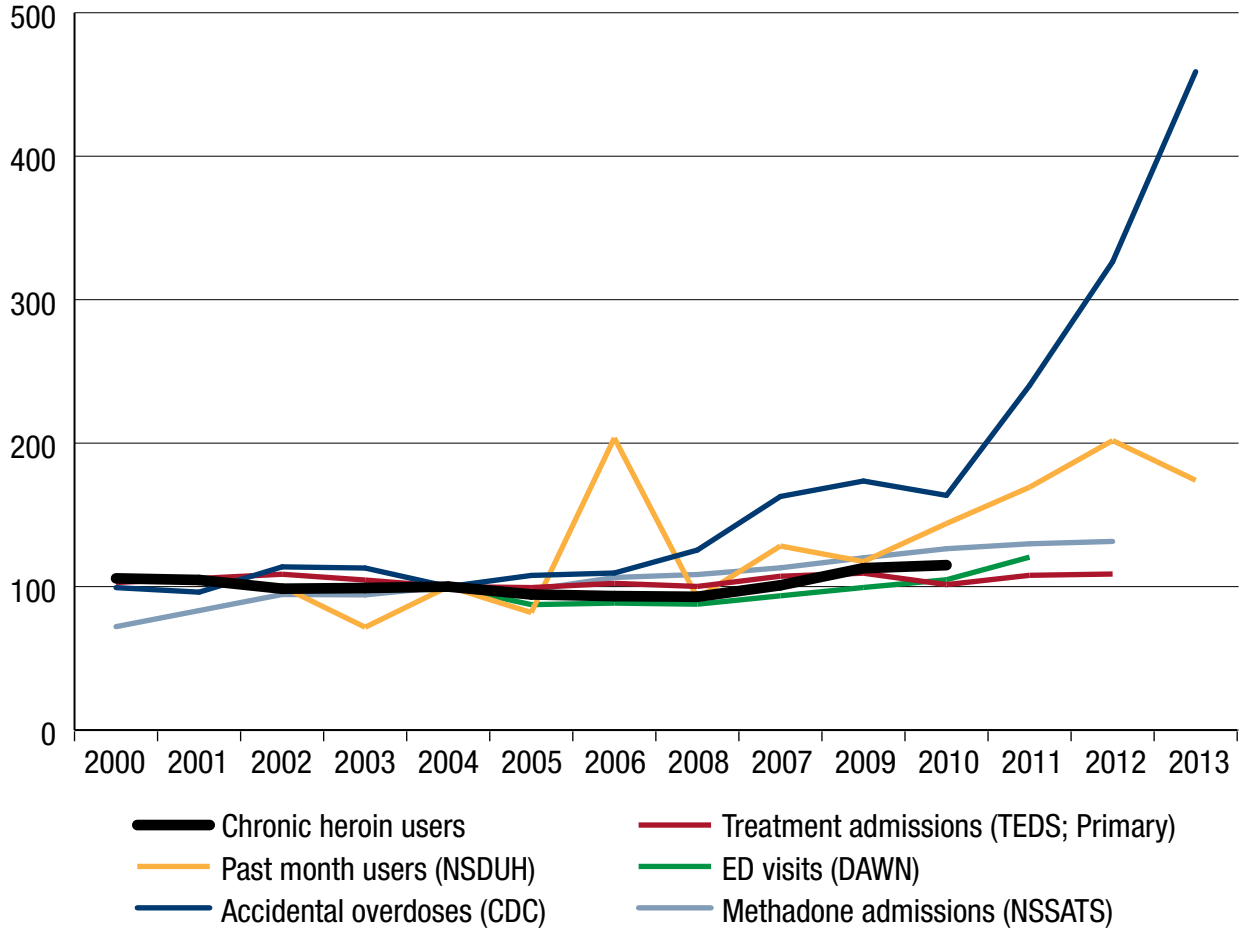
admissions, emergency department admits, and household respondents suggest that the estimated steep decline in users beginning circa 2005 may have abated or even reversed around the end of the 2000s (Figure 4). Evidence of a large increase in psychostimulant overdose deaths is consistent with that assertion, but we cannot rule out the possibility that the increase is attributable to a psychostimulant other than methamphetamine.[26]

Heroin. Figure 5 shows that the number of chronic heroin users was generally flat over from 2000 to 2010, but there appeared to be an uptick beginning in 2008.[27] The small increases seen in 2009 and 2010 continue into present day based on data on treatment admissions and emergency department visits. Most striking is the large increase in accidental overdoses involving heroin, which appear to have almost tripled from 2010 to 2013.

[26] CDC, *Multiple Cause of Death Files 1999-2013*. Accidental overdose deaths due to heroin and psychostimulants including methamphetamine both grew by approximately 40 percent between 2012 and 2013. For heroin, this was the third straight year of 35 percent or higher year-over-year growth and represents nearly a tripling of overdose deaths from 2,794 in 2010 to 7,838 in 2013. This is unprecedented in the WONDER data going back to 1999, and an area of immediate concern for drug and public health policy research and intervention, especially in light of the plateau in prescription opioid overdoses over the same period after rapid growth in the preceding decade. The increase in deaths also appears to be acute among women 35-44 years of age (3.5-fold growth over 2010-2013) and in the northeast (3.8-fold growth).

[27] The erratic trends in household survey figures circa 2005 underscore how futile it is to try to track heroin use with general population surveys; indeed, the actual number of daily and near-daily heroin users was more than 15 times (one million versus 60,000) what would be estimated by the U.S. household survey. Beau Kilmer and Jonathan P. Caulkins, "Hard Drugs Demand Solid Understanding," *USA Today*, March 8, 2014, http://www.usatoday.com/story/opinion/2014/03/08/heroin-abuse-hoffman-research-column/6134337/.

Figure 5. Indicators of Heroin Use in the United States, 2000-2013



Sources: ONDCP, 2014; SAMHSA TEDS, 2000-2012; SAMHSA NSDUH, 2002-2013; SAMHSA DAWN, 2004-2011; SAMHSA *National Survey of Substance Abuse Treatment Services* (N-SSATS), 2000-2011; CDC, 2014

Though the causes of the upturn in use are unclear, evidence increasingly suggests that dependent nonmedical use of prescription opioids has led to an increase in heroin use.[28] One hypothesis is that some who become dependent on painkillers eventually substitute cheaper heroin for more expensive—and increasingly harder to acquire—pills. Additional evidence of chemical tolerance toward opioid painkillers may also push users to heroin to maintain intoxication.[29] Another conjecture is that suppliers may be pushing heroin more heavily in light of the drops in demand for cocaine and falling profitability for illicit marijuana.[30]

Nonmedical use of prescription opioids. The prevalence of nonmedical use of prescription opioid painkillers has been relatively flat over the past decade,

[28] Stephen E. Lankenau et al., "Initiation Into Prescription Opioid Misuse Amongst Young Injection Drug Users," *International Journal of Drug Policy* 23, no. 1 (2012): 37-44, doi: http://dx.doi.org/10.1016/j.drugpo.2011.05.014; K. Michelle Peavy et al., "'Hooked On' Prescription-Type Opiates Prior To Using Heroin: Results From A Survey Of Syringe Exchange Clients," *Journal of Psychoactive Drugs* 44, no. 3 (2012): 259-65, doi: http://dx.doi.org/10.1080/02791072.2012.704591; and Cristopher M. Jones, Karin A. Mack, and Leonard J. Paulozzi, "Pharmaceutical Overdose Deaths, United States," *Journal of the American Medical Association* 309, no. 7 (2013): 657-659, doi: http://dx.doi.org/10.1001/jama.2013.272.

[29] Kieran A. Slevin and Michael A. Ashburn, "Primary Care Physician Opinion Survey on FDA Opioid Risk Evaluation and Mitigation Strategies," *Journal of Opioid Management* 7, no. 2 (2011): 109-15.

[30] Nick Miroff, "Tracing the U.S. Heroin Surge Back South of the Border as Mexican Cannabis Output Falls," *Washington Post,* April 6, 2014, http://www.washingtonpost.com/world/tracing-the-us-heroin-surge-back-south-of-the-border-as-mexican-cannabis-output-falls/2014/04/06/58dfc590-2123-4cc6-b664-1e5948960576_story.html.

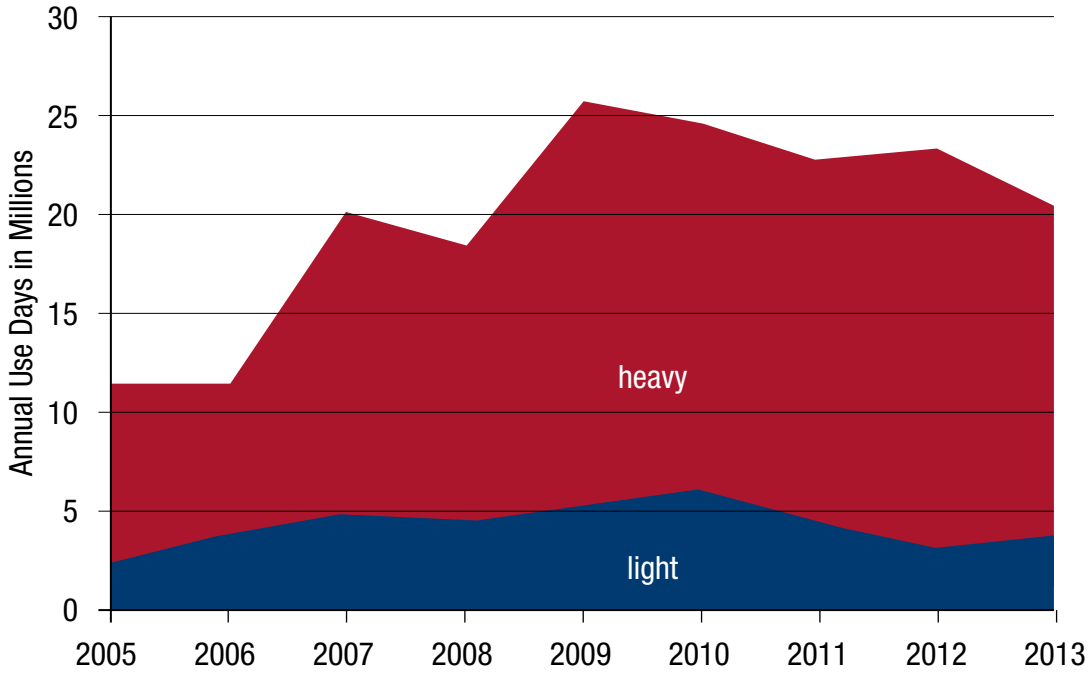
but heavy consumption and its associated harms have risen rapidly. This is in part due to the concentration of consumption among heavy users. According to the NSDUH, total nonmedical use days of OxyContin, one of several prescription opioid painkillers commonly used without a doctor's prescription, more than doubled between 2005 and 2012.[31] Growth among those using at least four times per month has outpaced the growth among occasional users; the former's share of total use days climbed from a low of 65 percent in 2006 to over 80 percent of the total in the last three years of available data (Figure 6).

The growth of heavy painkiller use led to an increase in overdose deaths. Accidental overdoses nearly quintupled between 1999 and 2013, and outnumbered accidental overdoses from heroin, cocaine, and psychostimulants (including meth) combined between 2004 and 2012.[32] From 1999 to 2012, there was a more than seven-fold increase in primary treatment admissions for "other opiates and synthetics."[33]

Production and Trafficking

All of the cocaine and most of the heroin consumed in the U.S. is imported from Latin America.[34] The cocaine comes from coca grown in the South American Andes region, and the heroin comes from poppies grown in Colombia and Mexico. Marijuana consumed in the United States used to be largely produced in Mexico (with smaller amounts imported from Canada, Jamaica, and other places), but

Figure 6. Increase in Non-Medical OxyContin Consumption Concentrated Among Heavy Users, 2005-2013



Source: SAMHSA NSDUH, 2005-2013

[31] SAMHSA, *National Survey on Drug Use and Health, 2005* (Ann Arbor, MI: ICPSR, 2005), doi: http://doi.org/10.3886/ICPSR04596.v4; and SAMHSA, *National Survey on Drug Use and Health, 2012* (Ann Arbor, MI: ICPSR, 2012), doi: http://doi.org/10.3886/ICPSR34933.v2.
[32] CDC, *Multiple Cause of Death Files 1999-2013.*
[33] SAMHSA, *Treatment Episode Data Set – Admissions (TEDS-A) – Concatenated, 1992 to 2012* (Ann Arbor, MI: ICPSR, 2014).
[34] National Drug Intelligence Center (NDIC), *National Drug Threat Assessment, 2011* (Washington, DC: U.S. Department of Justice, 2011), http://www.justice.gov/archive/ndic/pubs44/44849/44849p.pdf.

domestic production has grown sharply. It is hard to determine what share of the marijuana consumed in the U.S. is coming from one source or another because proportions seized can vary by point of origin. Based on law enforcement sources, some researchers have estimated that circa 2008 about 40-67 percent of marijuana consumed in the U.S. came from Mexico, but this proportion has likely decreased.[35] As for methamphetamine, it is produced in both Mexico and the United States, but law enforcement sources believe that much of what is being consumed is now coming from Mexico.[36]

Mexican drug trafficking organizations (DTOs) are the primary channel for drugs produced in the South to enter the United States. These Mexican DTOs have been identified in all nine Organized Crime Drug Enforcement Task Force regions and all 32 High Intensity Drug Trafficking Areas. Their rise to power has come as a result of diminishing Colombian DTO and Italian organized crime presence, as well as cooperative efforts with Dominican DTOs.[37] Asian DTO influence has also reportedly been on the rise as they traffic in high-purity Southeast Asian heroin and methylenedioxy-methamphetamine (MDMA, or ecstasy).[38] Israeli, Russian, and Western European traffickers have also been known to supply MDMA.[39]

Once the drugs enter the United States, there are numerous syndicates, street gangs, and other groups that move the product to urban areas. Local drug gangs will often control heroin and cocaine sales, and their distribution and use has historically been associated with violence and criminal activity.[40] Marijuana is largely distributed within loose social networks, although increasingly also via medical dispensaries and state-legal retail stores.[41]

The violence associated with domestic drug markets exists, but it has decreased dramatically, especially for cocaine.[42] This could be attributable to a number of factors, including a change in suppliers and a change in technology (e.g., increased use of cell phone transactions and deliveries). In addition, an unknown share of wholesale and retail drug transactions occurs behind closed doors, enabled by private online social networking and "deep web" applications transacting in cryptocurrencies like Silk Road or its most recent successors, Agora and Evolution.[43]

U.S. Drug Policy at a Glance

U.S. efforts to reduce drug consumption are typically placed into five groups: prevention, treatment, domestic law enforcement, interdiction, and international

[35] Beau Kilmer et al., *Reducing Drug Trafficking Revenues and Violence in Mexico: Would Legalizing Marijuana in California Help*? (Santa Monica, CA: RAND Corporation, 2010), http://www.rand.org/content/dam/rand/pubs/occasional_papers/2010/RAND_OP325.pdf.

[36] ONDCP, *Drug Availability Estimates in the United States* (Washington, DC: Executive Office of the President, 2012), https://www.whitehouse.gov/sites/default/files/page/files/daeus_report_final_1.pdf.

[37] NDIC, *Drug Trafficking Organizations* (Washington, DC: U.S. Department of Justice, 2010), http://www.justice.gov/archive/ndic/pubs38/38661/dtos.htm. "In the past few years, Mexican drug trafficking organizations (DTOs) expanded their operations in the Florida/Caribbean, Mid-Atlantic, New York/New Jersey, and New England regions, where, in the past, Colombian DTOs were the leading suppliers of cocaine and heroin. As a result, the direct influence of Colombian DTOs has diminished further, although they remain a source for wholesale quantities of cocaine and heroin in many eastern states, especially New York and New Jersey. Mexican DTOs have expanded their presence by increasing their transportation and distribution networks, directly supplying Dominican drug distributors that had previously distributed cocaine and heroin provided primarily by Colombian DTOs. The switch by Dominican DTOs from Colombian to Mexican suppliers is most evident in the Mid-Atlantic region, specifically in the Philadelphia/Camden and Washington/Baltimore areas. In these locations, some Dominican DTOs bypass Colombian sources of supply in New York City and Miami and obtain cocaine and heroin directly from Mexican sources or from sources in the Caribbean or in South America."

[38] NDIC, *National Drug Threat Assessment 2011*.

[39] NDIC, *National Drug Threat Assessment 2004* (Washington, DC: U.S. Department of Justice, 2004), https://www.hsdl.org/?view&did=31346.

[40] NDIC, *National Drug Threat Assessment 2004*; and Federal Bureau of Investigation, *2013 National Gang Report* (Washington, DC: National Gang Intelligence Center, 2014), http://www.fbi.gov/stats-services/publications/national-gang-report-2013.

[41] Jonathan P. Caulkins and Rosalie L. Pacula, "Marijuana Markets: Inferences From Reports by the Household Population," *Journal of Drug Issues* 36, no. 1 (2006): 173-200, http://repository.cmu.edu/cgi/viewcontent.cgi?article=1021&context=heinzworks.

[42] Roland Fryer et al., "Measuring Crack Cocaine and Its Impact," *Economic Inquiry* 51, no. 3 (2013): 1651-81, doi: http://dx.doi.org/10.1111/j.1465-7295.2012.00506.x.

[43] N. Christin, "Traveling the Silk Road: A Measurement Analysis of a Large Anonymous Online Marketplace" (paper, 22nd International Conference on World Wide Web, Rio de Janeiro, Brazil, May 13, 2013), http://dl.acm.org/citation.cfm?id=2488408; and Andy Greenberg, "How the Dark Web's New Favorite Drug Market Is Profiting From Silk Road 2's Demise," *Wired*, November 20, 2014, http://www.wired.com/2014/11/the-evolution-of-evolution-after-silk-road/.

efforts. We begin this section with a brief overview of each. Since these categories include a number of different programs and policies, we do not attempt broad generalizations about their effectiveness or cost-effectiveness.

- **Prevention:** Prevention efforts are intended to reduce initiation as well as progression to heavy use. These efforts range from school-based programs to advertising campaigns, and there is currently a large focus on community-based initiatives.[44] There are also many programs that may prevent substance use but are not classified as typical substance use prevention programs (e.g., the Good Behavior Game).[45]
- **Treatment:** The goal of treatment is to reduce consumption and use-related harms. Some approaches focus on abstinence while others use maintenance therapy to reduce consumption (e.g., methadone). On any given day in 2011 there were roughly 1.2 million clients enrolled in substance use treatment at 14,000 facilities (including for alcohol).[46] Approximately 90 percent of these clients were in outpatient treatment, and 26 percent received methadone or buprenorphine from an opioid treatment program.
- **Domestic law enforcement:** Prohibiting drugs, enforcing laws, and sanctioning drug-related violations are all intended to constrain supply and thereby hold down consumption through making it more expensive and less convenient for users to obtain drugs, and also to prevent overt marketing. Many jurisdictions offer diversion programs for arrestees with drug problems (e.g., education programs, drug courts) as well as for most—but not all—individuals sentenced to incarceration for drugs who were involved in distribution.[47] On any given day, almost five million individuals are under community supervision (e.g., probation, parole) and many are subject to drug testing and the possibility of being sanctioned for testing positive.[48]
- **Interdiction:** Funding for interdiction primarily supports the Departments of Homeland Security and Defense in their activities to interrupt the trafficking of illicit drugs across international borders.[49] Agencies such as the U.S. Coast Guard, U.S. Customs and Border Protection, and U.S. Immigration and Customs Enforcement provide a first line of defense against drugs en route to the U.S. market. These efforts do not "seal the borders," but they do make transport of drugs risky and expensive enough to induce a large price differential across the border.
- **International:** Federal spending on international programs is allocated to the Departments of Defense, Justice, and State in order to execute drug control programs in areas outside of the United States. These activities are intended to disrupt or dismantle major DTOs, reduce supply, promote demand reduction, and increase enforcement capabilities in foreign nations.[50]

[44] "Drug-Free Communities Support Program," ONDCP, http://www.whitehouse.gov/ondcp/drug-free-communities-support-program.
[45] Sheppard Kellam et al., "The Good Behavior Game and the Future of Prevention and Treatment," *Addiction Science and Clinical Practice* 6, no. 1 (2011): 73-84, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3188824/.
[46] SAMHSA, *National Survey of Substance Abuse Treatment Services (N-SSATS): Response Rates for State-Approved Facilities* (Rockville, MD: SAMHSA, 2014).
[47] Eric L. Sevigny and Jonathan P. Caulkins, "Kingpins or Mules: An Analysis of Drug Offenders Incarcerated in Federal and State Prisons," *Criminology and Public Policy* 3, no. 3 (2006): 401-34, doi: http://dx.doi.org/10.1111/j.1745-9133.2004.tb00050.x.
[48] Bureau of Justice Statistics, U.S. Department of Justice, *Probation and Parole in the United States, 2012* (Washington, DC: U.S. Department of Justice, 2013), http://www.bjs.gov/index.cfm?ty=pbdetail&iid=4844; and Angela Hawken, Steven Davenport, and Mark A.R. Kleiman, "Managing Drug-Involved Offenders" (working paper, National Criminal Justice Reference Service, National Institute of Justice, July 2014), https://www.ncjrs.gov/pdffiles1/nij/grants/247315.pdf.
[49] ONDCP, *2013 National Drug Control Strategy* (Washington, DC: Executive Office of the President, 2013), https://www.whitehouse.gov/sites/default/files/ndcs_2013.pdf.
[50] Ibid.

Each year after the president's proposed federal drug budget is announced, attention is given to the share of the budget that is dedicated to demand reduction (treatment and prevention) versus supply reduction (domestic law enforcement, interdiction, and international efforts). While an increased focus on federal support for demand reduction has been consistent throughout the Obama administration (Table 1), critics correctly note that the majority of *federal* spending is still focused on supply-reduction efforts. While the symbolism of this ratio has dwindled over time, it is still seen by some as an indicator of the U.S. commitment to drug prohibition. What is sometimes lost in this discussion is that many countries spend more on supply reduction than on demand reduction, including countries that are thought of as having very different drug policies than the United States (e.g., the Netherlands).[51]

But a focus on the *federal* drug control budget misses the larger picture of what is happening with drug policy in the United States. Local and state governments are largely responsible for education and law enforcement expenditures (the federal budget does include block grants which support some of these efforts), and a large chunk of health-care spending in the United States is via the private sector. Thus, much of what happens with drug policy is not funded by the federal government, and there is enormous variation across jurisdictions.

Unfortunately, we have little information about the amount of money state and local governments spend trying to control drug use and drug problems.[52] A report from the National Association of State Alcohol/Drug Abuse Directors suggested that in the late 1990s federal spending only accounted for approximately 40 percent of state-supported alcohol and other drug services.[52] There are no systematic estimates for state and local drug enforcement, but the annual costs associated with incarcerating roughly 400,000 jail and prison inmates are in the double-digit billions.

Table 1. Federal Drug Control Spending (in Millions), by Category and Year

	FY2003 Final	FY2004 Final	FY2005 Final	FY2006 Final	FY2007 Final	FY2008 Final	FY2009 Final	FY2010 Final	FY2011 Final	FY2012 Final	FY2013 Final	FY2014 Enacted	FY2015 Requested
Demand Reduction													
Treatment	5,229.9	5,906.4	6,151.7	6,229.4	6,493.9	6,725.1	7,208.7	7,544.5	7,659.7	7,848.3	7,888.6	8,825.1	9,596.8
Prevention	2,006.8	2,040.2	2,040.0	1,964.5	1,934.2	1,841.0	1,954.0	1,566.4	1,478.1	1,339.2	1,274.9	1,279.3	1,337.4
Total Demand Reduction	7,236.7 42.4%	7,946.5 42.8%	8,191.7 42.2%	8,193.9 39.7%	8,428.1 38.9%	8,566.1 39.2%	9,162.7 36.9%	9,110.9 37.0%	9,137.7 37.5%	9,187.4 37.5%	9,157.0 38.5%	10,097.4 40.1%	10,927.2 43.1%
Supply Reduction													
Domestic Law Enforcement	6,678.7	7,049.5	7,383.1	7,602.2	8,018.2	8,300.9	9,470.0	9,252.5	9,223.0	9,446.5	8,850.0	9,274.1	9,176.6
Interdiction	1,694.7	2,010.9	2,433.6	2,924.1	3,045.9	2,968.7	3,699.2	3,662.4	3,977.1	4,036.5	3,940.6	4,047.9	3,863.1
International	1,443.3	1,549.0	1,873.7	1,895.8	2,191.4	1,998.5	2,532.6	2,595.0	2,027.6	1,833.7	1,846.3	1,785.8	1,389.4
Total Supply Reduction	9,816.7 57.6%	10,609.4 57.2%	11,690.4 58.8%	12,422.2 60.3%	13,255.5 61.1%	13,268.1 60.8%	15,701.9 63.1%	15,509.9 63.0%	15,227.7 62.5%	15,316.7 62.5%	14,643.4 61.5%	15,114.8 59.9%	14,436.1 56.9%

Source: ONDCP, 2014

[51] Peter H. Reuter, "What Drug Policies Cost: Estimating Government Drug Policy Expenditures," *Addiction* 101, no. 3 (2006): 315-22, doi: http://dx.doi.org/10.1111/j.1360-0443.2005.01336.x; and European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), *Public Expenditure* (Luxembourg: Publications Office of the European Union, 2011), http://www.emcdda.europa.eu/online/annual-report/2011/policies-law/4.

[52] One recent report suggests that this number has not been calculated since 1991. See Beau Kilmer, Jonathan P. Caulkins, Rosalie L. Pacula, and Peter H. Reuter, *The U.S. Drug Policy Landscape: Insights and Opportunities for Improving the View* (Santa Monica, CA: RAND Corporation, 2012), http://www.rand.org/pubs/occasional_papers/OP393.html.

[52] National Association of State Alcohol and Drug Abuse Directors, Inc. (NASADAD), *Analytic Brief: Understanding the Baseline: Publicly Funded Substance Abuse Providers and Medicaid* (Washington, DC: NASADAD, 2011), http://nasadad.org/wp-content/uploads/2011/05/Understanding-the-Baseline-Publicly-Funded-Substance-Abuse-Providers-and-Medicaid1.pdf. There is also private spending on treatment and this is expected to increase with the roll out of the Affordable Care Act.

Also, it is simplistic to only associate criminal justice efforts with supply control.[53] Distinctions between domestic law enforcement and treatment are becoming increasingly blurry as jurisdictions pursue alternatives to incarceration for those arrested for drug offenses. In an increasing number of places, those arrested for a drug offense and/or with drug problems are mandated to some form of treatment with varying levels of judicial involvement. And as police are often the first responders to overdoses, there has been an increased focus by the White House and others to make sure these officers are equipped with the training and the Naloxone necessary to treat an overdose.

Noteworthy Changes in U.S. Drug Policies

This section highlights four noteworthy changes to drug policy in the United States, outlining efforts toward: 1) increasing access to high-quality substance use treatment; 2) reducing the length of incarceration for non-violent drug offenders; 3) reducing heavy substance use among those subject to community corrections via frequent testing, with swift, certain, and fair sanctions for violations; and 4) increasing flexibility about harm reduction at the federal level.[54]

Increasing Access to High-Quality Substance Use Treatment

Many drug users want treatment but cannot get access. In some places there may just be a lack of treatment providers; in others, the waiting lists may be too long.[55] And for those who do get access, they may not necessarily receive the most appropriate treatment. For example, an evaluation of California's Proposition 36—a criminal justice diversion program—found that few opioid abusers diverted to treatment were able to access substitution treatment.[56] And even those who access the appropriate treatment may not get the right level. For example, some researchers have found that "efforts to improve methadone treatment practices have made substantial progress, but 23 percent of patients across the nation are still receiving doses that are too low to be effective."[57]

Part of the problem in the United States is that most substance use treatment takes place in specialty facilities that operate outside of the traditional health care system. In addition, treatment can be expensive and until recently insurers did not have to cover mental health conditions in the same way they covered physical conditions. But with the passage of the 2008 Mental Health Parity and Addiction Equity Act (MHPAEA), insurers that covered mental health disorders, which includes substance use disorders, were required to cover these services "at parity" with the coverage rate for physical conditions. While this was significant, it was still possible for insurers to not provide any coverage for substance use disorders.

That situation is changing in the United States. With the passage of The Patient Protection and Affordable Care Act (ACA) in 2010, millions of previously uninsured individuals now have access to insurance that will cover substance use treatment. Some claim that the "ACA will revolutionize care for substance use disorders," highlighting three examples:

> First, the law defines substance use disorder screening, brief intervention, and treatment as essential insurance benefits that must be

[53] T.F. Babor et al., *Drug Policy and the Public Good* (Oxford: Oxford University Press, 2010).
[54] Issues surrounding marijuana legalization are addressed in Kleiman, *Legal Commercial Cannabis Sales in Colorado and Washington*.
[55] Rebecca Clay, "Rural Substance Abuse: Overcoming Barriers to Prevention and Treatment," *SAMHSA News* 15, no. 4 (July/August 2007), http://media.samhsa.gov/SAMHSA_News/VolumeXV_4/July_August_2007.pdf; and "Brief Overview: Alcohol or Other Drug Treatment Services and Need," Center for Health and Justice, Treatment Alternatives for Safe Communities, June 2008, http://www.centerforhealthandjustice.org/BOAODTXServicesandNeeds_short.pdf.
[56] Darren Urada et al., *Proposition 36: The Substance Abuse and Crime Prevention Act of 2000 - 2008 Report* (Los Angeles: University of California Los Angeles / Integrated Substance Abuse Programs, 2008), http://www.uclaisap.org/prop36/documents/2008%20Final%20Report.pdf.
[57] Thomas D'Aunno et al., "Evidence-Based Treatment for Opioid Disorders: a 23-Year National Study of Methadone Dose Levels," *Journal of Substance Abuse Treatment* 47, no. 4 (2014): 245-250, doi: http://dx.doi.org/10.1016/j.jsat.2014.06.001.

> offered in all health plans. Second, by providing insurance to what is ultimately projected to be more than 27 million people, the Affordable Care Act extends this access to the previously uninsured population, which historically has had a high rate of substance use disorder but limited access to care. Thirdly, the Affordable Care Act extends the protections of MHPAEA to individuals who receive insurance through small employers or purchase it on the individual market. These changes are projected to expand access to care to 62.5 million Americans, in addition to the more than 100 million Americans whose insurance coverage was subject to the provisions of MHPAEA.[58]

The ACA is also expected to change the system of treatment, with an official at the Centers for Medicare and Medicaid Services predicting that the system "will be a more ambulatory-based, medically-oriented, and physician-directed system. Such a system may also be expected to makes greater use of pharmacological treatment and services delivered by health professionals."[59]

The ACA is a highly political issue in the United States and there are a number of politicians that would like to repeal it. The Supreme Court is currently hearing a case about the ACA (*King v. Burwell*), and if they side with the plaintiff, a large number of individuals would lose their coverage and/or face higher premiums.[60] We do not offer a guess about what health care coverage will look like in the United States in 10 years, but it will have important implications for the availability of high-quality substance use services for low- and middle-income individuals.

Reducing the Length of Incarceration for Non-Violent Drug Offenders

Many jurisdictions have diversion programs to help keep those arrested or convicted for drug possession out of jail and prison, but some individuals do spend time behind bars for possession.[61] For those convicted for drug sales or trafficking, approximately 80 percent are sentenced to incarceration.[62] The crack epidemic and the passage of mandatory minimum sentencing laws—at the federal level and also within some states—with long sentences and disproportionate penalties for selling crack contributed to the U.S. prison population increase that had a disproportionate impact on ethnic and racial minority groups.[63] However, we must be careful not to overemphasize the role drug offenses played in the growth of the prison population in recent decades.[64]

The social costs of incarceration are large and have been well described elsewhere.[65] Whether or not the large increase in incarceration over the past 40 years reduced crime is hotly debated; experts convened by the National Research Council concluded that "the

[58] Keith Humphreys and Richard G. Frank, "The Affordable Care Act Will Revolutionize Care for Substance Use Disorders in The United States," *Addiction* 109, no. 12 (2014): 1957-58, doi: http://dx.doi.org/10.1111/add.12606.

[59] Jeffrey A. Buck, "The Looming Expansion and Transformation of Public Substance Abuse Treatment Under the Affordable Care Act," *Health Affairs* 30, no. 8 (2011): 1402-10, doi: http://dx.doi.org/10.1377/hlthaff.2011.0480.

[60] Evan Saltzman and Christine Eibner, *The Effect of Eliminating the Affordable Care Act's Tax Credits in Federally Facilitated Marketplaces* (Santa Monica, CA: RAND Corporation, 2010), http://www.rand.org/content/dam/rand/pubs/research_reports/RR900/RR980/RAND_RR980.pdf.

[61] Sometimes as a result of a plea bargain, but not always. In addition, one must also consider that some drug-related arrestees spend time behind bars before trial.

[62] Bureau of Justice Statistics, *Felony Defendants in Large Urban Counties, 2009 - Statistical Tables* (Washington, DC: U.S. Department of Justice, 2013), http://www.bjs.gov/content/pub/pdf/fdluc09.pdf; and Sevigny and Caulkins, "Kingpins or Mules." We remind readers of the insight from Sevigny and Caulkins that "only about 1.6 percent of federal and 5.7 percent of state inmates [for drug offenses] can be described as 'unambiguously low-level.' Alternatively, not many are 'kingpins.' Rather, most fall into a middle spectrum representing different degrees of seriousness that depend on what factors are emphasized."

[63] Steven Raphael and Michael A. Stoll, *Why Are So Many Americans in Prison?* (New York: Russell Sage Foundation, 2013).

[64] See, for example, John Pfaff, "Waylaid by a Metaphor: A Deeply Problematic Account of Prison Growth," *Michigan Law Review* 111, no. 6 (2013): 1087-110, http://repository.law.umich.edu/mlr/vol111/iss6/12.

[65] Jeremy Travis and Michelle Waul, eds., *Prisoners Once Removed: The Impact of Incarceration and Reentry on Children, Families, and Communities* (Washington, DC: Urban Institute Press, 2004); Jeremy Travis, Bruce Western, and Steve Redburn, *The Growth of Incarceration in the United States: Exploring Causes and Consequences* (Washington, DC: National Research Council, 2014), http://johnjay.jjay.cuny.edu/nrc/NAS_report_on_incarceration.pdf; and Michelle Alexander, *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (New York: New Press, 2012).

increase in incarceration may have caused a decrease in crime, but the magnitude is highly uncertain and the results of most studies suggest it was unlikely to have been large."[66] In addition, a complete analysis must take into account how this incarceration affected the futures of these individuals, their families, and their neighborhoods.

While some policymakers are still opposed to sentencing reform, there have been noticeable shifts. For example, California's "realignment"—what Joan Petersilia refers to as a "prison downsizing experiment of historical significance"[67]—is expected to reduce the number of individuals in prisons for drug offenses, and New York repealed its Rockefeller mandatory minimum laws for drug offenders (although Reuter notes that what they were replaced with was not much less severe).[68] However, these changes are not confined to liberal states. Texas is being held up as a model for its sentencing reforms, which included the passage of a law in 2003 that required mandatory community supervision (instead of jail) for first time offenders convicted of possession of less than one gram of most controlled substances.[69]

There have also been a series of drug sentencing reforms at the federal level. Most notably, the U.S. Sentencing Commission recommended reducing the penalties for drug offenders and making the changes retroactive in 2014. Congress had three months to nullify the proposed changes and did not act to do so. Thus, nearly half of the 100,000 drug offenders in federal prisons may be able to be released earlier than planned (applications can be submitted in November 2015). In addition, the crack-powder cocaine sentencing disparity was reduced—but not eliminated—in 2010 with the Congressional passage of the Fair Sentencing Act.

While there are still attempts to increase sanctions for some drug sellers (for example, Senate Bill 5 in Kentucky[70] and House Bill 508 in Ohio,[71] both of which would significantly increase penalties for heroin dealers whose product results in a death), the consensus among experts is that revising policies to reduce the time drug offenders spend behind bars is smart and humane:

> Given the small crime prevention effects of long prison sentences and the possibly high financial, social, and human costs of incarceration, federal and state policy makers should revise current criminal justice policies to significantly reduce the rate of incarceration in the United States. In particular, they should reexamine policies regarding mandatory minimum sentences and long sentences. Policy makers should also take steps to improve the experience of incarcerated men and women and reduce unnecessary harm to their families and their communities.[72]

Reducing Heavy Substance Use Among Those Subject to Community Corrections[73]

A large proportion of heavy drug users are involved in the criminal justice system as either inmates, probationers, or parolees, or are awaiting trial.[74] Many

[66] Travis, Western, and Redburn, *The Growth of Incarceration in the United States.*
[67] Joan Petersilia, "California Prison Downsizing and Its Impact on Local Criminal Justice Systems," *Harvard Law and Policy Review* 8 (2014): 327-57, https://www.law.stanford.edu/sites/default/files/publication/649369/doc/slspublic/Petesilia%20California%20Prison%20Downsizing.pdf.
[68] Peter H. Reuter, "Why Has US Drug Policy Changed So Little Over 30 Years?" *Crime and Justice* 42, no. 1 (2013): 75-140, doi: http://dx.doi.org/10.1086/670818.
[69] *Estimated Two-Year Net Impact to General Revenue Related Funds for HB2668*, Fiscal Note, 78th Texas Legislative Regular Session (2003) (Statement of John Keel, Director, Texas Legislative Budget Board), http://www.legis.state.tx.us/tlodocs/78R/fiscalnotes/html/HB02668E.htm.
[70] John Schickel, "Lawmaker: We Created Heroin Epidemic, Must Fix It," *Cincinnati Enquirer*, February 10, 2015, http://www.cincinnati.com/story/opinion/contributors/2015/02/10/lawmaker-created-heroin-epidemic-must-fix/23166101/.
[71] Ally Marotti, "Punishments Increasing for Dealers of Deadly Heroin," *Cincinnati Enquirer,* October 31, 2014, http://www.cincinnati.com/story/news/crime/2014/09/09/punishments-increasing-dealers-deadly-heroin/15347165/.
[72] Travis, Western, and Redburn, *The Growth of Incarceration in the United States.*
[73] Jonathan P. Caulkins made an important contribution to this section; however, the views reflected here only represent those of the authors.
[74] Mark A.R. Kleiman, "Toward Practical Drug Control Policies," *Social Research* 68, no. 3 (2001): 884-890.

of those under community supervision are subject to drug testing, with at least a theoretical possibility of sanction if they test positive. However, traditionally the implementation of those sanctions looked as if it had been designed to minimize, not maximize, the deterrent impact. If the early violations were sanctioned at all, it was often only a slap on the wrist (e.g., more frequent testing). But then after an apparently random number of positive tests, the individual's probation or parole might be revoked, sending them back to jail or prison for an extended period.[75] This regimen violates common sense and scientific precepts for making incentive schemes effective at changing behavior. Furthermore, given that heavy substance users tend to heavily discount the future, and that many meet clinical criteria for dependence on the substance, it is not surprising that many will continue to use.[76]

What is surprising to many is the more recent revelation that well-designed testing schemes can succeed in radically reducing drug use—even among people who meet clinical criteria for substance abuse or dependence. Hawaii's Opportunity Probation Enforcement (HOPE) program has been a pioneer in this regard.[77] Probationers are told that they can be tested on any given day and that if they test positive they will be immediately subject to a short stay in jail (i.e., it is essentially an extremely short mandatory sentence). Combining abstinence orders with frequent testing and swift, certain, and fair sanctions (SCF) for violation seems to be working for many individuals. A randomized controlled trial (RCT) of HOPE yielded excellent results with respect to probation performance and criminal recidivism,[78] and studies are underway to assess how long these effects persist over time.[79]

The SCF model is expanding throughout the United States, and not just for illegal drugs. Programs similar to HOPE for illegal drugs have now been implemented in more than 40 jurisdictions in 18 states, and there are at least four RCTs currently underway.[80] South Dakota's 24/7 Sobriety Program for alcohol-involved offenders combines frequent alcohol testing with SCF; a violation typically results in one or two days in jail. 24/7 Sobriety has been so widely implemented and effective in the state that it is possible to see reductions in arrests for repeat drunk driving and domestic violence *at the county level* after counties adopt the program.[81] Laws were passed to make 24/7 Sobriety operational statewide in Montana and North Dakota, and it is now being implemented in an increasing number of counties across the country.[82]

A common criticism of HOPE, 24/7 Sobriety, and other SCF programs is that they do not require participation in a "formal" treatment program. Indeed, one of SCF's main challenges is that it directly challenges the persistent belief that treatment is the only way to reduce drug use by people who meet clinical criteria for abuse or dependence. That said, treatment

[75] Mark A.R. Kleiman, "Toward Fewer Prisoners and Less Crime," *Dædalus* 139, no. 3 (2010): 115-23, doi: http://dx.doi.org/10.1162/DAED_a_00027.

[76] G. Ainslie and N. Haslam, "Hyperbolic Discounting," in *Choice Over Time,* ed. George Loewenstein and John Elster (New York: Russell Sage Foundation, 1992), 57-92; R.E. Vuchinich and C.A. Simpson, "Hyperbolic Temporal Discounting in Social Drinkers and Problem Drinkers," *Experimental and Clinical Psychopharmacology* 6, no. 3 (1998): 292-305; and Nancy M. Petry, "Delay Discounting of Money and Alcohol in Actively Using Alcoholics, Currently Abstinent Alcoholics, and Controls," *Psychopharmacology* 154, no. 3 (2001): 243-250.

[77] But Hawaii's Opportunity Probabtion Enforcement (HOPE) program was not the first. See, for a discussion of earlier efforts, Angela Hawken and Mark A.R. Kleiman, "Managing Drug-Involved Probationers with Swift and Certain Sanctions: A Randomized Controlled Trial of Hawaii's HOPE" (working paper, National Criminal Justice Reference Service, National Institute of Justice, 2009); and Hawken, Davenport, and Kleiman, "Managing Drug-Involved Offenders."

[78] Hawken and Kleiman, "Managing Drug-Involved Probationers with Swift and Certain Sanctions."

[79] Note that most of the HOPE offenders in the evaluation used methamphetamine, a notoriously difficult drug to address.

[80] Robert Pearsall et al., "Exercise Therapy in Adults With Serious Mental Illness: A Systematic Review and Meta-Analysis," *BMC Psychiatry* 14, no. 117 (2014), doi: http://dx.doi.org/10.1186/1471-244X-14-117.

[81] Beau Kilmer et al., "Efficacy of Frequent Monitoring With Swift, Certain, and Modest Sanctions for Violations: Insights from South Dakota's 24/7 Sobriety Project," *American Journal of Public Health* 103, no. 1 (2013): e37-43, doi: http://dx.doi.org/10.2105/AJPH.2012.300989.

[82] A new working paper focused on Montana's program provides additional support for the hypothesis that 24/7 reduces the probability of future arrests. Gregory Midgette and Beau Kilmer, "The Effect of Montana's 24/7 Sobriety Program on DUI Re-arrest: Insights from a Natural Experiment with Limited Administrative Data" (RAND Corporation Working Paper WR-1083, March 2015), http://www.rand.org/content/dam/rand/pubs/working_papers/WR1000/WR1083/RAND_WR1083.pdf.

—whether voluntary or required—and SCF are not mutually exclusive.

In fact, SCF can be viewed as a complement, rather than as a competitor, to traditional treatment. Even though a large number of heavy users can reduce their consumption with SCF, without formal treatment, not all can. Indeed, Hawken argues that jurisdictions can use SCF as a type of "behavioral triage,"[83] where those who cannot stop despite the threat of sanctions will then be ordered to treatment or a drug court. This then allows scarce treatment resources to be focused on the individuals with the greatest need, rather than be squandered by spreading them over a much larger number of people, and as a result not provide adequate services to many. Hawaii is currently experimenting with this model.[84]

For individuals under community supervision whose consumption has led them to take actions that threaten public health or public safety (e.g., driving under the influence, domestic violence, robbery), it may be in society's best interest to make sure they reduce their consumption. At this point we do not know whether it is more cost-effective (or cost-beneficial) to order these individuals to "formal" treatment, SCF, both, or something else. This is an open question that should be answered with RCTs.[85]

Increasing Flexibility on Harm Reduction at the Federal Level

In the world of drug policy, harm reduction refers to policies or programs intended to reduce the harms associated with substance use without the express goal of reducing consumption (although that may be a secondary benefit). It is often conflated with legalization since many legalization advocates support harm reduction efforts and believe legalization will reduce the harms associated with consuming; however, they are entirely distinct concepts.

Needle-exchange programs (NEP) are the classic example of harm reduction in the substance use field. The goal of NEP is to reduce the spread of disease (e.g., HIV, Hepatitis C) caused by needle sharing. Evidence shows that these programs are "usually, but not always, effective in limiting HIV transmission among injection drug users."[86] Critics of NEP worry that the programs would send the wrong signal about drug use and lead to an increase in consumption. Yet there are a number of studies suggesting NEP reduce disease and do not increase use.[87]

While Congress banned federal funding for NEP in 1988, several American cities have NEP, either funded by government agencies, non-profit organizations, and/or private donors. It was not until 2009 that Congress reversed the federal funding ban and President Obama signed it into law. However, the victory was short lived; in 2012, Congress attached a funding ban to an expenditure bill that President Obama signed into law.

In 2013, the White House Office of National Drug Control Policy (ONDCP) started championing efforts for states to pass Good Samaritan laws, which protect those who called the police to report an overdose or took someone who overdosed to the hospital at legal risk (e.g., if they were using together).

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[83] Angela Hawken, "Behavioral Triage: A New Model for Identifying and Treating Substance-Abusing Offenders," *Journal of Drug Policy Analysis* 3, no. 1 (2010): 1–5, doi: http://dx.doi.org/10.2202/1941-2851.1014.

[84] "A New Probation Program In Hawaii Beats The Statistics," *PBS NewsHour*, PBS, February 2, 2014, http://www.pbs.org/newshour/bb/law-july-dec13-hawaiihope_11-24/.

[85] Beau Kilmer et al., "Efficacy of Frequent Monitoring With Swift, Certain, and Modest Sanctions for Violations"; and Mark A.R. Kleiman, Beau Kilmer, and Daniel Fisher, "Theory and Evidence on the Swift-Certain-Fair Approach to Enforcing Conditions of Community Supervision," *Federal Probation* 78, no. 2 (2014), http://www.uscourts.gov/uscourts/FederalCourts/PPS/Fedprob/2014-09/response.html.

[86] Don C. Des Jarlais, "Research, Politics, and Needle Exchange," *American Journal of Public Health* 90, no. 9 (2000): 1392-4.

[87] Mason Ingram, "The Impact of Syringe and Needle Exchange Programs on Drug Use Rates in the United States" (Master's thesis, Georgetown University, 2014), https://repository.library.georgetown.edu/bitstream/handle/10822/709897/Ingram_georgetown_0076M_12592.pdf?sequence=1&isAllowed=y; David Vlahov et al., "Reductions In High-Risk Drug Use Behaviors Among Participants In The Baltimore Needle Exchange Program," *Journal Of Acquired Immune Deficiency Syndromes* 16, no. 5 (1997): 400-06; and John K. Watters et al., "Syringe and Needle Exchange as HIV/AIDS Prevention for Injection Drug Users," *Journal of American Medical Association* 271, no. 2 (1994): 115-20.

Around the same time, the ONDCP also provided funding for police officers and other first responders to have access to naloxone so that they could reverse potentially fatal overdoses among opioid users.[88]

Most recently, ONDCP Director Michael Botticelli announced in February 2015 that the federal government would no longer provide funding to drug courts that did not allow participants to receive medication-assisted treatment.[89] This is important since many drug courts and therapeutic communities require clients to be fully abstinent and not using methadone or buprenorphine.[90]

The increase in heroin consumption in the United States, combined with evidence suggesting that (1) safe injection rooms reduce needle sharing[91] and (2) heroin maintenance treatment may benefit some users for whom other types of maintenance have been unsuccessful,[92] raises questions about whether these programs should be piloted in the United States.

Thinking About International Conventions and UNGASS

As discussed elsewhere within this project, there have been important global policy changes since the 2009 Committee on Narcotic Drugs review of the 1998 Special Session of the United Nations General Assembly on the World Drug Problem (UNGASS 1998). In 2011 Bolivia withdrew from the Single Convention, and then in 2013 re-adhered with a reservation that allowed Bolivians to produce and use coca leaves for traditional purposes. This was the first time a country had withdrawn from that convention. There was another unprecedented change at the end of 2013 when Uruguay became the first country in the world to remove the prohibition on cannabis and began the process of creating a legal market.

Also surprising was the legalization of marijuana in Colorado and Washington, and the federal decision to not block implementation efforts in these states even though the commercial activities clearly violated federal law. As Kilmer notes:

> The [Cole] memo gave a green light to Colorado and Washington to continue with legalization, and it also sent a signal to other states and jurisdictions throughout the world: the Obama administration was willing to tolerate potentially large, for-profit companies to produce a federally prohibited drug as long as it played by their rules.[93]

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[88] "Adult Drug Courts and Medication-Assisted Treatment for Opioid Dependence," *SAMHSA In Brief* 8, no. 1 (2014), http://dsamh.utah.gov/pdf/SAMHSA%20MAT.pdf.

[89] Ryan Grim and Jason Cherkis, "Federal Government Set to Crack Down on Drug Courts that Fail Addicts," *Huffington Post*, February 5, 2015, http://www.huffingtonpost.com/2015/02/05/drug-courts-suboxone_n_6625864.html.

[90] SAMHSA, *Expansion of Naloxone in the Prevention of Opioid Overdose FAQs* (Rockville, MD: SAMHSA, 2014), http://www.dpt.samhsa.gov/pdf/Expansion%20of%20naloxone%20FAQ_REV_R060914B.pdf.

[91] Leo Beletsky et al., "The Law (and Politics) of Safe Injection Facilities in the United States," *American Journal of Public Health* 98, no. 2 (2008): 231, doi: http://dx.doi.org/10.2105/AJPH.2006.103747; Wouter de Jong and Urban Weber, "The Professional Acceptance of Drug Use: A Closer Look at Drug Consumption Rooms in the Netherlands, Germany, and Switzerland," *International Journal Of Drug Policy* 10, no. 2 (1999): 99-108, doi: http://dx.doi.org/10.1016/S0955-3959(98)00072-3; and Kate Dolan et al., "Drug Consumption Facilities in Europe and the Establishment of Supervised Injecting Centres in Australia," *Drug and Alcohol Review* 19 (2000): 337-346, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.190.1419&rep=rep1&type=pdf.

[92] Marica Ferri, Marina Davoli, and Carlo A. Perucci, "Heroin Maintenance for Chronic Heroin-Dependent Individuals," *Cochrane Database of Systematic Reviews* 8 (2010), doi: http://dx.doi.org/10.1002/14651858.CD003410.pub3; and EMCDDA, *New Heroin-Assisted Treatment (*Luxembourg: Publications Office of the European Union, 2012), http://www.emcdda.europa.eu/attachements.cfm/att_154996_EN_Heroin%20Insight.pdf. Based on data from eight different studies, Ferri concludes, "The available evidence suggests a small added value of heroin prescribed alongside flexible doses of methadone for long-term, treatment-refractory opioid users, considering a decrease in the use of street heroin and other illicit substances, and in the probability of being imprisoned; and an increase in retention in treatment. Due to the higher rate of serious adverse events, heroin prescription should remain a treatment of last resort for people who are currently or have in the past failed maintenance treatment." The EMCDDA concluded, "Over the past 15 years, six RCTs have been conducted involving more than 1,500 patients, and they provide strong evidence, both individually and collectively, in support of the efficacy of treatment with fully supervised self-administered injectable heroin, when compared with oral MMT, for long-term refractory heroin-dependent individuals."

[93] Kilmer, "The U.S. Federal Government Tolerates Marijuana Legalization: Will it Last?"

With respect to the United Nations (UN) conventions, the United States had been very quiet. Attorney General Holder stated in February 2013 that he would consider "international obligations" when crafting a response to Colorado and Washington,[94] but researchers noted that "as of November 2013, the Obama administration has not made an official statement about how the initiatives or the federal response fit or do not fit within the existing international conventions."[95]

This silence came to a stunning halt in October 2014. Assistant Secretary of State for Drugs and Law Enforcement William R. Brownfield announced a new flexible approach to the international drug conventions, noting to reporters, "The first [UN Single Convention on drugs] was drafted and enacted in 1961. Things have changed since 1961. We must have enough flexibility to allow us to incorporate those changes into our policies." He also argued that it was important to "tolerate different national drug policies, to accept the fact that some countries will have very strict drug approaches; other countries will legalize entire categories of drugs." [96]

Perhaps most striking was Assistant Secretary Brownfield's comments about the implications of marijuana legalization in the United States: "How could I, a representative of the Government of the United States of America, be intolerant of a government that permits any experimentation with legalization of marijuana if two of the 50 states of the United States of America have chosen to walk down that road?" [97]

There are a number of reasons why drug policy receives an increasing amount of attention outside of the United States (e.g., legalization in Uruguay, efforts of the Global Commission on Drug Policy and its notable members); however, there is little doubt that actions within the United States are intensifying serious discussions about policy alternatives.[98]

Concluding Thoughts

In his provocative essay "Why Has U.S. Drug Policy Changed So Little Over 30 Years?," Reuter argues that U.S. drug policy—excluding marijuana—remained largely unchanged from 1980 to 2010.[99] For cocaine, heroin, and methamphetamine he notes there was an almost "relentless increase" in incarceration for drug dealers that changed by an order of magnitude. One of Reuter's key insights for the 30-year period is that, "Recent reforms in health care at the federal level offer hope for increased access to treatment services, but otherwise only drug policy rhetoric has changed much."[100]

This chapter has a narrower focus, mostly describing the U.S. drug policy landscape post-2005. Over the past decade marijuana consumption rapidly escalated, heroin consumption increased—at least in part—as a byproduct of a prescription opioid epidemic, and cocaine consumption plummeted. With respect to cocaine and marijuana, it is hard to argue that policy did not influence these trends;[101] however, the extent to which these changes can be attributed to policy versus other factors remains an area ripe

[94] Holder stated, "[Y]ou'll hear soon. We are, I think, in our last stages of that review and are trying to make a determination as to what the policy ramifications are going to be, what our international obligations are. There are a whole variety of things that go into this determination, but the people in [Colorado] and Washington deserve an answer and we will have that, as I said, relatively soon." Josh Gerstein, "Holder: Feds to Set Pot Legalization Response 'Relatively Soon'," *Politico*, February 26, 2013, http://www.politico.com/blogs/under-the-radar/2013/02/holder-feds-to-set-pot-legalization-response-relatively-157895.html.

[95] Kilmer et al., "Efficacy of Frequent Monitoring With Swift, Certain, and Modest Sanctions for Violations."

[96] William R. Brownfield (Assistant Secretary of State, International Narcotics and Law Enforcement Affairs), "Trends in Global Drug Policy" (press briefing, New York Foreign Press Center, United Nations, October 9, 2014), http://fpc.state.gov/232813.htm.

[97] Matt Sledge, "State Department Official Calls For 'Flexibility' On Drug Control Treaties," *Huffington Post,* October 14, 2014, http://www.huffingtonpost.com/2014/10/14/state-department-official_0_n_5985930.html.

[98] Balford Henry, "Gov't, Ganja Lobby Welcome US Midterm Vote on Marijuana," *Jamaica Observer*, November 5, 2014, http://www.jamaicaobserver.com/news/Gov-t--ganja-lobby-welcome-US-midterm-vote-on-marijuana_17883432.

[99] Reuter, "Why Has US Drug Policy Changed So Little Over 30 Years?"

[100] Ibid.

[101] Jonathan P. Caulkins et al., "Cocaine's Fall and Marijuana's Rise."

for future research. Indeed, there may have been a "perfect storm" of events, which led to the 50 percent reduction in U.S. (pure) cocaine consumption from 2006 to 2010.

Like many others, we are optimistic that changes in treatment quality and accessibility will significantly improve social welfare.[102] We are also encouraged by recent efforts to reduce the length of incarceration for non-violent drug offenders and by evidence suggesting that criminal justice resources can be reallocated to create credible deterrent threats that reduce both incarceration and crime at the same time.[103] The Obama administration's commitment to some harm reduction approaches also seems promising, but these efforts (as well as the others just mentioned) should be rigorously evaluated.

Thus, it is quite possible that drug policies and problems in the United States could look very different over the next 30 years compared with the previous 30. Considering that the United States has a booming voice when it comes to the international drug conventions and drug policy in general, changes could reverberate around the globe.

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[102] Reuter, "Why Has US Drug Policy Changed So Little Over 30 Years?"; Buck, "The Looming Expansion and Transformation of Public Substance Abuse Treatment Under the Affordable Care Act"; and Humphreys and Frank, "The Affordable Care Act Will Revolutionize Care for Substance Use Disorders in The United States."

[103] Kleiman, "Toward Fewer Prisoners and Less Crime."

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