Statement of David Murray

"America's Insatiable Demand for Drugs: Examining Alternative Approaches"

A Roundtable with the Senate Committee on Homeland Security and Governmental Affairs

Wednesday, June 15, 2016
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Chairman Johnson, Ranking Member Carper, and members of the Committee, thank you for this opportunity to address "America's Insatiable Demand for Drugs: Examining Alternative Approaches" before this Committee.

In this written testimony, I shall endeavor to answer several of the Committee's concerns as were expressed in my invitation to testify. In this document, I will, following a brief overview of decriminalization and legalization problems, present evidence and discussion with regards to the following:

- I shall examine the impact of proposals to either decriminalize or legalize drugs such as marijuana, as currently found in several states in contravention of the federal Controlled Substances Act.

- Moreover, I shall argue that the criminal black market in states such as Colorado has thrived, not diminished, in the presence of legalized access.

- I shall offer a critical review of proposals to offer so-called "safe" or supervised injection facilities as a potential response to the current opioid crisis.

- I shall offer a critical review of the state of current national drug control policy, as represented by the strategic undertakings of the current Administration.

- I shall also address some attention to the current state of drug treatment programs, and discuss how they are affected by changes recently found in regards to marijuana policy.

- I shall follow that critical evaluation by addressing the specific need for a more robust focus on reducing drug supply and availability, with some specific examples.

Has Federal Drug Control Strategy Lost Direction? An Overview

It must be borne in mind in evaluating Obama Administration drug control performance across the horizon of its responsibilities that the first action taken upon assuming office was to remove the Director of the President's own Office of National Drug Control Policy (ONDCP) from Cabinet status.

As a consequence, the very entity charged with setting and implementing drug control strategy, and with coordinating responses and priorities across the interagency as affected by the President's drug control budget, lost political power and impact.

In a stunning recent development, we now learn that, as the Administration prepares to leave, ONDCP has suffered a substantial cut to personnel, and has experienced a downsizing organizational restructuring that can only hamper its most effective programs. The effect is to institutionalize the weaknesses that have been imposed beyond ready repair in successive administrations.

As we shall see later in this testimony, these troubling developments were all presaged in the beginning, and can be placed in relief by reviewing Administration performance with respect to its own goals.

The real contrast between the last seven years and that of previous approaches lies in three things: 1. Failed leadership, turning away from the urgency of protecting Americans from this disease approaching epidemic proportions, and instead undermining federal law; 2. Weakening prevention by failing to defend social norms and allowing the normalization of drug use; and 3. Neglecting drug supply, thereby allowing the tide of drugs to now flood our streets.

Instead of effective drug control, we have witnessed at the state level, for the last several years, widespread efforts at decriminalization or outright legalization of

drugs. These efforts were not countered by the Administration, which even declined to challenge them in court, and they have proven counterproductive against multiple drug control objectives.

In summary form, to be expanded upon in the text that follows, these are the types of problems that follow from decriminalization/legalization:

First, multiple legal problems are presented beyond the provisions of the Controlled Substances Act, which is being set aside with regards to marijuana at the state level. Examples include drug-related provisions regarding food safety, child endangerment, a drug-free workplace, federal contracting obligations, banking and finance protections, and even international treaty obligations, which are also adversely affected.

Decriminalization undermines key expressed goals of the Administration, such as treatment and prevention. Not only are the incentives to remain "drug free" weakened when drugs are readily and legally available, but decriminalization commonly leads to the removal of a law enforcement/judicial role in supporting treatment. Positive developments such as drug courts are undermined. The continuing presence of laws against drug use and trafficking serve to strengthen treatment and prevention objectives. They must not be dismissed.

Under liberalizing drug policies such as have been pursued, drug use prevalence increases, certainly among adults, as we shall see, and there is evidence that it happens for youth, as well. The National Epidemiological Survey on Alcohol and Related Conditions (NESARC), for instance, recently reported a doubling of marijuana use among adults and a comparable doubling of "marijuana related disorders" during the period 2001-2013, following liberalized marijuana policies.

The public health, educational, and law enforcement impact is negative, and the costs imposed, in lives as well as public expense, outweigh whatever revenue is promised. The impact can be found on mental health, cognitive performance, and overall public well being; all are degraded.

The black market and attendant violence, attached to the trafficking of both marijuana and other drugs, does not wither away, but thrives in the environment of decriminalization; the lessons from Colorado are particularly striking.

Crucial public attitudes concerning the risk in using drugs and the social norms of disapproval tumble; among high school seniors, for instance, they are now at the

lowest points recorded involving marijuana. Where these norms and attitudes change, increased use commonly follows.

The revenue from recreational, legal marijuana sales can be seen to feed back into political actions to insulate the new, liberalized markets, threatening corruption and the integrity of banking services; the risk of criminals exploiting these conditions is high.

The U.S becomes increasingly in violation of international treaties regarding drug control (we have already been sanctioned by international bodies such as the International Narcotics Control Board of the United Nations Office of Drug Control) and our "moral authority" and leadership internationally is undermined.

There appears to be a spill-over effect and a 'gateway' risk from liberalized marijuana policies that may well feed into related drug control problems, such as the emerging and climbing opioid overdose crisis.

Law enforcement, reflected by such recent statements as those of Commissioner Bill Bratton in New York, indicate that marijuana markets become a serious problem threatening public order, while the smuggling of high potency marijuana from Colorado is now found in multiple states.

Drug potency increases dramatically, as seen in the new "concentrates" flowing from Colorado, approaching 70 to 80 percent THC (intoxicating element in marijuana) found in "edibles" such as candies marketed to youth. There are yet other attendant legal problems, but these are some prominent concerns already showing up.

Most importantly, the combined effect of both Administration policy as seen in the National Drug Control Strategy and the impact of broad state level decriminalization/legalization developments has been the weakening of a critical strategic pillar of effective drug control policy: efforts against drug supply, availability, and trafficking.

Specific Evidence Regarding Marijuana, Drug Decriminalization and Legalization: Colorado's Record and the Continuing Black Market:

Recent state-level data from the Department of Health and Human Services show that only 5.5 percent of Oklahoma youth between 12 and 17 years of age are "current users" (having used in the past month) of marijuana, compared with the

national average of 7.2 percent, according to the most recent survey.

That's the good news. The bad news is that the percentage is much higher in neighboring Colorado where, as an Oklahoma lawsuit against that state has shown, "legalization (of marijuana) has created a dangerous gap in the federal drug control system."

The notion that Colorado's first full year of commercial, "recreational" marijuana production and sales — in violation of federal law — is some sort of "experiment" has been embraced by many within the Administration and members of both political parties. Given what's at stake — mental health, educational outcomes, family well-being, and even future policy decisions in other states — an accurate accounting is essential.

A major new report from the National Household Survey on Drug Use and Health (NSDUH) with combined two-year data (2013-2014; a sample size sufficient to give a picture at the state level) presents the reality of marijuana use for the first time since the legal roll-out.

The data are devastating to the marijuana "experiment." Use is up in Colorado, and has been rising steadily every year since 2009. That date matters not only because it marks the end of Bush administration policies that fought back against — and lowered substantially — teen marijuana use, but because that year saw a major expansion of the state's medical marijuana program. Medical marijuana drives up teen use; legalization drives it up even more.

To anyone paying attention, this rise is not surprising. Recent data have clearly shown increases in marijuana use, including adolescent use, in states that have adopted either so-called "medical marijuana" programs, or have liberalized access to the drug. Colorado has recklessly done both, and the latest data show that it has the dubious distinction of being the national leader in youth marijuana use.

A realistic assessment of impact, from 2009, shows a stunning rise of 27 percent by 2014 (from 9.91 percent to 12.56 percent) in teen marijuana use, as well as large increases for those ages 18 to 25. And there is no sign that the rate of increase is slackening.

Lest we think Colorado's rise is something going on everywhere in the country, a comparable rise has not been seen in all states, except those, like Washington, Oregon, the District of Columbia, and Alaska, which also legalized, and now join

Colorado in the top eight states. In fact, in states like Georgia, Ohio and Texas, the rate of youth marijuana use is half that of Colorado. Parents should take note. Moreover, use by those 12 and older, which includes Colorado's young adults, is also steeply up, rising 99 percent in the last 10 years.

According to the proclamations of eager advocates for the legal dope market, this wasn't supposed to happen to kids. In fact, they argued that they were legalizing marijuana with the specific intention to protect the children, since a regulated market would shut down the criminals (which hasn't happened, either) and ensure that young people couldn't get access.

Those aged 12 to 17 are adolescents, ranging in classrooms from junior high to their senior year. These data now show one in every eight Colorado kids is a current smoker of the highest-potency dope in the nation.

Almost weekly, the science grows stronger and more undeniable as to what this drug is doing to the adolescent brain; eight-point IQ loss, potentially permanent impact on memory, learning, cognitive performance, and risk of psychosis; these are but some of the damaging associations with heavy use.

More than 6 percent of high school seniors nationwide are now "daily" marijuana users, says another survey released in December, which also showed that perceptions of risk in using marijuana by high school seniors ("perceived risk" being a major component of effective prevention), has dropped 62 percent since 2008 to its lowest level ever. President Obama's drug czar Michael Botticelli has laid the blame on legal marijuana. For states such as California, facing legalization on the ballot in 2016, voters should know that legal marijuana means an epidemic of teen use and addiction.

Solutions? We should enforce federal law, designed to push back on this very threat. Pro-drug legalizers — and their apologists — need to stop denying the science, and the facts before their eyes.

The Impact of Liberalized Attitudes: More on the NESARC:

To generalize, liberalized attitudes about marijuana appear to have the predicted effect, and they extend well beyond Colorado and are associated with national impact. I have mentioned already the latest results from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC). To

demonstrate specifics, NESARC showed that by 2012-2013, past year prevalence of marijuana use has risen 132 percent since last measured in 2001-2002 (from 4.1 percent of study participants to 9.5 percent).

The results may be even worse than they appear. The NESARC is a longitudinal survey, tracking the subjects over time, and reporting once a decade (there were interim "wave" results issued in 2004-2005), meaning that the temporal trajectory of this change (the sharp upswing in the most recent years) is masked by looking only at the beginning and ending of the decade.

There appears to be an acceleration in the most recent years, with decline occurring in the middle. Confirmation of this trajectory can be found in a "wave" finding in 2004-2005, which showed a decline down to 3.57 percent "past year" use (at least in the 41 states that did not have medical marijuana laws).

Collateral confirmation can be found in a parallel study of youth (the Monitoring the Future school-base survey done yearly by the National Institute on Drug Abuse), which revealed a 25 percent decline in marijuana use between 2001 and 2008 for high school youth, only to increase thereafter, and the even larger survey known as the National Survey on Drug Use and Health (NSDUH).

There are differences in the studies rendering them not completely comparable. The NSDUH samples those 12 and older, while the NESARC reports on those 18 and older. Thus, the absolute numbers are not fully compatible, but the trends support the interpretation of a recent rise, not a steady increase from 2002.
In the NSDUH, between 2002 and 2007 past month use of marijuana first fell by 6 percent, to be followed by a 29 percent increase between 2007 and 2013. Further, the NESARC measured in the year prior to the impact of legal commercial marijuana, implemented in 2014. NSDUH reveals that in the period subsequent to 2013 (NESARC's final year), steep increases continued, rising an additional 12 percent during a single year by 2014.

The Obama Administration's support for legal marijuana could well be reflected in these sharp increases in marijuana use.

Finally, what are the consequences of our choices? While the impact of high-potency use has been well documented, the impact affects more than just current users. The medical report found in the Proceedings of the National Academy of Sciences (PNAS) addresses the future that we are sowing, showing that marijuana's THC affects the brain structure and functioning of the progeny of

maternal users (which, depending on the community, reaches as high as 41 percent of neonates born in North America).

Though prenatal risks in maternal marijuana use are well known, the PNAS, through an animal study, hits upon a specific neural mechanism:
"Prenatal exposure to cannabinoids (through the impact of THC on developing cortical neurons) evokes long-lasting functional alterations …[with] remarkable detrimental consequences of embryonic THC exposure on adult-brain function."
The consequences were lifelong, including an increased risk of seizure in adulthood.

This is only the latest study to dispel the widely but mistakenly-held belief driving legalization efforts that marijuana is harmless. Pulling together the three reports, it seems undeniable from the weakening of attitudes against marijuana, the associated sharp increases in marijuana prevalence, and now the further demonstration of harm from maternal marijuana use for future generations, damage is already being done.

While for some, that damage appears irreversible, it is not too late for responsible Americans to push back against this clear public health threat. The fate of future unintended victims is in our hands.

Further National Survey Results: NSDUH on Adults and Increased Use:

On September 10, 2015, the Obama Administration released the results of the 2015 National Survey on Drug Use and Health (NSDUH), the most recent of he nation's annual report card on illicit substance use conducted by the Department of Health and Human Services (HHS).

Though it is the 2015 NSDUH, the data are for the year 2014, and were released at a press conference at the National Press Club.

The survey is the largest and most comprehensive report on the population 12 and older in the United States. It is subdivided into sections reporting on those 12-17 years of age, those 18-25 years of age, and those 26 and older
.
The report analyzes use of illicit substances according to whether it was Lifetime (ever used), Past Year use, or Past Month use (treated as "current use"). The latter category, Past Month, is regarded as the most policy relevant, as it measures those whose use is not only "current," but likely reflects habitual, regular use of a

substance. Regular, habitual users are at greater risk of suffering the consequences of their drug use, including dependency and harms to health.

The report includes several different categories of specific drugs, providing findings on use of “Any Illicit Drug,” as well as specific drugs, such as marijuana use, cocaine and heroin use, or misuse of prescription medications, such as pain killers.

The report comes at a time when the nation is undergoing the most dramatic change in drug policy driven by the Obama Administration’s determination not to uphold the federal Controlled Substances Act, fostering a legal, commercial market in “recreational” marijuana use by several states, as well as a broader retreat from efforts to diminish the supply of illegal drugs at home and abroad.

There are important changes in drug use to be found in this survey when one examines both 12-17 year olds and those between the ages of 18-25. But the most dramatic changes in this year’s results are found in the category of adults, those 26 and older.

Heroin use, for those 26 and older, effectively doubled between 2013 and 2014 (though it is mercifully a relatively small absolute number; the change was from .1 percent to .2 percent). However, we now have the highest figure for heroin use since at least 2002, which is as far back as the tables released by the Administration cover. (All findings noted here are “statistically significant,” including the heroin increase.)

Yet, according to the HHS press release headline, today’s news is:
“Alcohol, tobacco, and prescription drug use by teens declines; level of youth with major depressive episodes remains high."

While that narrow focus presents relatively good (and some bad) news, a far more troubling story lies elsewhere, and must be discovered by careful examination of the data tables.

By comparing drug use over time, it is possible to discover the impact of Obama Administration drug policies and compare them to the previous, Bush Administration, drug use results.

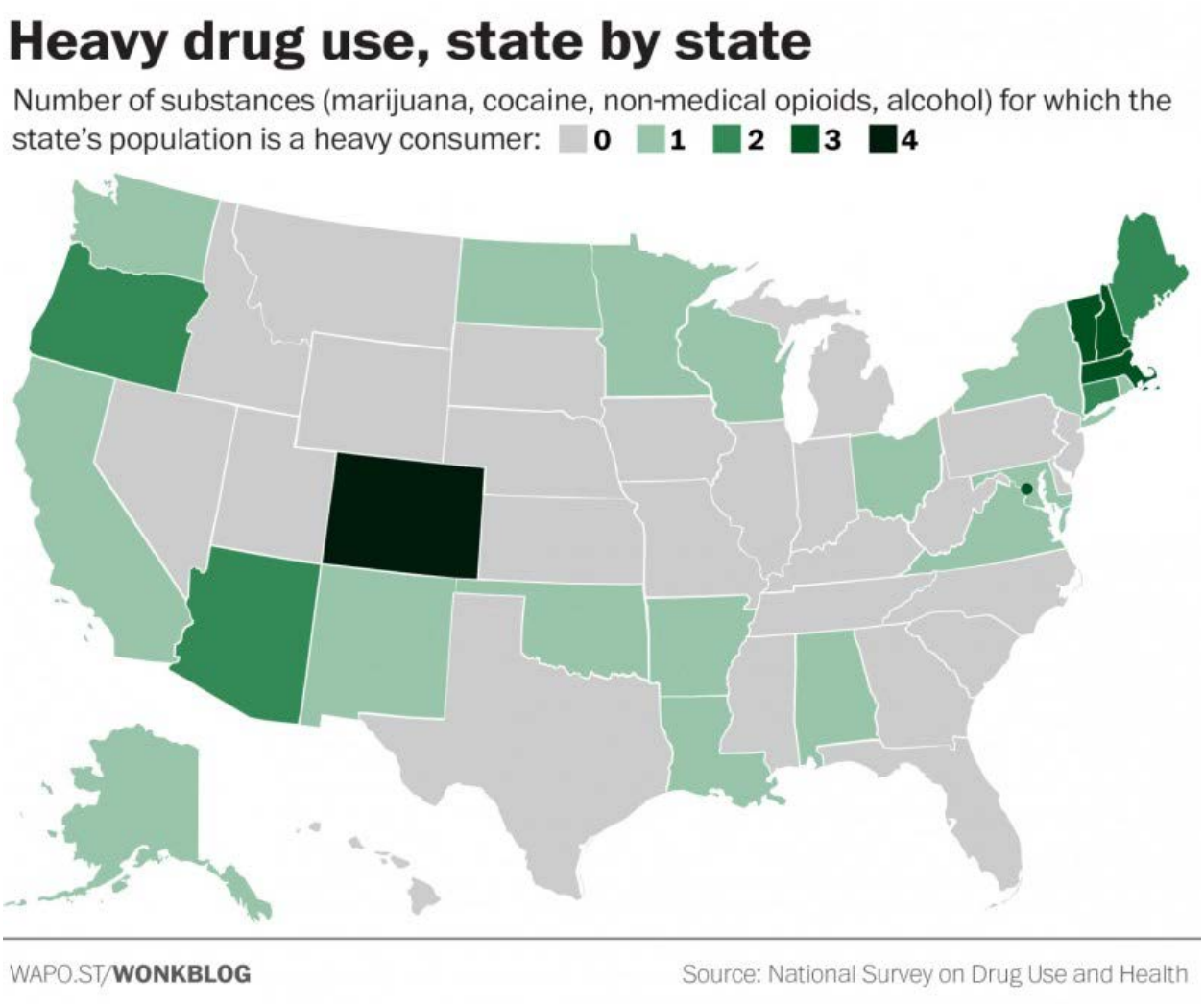
Taking last year of the Bush Administration, 2008, and today’s results for 2014, here are the headlines:

- Between 2008 and 2014, for the population 26 and older, Past Month use of Any Illicit Drug has risen 41 percent. In the single year 2013-2014, it rose 14 percent.

- Between 2008 and 2014, for the population 26 and older, Past Month use of Marijuana has risen 57 percent. In the single year 2013-2014, it rose 18 percent.

It is now undeniable that the Obama Administration's drug policies and its facilitation of commercial marijuana distribution are deeply damaging. And the damage is only spreading, accelerating, and deepening.

The comprehensiveness of the impact can be seen the graphic below. Colorado, as seen in SAMHSA state-level drug use analysis, is the leading state for every one of the major drugs of abuse, as well as alcohol. That last realization tells us that marijuana use, for instance, does not displace high levels of alcohol use, but rather is coincident with them.



The Thriving Black Market: Rocky Mountain HIDTA and Smuggling:

Colorado has now become a national as well as international center for drug smuggling. According to a recent law enforcement report from southern Colorado, an illegal operation there has been accused of growing marijuana for distribution to Cuba. Local law enforcement reports note the increased presence of criminal gangs, including transnational organizations, entering the state to capitalize on the lax legal environment.

We can see clearly that promises to end criminal participation in drug markets, along with the violence that accompanies such operations, were empty, and have been disconfirmed. Notwithstanding the rising threat, the Administration has failed to provide a prosecutorial response, one moreover which was a predicate of the initial decision to allow legalization to go unchallenged.

A new government report on the Colorado "experiment" to legalize and commercialize marijuana sales was recently released by the multi-agency intelligence fusion center of the Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) headquarters in Denver. In it we can witness the continued operation of the black market criminal activities.

Two prior reports traced the development of marijuana legalization through successive stages (medical marijuana introduction, expansion of medical marijuana dispensaries) and the new report covers full commercial legalization beginning in January, 2014. The report confirms the warnings of legalization opponents in considerable detail.

Simply put, the report shows that the impact to date has affected public health (emergency department episodes in particular), public safety (rising crime rates, traffic fatalities from drugged driving), and the integrity of public institutions, such as schools (student violations of drug policy, disruptions and expulsions). And, predictably, adult use of marijuana has surged, as has increasing access and use by minors.

Each of these points in presented in detail in the report, along with presentation of recent research showing the cognitive and psychological damage of marijuana exposure, especially on youth, subjected to the rising potency of Colorado commercial marijuana (now exceeding 17.1 percent average potency of THC, the intoxicant in marijuana, well above the national average of 12.6 percent). Each of the findings warrant a full discussion, but one in particular deserves immediate attention.

As the Obama Administration progressively adapted the federal response to the escalating violation of the federal Controlled Substances Act represented by Colorado's legalization, successive memos from the U.S. Department of Justice (DOJ) provided rationales and excuses for not enforcing U.S. law.

In August of 2013, Deputy Attorney General James Cole provided guidance to all U.S. attorneys regarding marijuana criminal conduct in a memorandum, that would remain priorities for federal enforcement. Two of these priorities are:

> *Preventing the diversion of marijuana from states where it is legal under state law in some form to other states;* and
>
> *Preventing state-authorized marijuana activity from being used as a cover or pretext for trafficking of other illegal drugs or other illegal activity.*

The RMHIDTA report indicates that the DOJ priorities have been ignored as trafficking spreads rapidly. Listed below are episodes where marijuana seizures followed from traffic stops. Law enforcement estimates that approximately 10 percent of marijuana being trafficked from the state is represented in these seizures.

- During 2009 – 2012, when medical marijuana was commercialized, the yearly average number interdiction seizures of Colorado marijuana increased 365 percent from 52 to 242 per year.

- During 2013 – 2014, when recreational marijuana was legalized, the yearly average interdiction seizures of Colorado marijuana increased another 34 percent from 242 to 324.

- The average pounds of Colorado marijuana seized, destined for 36 other states, increased 33 percent from 2005 – 2008 compared to 2009 – 2014, rising from 2,763 pounds to 3,671 pounds.

- In 2014, there were 360 interdiction seizures of Colorado marijuana destined for other states. When compared to the pre-commercialization average of 52 from 2005 – 2008, this represents a 592 percent increase. The most common destinations identified were Kansas, Missouri, Illinois, Oklahoma, and Florida.

In addition to traffic stops, there were parcel intercepts of marijuana.

- U.S. mail parcel interceptions of Colorado marijuana, destined for 38 other states, increased 2,033 percent from 2010 – 2014, rising from 15 to 320 intercepts.

- Pounds of Colorado marijuana seized in the U.S. mail, destined for 38 other states, increased 725 percent from 2010 – 2014, from 57 to 470 pounds.

- From 2006 – 2008, compared to 2013 – 2014, the average number of seized parcels containing Colorado marijuana that were destined outside the United States increased over 7,750 percent (from 2 to 157 parcels) and pounds of marijuana seized in those parcels increased over 1,079 percent (from 29 to 342 pounds).

The seizures and intercepts all are tied to criminal activity and, more importantly, represent a small fraction of what law enforcement believes is the actual magnitude of this growth in trafficking.

In simplest terms, marijuana legalization is poisoning Colorado and Colorado is now poisoning more and more of America.

Safe Injection Facilities: Evaluating the Evidence From "Harm Reduction"

My colleague John Walters, who has served as Director of the Office of National Drug Control Policy during the Bush administration, recently wrote on *USA Today* concerning safe or supervised injection facilities, which have recently been proposed as a response to the heroin epidemic in several US settings. Mr. Walters argues:

> *"There are no "safe heroin injection sites." The only "safe" approach to heroin is not to take it. For addicts, the humane public health response is to help them get and stay sober, or at the very least, opioid replacement therapy in sustained treatment. Any approach without these goals is cruel and dehumanizing — not healing, but perpetuating harm.*
>
> *Addiction is a treatable disease. Millions of Americans are in recovery — living healthy, productive lives. Supporting addicts' heroin use maintains their disease, administering the poison that causes their illness and diminishes their lives. A government-approved place for unlimited heroin injection creates the conditions for never-ending addiction and gives government a drug dealer's power over the addicted.*
>
> *Advocates for injection sites claim various "successes." In fact, very few who use these facilities are persuaded to enter treatment and reach recovery. Many addicts using such facilities do not stop using heroin and other such drugs from criminal sources — the "safe facility" is simply another place for drugs. Addicts are often abusers of multiple drugs and alcohol. Injection facilities sustain all of this.*
>
> *Such proposals require us to suppress common sense and adopt heartless indifference to the lives of the addicted. We do not protect addicts by reviving them from overdose death only to return them to death's front door, perpetuating the self-destructive cycle of addiction. In fact, many addicts enter treatment because they cannot obtain heroin, and even more are treated under the supervision of drug courts. We treat the addicted through workplace interventions, medical practice and many faith-based organizations. We should keep vigil as they struggle to recover.*
>
> *Today's heroin deaths are caused by the drug flooding into America from Mexico. Giving up on fighting heroin trafficking brought a supply-driven epidemic to our communities. Pressure on heroin networks works, just as*

attacks on terror networks can and must be pressed for our security.

Heroin destroys freedom and life. Government-approved injection centers are shameful."

While such facilities have not changed fundamental high-risk health behavior, what they have changed is the moral and civilizational relationship between the state and the individual. At their worst, they risk representing servitude, and eroding prevention, when the government itself becomes the entity sustaining continued addiction.

While many claims have been made for positive health outcomes in association with the operation of such facilities, there are many questions about the actual evidence of benefit.

For instance, INSITE, a Supervised Injection Facility in Vancouver, Canada, opened in 2003. In 2007, Colin Mangham, Director of Research for the Canadian Drug Prevention Network published his critique of the operation and the validity of the evaluations.

He argues:

1). "The published findings actually reveal little or no reductions in transmission of blood-borne diseases or public disorder, no impact on overdose deaths in Vancouver, very sporadic individual use of the facility by individual clients, a failure to reach persons earlier in their injecting careers and very little or no movement of drug users into long-term treatment and recovery. The fact that the evaluators and the funders of INSITE nonetheless have hailed the program as successful reveals a serious problem in drug policy today.

2). "(There is a) considerable overstating of findings as well as underreporting or omission of negative findings, and in some cases the discussion can mislead readers. The reports show no impact on the key issues that would most warrant its existence: spread of HIV or other blood borne disease, getting clients into treatment and off of drugs, reducing overdose deaths. The reported impact on public disorder that is discussed is questionable and so limited in scope as to be misleading.

3). Data in all of the reports suggest that only a small percentage of IV drug

users use INSITE for even a majority of their injections. Most drug users use it only some of the time or not at all. This finding illustrates a shortcoming of harm reduction measures that has recently been highlighted by Neil McKeganey in the UK: an inability to control a free moving population of IV drug users sufficiently to control disease in the face of continued use of drugs.

4). The article includes data that show the relative infrequent use of INSITE by individual IV drug users. In this evaluation, 178 of 400 participating drug users utilized INSITE during the study period, leaving over 50% who did not use INSITE at all. Of the 178 who did use INSITE, over half used it for less than a quarter of their injections. These findings illustrate a trend that precludes INSITE effectively controlling injection drug behaviours.

5). This article mentions that no overdose deaths occurred at the site. We do not know if any of the overdoses would have resulted in death outside the site. The number of overdose deaths in Vancouver and the DTES has increased since INSITE started up. This fact at least suggests that in its 3 years of operation, INSITE has produced no impact on overdose deaths.

6). We do not know what negative effects the facility may have had on the availability of treatment, given the preoccupation with INSITE. Neil McKeganey's research in the UK suggests such programs may actually have an adverse effect by drawing focus and efforts away from incidence reduction (prevention) and prevalence reduction (treatment).

7). This report, if not read carefully, is misleading. It implies that use of INSITE is associated with reduced needle sharing. Actually, only exclusive use of INSITE correlates with reduced sharing - an example of a "straw horse" finding. If someone uses INSITE for all their injections, it goes without saying they would not share needles. Only about one in ten HIV negative participants reported using INSITE for all of their injections. Only four HIV positive participants reported using INSITE all the time. These are the most important findings in the study but are not reported.

8). This report ignores the significant negative implications of the fact that, of 431 drug users studied, only 90 used INSITE some, most or all the time. It does not recognize adequately that half of these persons still shared needles.

9). This report's only finding is that some INSITE users go to detoxification upon referral. It does not show that INSITE increases use of detoxification, nor, more importantly, does it show that INSITE produces any increase or effect on people proceeding to actual treatment. Detoxification is often called a "revolving door." Going to detoxification is by no means the same as going for treatment, and this is a well-understood fact.

In a similar vein, Professor Neil McKeganey, (already mentioned), Director of the Centre for Drug Misuse Research at the University of Glasgow since 1994, has provided (personal communication) his evaluation of the Safe Injection Facility evidence, extending beyond the particular case of INSITE in Canada to the comparable facilities in Europe and Australia. According to Professor McKeganey:

"The provision of a safe injecting facility as it is typically called can unquestionably lead to a reduction in some aspects of drug injectors risk behaviour. Injecting under some level of trained clinical supervision can for example reduce the risk of injecting being carried out with non sterile injecting equipment. Such settings can also enable staff working within the facility to provide advise on injecting techniques which may reduce the incidence of injection site related problems. In addition, such settings can ensure that medically trained staff are able to respond in the event that an individual experiences an overdose associated with the drugs they have used. It is important I believe to recognise what such settings can contribute but equally important to recognise their shortcomings. In short form these are summarised below.

1) *Typically, so called safe injecting facilities provide a setting where individuals can inject previously purchased street drugs rather than prescribed injectable medication. Street drugs are likely to be contaminated with a variety of cutting agents. As a result, the injection of these drugs can result in serious blood based infections which will occur irrespective of the setting where the injection is occurring.*
2) *Providing a setting where individuals inject drugs runs the risk of encouraging injecting itself which is without doubt the single most risky way of administering any substance to the body. A more constructive approach than facilitating injecting would be to discourage injecting at all as a means of administering illicit substances.*
3) *The provision of any facility that enables individual's illegal drug use runs the very real danger of undermining efforts aimed at facilitating the individual's recovery from dependent drug use. In a situation of limited*

financial resources, it is more appropriate to ensure that addicts have access to treatment recovery oriented treatment services that can support their attempts at ceasing their drug use rather than providing facilities which actually enable such drug use.

4) *The creation of a safe injection facility where individuals can inject street purchased drugs without fear of prosecution requires the limited suspension of national laws relating to the possession of illegal drugs. Clearly it would not make any sense to set up a safe injecting facility and then simultaneously prosecute individuals for possessing the illegal drugs they were consuming within the facility. However, creating a setting where national drug laws are suspended also creates situation in which any individual in possession of illegal drugs could claim that he or she was en-route to a safe injecting facility. In this way the setting up of such a facility is likely to result in a much wider dilution of the existing drug laws well beyond the physical boundary of the injecting facility itself.*
5) *It is questionable whether a national of local government (Federal or State) should take on the responsibility of facilitating individual's drug use. Indeed, it is hard to see how any such government authority taking on such a responsibility would not at one and the same time be undermining its efforts at drug prevention.*
6) *Whilst there have been some studies undertaken that have reported on the experience of a number of safe injecting centres (specifically in Vancouver and Australia) most of those evaluations have been undertaken by centres that are firmly supportive of safe injecting facilities – as such it is not at all clear whether these evaluations can be considered as objective. Those studies have typically not shown that individuals who are attracted to use these facilities have been able to successfully cease their drug use.*
7) *Whilst it is clear that such settings can attract some individuals who then inject some of their drugs within the injecting facility it is equally clear that not all injectors within a local area are inclined to use such a facility. Equally it is also clear that even those injectors who do use such a facility do so on only a proportion of the times they are injecting. As a result, risky injecting behaviour persists even in the areas where such facilities have been provided.*
8) *The provision of so called safe injecting facilities can create a deep sense of confusion within local drug treatment and recovery services as to what their role is with regard to supporting individuals to cease their drug use. Services cannot easily combine a focus on both facilitating and discouraging individuals drug use.*

9) *Relatedly it is hard to see how prevention efforts are not themselves undermined where a national or local government provides the means to inject illegal drugs and the settings within which illegal drugs can be used.*

Significantly, Professor McKeganey has published findings showing that the presence of "robust law enforcement" activity is productive of both drug use cessation and entry into treatment. This finding in particular argues against any policy of decriminalization or relaxation of the law in order to avail the operation of injection facilities.

More broadly, a comprehensive review of such facilities globally undertaken by the European Monitoring Center for Drugs and Drug Addiction (EMCDDA) has pointed out very similar problems regarding the evidence. The EMCDDA review found not only similar limitations found in the evidence regarding public health effectiveness, they present a general conclusion that the evidence to date is unclear and hard to properly evaluate, largely because of methodological inadequacies.

Evaluating a Specific Study of SIFs: The Methodological Weakness

Finally, a specific recent (2007) study has often been highlighted by advocates purportedly showing a raft of positive outcomes. But a review of actual findings and caveats shows once again the same partial, equivocal, and inconclusive results.

Findings were that out of 902 studied participants over multiple years, drug use "cessation" for as much as six months (they counted methadone maintenance as constituting "cessation") was reached by 23 percent. The study was of what characteristics were found as independently associated with entering that state; among the several such factors one finds (some) participation in SIFs (Safe Injection Facilities).

This is not a demonstration that SIF participation was itself the factor, nor that participation increased "cessation." (Hence the use of the term "potential role" in the Conclusions, below.) Final analysis out of more than 900 participants in the study that yielded about 2000 "observations of cessation" by these terms; that is, a "cessation event" was achieved for some period of time in 95 "events."

Note that the "cessation" comes from getting into treatment; since there is no demonstration that attending the SIF is the reason for getting into treatment, from a public policy perspective, why not provide the SIF funds directly to expanded

treatment options? (Note in the below quotes that Aboriginal participants, who are a large percentage of participants, were significantly **less likely** to enter into treatment services if attending SIFs):

Conclusions: While the role of addiction treatment in promoting injection cessation has been well described, these data indicate a ***potential role of SIF*** *in promoting increased uptake of addiction treatment and subsequent injection cessation. The finding that Aboriginal persons* ***were less likely*** *to enroll in addiction treatment is consistent with prior reports and demonstrates the need for novel and culturally appropriate drug treatment approaches for this population.*

Further: *"This study has several limitations. Firstly, given that addiction is recognized to be a chronic relapsing condition (Galai et al., 2003; Evans et al., 2009), our definition of* ***injection cessation is restricted to a relatively short period of injection cessation****. Nevertheless, our findings are compelling and it is noteworthy that this definition of cessation has been consistently used in the injection drug use literature. Secondly, there are a number of limitations associated with the observational nature of our study. For one, the present study is limited in that the control group included non-frequent SIF users. As has been described previously (Lurie, 1997), selecting adequate control groups is particularly challenging in observational studies examining the use of healthcare services for IDU. While a randomized control trial would be an optimal evaluation strategy, interventional study designs to evaluate SIF have been deemed unethical (Christie et al., 2004).* ***Given this limitation it is possible that individuals who are more concerned with their health may be independently more likely to visit a SIF, seek addiction treatment and experience periods of injection cessation….***

Finally: *"In addition, many of our measures* ***relied on self-report*** *and are susceptible to socially desirable reporting as well as recall bias…. Although our observational study* ***cannot determine causation,*** *these findings contribute to a growing body of literature suggesting a link between SIF attendance and entry into addiction treatment."*

In the face of insufficient evidence of effectiveness, and given the realization that public dollars may more effectively be spent in support of expanded drug treatment, the lesson seems to be that the provision of government-enabled safe or supervised injection facilities simply cannot suffice as an adequate policy response to our present drug use, overdose, and HIV/AIDs crises.

The Overall Failure to Achieve National Drug Control Strategy Goals by the

Obama Administration: The Opioid Crisis and Beyond

President Obama's *National Drug Control Strategy* in 2010 first proclaimed the major policy goals of the administration's approach to the drug problem and the goals were to be met by 2015. Not only have they not been met, in critical instances, the policies have been going in the wrong direction, rapidly.

We learned that, in the midst of the ongoing opiate overdose crisis, heroin overdose deaths rose an additional 28 percent between 2013 and 2014. That's on top of the 340 percent rise in heroin deaths since 2007, such that beyond the 8,217 deaths of 2013, we now have another 10,574. That is, we now see a 440- percent increase from the Bush years.

Moreover, prescription opiate deaths also surged an additional 16 percent, taking us to 18,893 dead, while heroin use and Mexican production of the drug continue their steep climb. Overall, all drug poisoning deaths hit 47,055 in 2014. That's up from the last years of the Bush administration, when they were 36,450; that is, the rise for all drug deaths is almost 30 percent.

But according to the Obama administration, that wasn't going to happen. Instead, it was supposed to drop by 15 percent between 2010 and 2015, a target confidently set in their own strategic goals.

And then we discover that marijuana use by high school students, as measured by the largest, longest-running youth survey, Monitoring the Future (MTF), remains steadfastly high, unmoved from the steep rise since 2009; more than 1-in-5 high school seniors are "past-month" users of the drug. (Moreover, the foundation of prevention education, perceived "harmfulness" in using marijuana, has fallen to its lowest point ever among 12th graders, 62 percent lower than in 2008.) The same sustained high rates are found for youth use of "any illicit drug," beyond marijuana.

Further, the lead researcher for MTF had issued a dire warning recently, that the "second relapse phase in America's youth epidemic of drug use may now be beginning," based on recent upturns in marijuana use.

Many experts suspect that the actual number of users is considerably higher, were MTF to properly capture the new, highly potent forms of the drug now spreading across the country, the candies, drinks, and concentrates such as "shatter" consumed in vapor-pens, even in the classroom. The potency of such forms is

unprecedented, reaching 70 to 80 percent THC (compared to the 3-4 percent potency of the 1980s), the intoxicating chemical linked to such effects as IQ loss, memory and cognitive impairment, psychosis, and multiple social pathologies, including school drop-out.

Again, that wasn't supposed to happen. By the administration's goals, youth "past-month" use of drugs was to decline by 15 percent. Similarly for 18-25 year olds, whose rates of "past-month" use were supposed to fall 10 percent; the National Survey on Drug Use and Health (NSDUH) shows that since 2008, their "past-month" use has risen 12 percent (strictly marijuana use by 18 percent).

Drugged driving was to drop; it's up. The "lifetime" use of drugs by 8th graders was supposed to decline by 15 percent (surely a modest goal); MTF shows that in 2015 it's up 8 percent since 2007. And so forth.

These recent findings matter, as they show undeniably that the drug policies of the Obama administration have failed. Importantly, they have failed not according to editorializing critics, but according to the very metrics, required of the White House Office of National Drug Control Policy by law, which the administration itself selected as the way to evaluate their performance. That is, this evidence represents a self-indictment.

For seven long years, the administration has insisted on a master narrative. It denounced the supposed policies of the past, and proclaimed a new, enlightened approach, that "ended the drug war," promised treatment insurance that never arrived, dispensed clean needles and overdose antidotes and other inadequate "harm reduction" approaches, and in an overarching manner blamed "stigma" for the disease of addiction.

Never mind that the actual Bush policies had produced real results—treating drug addiction as a public health problem; insisting, for example, on drug courts over incarceration; and effectively reducing the availability and use of all drugs through a combined medical science, national security, and law enforcement strategy that reduced drug supply as it strengthened prevention and treatment. But the Obama administration insisted on the distorted caricature.

The policies of the Obama administration's predecessors, we heard repeatedly, were the failed crack-downs of the past, trying to reduce the supply of drugs and fighting back against international cartels. All that was declared futile, notwithstanding that under Bush, the same MTF data showed a 25-percent

reduction in “past-month” marijuana use, for combined high school grades 8th through 12th, that cocaine production had fallen 75 percent in Colombia, and cocaine use on U.S. streets had plummeted 50 percent (by 2011).

So far was this administration from achieving their goals that even the Government Accountability Office issued a report warning that they were seriously off track, based largely on data from 2012; but they did not change course, and things have only worsened since then.

Then, on CBS’s *60 Minutes*, Obama Drug Czar Michael Botticelli termed legalized marijuana “bad public health policy,” and worried that youth receive the message that because the drug is legal, it’s somehow safe, eroding the perceptions of risk essential to good prevention programs.

He should tell the president, the source of the policies that have led us into this circumstance, when he disabled federal law and enabled commercial, legalized marijuana.

The Impact on Drug Treatment: Drug Decriminalization and Legalization Undermine Public Health Goals

Recovery, including abstinent recovery, from long-term serious addiction is well attested. There is ample ground for hope, and for many recovery is in reach. Drug addiction is a habit, a habit that over time changes the brain, and in many forms becomes a type of disease. Recovery therefore is also a habit, which, over time, enables the brain to improve and even heal.

Many people who are deeply dependent simply stop using drugs and liberate themselves, even in the absence of a treatment intervention.

There are various forms of treatment, and ideally the form will be tailored to the specific needs of various populations of patients, perhaps inflected for gender, age, ethnicity, parenthood, resources, and co-morbidities, among many dimensions. There are faith-based treatments, cognitive and behavioral therapies, medication-assisted therapies, and entry into therapeutic communities, to provide but an incomplete sample. Some are publicly funded, some private, some in recent history were even voucher-ized, enabling selection by the participant for treatment with a demonstrated record of success, and some are insurance-covered.

But what remains a continuing failure on the part of the treatment community is clear and convincing evidence of what works and why. That there is recovery is true; that treatment sometimes leads to recovery is also true. But studies of effectiveness have fallen woefully short.

Some studies claiming effectiveness turn out to only examine the positive behavior of those who are still in treatment. But after they leave treatment, their outcomes are not well-documented in the evidentiary literature, not the least problem is the attrition rate in the study population. Moreover, the attrition is differential; we are most likely to lose from the study just those most at risk from failure. It is a major weakness of claims for treatment effectiveness that treatment populations are commonly followed for short months into their recovery, rendering long-term outcomes of specific treatment modalities largely an unknown.

Treatment must be supported as necessary part of the triad of strategic responses but it cannot be stressed enough that better and more honest evaluations of treatment effectiveness must be forthcoming or the field will lose credibility.

That said, we are presented routinely with policy statements, such as the respective return on investment of a public policy dollar spent on treatment as being cost effective compared to other options, that are really based on unknowns. Unfortunately, what has happened all too often in the treatment world has been a call for more funding, an assurance that the investment is worth it, while at the same time moving the goalposts. That is, a "successful outcome" gets progressively re-defined in such a manner that holding treatment accountable becomes a semantic exercise rather than a medical one.

Once we have been accustomed to accept that drug use is a "chronic, relapsing" condition from which we should not expect full and abstinent recovery, we have taken a partial truth about this disease and converted it into a framework of expectation whereby safe injection facilities or government-supported heroin maintenance programs come to be regarded as part of a treatment continuum.

SAMHSA budgets approximately $1.8 billion a year on publicly funded treatment, while insurance and private payments greatly supplement that amount. Greater demonstration that this money is actually effective, meaning actually turning around lives and producing recovery, is a fundamental urgency in drug policy.

What is the impact of the Affordable Care Act? Initially hailed as a 'breakthrough' for substance abuse treatment, the Act mandates expanded insurance coverage for

drug treatment with “parity” requirements (comparable to coverage of other medical conditions) that ACA supporters hope will revolutionize health care for the addicted.

That’s not where the treatment policy problem is; it lies with those who don’t feel that they need treatment and aren’t even seeking it, expanded coverage or no. Our problem, then, is denial. And more drugs, with greater availability and acceptability, can only make that denial worse.

Of greater concern, however, is how prosecutorial neglect of marijuana use will harm the Administration’s own efforts to treat substance abuse through the Affordable Care Act.

While the Administration’s new policy of neglect won’t substantially reduce drug-related incarceration, it will inflict harm on effective programs in drug prevention and treatment. Though the administration’s rhetoric has stressed a public health approach to curb drug use, their policies will produce short-term harm from increasing marijuana use and long-term damage to the administration’s stated prevention and treatment objectives.

Legal marijuana undermines social norms against drugs, diminishes perceptions of risk, handcuffs the courts as an instrument in treatment, and makes it less likely that the largest category of dependent drug users in need of treatment will pursue a path to their recovery.

Concerns now beset provisions of the ACA, especially concerning marijuana, which is the largest cause driving treatment need. While the heaviest drug using age cohort (18-25 year olds) should now be covered until age 26 under their parents’ plan, if the ACA falters in its funding assumptions or in some other manner, federal funding for treatment under the old system would be wholly inadequate to cover expanded treatment need spurred by legal, recreational marijuana.

Legal marijuana also has a perverse impact on getting people needed treatment. The National Survey on Drug Use and Health discloses the problem. Among the 7.3 million Americans in 2012 who met the criteria for needing treatment (4.3 million of whom were dependent on marijuana), high cost or lack of insurance were offered by some as the reasons that they didn’t actually get the treatment they sought. But these problems were cited by fewer than half of those who didn’t get, for any reason, the treatment they wanted. In fact, the entire category of those who

sought treatment but failed to get it represents only 1.7 percent of those who needed it.

In fact, a remarkable 95 percent of those who needed treatment for a drug abuse disorder were not seeking it – that is, they are in denial. No provision of an expanded ACA can help those who do not seek their own recovery. Public policy should be designed to motivate those in need to seek help.

Regrettably, widely accessible, socially acceptable marijuana provides no incentive for the dependent to enter recovery; rather, such a permissive environment makes it easier for a person to persist in denial and continue the self-destruction of addiction.

There is similar jeopardy for drug courts, which serve as an alternative to incarceration for non-violent drug offenders. There are now more than 3,400 such courts, where offenders are directed to treatment, completion of which can lead to clearing their record, with no resort to prison. They are a huge success; in fact, the criminal justice system today is the largest single source of referral for treatment for drugs like marijuana. But the success of these courts in driving treatment will likely suffer as a consequence of legalization, which weakens the criminal justice system as an adjunct to treatment and recovery.

We can add to that the misapprehension regarding the criminal justice issue, which is often promoted as a reason to legalize marijuana. The Obama administration, perhaps driven by the mistaken notion that America's prisons are unjustly filled with first-time marijuana offenders, has condoned marijuana use through an artful blend of inaction and avoidance towards legalization initiatives. Not only has the administration declined to challenge legalization ballot initiatives (or even speak against them during the state campaigns), they have turned a blind eye to recreational marijuana usage by ranking such activities as beneath their "prosecutorial priorities."

In reality, fewer than 1 percent of inmates in a state prison system are incarcerated due to first-time marijuana use or possession. And many of those who are incarcerated have pled down from more serious charges. The fact is most inmates are incarcerated for multiple, non-marijuana drug offenses, often involving trafficking or violence.

In the end, the administration is undermining effective responses to real problems by peddling a false narrative regarding incarceration and implementing public

health policies at odds with its own objectives.

ROLE OF DRUG SUPPLY IN EFFECTIVE POLICY:

To Stop the Drug Epidemic, Control Supply

Observers agree that the U.S. is in the midst of an opiate epidemic, the most prominent effect being the increasing number of overdose deaths accelerating sharply since 2010. Opiate deaths as of 2014 stand at nearly 29,000 per year, a function of both misused prescription opiates as well as the greatly increased supply from Mexico of illicit heroin and fentanyl now found on domestic streets.

The opiate crisis is only one factor in our current exploding American drug problem. Comparable recent surges in supply and use are found with methamphetamine also from Mexico, accompanied by recent increases in cocaine production and availability, sourced to Colombia, and finally, significant increases in nationwide marijuana supply and prevalence, particularly high-potency products smuggled interstate from states that have “legalized.”

A primary source is, as I have noted, is Colorado, where the drug is being offered for recreational, commercial sale, notwithstanding its continued status federally as a Schedule I Controlled Substance, illegal to produce or use and deemed without acceptable medical use.

While overdose deaths are most pronounced with opiates, cocaine and methamphetamine also produce acute, even life-threatening, drug consequences, and their increase can be detected in both nationwide mortality reports and emergency department episodes.

Marijuana is likewise increasingly associated with medical emergencies, and while deaths from acute episodes are rare, the health consequences of use, especially for adolescents, are major, and appear most threatening in terms of mental and cognitive impairment, psychosis, and persisting mental disability, including associations with schizophrenia, all found with persistent use, especially when initiated in adolescence with high-potency products.

In passing, it must be stressed that a focus on opioids as a cause of adverse drug use consequences, while certainly understandable, can be potentially misleading if it leads us to neglect a comprehensive strategy against all illicit drugs of abuse. To provide but one example, there has been extensive policy focus on responding to

the opioid crisis by resort to antidote medications, or medication-assisted therapies, or efforts to stem opioid medication proliferation and diversion.

While these interventions may be necessary, we must realize that there are no such effective policy counterparts available for responding to drugs like marijuana, methamphetamine, or cocaine, for which such resources or opportunities for intervention are simply not available.

Yet an effort to control the supply and availability of each of these drugs would be effective in mitigating the toll that they impose.

We face serious threats from heroin, synthetic opioids, pharmaceutical diversion, methamphetamine, and cocaine. In each of these cases, the root cause underpinning the crises are the greatly increased production, available supply, and sheer magnitude of quantity and potency of these drugs in U.S. markets. The supply has led to a large criminal army of dealers and supply networks, as it has swollen the ranks of the addicted. We have been down this path before, and know that the consequences of an unopposed drug supply become intolerable. Yet we also know that we have powerful tools to reverse this course.

At present, at the national level, there is silence regarding drug supply, as President Obama's policy rejects the primacy of supply control efforts as futile and alienating. In opposition, we argue that the true impact of increased drug supply is the most important thrust of an effective national policy, and rebuilding such programs is an imperative, without which we will be overwhelmed by the illicit markets that now threaten to consume a generation. This reality is supported by an honest assessment of drug control history, and has contemporary empirical support.

Simply put, the way to overcome our current catastrophe of drug use is to effectively attack the surging abundance of production and supply.

Further, in addition to reducing availability and use, controlling supply will augment the effectiveness of programs the objectives of which are prevention as well as treatment and recovery.

The impact of drug supply on drug use and consequences is much misunderstood, even misrepresented, in current policy debates, as are the positive effects of reducing that supply on all drug control programs and objectives. Note that virtually everyone concerned with drug use calls for reducing the demand for

drugs, convinced quite reasonably that if demand were quenched, the problem would cease.

Yet an estimated 27 million Americans in 2014 were past-month users of an illegal drug, with the figure rising yearly. Beyond rhetoric, how does the federal government reduce that demand? Programs in prevention, largely educational efforts, may defer new entrants, and programs in treatment provide avenues to recovery, notwithstanding recent efforts to define drug use as a "chronic, recurring condition" suffered by the brain, inclining to the temptation to just accept its presence. But evidence that federal programs drive out the demand for intoxication is dismayingly weak.

Moreover, we have for years been offering nationwide programs, funded by billions, on prevention and treatment, and still demand persists. It can be argued that yet more resources and yet more science can be directed at drug treatment, but the evidence is overwhelming that while prevention and treatment are necessary dimensions of drug control, they cannot be sufficient. To be effective, the front ranks of our response must be controlling the spread of the pathogen itself – making drugs scarce, expensive, risky, and feared. Prevention and treatment only then gain traction.

Conversely, fully eliminating the drug supply would be sufficient to drug control purposes, but full elimination is nearly impossible to realize. That said, evidence is strong that substantially reducing the drug supply, when sustained over time, does lower drug use, and does ameliorate attendant damage, thereby shielding potential users while healing and liberating current users.

The Evidence Regarding Heroin:

Consider this evidence. Heroin use in the United States was in decline in the mid-2000s. There were no adverse changes in the federal drug treatment system, and prevention efforts directed at heroin were unchanged. Yet heroin use began to rise, increasing sharply in 2010 and continuing an ascent through today. That is, there has been a disease outbreak.

As ONDCP Director Botticelli testified before the Senate this year, *"The past five years have seen an alarming increase in deaths involving heroin, rising from 3,038 in 2010 to 10,574 in 2014. This increase has been accompanied by a sharp rise in the availability of purer forms of heroin that allow for non-intravenous use, and at a relatively lower price, and an increase in the initiation of heroin use (from*

116,000 people in 2008 to 212,000 in 2014).”

The dynamic of difference was the sharp increase in heroin production and means of distribution, greatly increasing availability, largely a function of significantly expanded Mexican production, that today yields an accessible market product of unprecedented low cost and high purity. The rise in production to 70 metric tons in 2015 represents an increase in two short years of 170 percent.

MEXICAN Poppy/Heroin Production

	2015	2014	2013	2012	2011
Hectares under cultivation	28,000	17,000	11,000	10,500	12,000
Potential pure production (metric tons)	70	42	26	26	30

In past decades, according to the Drug Enforcement Administration’s Heroin Signature Program (as supplemented by understanding from the Domestic Monitoring Program), significant heroin sources directed at the US have included South West Asia, South East Asia, Mexico, and South America, principally from Colombia.

During the decade of the 2000s heroin production from Colombia diminished as a primary source, as a function of programs such as eradication, interdiction, and organizational pressure; the decrease coincided with comparable pressure on Colombian cocaine, the primary source of that drug to the US.

This time period witnessed the increasing role of Mexican sourced heroin to the US, both traditional black tar and increasingly, so the DEA now argues, from white heroin apparently produced in a manner similar to the South American product; as such, it is unusually pure and potent. This heroin sourced to Mexico is now being adulterated with synthetic opioids such as fentanyl, and yet more potent synthetics are on the horizon.

The effect has been to great increase the lethality of the heroin threat, both to users and to first-responders. It further offers a challenge to the administration of overdose antidotes such as Naloxone as the principle response.

The parallel prescription opiate crisis contains the same lesson. Administration authorities argue that excessive prescribing of opiate medications generated the epidemic (just as they further argue that imposing restrictions on access to opiates "caused" a turning toward heroin). Leaving aside the merits of their history, the Administration in this case fully recognizes the critical role of drug supply and availability in driving drug use outcomes, and have sought to restrict access and overprescribing. What is remarkable is their unwillingness to apply an equivalent understanding against all illicit drugs.

The Evidence Regarding Colombian Cocaine:

But the same principle -- that supply fosters outbreaks as a virus drives flu -- applies to the illicit substances. The case can be made even stronger by examining recent facts concerning cocaine, which has but one global source – the three nations of the Andes, of which the overwhelming producer of U.S. supply (95 percent) has been Colombia.

By effective, sustained supply control programs operated in-country (comprehensive efforts combining eradication, establishing the rule of law, and alternative economic development) coupled with interdiction in drug transit arenas, the volume of cocaine produced in Colombia and directed at U.S. targets (controlled in distribution through Mexican cartels) plummeted from 700 metric tons of potential pure cocaine in 2001 to only 165 metric tons in 2012. The drop was 76 percent, and cocaine thereby became scarce, costly, risky, and adulterated.

Through Plan Colombia, the joint program sustained across successive U.S. and Colombian administrations, achievement was driven by year over year aerial eradication of the crop. Scientific field studies established that for every year of sustained eradication, productivity of the coca fields fell in consistent increments; over five years, there was a measured decrease in field productivity well more than half.

Many economists who speculate about the drug market do not accept the impact of producer country supply reduction efforts such as Plan Colombia. They argue that raising the price of coca in Colombia has only marginal impact on the market in the U.S, since the major mark-up in value is provided by cross-border smuggling and distribution, where the value of a kilo of cocaine rises from roughly $1,500 in country to between $25,000 to $45,000 in the U.S. From their perspective, what is the point of eradication if it only lifts the price in Colombia by a few hundred dollars?

These economic analyses, however, do not portray real drug markets. It doesn't matter how much you're willing to pay in Miami for a kilo of top quality cocaine when there is no cocaine supply to satisfy the demand. Unlike other global commodities, there are not multiple market alternatives for cocaine when supplies dwindle. Producing cocaine is a specialized activity, fraught with risk and disincentives, coercion and violence, and it thrives in ungoverned spaces. The crop is not an annual, like poppy, and years of farmer effort can be destroyed quickly, while re-planting is intensely laborious. The impact favors movement of farmers to licit alternative crops as a form of sustainable agriculture.

We further know that the induced shortages in Colombian production were manifested all along the supply chain. With reduced flow, interdiction efforts became more effective in Colombia and the transit areas moving to the U.S. Law enforcement noted that Mexican cartels were unable to satisfy deliveries, and cocaine flow at the border decreased, leading to urgent calls from dealers and sharp declines, beginning in 2007, in cocaine purity, accompanied by increases in price per pure gram. Lost revenue from cocaine sales forced cartels to scramble for alternatives, and set in motion battles for control of remaining supplies and supply lines. The cocaine market was moving towards collapse.

Importantly, there was no "balloon effect" from reductions in Colombia felt in either Peru and Bolivia, as cocaine production throughout the Andes declined from 1,055 metric tons in 2001 to only 560 metric tons by 2012, a 47 percent decline, led by Colombia's plummet.

The impact led to many positive developments on the U.S. home front. Work place cocaine positives were cut deeply between 2007 and 2013. Cocaine overdose deaths and emergency department episodes fell. Regular cocaine use declined by as much as half. With nothing on offer but a more expensive, less pure product, now harder to find, treatment began to take hold, and people moved away from cocaine. An entire array of damaging drug consequences began to heal. Lives were saved.

There is a coda to this argument about controlling drug supply, as tragic as it is unnecessary. By 2012, following the Obama policy line, U.S. and Colombian policy began to shift away from aggressive supply reduction, and a reverse experiment regarding the effectiveness of supply control was set in motion.

First, broad areas of Colombia were closed to eradication, giving license to

produce cocaine within those borders. Cocaine cultivation began to return, while cocaine production rose between 2012 and 2014, 165 metric tons of cocaine rose to 250, more than 50 percent. In the U.S., overdose deaths almost immediately rose.

Then in May of last year, aerial eradication was completely banned in Colombia, based on false scares about the health impact. Devastation has now followed in short order. Cocaine production is flooding the Colombian forests. Indeed, the White House has just acknowledged that potential pure production is now 420 metric tons for 2015, a rise of 155 percent from its 2012 low. We fear there may already be even greater production in the offing. Already, revolutionary-groups-turned narco-traffickers are in league with hungry Mexican cartels like Sinaloa, partnering to return the deadly cocaine circus of the 1980s to U.S. streets.

We can anticipate the devastating consequences on the home front, as the leading edge of the cocaine flood moves its way north, its flow abetted by a weakened Administration stance in Central America, while transit arenas have experienced reduced interdiction assets, and Mexican cartels are poised to re-capture market share. Let there be no doubt – given an unprecedented policy accomplishment, this Administration threw it away, when they refused the clear lesson of supply control.

Summing Up: The Neglect of Strategic Drug Supply and the Rise of Synthetics:

We are witnessing drug policy cause and effect. Sadly, similar stories can be told with regards to not only heroin and prescription opiates, but drugs like methamphetamine, where use was cut nearly in half by U.S. restrictions on precursor chemicals, only to come back once Mexican cartels found ready industrial supplies of chemicals, evidently derived from China. Supply reduction pressure must be sustained and adapted in order to work.

And then there's the current debacle of marijuana, demand for which had been successfully reduced prior to 2009, falling 25 percent among youth. But with legal, "recreational" state sales of the drug, added to the production of so-called "medical marijuana" in multiple states, supplies nationwide are surging, and prevalence of use is climbing steeply, most rapidly in the very states where supply is most abundant.

Increased drug supply and growing markets fund those controlling the trade, and they capitalize by increasing supply of yet other drugs. Marijuana use by youth, through its well-attested 'gateway' capacity, will generate use and sales of yet

other drugs that will be introduced to communities through the legal marijuana gateway. The black market providing all drugs can be seen to thrive in the environment of legal drugs, that vastly increases supply and approved access.

There can be no doubt that legal, commercial marijuana, as found in Colorado, will lead to many more users of marijuana, stronger cartel control, and yet more drug supply of other drugs, leading to many more users in a vicious cycle already underway. There may be time to reverse this cycle, before the large revenues from "legal" drugs insulate and perpetuate its political standing.

But we know what the first and most important strike must be – shut down the burgeoning pathogen at its source. Reduce drug supply. Other benefits will follow.

There are two critical lessons about how the Administration's policies have been deficient. First, they largely address the consequences of the epidemic, but provide little support for programs intended to reduce the spread and hold of the behavioral disease of drug use.

Second, the policies, by ignoring supply reduction, the attack on trafficking organizations, and the critical role of international engagements in source countries (the President's most recent budget actually cuts funding for international drug control programs by $952 million), the policies have been at best tactical dodges but not strategic initiatives capable of solving the problems.

The work to stem the tide demonstrated by Drug Enforcement Administration and numerous other drug control agencies (such as State INL, CBP and ICE) is commendable, but insufficient. Still, Administration policy has neglected (when it has not undercut) at the national policy level control of border movement, international drug control partnerships, and suppressing trafficking networks and gang distribution, as all the while it has simultaneously emphasized enabling of legal recreational marijuana production, sales and distribution.

The result is that any achievements that have been made in controlling drug flow by respective agencies have had to push against the dominant policy tide and have not enjoyed robust national policy support.

The rise of synthetic opioids tells us that the heroin threat has morphed already into a more deadly form. Synthetics present a model of production more akin to methamphetamine, which means industrial chemical production in makeshift laboratories in the midst of urban centers, freed from attachment to agricultural

products, drug production from which we are able to estimate from national technical means through crop sampling estimates.

Testimony regarding the amounts seized by the Customs and Border Protection (CBP) agency capture the extraordinary volume of opioids moving across our borders, not only heroin production, (production of which, as have seen, has risen through 2015 to 70 Metric Tons, but recent seizure increases showing a surge in synthetic fentanyl crossing the border.

For synthetics, the underlying production estimate is simply not known. That said, as the figures presented show a rise through 2015, at best, we can anticipate that the horrendous overdose toll represented in the literature today, which represents known deaths from 2014, will likely continue to rise even more steeply, given the available supply and distribution networks. If so, the impact will be catastrophic and well beyond the public health problem from which we are already reeling.

Coupled with the rising cocaine threat from resurgent Colombian production, the sharply rising methamphetamine threat, and the ongoing expansion of high potency marijuana, both licit and illicit, a looming disaster that will engulf public health, law enforcement, and national security is almost upon us, as this Administration prepares to leave office.

What are we doing in response? Compared to the public health reaction to the Ebola and Zika infectious threats, the funding has not been of the proper magnitude. But funding is not the complete measure of response. We must ask what strategic responses, with what resources and coordination, are being brought to bear?

The Administration has testified concerning their program to train Customs and Border Protection (CBP) personnel in the administration of the Naloxone overdose antidote to those they encounter at the border. It is not clear to this observer how such a priority program at the border will help stem drug flow. In fact, if criminal cartels, controlling plazas in Mexico and migrant smuggling routes were to insinuate drug trafficking mules into the flow of migrants streaming across the southern border, how would this program, however otherwise meritorious, be a sufficient response, and how would it protect the lives of Americans?

As I have argued, the risk from current Administration policy is that too much focus on opioids at the expense of a comprehensive, all-drug strategy (which supply reduction can address) will leave us unprotected. Further, with regards to

the opioids, a nearly exclusive focus on responding to the *sequelae* of initiation and dependency, rather than placing more effective emphasis on interrupting the spread of this behavioral disease by cutting supply and initiation, has proven inadequate.

Finally, within the larger opioid crisis, the response focus has been almost exclusively on the problem of prescription medication opioid diversion and misuse, with a corresponding neglect of illicit heroin and rogue synthetic opioid production and distribution.

Not surprisingly, it is this latter category of drugs that is climbing most steeply and causing increasing damage (prescription abuse having peaked, as a prevalence rate, in 2006, with small declines thereafter), while overdose deaths therefrom peaked around 2011 — as heroin deaths began to surge in 2010 — before the recent rise plausibly related to what may be misclassified illicit synthetic overdose deaths, such as those from fentanyl, that may account for as many as 5,500 of the most recent (2014) death toll.

That said, the Administration has at least followed the right course of action, strategically, regarding the diversion and misuse of licit prescription opioids. They have addressed the supply and availability of the drugs themselves, through pill-mill and doctor shopping crack-downs, through prescriber education initiatives, through continuing to expand Bush-era prescription monitoring programs, and through efforts such as restricting access to medicines such as hydrocodones through up-scheduling, as took place in October of 2014.

These steps to address the supply and availability of prescription opioids are proper initiatives, but the challenging policy question, as I have noted, is why have comparable actions against the supply and availability of illicit drugs — including opioids, cocaine, methamphetamine, and marijuana — not followed this correct strategic model?

Instead, Administration policy has neglect this critical strategic tool when it comes to illicit drugs, and the results of that neglect are unavoidably negative, currently presenting an epidemic crisis that is only rising, particularly as the supply of such drugs, based on seizure and production estimates, already outstrips significantly the magnitude of the production and supply that have produced our current crisis; that is, the flow is already increasing, and what is to follow will likely greatly increase the present disaster.