APRIL 2, 2014

BUDGET HEARING - DRUG ENFORCEMENT ADMINISTRATION AND STATE OF RESEARCH ON DRUG ABUSE IN AMERICA

U.S. HOUSE OF REPRESENTATIVES, COMMITTEE ON APPROPRIATIONS, SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES

ONE HUNDRED THIRTEENTH CONGRESS, SECOND SESSION

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Chairman, House Committee on Appropriations

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Michele M. Leonhart *[view PDF]*
Administrator, Drug Enforcement Agency

Nora D. Volkow *[view PDF]*
Director, National Institute on Drug Abuse

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Chairman Hal Rogers
FY 2015 Budget Hearing: DEA and State of Research on Drug Abuse in America
DEA Administrator Michele Leonhart
NIDA Director Nora Volkow
April 2, 2014
Opening Statement As Prepared

Chairman Wolf, thank you for yielding and for holding this critically important hearing with the Drug Enforcement Administration and the National Institute of Drug Abuse. Administrator Leonhart, Dr. Volkow, thank you both for taking time this morning to discuss your respective leadership roles in our country's fight against the terrible scourge of drug abuse. While your backgrounds are certainly very different, your jobs are equally important in employing a multi-faceted anti-drug strategy at the national level that incorporates law enforcement, treatment, education and research.

Administrator Leonhart, DEA has the critical task of implementing our country's federal response to illicit drug use. Your budget request for Fiscal Year 2015 is $2.018 billion. While the request is essentially flat from last year, I am concerned that you've proposed to absorb some $75 million in mandatory pay and retirement increases and foreign operations expenses with unspecific, amorphous "administrative reductions." I certainly understand that we must all make difficult decisions in this tough budgetary environment, but the reality is that you've sent your budget over with a $75 million hole that the Committee will have to fill. This is critically important as we strive to provide the men and women on the front lines with the tools, training, equipment and support necessary to carry out vital anti-drug missions domestically and abroad.

This is particularly important as we continue to fight against the abuse of prescription medications. Chairman Wolf and I have discussed with you and your agency on many occasions the truly devastating impact of prescription drug abuse in small town America. Where I live, it is hard to find someone who hasn't been left in the wake of this scourge. When OxyContin first came to the market in the late 1990s, our towns were completely overrun by pills that had been marketed to doctors as completely safe and resistant to abuse. The pills that were supposed to treat pain were creating pain in the form of addiction, abuse and, tragically, the untimely overdose deaths of far too many mothers, fathers, daughters and sons.

Unfortunately, what once was sequestered in small towns of Appalachian Kentucky and West Virginia has now been characterized by the CDC as a national epidemic. Whether it's rural Vermont, the beaches of South Florida, or the glamorous streets of Hollywood, this crisis knows no socio-economic, gender or racial bounds. It is indiscriminate in its path of destruction, and it will require a coordinated, multi-pronged approach to finally put a dent in the problem. DEA has been a valued partner in this endeavor, rooting out unscrupulous and bad-acting doctors and drug dealers while sponsoring national take-back days that provide a safe, convenient, and responsible means of disposing of unused prescription drugs. However, challenges persist, and I look forward to hearing from you today about DEA's efforts to combat the illicit diversion of prescription medications and whether you feel these efforts are making a measurable impact in reducing abuse.

In particular, despite some meaningful reforms on the regulatory front, including the up-scheduling of hydrocodone combination products for which the DEA has staunchly advocated, the FDA has recently taken a major step backwards by approving a pure, hydrocodone painkiller without any protections against abuse. The FDA's justifications for defying the recommendations of its own Advisory Panel against approving Zohydro are incredibly weak in my estimation, and I would like to hear how you anticipate Zohydro's entrance into the market will impact the law enforcement community. My region in

Southern and Eastern Kentucky is bracing for a wave of abuse and addiction, and I can only pray that the fears of so many in my community do not come to fruition once this drug becomes a household name.

The approval of Zohydro is particularly egregious because with certain regulatory changes at the federal level and a number of statutory changes at the state level, some regions have experienced some much-needed relief from the challenges associated with prescription drug abuse. In Kentucky, for example, we saw overdose deaths plateau in 2012 for the first time in a decade. The FDA risks reversing this hard-fought progress by allowing a new, crushable pill to flood into our streets.

It is important to note, however, that though we have made some meaningful progress in beating back on prescription drug abuse and misuse, we have seen deaths related to heroin increase by 450% in Kentucky. I know that you have been seeing similar trends on the national scale, and this uptick in heroin abuse is incredibly alarming. It raises important questions about the availability of treatment options for those struggling with addiction and also about the strain on our law enforcement officers who must now grapple with a different type of challenge. Operation UNITE in my congressional district has always approached this problem from the perspective of investigations, treatment and education, and so I look forward to hearing from you about how DEA is addressing these important concerns at the federal level.

On that note, I would like to thank the DEA for its strong representation at the National Rx Drug Abuse Summit which will take place in Atlanta a few short weeks. As Dr. Volkow can surely attest, this conference will bring together our country's best, brightest and most passionate policy makers, scientists, law enforcement officials, and advocates, and I am grateful that DEA and NIDA have lent their voices and expertise to the cause.

Before I conclude, I would be remiss if I did not register my strong concern that this Administration has completely abdicated one of its chief responsibilities under the Controlled Substances Act. Earlier this month, your Deputy Administrator noted that there is no sound scientific, economic or social reason to change our nation's marijuana policies. He further signaled that the Administration should send a clear message to the American people and ensure our public safety by not abandoning the science I am sure Dr. Volkow can discuss ad nauseam. And yet, we've seen the exact opposite: DOJ turning a blind eye to state laws legalizing a Schedule I drug and instructing federal prosecutors to deemphasize marijuana prosecutions. This is simply not acceptable. I am pleased that we'll have the opportunity this morning to hear from leaders in both the scientific and law enforcement communities about this wrong-headed approach to drug enforcement.

Thank you and I look forward to your testimony.

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STATEMENT OF
THE HONORABLE MICHELE LEONHART, ADMINISTRATOR
DRUG ENFORCEMENT ADMINISTRATION
BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE
AND RELATED AGENCIES

April 2, 2014

Chairman Wolf, Ranking Member Fattah, and Members of the Subcommittee:

Good morning and thank you for allowing me the opportunity to testify on behalf of the President's Fiscal Year (FY) 2015 Budget request for the Drug Enforcement Administration (DEA). I would like to start today by thanking you, Chairman Wolf, for your years of dedicated service to our country. Since this will probably be your last DEA appropriations hearing before your retirement, I would like to express the gratitude of everyone at DEA for your strong support of our agency and its employees over the years. Through your leadership, this subcommittee has provided DEA with the resources we need to disrupt and dismantle the largest drug trafficking organizations in the world. It is my pleasure to appear before you and the other members of the subcommittee today to discuss the important work carried out by DEA's employees across the United States and around the world.

When I appeared before you last year, DEA, like other Federal agencies, was in the process of making many tough decisions. Even though the FY 2014 appropriation provided needed relief, DEA remains conscious of the budget climate and continues to aggressively manage our resources to ensure every dollar is used in the most efficient manner possible. Today, I will highlight some of DEA's recent achievements as well as the most important resource and operational challenges we face going forward.

Recent Arrest of Joaquin Guzman Loera

The efforts of DEA, and its Federal, state, local, and international law enforcement partners have recently led to several significant accomplishments, including the February 22, 2014, arrest of Joaquin "El Chapo" Guzman Loera, the head of the Sinaloa Cartel, by Mexican authorities. This was a significant achievement for Mexico and a major step forward in our shared fight against transnational organized crime, violence, and drug trafficking. We congratulate the Mexican people and their government on this capture. The DEA and Mexico have a strong partnership, and we will continue to support Mexico in its efforts to improve security for its citizens and continue to work together to respond to the evolving threats posed by transnational criminal organizations.

Overview of Drug Threat Facing the United States

Mexican transnational criminal organizations pose the greatest criminal drug threat to the United States; no other group is currently positioned to challenge them. These Mexican poly-drug organizations traffic heroin, methamphetamine, cocaine, and marijuana throughout the United States, using established transportation routes and distribution networks. They control virtually all drug trafficking across the Southwest Border and are moving to expand their share, particularly in heroin and methamphetamine markets.

Heroin poses an increasing threat to the United States. In 2014, 29 percent of respondents to the National Drug Threat Survey said heroin was the greatest drug threat in their areas, as compared to 8 percent in 2007. This annual survey gathers information from a representative sample of over 1,300 state, local, and tribal law enforcement agencies. Increasing demand for heroin is largely being driven by prescription drug abusers switching to heroin because it is more readily available and less expensive.

The threat from prescription drug abuse is persistent and deaths caused by it outnumber those for heroin and cocaine combined.[1] There has also been an increase in fatal and non-fatal heroin overdoses in several metropolitan areas, with some of the overdoses due to heroin tainted with fentanyl, or fentanyl being sold as heroin. Each of these threats is discussed in greater detail below.

DEA's Focus on the Most Significant Drug Trafficking Organizations

As a single mission agency with responsibility for coordinating United States drug enforcement activities worldwide, DEA focuses on the organizations and principal members of organizations involved in the manufacture or distribution of controlled substances. This entails targeting the world's "Most Wanted" drug traffickers, identified as Consolidated Priority Organization Targets (CPOTs) as well as other Priority Target Organizations (PTOs). As of December 31, 2013, there were 67 CPOTs, a designation conferred by an agreement of the Organized Crime Drug Enforcement Task Force (OCDETF) member agencies. A PTO is a DEA designation given to drug trafficking organizations with an identified hierarchy engaged in the highest levels of drug trafficking and drug money laundering operations with a significant international, national, regional, or local impact. DEA's ultimate objective is to dismantle CPOTs and PTOs so that reestablishment of the same criminal organization is impossible and the source of the drugs they distribute is completely eliminated.

Since we started tracking CPOTs in FY 2003, there have been a total of 179 CPOTs identified by the United States Department of Justice (DOJ). Cumulatively, 135 (75 percent) have been indicted, 99 (55 percent) have been arrested and 55 (31 percent) have been extradited. FY 2013 was a very successful year. Five CPOTs were extradited to the United States, four were arrested overseas and are pending

[1] Centers for Disease Control and Prevention (CDC). National Center for Health Statistics.

extradition, seven were arrested and are in custody outside of the United States, and one CPOT was killed in a gun battle with Mexican law enforcement authorities.

Of the five CPOTs extradited in FY 2013, although all were important, the most significant was likely Daniel Barrera-Barrera (aka Loco Barrera), who was extradited from Colombia in July 2013. For over 20 years, Barrera led a global organization, estimated to consist of thousands of members, and was responsible for distributing hundreds of tons of cocaine throughout the world. Much of Barrera's cocaine was supplied by the Fuerzas Armadas Revolucionarias de Colombia (FARC), a designated foreign terrorist organization. In addition to distributing tons of cocaine, Barrera's organization was among the most violent in South America, responsible for killing and injuring countless people and earning him his nickname "Loco." Barrera was designated a CPOT in 2007 and was considered to be among the last of the Andean Region's true "kingpins." His arrest and extradition to the United States had a significant impact on cocaine trafficking throughout the world.

During FY 2013, DEA disrupted or dismantled 3,422 PTOs, of which 552 were linked to CPOT organizations. This is a 10 percent increase over the 3,120 PTOs disrupted or dismantled in FY 2012. PTO cases are complex, multi-year investigations.

Although CPOTs and PTOs operate around the world, DEA has placed a special emphasis on Mexican drug trafficking organizations because of the dominant role they play in supplying drugs to the United States. DEA focuses on identifying and attacking these organizational structures through communications exploitation, financial investigations, and by gathering information from cooperating sources.

Another country of particular concern is Afghanistan, where DEA works bilaterally with host nation counterparts to identify, investigate, and bring to justice the most significant drug traffickers in Afghanistan and neighboring countries. DEA has made significant strides in achieving its objectives for Afghanistan. In particular, we have seen significant progress with the specialized vetted units we have established with the Counternarcotics Police-Afghanistan (CNP-A). DEA is carefully monitoring the United States military drawdown in Afghanistan. We are working with the interagency community and will adjust our staffing levels and operations there to be commensurate with United States foreign policy missions and the availability of resources to ensure the safety and security of our personnel.

Drugs of Particular Concern

Prescription Drug Abuse

Prescription drug abuse is the nation's fastest-growing drug problem. According to the 2012 National Survey on Drug Use and Health (NSDUH), there are an estimated 6.8 million current non-medical users of psychotherapeutic drugs. This represents 29 percent of illicit drug users and is second only to marijuana in terms of popularity. There are

more current users of psychotherapeutic drugs for non-medical reasons than current users of cocaine, heroin, and hallucinogens combined.[2]

The percentage of respondents to DEA's National Drug Threat Survey reporting prescription drug abuse as the greatest drug threat facing their communities increased from five percent in 2007 to 22 percent in 2014. Major drug trafficking organizations, street gangs and other criminal groups have become increasingly involved in distributing these drugs because of the enormous profits to be made.

Controlled substance pharmaceuticals are diverted from a variety of sources, but DEA is particularly concerned about rogue pain clinics that are currently diverting millions of doses of prescription controlled substances throughout the United States. Although operating under the guise of pain management or wellness care, their main activity is the unlawful distribution of opiates (hydrocodone and oxycodone), anti-anxiety medications (alprazolam, clonazepam and diazepam), and muscle relaxants (carisoprodol).

To address these pain clinics and other diversion concerns, DEA has implemented a two-pronged approach with the expansion of its Tactical Diversion Squads (TDSs), with their full criminal law enforcement authorities, and its Diversion Groups, with their regulatory focus of the Controlled Substances Act (CSA). Between March 2011 and March 2014, DEA increased the number of operational TDSs from 37 to 66. The TDSs and the Diversion Groups will continue to target the pharmaceutical threat through strategic enforcement, more focused regulatory oversight and education of practitioners and registrants concerning identification and correction of weaknesses in the drug delivery system.

During 2013, DEA, together with the United States Attorneys, pursued significant regulatory and civil actions in two cases where registrants violated provisions of the CSA. In April 2013, CVS Pharmacy, Inc. executed an $11 million settlement agreement in which it agreed to pay a civil penalty for CSA violations and failure to keep proper records of pharmacy sales in Oklahoma. In June 2013, Walgreens Corporation agreed to surrender its DEA registrations and pay $80 million in civil penalties for the actions by its distribution center and six pharmacies in Florida, which resulted in the diversion of millions of dosage units of oxycodone.

DEA also took another key regulatory step when it published a Notice of Proposed Rulemaking (NPRM) on February 27, 2014, to move hydrocodone combination products (HCPs) from Schedule III to Schedule II because of their high potential for abuse.

In addition to its enforcement efforts, DEA is continuing its very successful National Prescription Drug Take-Back Initiative. Since FY 2011, DEA has conducted seven National Take-Back Days, which have resulted in the removal of a total of 1,733 tons of

[2]Past month users among persons aged 12 or older. *National Survey on Drug Use and Health*: Volume I. Summary of National Findings, published September 2013.

medication from circulation. The eighth national take-back day is scheduled for April 26, 2014.

Heroin

We are all aware of the recent press coverage on the impact of opiate abuse, and in particular, the lives tragically lost due to overdose. Just last month, Attorney General Holder addressed Department of Justice Employees and said, "It's clear that opiate addiction is an urgent – and growing – public health crisis. And that's why Justice Department officials, including the DEA, and other key federal, state, and local leaders, are fighting back aggressively. Confronting this crisis will require a combination of enforcement and treatment."

Prescription opiate abuse can easily lead to heroin use. Black-market sales for prescription controlled substances are typically five to ten times the retail value, with some pills selling for as much as $80 per tablet. Not surprisingly, some prescription opiate users turn to heroin, which generally costs only $10 per bag.

According to the most recent NSDUH, there were 335,000 current heroin users in 2012, more than double the number in 2007 (161,000).[3] There was a 37 percent increase in new heroin initiates between 2008 and 2012.[4] Fatal and non-fatal heroin overdoses are increasing in several metropolitan areas, with some cities, such as Providence, Philadelphia, Chicago, Cleveland, and Minneapolis/St. Paul, reporting overdoses due to heroin tainted with fentanyl or fentanyl being sold as heroin. Fentanyl is approximately 50 times stronger than heroin[5] and can cause even experienced users to overdose.

Since 2008, DEA has been reporting an increase in heroin use by teens and young adults who began their cycle of abuse with prescription opiates. United States healthcare providers and the victims they treat are confirming this increase. Opiate addicts are anecdotally known to switch back and forth between prescription opioids and heroin, depending on price and availability. Those prescription opioid abusers who have recently switched to heroin are at higher risk for accidental overdose. Unlike with prescription drugs, heroin purity and dosage amounts vary, and heroin is often cut with other substances, all of which could cause inexperienced users to accidentally overdose.

DEA continues to take action against the traffickers that supply heroin throughout the United States. During ***Operation Green Treasure*** DEA, with the assistance of its domestic and international law enforcement partners, targeted a Mexican drug trafficking organization responsible for trafficking large quantities of heroin into the United States monthly and Colombian nationals who are responsible for laundering the illicit profits. Between June 2013 and January 2014, ***Operation Green Treasure*** resulted in the seizure

[3] Past month heroin use among persons aged 12 or older, *National Survey on Drug Use and Health*, 2007 to 2012.
[4] Persons aged 12 or older who used heroin for the first time within the past year, *National Survey on Drug Use and Health*.
[5] Fentanyl analogs (acetyl fentanyl, methyl fentanyl) can be much stronger.

of 52 kilograms of heroin and nearly $500,000 in currency form traffickers operating in New York and Illinois.

Cocaine

Overall use of cocaine by the American population has dropped significantly. According to the most recent NSDUH, the number of past month users of cocaine has dropped 32 percent since 2006.[6] The Monitoring the Future study, the most important youth survey on drug use in America, reports that the perceived availability of cocaine among high school seniors has dropped by nearly 50 percent since its peak in 1989.[7] According to the Center for Disease Control and Prevention, unintentional overdose deaths in the United States related to cocaine dropped 42 percent from 2006 to 2010.[8]

Cocaine availability in recent years has remained at lower levels than pre-2007, when the trend of lower cocaine availability began. Cocaine seizure rates nationwide and at the Southwest Border also remain lower than before 2007. Analysis of purchased cocaine exhibits analyzed by DEA laboratories clearly reinforces this trend. This analysis shows that from 2007 to 2012 the price per pure gram of cocaine has increased 160 percent, while the purity has decreased 34 percent. Indeed, cocaine purity over the past few years dropped to levels not seen since reporting began in 1981, indicative of a significant disruption in the United States cocaine market.

One example of DEA's work against cocaine traffickers is ***Operation Lockdown***, which began in 2008 and involves DEA offices around the world. The success of this multi-jurisdictional, multi-agency operation depended on timely cooperation between domestic and foreign law enforcement entities throughout Colombia, Guatemala, Mexico, Panama, and United States. To date, ***Operation Lockdown*** has resulted in 185 arrests, to include CPOTs Giorgio Cheaitelly and Fernain Rodriguez-Vasquez, the seizure of four cocaine labs, 7,379 kilograms of cocaine, 2 kilograms of heroin, 2 pounds of methamphetamine, $25.9 million in bulk currency, and $11.1 million in laundered drug proceeds, $1.3 million in financial instruments, $4.8 million in other assets, 40 vehicles, and 14 weapons. Rodriguez-Vasquez was the leader of a Colombia-based international organization that supervised the production, transportation, and distribution of multiple tons of cocaine annually in Colombia, Central America and the United States.

Synthetic Drugs

In recent years, a growing number of dangerous, addictive, synthetic drug products that are created in Asia and Eastern Europe have been introduced into the domestic marketplace. These include synthetic cannabinoids (commonly referred to as "Spice" or "K2") and synthetic cathinones (commonly referred to as "bath salts" or "glass cleaners")

[6] Past month cocaine use among persons aged 12 or older, *National Survey on Drug Use and Health*, 2006 to 2012.
[7] The proportion of 12th graders saying that it would be "fairly easy" or "very easy" for them to get cocaine if they wanted some, *Monitoring the Future*, 1989 to 2013.
[8] CDC, National Center for Health Statistics.

which are marketed and sold as household products in retail outlets and on the Internet. These products are purposely created to circumvent the CSA and are marketed to kids and young adults as legal alternatives to controlled illicit substances. DEA has taken steps to control the problem of synthetic designer drugs through scheduling and enforcement actions; however, new synthetics enter the marketplace on a regular basis. We estimate that there are currently 200 non-controlled synthetic designer substances representing every illicit class of drug in the marketplace today.

In 2012, DEA Special Operations Division (SOD) coordinated a national takedown of ***Operation Log Jam,*** the first nationwide Federal, state and local law enforcement action targeting distributors of synthetic designer drugs in the United States and abroad. Enforcement actions in 115 cities in 32 states resulted in the seizure of approximately 12,000 pounds (five million packets) of synthetic cathinones and cannabinoids, $45 million in United States currency and approximately 100 arrests. This was followed by ***Project Synergy,*** a large, multi-jurisdictional enforcement operation targeting drug trafficking organizations involved in the illegal distribution of synthetic designer drugs in the United States and abroad. In June 2013, nationwide enforcement actions were conducted by DEA and its partners in 45 cities within the United States, resulting in 227 arrests, and the seizure of over $51 million in cash and assets, along with approximately 11,000 kilograms of synthetic drugs such as synthetic cathinones and cannabinoids.

Methamphetamine

Methamphetamine availability is increasing in the United States. In 2014, 32 percent of National Drug Threat Survey respondents said methamphetamine was the greatest drug threat in their area; this was higher than for any other drug. Further, 41 percent said methamphetamine was highly available, meaning the drug is easily obtained at any time. High methamphetamine availability is directly related to high levels of methamphetamine production in Mexico. The number of methamphetamine labs seized in Mexico has increased significantly since 2008,[9] and methamphetamine seizures at the Southwest Border increased more than three-fold over the past five years.[10] Mexican-produced methamphetamine has extremely high purity and potency levels. During 2012, the System to Retrieve Evidence from Drug Evidence (STRIDE) reported that retail per-gram purity levels averaged close to 90 percent while prices remained low.

Although the vast majority of methamphetamine sold in the domestic market is distributed by Mexican traffickers operating super labs, a significant amount of law enforcement resources continue to be expended on domestic small toxic methamphetamine laboratories operating throughout the United States. There were seizures of 11,017 clandestine laboratories in 2013 and we expect this number to increase as we accept late reporting from state and local agencies. The biggest concentration of clandestine methamphetamine laboratories is still clustered in the Midwest, with Indiana,

[9] The Government of Mexico seized 19 meth labs in 2008; they seized 267 in 2012.
[10] Seizures reported in the National Seizure System (NSS) by federal, State and local agencies, FY 2009 to FY 2013.

Missouri, Tennessee, Ohio and Illinois leading the country with a combined total of over 6,200 clandestine lab seizures in 2013, accounting for over half of the seizures that year.[11] The vast majority of these labs are producing methamphetamine using over the counter (OTC) pseudoephedrine products as the primary precursor chemical. Pseudoephedrine is generally purchased from pharmacies. Individual states continue to struggle with the unabated availability of pseudoephedrine despite the sales restrictions instituted through the Combat Methamphetamine Epidemic Act and electronic tracking systems utilized by some of the states. The damage that these laboratories inflict on our communities, the loss of life due to addiction, health care costs, and the number of children affected has taken a serious toll on the economic and physical well-being of our states. States continue to look at more restrictive measures to combat methamphetamine manufacture to include placement of the pseudoephedrine OTC products within a state controlled substance schedule such as Oregon and Mississippi have done.

Marijuana

Marijuana is the most commonly abused drug in the United States. More people use marijuana than all other illicit drugs combined. With the increased use has come an increase in medical consequences. There was a 48 percent increase in marijuana-related emergency department visits between 2007 and 2011. Marijuana only slightly trailed cocaine as the most frequently-cited drug in emergency room visits.[12]

The abuse of marijuana concentrates ("wax," "butane honey oil," etc.) is also increasing throughout the United States. These concentrates can be abused using e-cigarettes or consumed as edibles, and have significantly higher THC levels than leaf marijuana. In 2013, the THC content of leaf marijuana averaged 14 percent while the THC content of marijuana concentrates averaged 54 percent, with some samples reported as high as 99 percent. Highly flammable butane gas is used to extract the THC from the marijuana leaf, and has resulted in home explosions, injuries, and deaths.

Both domestically and internationally, DEA is working with our law enforcement partners to combat these threats. Consistent with the marijuana enforcement guidance the Department issued to all federal prosecutors and law enforcement agents on August 29, 2013, DEA continues to aggressively enforce the CSA and does so by focusing on the eight enforcement priorities outlined in the guidance. This includes, among other things, investigating and preventing the distribution of marijuana to minors, preventing revenue from the sale of marijuana from going to criminal enterprises, gangs, and cartels, as well as preventing state-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity.

[11] Clandestine methamphetamine laboratory seizure incidents reported to the NSS.
[12] Drug Abuse Warning Network (DAWN), 2011: National Estimates of Drug-related Emergency Department Visits.

For example, on January 8, 2014, DEA agents, working jointly with our law enforcement partners, arrested Baltazar Garcia and two other individuals, resulting in the disruption of his methamphetamine trafficking organization. Since 2012, the Garcia organization distributed at least 40 pounds of methamphetamine and 40 kilograms of cocaine per month in Bakersfield and Oakland, California. Garcia laundered profits from his methamphetamine and cocaine trafficking activities through a medical marijuana dispensary he operated in Bakersfield, California. Garcia also operated an indoor grow house where marijuana was cultivated for distribution from his medical marijuana dispensary. A search warrant at the facility resulted in the seizure of 400 marijuana plants. To date, this 16-month OCDETF/PTO investigation, dubbed ***Operation Young Guns***, has resulted in the arrest of 12 individuals and the seizure of four kilograms of cocaine, 40 pounds of methamphetamine, 25 pounds of marijuana, 400 marijuana plants, $4,000 in United States currency, and four firearms.

On February 20, 2014, DEA agents seized a warehouse in Denver valued at $1.1 million. The warehouse was used by members of the Conley Hoskins Drug Trafficking Organization to cultivate and process marijuana. The next day agents served seizure warrants on ten bank accounts in Denver and three in Chicago resulting in the seizure of $1 million. The accounts contained illegal marijuana proceeds associated with the organization. Since January 2010, the Hoskins organization had been distributing at least 106 pounds of marijuana per month through local "medical marijuana" dispensaries under the guise of Colorado's medical marijuana laws. The organization also used financial institutions inside and outside Colorado to launder illicit marijuana proceeds.

Putting it in Context

The current picture of drug availability and abuse in the United States is mixed. We have had many notable successes, such as with cocaine, but serious concerns remain, including with regard to the abuse of heroin and prescription drugs. It is important to evaluate today's conditions in the context of those that existed when the nation began its "War on Drugs" in the 1970s. In that context, it is clear that, while still very serious, the national drug abuse problem is substantially smaller than it used to be, and progress continues to be made:

- According to the most recent NSDUH, the overall rate of illicit drug use in America has dropped by 35 percent since 1979.[13]
- More recently (since 2006), the number of current users of any illicit drug other than marijuana has dropped 8 percent. Driving this decline have been decreases in the number of current users of cocaine (32 percent) and methamphetamine (40 percent).[14]

[13] Percentage of past month illicit drug use among persons aged 12 or older, *National Survey on Drug Use and Health* (formerly the *National Household Survey on Drug Abuse*), 1979 to 2012.
[14] Past month illicit drug use among persons aged 12 or older, *National Survey on Drug Use and Health*, 2006 to 2012.

- The Monitoring the Future study, the most important youth survey on drug use in America, has shown that the overall rate of illicit drug use among high school seniors has also fallen by 35 percent since 1979.[15]

These statistics demonstrate that through an effective drug control strategy, the vast majority of the public will choose not to consume harmful drugs. DEA believes in a balanced strategy of enforcement, prevention and treatment. And we continue to have great success in dismantling the world's biggest drug trafficking organizations, as indicated by the examples included in this testimony. The names mentioned earlier – Joaquin "El Chapo" Guzman Loera and Daniel "Loco" Barrera-Barrera – were two of the world's most notorious drug kingpins. Their capture demonstrates that no one is beyond the reach of dedicated law enforcement investigators.

Successful Strategies

Partnerships

DEA's successes against CPOT and PTO targets would not be possible without the strong working relationships we maintain with our international, Federal, state, local, and tribal law enforcement counterparts. These interagency agreements act as force multipliers, drawing on the expertise and assistance of other agencies. DEA currently leads 190 state and local task forces staffed with DEA Special Agents and over 2,100 state and local task force officers who are deputized with Title 21 federal drug enforcement authority. DEA is also the lead agency in 78 percent of all OCDETF investigations, and participates in 86 percent of the OCDETF investigations.

DEA has 86 offices in 67 foreign countries and more than 700 onboard employees stationed overseas. DEA's cooperative partnerships with foreign nations help these nations develop more effective drug law enforcement programs which ultimately benefit the United States. One of DEA's most significant international initiatives is the Sensitive Investigative Unit (SIU) program, a comprehensive international drug enforcement initiative involving thirteen countries critical to DEA's mission. These units are staffed by over 1,000 host nation drug law enforcement investigators and are supported by over 65 DEA Special Agent Advisors and Intelligence Analysts. SIUs conduct high level narcotics investigations targeting international trafficking organizations with a nexus to the United States. DEA also has a Formal Vetted Unit Program (FVU) which puts host nation counterparts through the same vetting process as an SIU and an abbreviated training course. The FVUs allow DEA to increase its global footprint while teaming with the Departments of Defense and State for the necessary funding. If an FVU meets all requirements and functions at an acceptable level, it can be converted to an SIU.

An important component of DEA's international success is the DEA-led International Drug Enforcement Conference (IDEC) which we have held annually for the past 30

[15] Long-term trends in 30-day prevalence of illicit drug use in grade 12, *Monitoring the Future*, University of Michigan, 1979 to 2012.

years. IDEC brings together the top drug law enforcement leaders from over 100 nations for intelligence sharing and case prioritization. During the conferences, DEA and partner nations exchange information on CPOTs and priority targets. IDEC develops and nurtures important relationships between DEA and participating countries, facilitating future joint actions aimed at drug trafficking, narco-terrorism and other threats.

Information Sharing and De-confliction

Intelligence sharing, de-confliction, and cooperation between Federal, state, and local law enforcement partners is the key to combating transnational organized crime. Two important tools DEA has to accomplish this are SOD and the El Paso Intelligence Center (EPIC).

With 27 United States law enforcement agencies plus two foreign countries represented at SOD, DEA brings together the law enforcement operations of the participating agencies to dismantle drug trafficking organizations by exploiting their command and control communications. SOD facilitates coordination and communication among offices and agencies with overlapping investigations to ensure intelligence is shared between the participating agencies. SOD also plays a vital role in coordinating many of the Department's violent crime and international organized crime investigations. An example of SOD's role in coordinating large, multijurisdictional enforcement operations is ***Project Below the Beltway.*** This initiative combined 411 investigations in 79 United States cities and 12 foreign cities to target the Sinaloa and Juárez Cartels and other drug trafficking organizations and gangs throughout Mexico and the United States. ***Project Below the Beltway*** resulted in 3,780 arrests and the seizure of 6,100 kilograms of cocaine, 10,284 pounds of methamphetamine, 1,619 pounds of heroin, 349,304 pounds of marijuana, and nearly $150 million in United States currency.

EPIC is a multi-agency national law enforcement intelligence center that emphasizes timely and expeditious support to law enforcement efforts in the Western Hemisphere and in particular along the Southwest Border. Twenty-five federal, state, and local agencies as well as the governments of Mexico and Colombia are represented at EPIC. Through the Watch, a 24-hour communications center that offers simultaneous searches of 11 databases to support investigations, and other 24-hour intelligence operations, EPIC provides immediate information from participating agencies' databases to law enforcement personnel and analysts in support of tactical and operational activities, de-confliction, and officer safety. EPIC has sharing relationships with law enforcement agencies in all 50 states and partner organizations in the international law enforcement community.

Financial Investigations

DEA places a high priority on financial drug investigations by targeting the financial infrastructure of major drug trafficking organizations and members of the financial community who facilitate the laundering of their proceeds. By seizing drug proceeds,

DEA prevents drug trafficking organizations from using these funds to fuel the next round of drug production. From the time that DEA began tracking revenue denied in FY 2005 through the end of FY 2013, we have denied $25.7 billion in revenue from drug trafficking organizations, including $3.5 billion in FY 2013 alone. To put that in perspective, DEA's total appropriated budget over that same time period totaled $16.9 billion.

DEA also addresses the threat that drug proceeds represent as a means of financing terrorist organizations. A priority focus of the DEA's efforts in Africa has been the development of drug intelligence and investigations of drug traffickers with ties to terrorist organizations. Some of the identified terrorist organizations include al-Qaeda in the Lands of the Islamic Maghreb (AQIM), FARC, al-Shabaab, al-Qaeda in East Africa and Hizballah.

DEA's Financial Position

As you know, between FY 2010 and FY 2012, DEA's appropriation remained relatively flat. In January 2011, the Attorney General instituted hiring restrictions which were made more restrictive in January 2013. During this time period, DEA lost nearly 800 positions, including over 300 special agents, due to attrition. DEA's FY 2013 appropriation included a rescission of $42.5 million and a sequester reduction of $102 million, reducing DEA's Salaries and Expenses (S&E) appropriation by 6 percent compared to FY 2012.

Thankfully, DEA was able to avoid furloughs in FY 2013. The hiring freeze was a major reason for that, as well as managing our contracts, and limiting certain operational and administrative expenditures DEA is also helped by the Zero Based Budget (ZBB) process we use to ensure that priority programs and mandatory bills are fully covered and that remaining funds are spent on our highest priorities. DEA has also managed to realize efficiencies in many areas such as travel, where our FY 2013 obligations were $30 million below the FY 2010 obligations. This 45 percent decrease[16] can be attributed to a number of factors, including the mandatory use of the lowest available fare for all official travel, limiting travel for training and conferences, and the use of video teleconferencing in lieu of travel whenever possible.

The FY 2014 enacted appropriation of $2.018 billion is $111.7 million above the FY 2013 level. While a portion of the FY 2014 funding increase is required to cover the pay raise and inflationary increases such as benefits, rent, and foreign overhead costs, the remainder of the increase will be used to support hiring, operations, and investments in critical infrastructure. Thanks to the funding provided by this subcommittee in FY 2014, DEA will hire approximately 120 new Special Agents, 40 new Intelligence Analysts, and 25 new Chemists, in addition to a number of other investigative and administrative support personnel.

[16] DEA obligated $37 million from all funding sources under object class 21.0 in FY 2013, compared to $67 million in FY 2010.

FY 2015 President's Budget

The FY 2015 President's Budget requests $2.018 billion for the DEA's S&E Account, the same as the FY 2014 level. This will provide ongoing funding for new hires in FY 2014, however, DEA will carefully manage any hiring during FY 2015. In FY 2015, DEA expects to face an estimated $75.2 million in inflationary cost increases. The largest increases are due to the increase in DEA's Capital Security Cost Sharing charges from the State Department, a Federal Employees Retirement System (FERS) rate increase, and a general schedule pay increase. DEA will pay for these and other inflationary increases by managing hiring in FY 2015 and using our internal ZBB review process to make program and administrative reductions wherever possible.

In addition, the Budget requests $366.68 million for the Diversion Control Fee Account (DCFA), representing a $31.4 million increase over DEA's FY 2014 funded operations. This account is used to cover the cost of operating DEA's Diversion Control Program. The FY 2015 request provides ongoing funding for the fee-funded positions brought on board during FY 2014 and will allow for additional hires in FY 2015. It will also cover the increase in inflationary adjustments, including the pay raise, FERS rate, and foreign overhead costs for fee funded positions.

Finally, the Budget requests an estimated $497 million in funding from other agencies via transfer or reimbursable agreement. DEA's largest sources of reimbursable funding are the OCDETF program and the Asset Forfeiture Fund, both of which fall under this subcommittee's jurisdiction. The subcommittee's support for these cooperative programs is critical to DEA's operational success. Just over 25 percent of DEA's domestic special agent workforce is funded through the OCDETF program, so funding levels for the overall OCDETF program have a direct impact on DEA's staffing and operations. Another smaller, but still critical program that relies on external funding is DEA's hazardous waste cleanup program. The FY 2015 President's Budget includes $7 million for the Community Oriented Policing Services Program (COPS) to reimburse DEA for assisting state and local agencies with clandestine methamphetamine lab cleanups and training.

Conclusion

Targeting the world's most prolific and dangerous drug traffickers is a dynamic and evolving mission, and with it comes a myriad of challenges. But throughout our history, DEA has met those challenges and produced impressive results.

There are some indicators moving in the wrong direction, like the increased use of marijuana and heroin and prescription drug abuse, but overall the picture shows much progress has been made. If we remember where we were when our nation set out to fight drug abuse, and if we look at the tremendous successes we are having against the largest and most dangerous trafficking organizations in the world, there is much reason for optimism.

The fight against drug abuse is a generations-long struggle; it will not be won overnight. And like efforts to eliminate cancer, poverty, illiteracy or unemployment, there will always be results that are less than we hoped for. But that is no reason to declare surrender or give up.

DEA remains committed to bringing the "Most Wanted" drug traffickers to justice. By taking harmful drugs off of the street, dismantling major drug organizations, and seizing the profits associated with this trade, we are making our nation a safer place to live and do business. We recognize the important role DEA plays in our country's holistic strategy of prevention, treatment and enforcement.

We thank you for your consistent support. We greatly appreciate the funding we received in FY 2014 and the support we hope we can expect for DEA's FY 2015 budget request.

I would be happy to answer any questions you may have.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

Harnessing the Power of Science to Inform Substance Abuse and Addiction Policy and Practice

Witness appearing before the

House Committee on Appropriations

Subcommittee on Commerce, Justice, Science and Related Agencies

Nora D. Volkow, M.D.

Director, National Institute on Drug Abuse

April 2, 2014

Mr. Chairman and Members of the Subcommittee: Thank you for inviting the National Institute on Drug Abuse, a component of the National Institutes of Health (NIH), to comment on the state of the science regarding the impact of drug abuse and addiction on individuals, their communities, and the broader society. This scientific information is crucial if we are to tackle rapidly evolving public health threats such as the increase in marijuana use among young people and the growing prevalence of opioid addiction and overdose deaths. I believe my comments will provide useful insights on the value or science in helping us address the continuously evolving problem of substance abuse and substance use disorders in this country, a problem whose roots are both medical and social.

Background

Remarkable scientific advances have been made in genetics, molecular biology, behavioral neuropharmacology, and brain imaging that offer critical new insights into how the human brain works and generates behavior. In the case of addiction, we can now investigate questions that were previously unanswerable, such as how environmental factors such as social stressors and genes interact to affect the brain's responses to drugs and produce neural adaptations that lead to the compulsive drug use seen in addiction.

Drug addiction manifests as a compulsive drive to take a drug despite serious adverse consequences. This aberrant behavior has traditionally been viewed as a "bad choice" that is made voluntarily by the addicted person—a view that has perpetuated the lingering stigma of addiction as a moral failure. However, addiction researchers have collected overwhelming evidence, from multiple lines of research, showing that chronic drug use changes the brain in ways that can lead to the profound behavioral disruptions seen in addicted individuals, including the loss of self-control around an addictive substance or substances. This is because drugs of abuse impact many neuronal circuits, including those involved in the processing of response to rewarding and aversive stimuli, interoception (the sense of the physiological state of the body), emotions, decision making, and cognitive control, turning drug use into an automatic compulsive behavior. The fact that these changes in the brain are long-lasting, persisting even years after drug use has been discontinued is what makes addiction a *chronic and relapsing disease*. This new knowledge is helping us understand why many recovering individuals relapse even in the

face of threats such as divorce, loss of child custody, and incarceration—even when, in some cases, the drug is no longer perceived as pleasurable. This knowledge is also changing our approach to the prevention and treatment of addiction.

Drugs, both legal (e.g., alcohol, nicotine) and illegal (e.g., cocaine, methamphetamine, heroin, marijuana) as well as abused psychotherapeutic medications (opioid analgesics, stimulants, benzodiazepines) can be abused for various reasons, including to experience pleasure or altered mental states, to improve performance, or, in certain instances, to self-medicate a mental disorder. When such abuse becomes chronic and/or heavy, vulnerable individuals put themselves at high risk of becoming addicted.

A growing body of imaging evidence provides critical insights that help explain why addicted individuals experience such uncontrollable desire for the drug even in the face of catastrophic consequences. The convergent results suggest that addiction is characterized by a progressive structural and functional disruption of brain regions that underlie the normal processes of motivation, reward, and inhibitory control (1, 2). This provides a compelling rationale for the argument that drug addiction *is* a disease of the brain and that the associated abnormal behaviors (such as those associated with opioid, marijuana, or cocaine addictions) are the result of dysfunctional brain tissue, just as cardiac insufficiency is a disease of the heart and abnormal blood circulation is the result of impaired myocardial function (3) **(Fig. 1).**

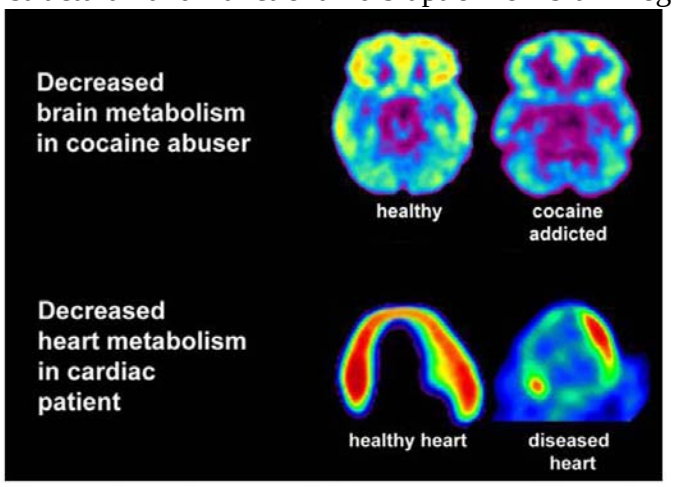


Figure 1. Drug abuse and addiction as a disease of the brain. Positron emission images of decreased glucose metabolism in the brain of cocaine addicted (top right) and in the heart of an individual with myocardial infarction (bottom right) compared to the control conditions (left panels).

Therefore, although initial drug experimentation and recreational use may be voluntary in most cases, once addiction develops, behavioral control becomes markedly disrupted. Importantly, even though imaging studies consistently show specific abnormalities in the brain function of addicted individuals, not all addicted individuals show these abnormalities nor is the severity the

same across addicted subjects. The dimensional and heterogeneous nature of this disease has implications for its prevention and treatment and for public health policy, and highlights the need for further research to delineate the nature and diversity of the genetic, neurobiological, and social factors that influence the addiction process.

Chronic intermittent exposure to an addictive substance is required for drug addiction to develop, but the process also involves complex interactions among a range of biological and environmental factors (4). These interactions help explain why some individuals become addicted and others do not and why attempts to understand addiction as a purely biological or environmental disease have been largely unsuccessful. Recently, important discoveries have increased our knowledge of how drugs affect the expression patterns of specific genes (the epigenome), their protein products, neuronal communication and plasticity, and neural circuitry (5), and how these biologic factors might converge to affect human behavior. These discoveries also set the stage for a better understanding of how different environmental factors influence molecular traits (e.g., through epigenetic modification (6)) and contribute to patterns of behavior that facilitate the establishment of an addiction.

A Complex and Evolving Public Health Threat

Psychoactive substances have been interacting with humans for at least 200,000 years; they come in myriad forms and potencies. Our society has developed a complex cultural and legal relationship with each of these drugs, emerging from a less-than-optimal combination of social tradition (norms) and scientific knowledge. Because these ingredients tend to evolve with time, the nature of the health threats that psychoactive drugs can pose to individuals and societies is constantly changing. The growing acceptance of recreational marijuana use with the concomitant shifting consensus about its legal status and the increasing prevalence of opioid addiction and overdose deaths are perfect examples of this constant evolution.

Current Issues Concerning Marijuana Abuse. The rapidly shifting landscape regarding the legalization of marijuana for therapeutic and recreational purposes seem to justify a renewed effort to disseminate accurate information about marijuana's real health effects, both adverse and desirable. Currently, marijuana is the most commonly used illicit drug in the United States, with

about 12% of people aged 12 or over reporting use in the past year, with particularly high rates of use in young people. Scientists are especially concerned about the regular use of marijuana during adolescence -when the brain is still undergoing active development-, because it is more likely to be associated with lasting deleterious consequences for the user (Table 1).

Acute adverse effects of marijuana use
Impaired short-term memory—making it hard to learn and retain information.
Impaired motor coordination—interfering with driving skills and increasing the risk of injuries.
Altered judgment—increasing high-risk sexual behaviors that could lead to STDs.
In high doses, paranoia, psychosis.
Long-term effects of chronic and/or heavy marijuana use.
*Addiction (about 9% of users; 17% of those who start as teens; and 25-50% of daily users).
*Altered brain development.
*Poorer educational outcomes—dropping out of school.
*Cognitive impairments; lower IQ in those who were frequent users during adolescence.
*Diminished life satisfaction and achievement (subjective and objective indicators).
Chronic bronchitis symptoms
Risk of chronic psychosis (schizophrenia) in vulnerable individuals.

Table 1. The acute and long-term adverse effects of marijuana use. Long term effects have been primarily documented among chronic and/or heavy marijuana users. *Strongly associated with early onset during adolescence.

Research is urgently needed regarding the influence of marijuana policy on public health and other outcomes, which is why NIDA is already actively engaged in identifying and seizing research opportunities in this variegated and rapidly changing regulatory environment. For example, we have a very inadequate understanding of the impact of policy on market forces (e.g., allure of new tax revenue streams, pricing wars, youth-targeted advertising, and the emergence of legitimate cannabis-based medicines) and on the interrelated variables of perception, use, and outcomes. Improving our understanding of these variables is important, given the historically close, inverse correlation between adolescents' marijuana use and their perception of its risks (Figure 3A). Assuming this relationship is causal, would cultural and policy changes making marijuana more accessible increase the number of young people who use it on a regular basis? Among 12th graders, the reported prevalence of past-month use of marijuana has been steadily increasing in recent years, surpassing that of tobacco smoking in 2009 (Figure 3B). And, what about second-hand exposure to cannabis smoke and their active cannabinoid and non-cannabinoid compounds? Second-hand exposure to nicotine and the thousands of other toxic compounds in tobacco smoke is a significant public health issue, but we

don't have a comparatively clear understanding today of the extent and potential impact of second-hand cannabis smoke exposure beyond the fact that it exists.

Studies in states (e.g., Colorado, California, and Washington) and countries (e.g., Uruguay, Portugal, Netherlands) where social and legal policies are shifting should be useful in the collection of critical data for shaping future policy making. Another area where more research is needed has to do with our understanding of the medicinal qualities of marijuana and its chemical components. Some physicians continue to recommend marijuana for medicinal purposes despite limited supportive evidence of either efficacy or safety. This raises some real concerns with regards to long-term use by different vulnerable populations.

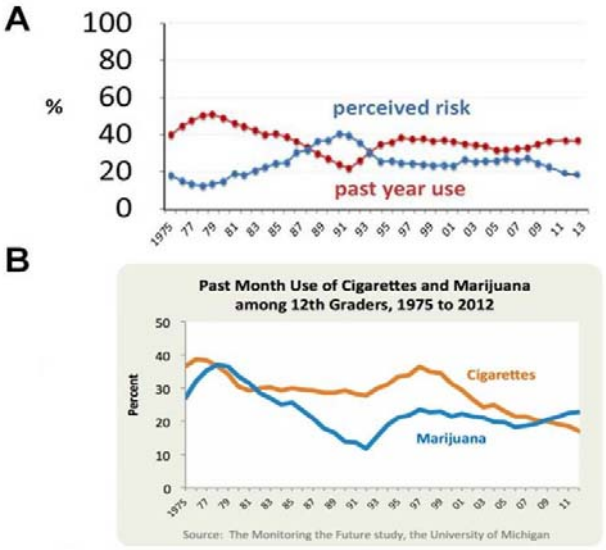
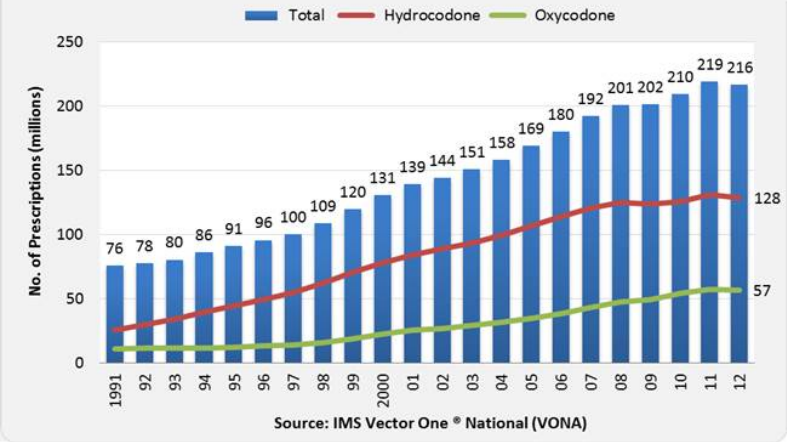


Figure 3. Rising marijuana use and consequences may reflect changing perceptions among US 12th graders. **A.** Inverse correlation between perception of marijuana's risk and use among students between the years 1975 and 2013. Perceived Risk corresponds to the percentage of teenagers reporting that the use of marijuana is dangerous. **B.** Percentage of students reporting past month use of cigarettes and marijuana between 1975 and 2012.

Opioid (Heroin and Prescription) Drug Abuse. The scope of the opioid problem in the US is alarming: 2.1 million Americans were addicted to opioid pain relievers in 2012, while 438,000 were addicted to heroin. Meanwhile, the number of unintentional overdose deaths from prescription opioids has quadrupled during the past 15 years (7). A growing number of Americans are using heroin for the first time or dying from heroin overdoses, often after becoming addicted to prescription opioids. These trends have brought renewed attention to the rising number of prescriptions written for opioid pain relievers for its probable contribution to these problems (8). The number of opioid prescriptions skyrocketed from around 76 million in 1991 to over 216 million in 2012 (9)(Figure 4). This greater availability may be linked to increasing mortality: by 2002, death certificates listing opioid analgesics as a cause of death were more common than those listing heroin or cocaine.

Figure 4. Opioid Prescriptions Dispensed by US Retail Pharmacies



Pain relievers like OxyContin and Vicodin are similar to heroin and morphine in chemical structure and their effects in the brain. They can cause euphoria, an effect that some abusers seek to intensify by taking them in ways other than prescribed, such as crushing pills and snorting or injecting the powder. Such practices make these drugs far more addictive and dangerous. One of the most serious adverse effects of prescription opioids is a depressed respiration, which can become life-threatening during an overdose. Such overdoses occur most frequently among individuals taking larger doses and/or in combination with other psychoactive drugs, most notably with benzodiazepines.

A recent troubling trend is the increase in the prevalence of injection heroin abuse particularly among young people, which is associated among others with an increase in the HCV epidemic. This trend is believed to reflect a switch from the abuse of prescription opioids to that of heroin, which is overall less expensive. Once an almost exclusively inner-city problem, heroin and its deleterious consequences are spreading to small towns and suburbs. Heroin is an extremely dangerous drug, with a wide array of negative effects. Heroin is commonly injected intravenously (although prescribed opioids like oxycontin and fentanyl can also be abused via injection), thus its abuse is closely linked to the spread of HIV, Hepatitis C virus (HCV), sexually transmitted infections (STIs), and other blood-borne diseases, mostly through the sharing of contaminated injection equipment but also through drug-induced risky sexual behaviors. However, it is important to keep such trends in perspective: While four out of five recent heroin initiates (79.5%) previously used prescription opioids non-medically, the vast majority of non-medical users of prescription opioids (96.4%) have not progressed to heroin use after 5 years (10). Addressing the intertwined problem of prescription opioids and heroin will require not just a focus in decreasing the diversion of opioid medication but also the

simultaneous implementation of effective prevention and education efforts to reinvigorate public awareness about the dangers of heroin abuse.

To reverse these highly intertwined trends, we must consider a range of measures designed to minimize the unintended consequences of prescription opioid abuse while preserving the fundamental role of these medications in healing and reducing human suffering. NIDA's strategy to address this problem involves collaborations with other Federal agencies (e.g., SAMHSA, CDC, FDA, and DEA) and constituent-based organizations; continuous surveillance of drug abuse trends; basic preclinical and clinical research; development of prevention programs and new medications; and education and outreach. Some of the pillars of this multipronged strategy include efforts to:

- Promote research that examines key risk and protective factors influencing opioid abuse and addiction risk and develop new approaches, medications, or formulations for treating pain with less or no risk of abuse.
- Harness the power of existing monitoring programs (e.g., Community Epidemiology Work Group and Monitoring the Future) to stay ahead of the curve vis á vis the abuse of prescribed medications and illegal opioids like heroin.
- Build on the success of effective but grossly underutilized medication-assisted treatments for opioid addiction and integrate them into the evolving healthcare reform efforts to increase patient retention and decrease drug use, transmission of infectious disease, and criminal activity. We are also working to expand the availability of the opioid overdose antidote naloxone and supporting the development of a more user-friendly naloxone nasal spray (11).
- Inform and educate the public, including physicians and pharmacists. This includes researching and developing effective and targeted messages about the dangers of these valuable medications when not used exactly as prescribed.

How Drug Abuse and Addiction Challenge Society

In most cases, drug abuse and addiction alienate the individual from both family and community, increasing isolation and interfering with treatment and recovery. Because support of both the family and the community are integral to effective treatment and recovery, an important

challenge is to reduce the stigma of addiction that interferes with intervention and proper rehabilitation.

Effective treatment of drug addiction in many individuals requires consideration of social policy, and its vast ramifications, which could either enhance or block the efficacy of available interventions. For example, findings show unequivocally that providing comprehensive drug abuse treatment to criminal offenders works, reducing both drug abuse and criminal recidivism (12, 13). The substantial prison population in the United States is attributable in large part to drug-related offenses and is accompanied by high rates of recidivism. As such, it is a matter of public health and safety to make drug abuse treatment a key component of the criminal justice system. Indeed, addressing the treatment needs of substance abusing offenders is critical to reducing overall crime and other drug-related societal burdens, such as lost job productivity and family disintegration.

Scientific research shows that drug abuse treatment can work even when an individual enters it under legal mandate. Drug courts, which incorporate drug treatment into the U.S. judicial system, have proved to be beneficial in decreasing drug use and arrests of offenders who are involved in drug-taking. However, only a small percentage of those who need treatment actually receive it, and often the treatment provided is inadequate. To be effective, treatment must begin in prison and be sustained after release through participation in community treatment programs. By engaging in a continuing therapeutic process, individuals can learn how to avoid relapse and withdraw from a life of crime.

As reflected in our collaborative Criminal Justice–Drug Abuse Treatment Studies (CJ–DATS) Initiative, NIDA is committed to working across organizational boundaries to improve substance abuse treatment services. Now we are at the point where the implementation of evidence-based treatment principles is called for within the criminal justice system to improve public health and public safety by reducing both drug use and crime.

There are also many unanswered questions that future research should address. For example, what are the active ingredients in the treatment of the drug offender? How does the system deal

with the fact that few offenders stay in treatment long enough to receive the minimally required services? What are the implications of these findings for pretrial diversion laws, post-prison reentry initiatives, and so on?

The recognition of addiction as a disease that affects the brain is essential for large-scale prevention and treatment programs that require the participation of the medical community. Engagement of pediatricians and family physicians (including the teaching of addiction medicine as part of medical students' training) can facilitate early detection of drug abuse in childhood and adolescence. Moreover, screening for drug use could help clinicians better manage medical diseases that are likely to be adversely affected by the concomitant use of drugs, such as cardiac and pulmonary diseases. Unfortunately, physicians, nurses, psychologists, and social workers receive little training in the management of addiction, despite it being one of the most common chronic disorders—a situation that NIDA is addressing through our NIDAMED initiative, which offers an array of tools and resources for healthcare providers to enhance their ability to screen, treat, and refer patients with substance use disorders. For example, with funding support from the Office of National Drug Control Policy, NIDA developed two online courses for clinicians on how to effectively screen pain patients before prescribing and identifying when patients are abusing their medications. To date, over 80,000 providers have completed these courses. Also, as part of the NIDAMED initiative, NIDA established the Centers of Excellence (CoEs) through a partnership with the American Medical Association's medical education research collaborative, Innovative Strategies for Transforming the Education of Physicians (ISTEP). Since 2007, the NIDA CoEs have developed innovative drug abuse and addiction curriculum resources to help fill some of the gaps in current medical student/resident physician curricula. These new curriculum resources can help prepare physicians for the challenge of identifying and treating patients who require substance abuse screening and follow-up as part of their overall health care. By the same token, NIDA co-developed with Medscape Education and with funding from the ONDCP, specific opioid and pain management CME courses that provide practical guidance for physicians and other clinicians in screening pain patients for substance use disorder risk factors before prescribing, and in identifying when patients are abusing their medications. The courses use videos that model effective communication about sensitive issues, without losing sight of addressing the pain.

Effective education campaigns would also help in our efforts to remove other important roadblocks, such as the suboptimal use of medication-assisted treatments (MAT). In spite of their effectiveness, a number of lingering barriers contribute to low MAT access and utilization, including a paucity of trained prescribers and negative attitudes and misunderstandings about addiction medications held by the public, providers, and patients. For decades, a common concern is that MATs merely substitute a new addiction for an old one. Many treatment facility managers and staff favor an abstinence model, and provider skepticism may contribute to low adoption of MAT. Systematic under-treatment further reinforces the lack of faith in MAT, as it will appear (incorrectly) to demonstrate the ineffectiveness of the medications themselves.

Policy and regulatory barriers are another concern. A recent report describing public and private insurance program coverage for MATs highlights several policy barriers that warrant examination. These policy barriers, which are common among all payers, include utilization management techniques such as: (1) limits on dosage prescribed, (2) annual or lifetime medication limits, (3) initial and reauthorization prescription processes, (4) minimal counseling coverage, and (5) “fail first” criteria with a requirement that other therapies be attempted first. While these policies may be intended to ensure MATs are the best course of treatment, they are potential barriers to access and appropriate care.

The translation of scientific findings in drug abuse into prevention and treatment initiatives clearly requires partnership with federal agencies such as the key collaborations mentioned before. It is important to emphasize, in the context of this hearing, the intense spirit of cooperation that has always existed between NIDA and the DEA. The DEA museum traveling exhibit is a good example of this spirit. This exhibit, called “Target America: Opening Eyes to the Damage Drugs Cause” explores the science behind illegal drug addiction and the myriad costs of drugs to individuals, American society, and the world. NIDA contributed an entire section on "The Costs to the Body & Brain." Similarly, NIDA contributes to the broad coalition led by the DEA through the National Prescription Drug Take-Back Day event, which aims to provide a safe, convenient, and responsible means for the disposal of prescription drugs while also educating the general public about the potential for abuse of medications. As of the end of

2013, this program has been credited with the collection and removal of over 1,700 tons of unused medications from circulation

Conclusion

As we learn more about the neurobiology of normal and pathological human behavior, a challenge for society will be to harness this knowledge to effectively guide public policy. This is particularly true in the case of a challenge as devastating and dynamic as substance abuse and addiction. Indeed, fully harnessed, this scientific information has the potential to transform our Nation's overall public health outlook, which could have profoundly positive social and economic effects.

Thank you again for inviting me here today. I would be pleased to answer any questions you may have.

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