



April 5, 2017

Federal Response to the Opioid Abuse Crisis

Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, Committee on Appropriations, United States House of Representatives, One Hundred Fifteenth Congress, First Session

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Congressional Hearing on the Opioid Crisis

Testimony Submitted to the House Appropriations Subcommittee on Labor, Health and Human Services (HHS), Education and Related Agencies

The Honorable Tom Cole, Chairman
The Honorable Rosa DeLauro, Ranking Member
2358 Rayburn House Office Building

April 5, 2017

Submitted by
Barbara Cimaglio, Deputy Health Commissioner
Department of Health
State of Vermont

Member, Board of Directors, National Association of State Alcohol and Drug Abuse Directors (NASADAD)

Chairman Cole, Ranking Member DeLauro, and members of the Subcommittee, my name is Barbara Cimaglio and I serve as Deputy Health Commissioner within Vermont's Department of Health. In this role, I lead the Department's oversight and development of the State substance use disorder treatment, prevention and recovery service system. I am also a longtime member of the Board of Directors of the National Association of State Alcohol and Drug Abuse Directors (NASADAD). Thank you for the opportunity to testify before the Subcommittee today to discuss actions we are taking in Vermont to address the opioid problem and offer considerations related to federal funding for substance use disorders.

States appreciate recent actions taken by Congress to address the opioid crisis: I wish to begin by thanking this Subcommittee in particular and Congress in general, for recent work to address the opioid crisis.

We appreciate passage of the 21st Century Cures Act which included the creation of a \$1 billion fund for FY 2017 and FY 2018 to help States enhance treatment, prevention and recovery services. The first installment of these funds, or approximately \$500 million, was approved by Congress late last year. Applications for the Cures funding for the States, now known as the *State Targeted Response to the Opioid Crisis (STR) Grants*, were due February 17, 2017. It is my understanding that all fifty States have applied for these dollars – mapping out plans to address their own unique needs and circumstances. In testimony presented to this Subcommittee last week, Secretary Price said awards through this program may be released as soon as April.

The 21st Center Cures Act also included key provisions reauthorizing the Substance Abuse and Mental Health Services Administration (SAMHSA). This included the reauthorization of programs within SAMHSA's Center for Substance Abuse Treatment (CSAT), Center for Substance Abuse Prevention (CSAP), Center for Behavioral Health Statistics and Quality (CBHSQ) and others. NASADAD supports actions to ensure a strong SAMHSA and appreciates the leadership of Ms. Kana Enomoto, SAMHSA's Acting Deputy Assistant Secretary for Mental Health and Substance Use.

Thank you also for your work to pass the Comprehensive Addiction and Recovery Act (CARA) which authorized programs seeking to promote a coordinated and multi-sector approach to addressing the opioid crisis. CARA created several important initiatives, including:

Improving Treatment for Pregnant and Postpartum Women (Section 501): Reauthorizes the Residential Treatment Program for Pregnant and Postpartum Women program to help support family treatment services – where women and their children can receive the help they need together in a residential setting. CARA also created a pilot program to afford States flexibility in providing new and innovative family-centered services in non-residential settings.

State Demonstration Grants for a Comprehensive Opioid Abuse Response (Section 601): For State applications of this grant, there is an emphasis on coordination between an applicant’s State alcohol and drug agency and its corresponding State administering authority for criminal justice. This initiative is designed to help promote coordinated planning on issues related to justice-involved individuals with substance use disorders.

Community Coalition Enhancement Grants (Section 103): Authorizes the Office of National Drug Control Policy (ONDCP), in coordination with SAMHSA, to make grants to community anti-drug coalitions to implement community-wide strategies to address their local opioid and methamphetamine problem.

Building Communities of Recovery (Section 302): Authorizes SAMHSA to award grants to recovery community organizations (RCOs) to develop, expand and enhance recovery services. RCO’s across the country are doing an excellent job of helping individuals in recovery with the assistance they need to once again contribute to their families, employers and communities.

Financial Burden of substance Use Disorders: The National Institute on Drug Abuse (NIDA) estimates that illegal drugs, alcohol, and tobacco cost society roughly \$700 billion every year or \$193 billion for illegal drugs, \$224 billion for alcohol, and \$295 billion for tobacco. According to SAMHSA’s 2016 report, *National Expenditures for Mental Health Services and Substance Abuse Treatment, 1986-2014*, spending on substance use disorders decreased as a share of all health spending from 2.0 percent in 1986 to 1.1 percent in 2002, and remained stable ever since. Expenditures for substance use disorders represented only 1.2 percent of all health expenditures in 2014.

Benefits of prevention, intervention, treatment, and recovery: A primary message for this Subcommittee is that services to prevent, treat, and maintain recovery from substance use disorders help millions across the country. These services are literally life saving for both individuals and families. In addition, research demonstrates the investments in services save money.

- **Prevention:** \$1 invested in substance abuse prevention saves \$10–\$18 in costs associated with health care, criminal justice, and lost productivity
- **Intervention:** Substance abuse screening and brief counseling is as effective as other health prevention screenings
- **Treatment:** \$1 invested in addiction treatment saves between \$4–\$7 in costs associated with drug related crime, criminal justice, and theft
- **Recovery:** Relapse rates for addiction resemble those of other chronic diseases such as diabetes, hypertension, and asthma

Importance of State-Federal Partnership: NASADAD promotes the work of the National Governors Association (NGA) in its Principles for State-Federal Relations policy position which recommends a strong, cooperative State-federal partnership and maximum State flexibility when managing federal resources.

States recognize the importance of these federal resources and greatly benefit from funds managed by different agencies under this Committee's jurisdiction. In addition to SAMHSA, these agencies include the Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration (HRSA), Centers for Medicare and Medicaid Services (CMS), National Institute on Drug Abuse (NIDA) and National Institute on Alcohol Abuse and Alcoholism (NIAAA). We also appreciate the work of agencies outside this Committee's jurisdiction – including the Office of Justice Programs (OJP)/Bureau of Justice Assistance (BJA), the Drug Enforcement Agency (DEA) and others within the Department of Justice (DOJ).

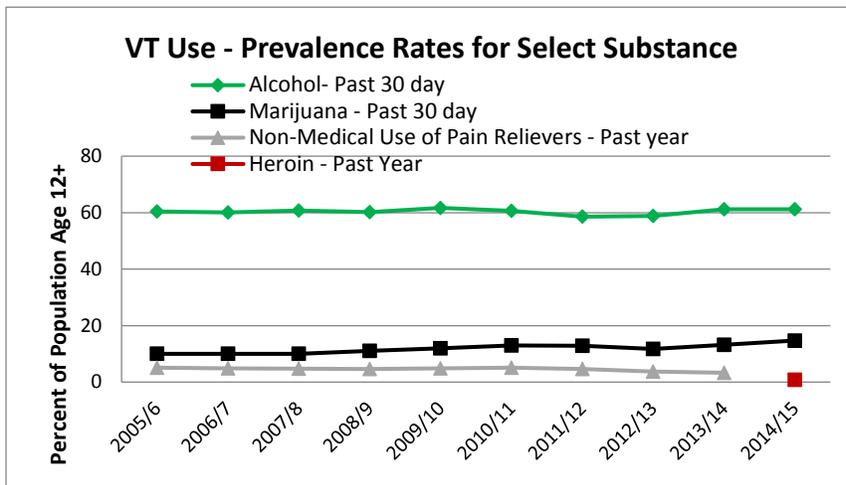
Vermont in particular has leveraged multiple sources of State and federal funding to address opioid use in Vermont. Federal funding opportunities have been fundamental to implementing programming. Examples of these important programs include:

- SAMHSA's Substance Abuse Prevention and Treatment (SAPT) Block Grant,
- SAMHSA's Strategic Prevention Framework (SPF)/Partnerships for Success (PFS) Grants
- ONDCP's/SAMHSA's Drug Free Communities Program
- SAMHSA's Medication-Assisted Treatment (MAT) Prescription Drug and Opioid Addiction Grant
- SAMHSA's Screening, Brief Intervention and Referral to Treatment (SBIRT) Grant
- CDC's Prescription Drug Overdose Prevention grant
- DEA's drug takeback program to support state drug takeback initiatives

Vermont is interested in utilizing 21st Century Cures Act funds to better coordinate care between substance use disorder treatment and medical providers; implement programs to improve and expand the substance use disorder workforce; add peer recovery coaches to emergency departments to support individuals who have overdosed on opioids and assist these individuals in seeking treatment for addiction; and providing funding to support community-initiated opioid prevention programs.

Scope of the substance use disorder problem in Vermont: It is worth stepping back for a moment to examine the impact of all substance use disorders in the State first before focusing on the unique issues related to prescription drug abuse and heroin.

Alcohol has consistently been the most frequently used substance in Vermont and an estimated 21,250 Vermonters are alcohol-dependent (NSDUH 2013/14). Marijuana is the next most frequently used substance. Vermont has among the highest rates of alcohol and marijuana use in the United States.



Vermont prevention activities have focused on regional approaches and it is estimated that substance abuse prevention activities reach 65% of Vermont residents at a cost of approximately \$9 per person.

Intervention services are provided in schools, medical settings, in other State programs, and at specialty

providers. Intervention services were provided in 34% of Vermont supervisory unions in 2016. Intervention activities reached 5.2% of Vermonters at a cost of \$151 per person.

The SAPT Block grant funded treatment system served nearly over 11,000 in 2016. Treatment costs in 2016 averaged \$3,253 per person. An additional 3,800 people also receive medication assisted treatment in medical settings.

Vermont has a Statewide network of recovery centers that served nearly 6250 Vermonters in 2016 at a cost of \$364 per person. These centers provide peer recovery services and other activities to support individual recovery.

Vermont’s Strategy for Addressing Opioid Misuse and Dependence

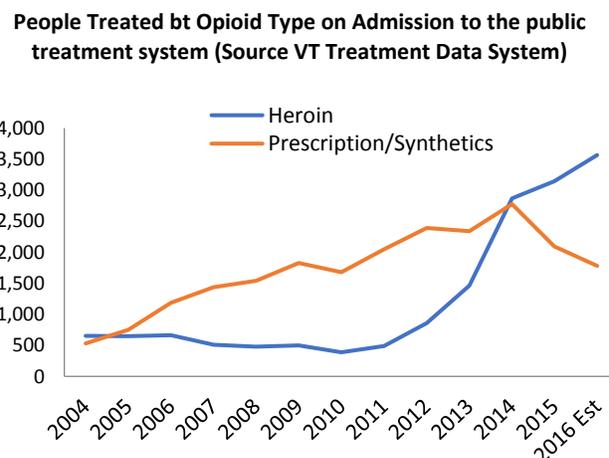
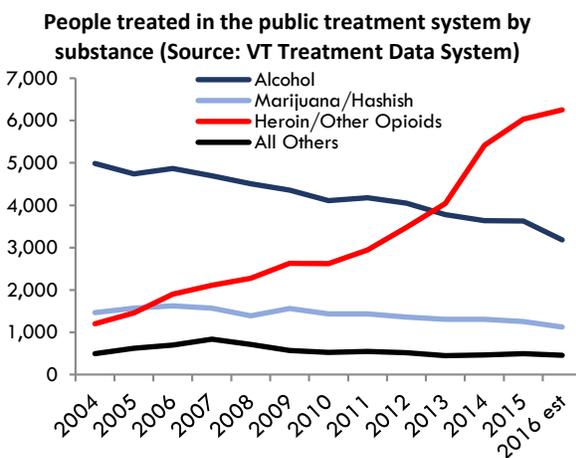
Importance of a comprehensive and aligned approach: Vermont recognized and publicly acknowledged the increasing challenges associated with opioid use when former Governor Shumlin’s 2014 State of the State speech was devoted entirely to the topic. Vermont focused on opioids as a public health and medical issue. State and federal resources have been leveraged to address prevention, intervention, treatment, and recovery for opioid use disorders. Such disorders have a far-reaching effect in Vermont families and communities, and increased pressure on Vermont’s health care, child protection and criminal justice systems. When Governor Phil Scott took office in January, 2017 he immediately appointed a Drug Prevention Policy Director to bring focus across State agencies on the continuing opioid crisis. The Governor is also convening an Opioid Coordinating Council to develop a multi-disciplinary strategy that will frame his administration’s work.

Critical involvement of public health, Medicaid and other insurers, and prescribers: The Division of Alcohol and Drug Abuse Programs (ADAP) within Vermont’s Department of Health (VDH) is the designated State substance abuse agency. As such, ADAP is responsible for overseeing the public prevention, intervention, treatment, and recovery service system as well as the prescription drug monitoring program. VDH also coordinates service delivery with the Medicaid division, which oversees physician office-based opioid treatment and pays for most opioid use disorder treatment in Vermont. Vermont has implemented a unique treatment program for opioid use disorders, known as the “Hub and Spoke” model, and has worked with third party payers to assure care is consistent regardless of payer. A more detailed overview of the Hub and Spoke model is offered later.

Vermont has a multifaceted and Statewide approach to addressing opioid addiction that involves multiple community partners. The State alcohol and drug agency director plays a prominent role in guiding this comprehensive strategy. The components of this strategy are:

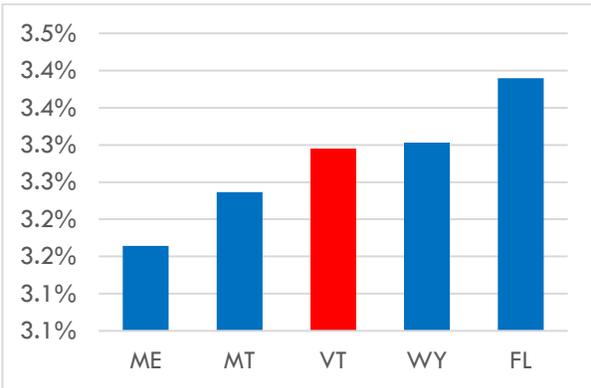
- **Public Information and Messaging** – campaigns targeting the public, prescribers, and those using opioids
- **Pain Management and Prescribing Practices** – training, technical assistance, and tools provided to prescribers, required use of the prescription drug monitoring program
- **Prevention and Community Mobilization** – regional prevention capacity increases to provide assessment and planning, education and outreach, policy change, school-based services, and community-led triage programs
- **Drug Disposal** – implementation of a statewide system
- **Early Intervention** – screening for risky substance use in medical settings and within state programs that directly serve individuals
- **Overdose Prevention and Harm Reduction** – wide distribution naloxone overdose reversal kits, syringe services programs to prevent spread of HIV and hepatitis C, good Samaritan laws to encourage people to seek care in case of an overdose
- **Expanded Access to Treatment and Recovery Services** – rapid increases in medication assisted treatment capacity for opioid use disorders with buprenorphine and methadone through the hub and spoke system of care as well as services for pregnant women with opioid use disorders. Development of peer recovery services
- **Legislation and Rules Enacted** – laws around prescribing opioids for chronic and acute pain, use of the prescription drug monitoring program, good Samaritan protections, drug disposal program funding, pretrial services and alternatives to incarceration

Scope and changes in opioid use in Vermont: Like many States, Vermont saw demand for treatment services for opioid use disorders increase rapidly. In 2014, more people were treated for opioid use disorders than alcohol. Treatment demand was initially driven by prescription drugs. Heroin use, however, began to increase rapidly in 2011. By 2014, heroin overtook prescription opioids as the most commonly used opioid among those in treatment for a substance use disorder.

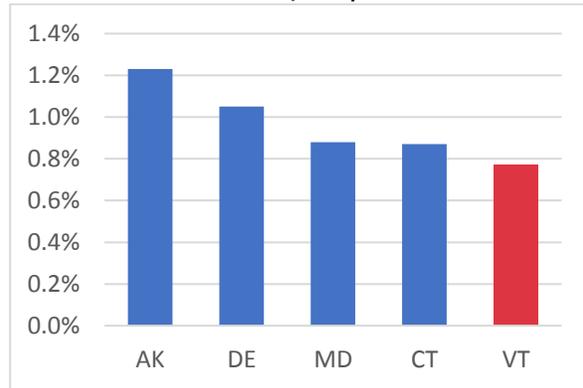


Vermont’s data describing the high rate of heroin use is reflected in data collected by SAMHSA’s National Survey on Drug Use and Health (NSDUH). In particular NSDUH found that Vermont has one of the lowest rates of past year use of prescription pain relievers and one of the highest for heroin use in the country.

Lowest 5 States for Non Medical Use of Prescription Pain Relievers Age 12+ (NSDUH 2013/2014)



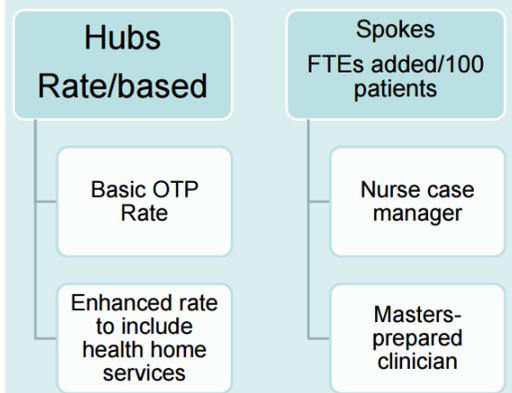
Highest 5 States for Heroin Use Age 12+ (NSDUH 2014/2015)



Vermont’s Hub and Spoke Treatment System: Vermont’s Hub and Spoke system is a Statewide partnership of clinicians and treatment centers designed to provide medication assisted treatment to Vermonters who are addicted to opioids. The Hub and Spoke model ensures that each person’s care is effective, coordinated and supported. Depending on need, these services may include mental health and substance abuse treatment, pain management, life skills and family supports, job development and recovery supports. The key goals of the system are to improve access to substance use disorder treatment and integrate substance use disorder treatment with general health care. Services include enhanced health homes for substance use disorder treatment.

A person may enter care by requesting services at a regional opioid treatment center (Hub) or their primary care provider (Spoke).

- Regional Opioid Treatment Centers (Hub) located around the State treat those patients who have especially complex needs with medication assisted treatment.
- Physicians lead a team of nurses and clinicians (Spoke) to treat patients with medication assisted treatment
- Each patient’s care is supervised by a physician and supported by nurses and counselors who work to connect the patient with community-based support services to ensure care coordination.

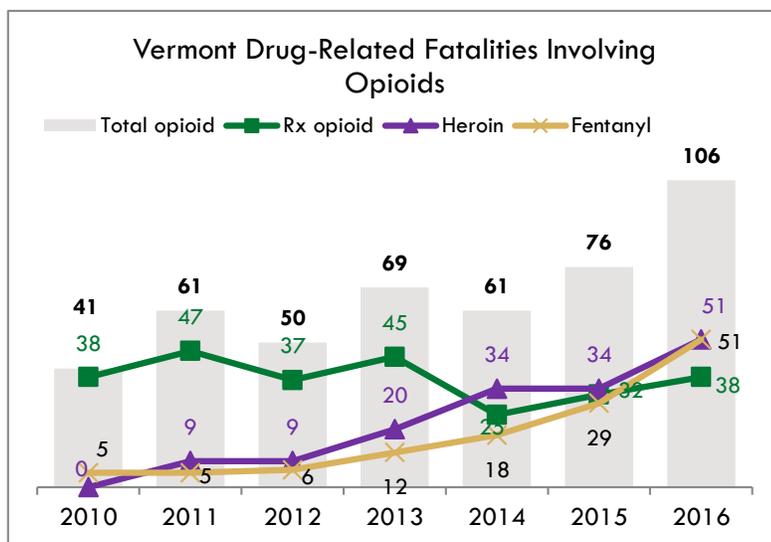


This system has significantly improved access to care – between 2012 and 2016 medication assisted treatment capacity increased by 139%. Approximately 7,150 Vermont adults age 18-64 are currently receiving medication assisted treatment for opioid use disorders and there is still demand for additional services. An initial evaluation of costs suggests that medication-assisted treatment in hubs and spokes is associated with reduced general health care expenditures and utilization, such as inpatient hospital admissions and outpatient emergency department visits, for Medicaid beneficiaries with opioid

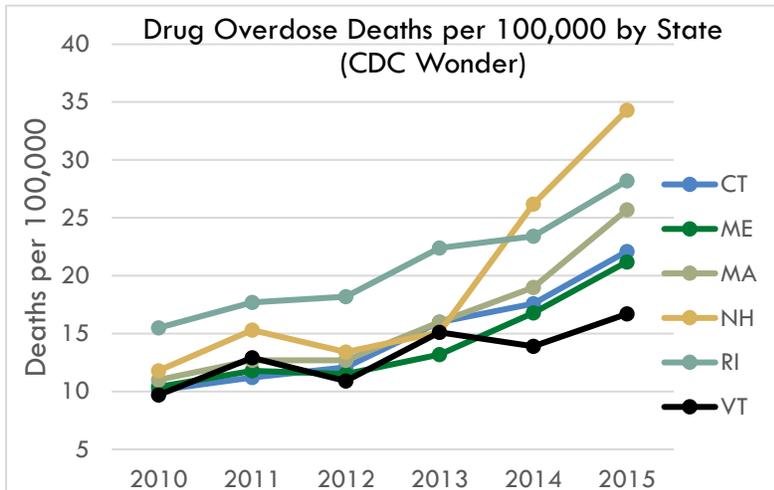
addiction. A review of 2015 Medicaid claims supports these positive outcomes and indicates that those with opioid use disorders have higher rates of health conditions than the general Medicaid population. It is also important to note that total Medicaid expenditures for those with opioid use disorders on medication assisted treatment are lower than those with opioid use disorders that are not receiving medication assisted treatment. An ongoing evaluation of patients receiving care shall focus on how patients’ lives and functioning have been affected by their involvement in the Hub and Spoke system. Initial interviews indicate that those involved typically use heroin for about 10 years before treatment. Finally, more people seem to seek treatment if there are more accessible treatment services available in the community.

Opioid overdose deaths: New England has been particularly impacted by opioid use, resulting in overdose deaths from prescription drugs, heroin, and synthetic opioids such as fentanyl and tramadol. Vermont’s overdose death rate is statistically similar to the U.S. rate (CDC, Wonder).

Vermont’s accidental and undetermined manner drug-related fatalities involving an opioid (the categories not mutually exclusive – people use multiple substances -- and are from the VDH Vital Statistics System) are due to a combination of heroin, fentanyl and prescription opioids. The number of deaths involving heroin and fentanyl are increasing while those for prescription opioids are trending downward. Preliminary 2015 numbers show those trends have continued.



While deaths are increasing, they are increasing more slowly than other New England States despite high rates of heroin use in Vermont. We attribute this largely to access to medication assisted treatment and widely available naloxone reversal kits.



Naloxone Overdose Reversal Kit Distribution: In 2013, Vermont’s Department of Health developed a Statewide naloxone (Narcan®) pilot program for distributing emergency overdose rescue kits to people at risk of an overdose, and to family members and others who may be able to help in the event of an overdose. The project has expanded emergency use kits by providing them free of charge at distribution sites across Vermont, and many town and city police departments are also carrying kits. Naloxone is currently available by prescription and stocked by many pharmacies and is also available over the counter.

In August 2016, the Department of Health issued a standing order for the opioid overdose rescue drug naloxone for all of Vermont. This allows any pharmacy to dispense the life-saving drug to anyone – without a prescription. The standing order is designed to ensure people who are addicted to opioid drugs, as well as their friends and family members, have easy access to naloxone in the event of an overdose. The order also allows insurers and Medicaid to cover the cost of naloxone.

Funding for the naloxone initiative was provided through the State evidence-based education program. The Department of Health and the Attorney General determine the funding sources for the program. This may include lawsuits brought by the Attorney General against pharmaceutical manufacturers.

Three Important Considerations for the Subcommittee: I offer the Subcommittee three key themes to consider as deliberations move forward.

Key nature of sustained and predictable funding through the Substance Abuse Prevention and Treatment (SAPT) Block Grant: We recommend that Congress maintain robust support for the SAPT Block Grant, an effective and efficient program supporting prevention, treatment, and recovery services. The SAPT Block Grant provides treatment services for 1.5 million Americans. At discharge from SAPT Block Grant funded treatment programs, 81.5 percent were abstinent from alcohol and 72.1 percent were abstinent from illicit drugs.

By statute, States must dedicate at least 20 percent of SAPT Block Grant funding for primary substance abuse prevention services. This “prevention set-aside” is by far the largest source of funding for each State agency’s prevention budget, representing on average 70 percent of the primary prevention funding that states, U.S. territories, and the District of Columbia coordinate. In 33 states, the prevention set-aside represents at least 50 to 99 percent of the substance abuse agency’s budgets.

It is important to continue this work given the positive gains moving forward in a number of areas. For example, according to the Monitoring the Future (MTF) study funded by the National Institute on Drug Abuse (NIDA), from 2000 to 2014, past year alcohol use among high school seniors in America has declined by 18 percent; past year use of cocaine has declined by 48 percent; and since its peak in 2004, the country has seen a 36 percent decline in past year use of prescription opioids.

An important feature of the SAPT Block Grant is flexibility. Specifically, the program is designed to allow States to target resources according to regional and local circumstances instead of predetermined federal mandates. This is particularly important given the diversity of each state's population, geography, trends in terms of drugs of abuse, and financing structure.

We appreciate the difficult decisions Congress must face given the current fiscal climate. We believe it is equally important to note that trends in federal appropriations for the SAPT Block Grant have led to a gradual but marked erosion in the program's reach. Specifically, the SAPT Block Grant has sustained a 29 percent decrease in purchasing power since 2007 due to inflation. In order to restore this important program back to the purchasing power for 2006, Congress would have to provide an increase of \$442 million.

Critical role of State alcohol and drug agency directors and National Association of State Alcohol and Drug Abuse Directors: State substance abuse agencies work with stakeholders to craft and implement a statewide system of care for substance use disorder treatment, intervention, prevention, and recovery. In so doing, State agencies employ a number of tools to ensure public dollars are dedicated to effective programming. These tools include performance and outcome data reporting and management, contract monitoring, corrective action planning, onsite reviews, training, and technical assistance. In addition, State substance abuse agencies work to ensure that services are of the highest quality through State established standards of care. Federal policies and resources that promote working through the State substance abuse agency ensure that initiatives are coordinated, effective, and efficient.

NASADAD serves as the voice of State substance alcohol, and drug agency directors from across the country. NASADAD's mission is to promote effective and efficient State substance use disorder treatment, prevention and recovery systems. The Association promotes best practices, shares information about State systems, and collaborates with federal and non-governmental stakeholders from its Washington, D.C. location. NASADAD is led by Robert Morrison, Executive Director, and houses a Research Department and Public Policy Department.

Federal support of, and coordination with, State-based groups focused on the opioid crisis - including the National Governors Association (NGA): Since 2012, NGA's Center for Best Practices has worked with 13 states to help States develop and implement comprehensive plans for reducing prescription drug and heroin abuse. States that participated in NGA's two policy academies have passed legislation, developed public awareness campaigns, launched cross-agency and regional initiatives, and established critical relationships with universities and the private sector. We applaud NGA, led by Scott Pattison, for their leadership on this issue and look forward to our continued collaboration on this and other related efforts.

I also wish to recognize the work of the Association of State and Territorial Health Officials (ASTHO) led by Dr. Michael Fraser. We also wish to recognize ASTHO's current President, Dr. Jay Butler from Alaska, for identifying substance misuse and addiction as his top presidential priority. ASTHO has been working with NGA and NASADAD on these issues, participating in the NGA policy academies, and leading its own set of meetings on the topic. Over the years, the two Executive Directors of ASTHO and NASADAD have joined together to engage in joint presentations at meetings and conferences in order to ensure our efforts are coordinated.

I also recommend coordinating with other State-based groups that are working on this topic. For example, the National Alliance of State and Territorial AIDS Directors have been leaders on issues such as Hepatitis C and other matters related to intravenous drug use. The Safe States Alliance is another important group focused on injury and violence prevention. Close coordination between the federal government and State-based organizations does have an impact on our respective memberships on the ground level.

Conclusion: I sincerely appreciate the opportunity to present testimony before the Subcommittee. I look forward to working with Congress on these important issues. I also encourage the Subcommittee and Congress to work with NGA, NASADAD and ASTHO as well as other partners to leverage the collective knowledge and expertise of State alcohol and drug agency directors and public health departments across the country.

Bill Guy
Advocate
Parents Helping Parents

Something just as simple or as profound as an unexpected phone call can make all the difference. It can bring unsurpassed joy. Or, it can evoke unspeakable grief.

It was September 26, 2016. I had just arrived at my elderly parents' home in the Dallas/Fort Worth area after taking them back from a delightful visit with us. That's when I got an unexpected phone call from our eldest son. He struggled to speak. Only with great difficulty was he finally able to articulate his message, "Dad . . . Chris is dead!" My heart heaved in violent pain. The blood drained from my face. I staggered and had to sit down. Our 34-year-old son had died two days before from an overdose of injected heroin. It took the medical examiner's office that long to identify him and find a close relative to notify.

That unexpected call is one no parent, family member or friend ever wants to get. Yet it's replicated thousands of times to fathers, mothers, children, siblings, grandparents, aunts, uncles, cousins and friends, resulting from the deaths of the estimated 144 people who die every day in our country from drug overdose. That's almost 53,000 loved ones per year – more than the number of American's killed during the Vietnam War in the 1960s and early '70s.

Just one unexpected phone call, but repeated thousands upon thousands of times . . . multiplied missives of misery.

Yet, it was also an unexpected phone call that carried the incredible, but exhilarating news that we had become the parents of a week-old baby boy. It was December 21, 1981, four days before Christmas. While others made their last-minute holiday gift purchases, we scrambled to buy diapers, bottles and baby blankets. The adoption agency had told us that though we were approved, we should not get our hopes too high. We already had a three-year-old son. But

exactly nine months later, an unexpected phone call gave us the best Christmas present imaginable . . . William Christopher Guy. How could we have known then that our beloved, sweet Chris would grow up to become enslaved by the disease of addiction?

Chris was one of the most beautiful babies I have ever seen. He had a full head of abundant brown hair, the face of a cherub and bright blue eyes that radiated health and charm.

A bit introverted and shy around groups of people as a toddler, he was a daddy's boy. At church or even at large family events, you'd generally find him in my arms or on my lap.

Nothing thrilled him more than to be around any creature, great or small. Puppies, kittens, rabbits, and much to the chagrin and horror of his mother, frogs, lizards and especially, snakes. He loved the outdoors and was much happier at the fishing pond than just about anywhere else.

Chris was a gifted artist. He could take a scrap of paper and some pencils, and within minutes perfectly replicate an object of intricate complexity. For a time, he studied to become a graphic artist, but he spent most of his adult life in the food industry. He worked his way up to responsible positions as a cook in good restaurants in Portland, Boston, Nashville and Oklahoma City.

Chris was a bright and beautiful soul . . . kind, caring and compassionate. He had been raised in church. He was adored by an extended family. He had such hopes for his future, such potential. But unbelievably, our beloved son was also a drug addict.

For more than twenty years, Chris was trapped on a ride through a macabre house of mirrors, never knowing which twist or turn might bring him sorrow or pain, guilt or shame. He kept trying to escape, but never could find the way out. And for too many of those years, feeling guilty and desperate ourselves for not being aware of his plight sooner, and then not knowing how to help him, we unwittingly kept buying him "ride tickets" in the form of well-meant

financial support that only perpetuated his tragic journey. Isn't that what good parents do? Try to help their children when they are mired in pain and horror? We were at a loss, and Chris even more so.

Finally, it was grace, and the help of programs like Al-Anon and Parents Helping Parents, we came to realize that Chris' addiction was an illness, part of an eviscerating epidemic sweeping the nation. Something he could no more overcome without professional help than he could cure an affliction of diabetes or cancer.

Addiction is a disease. Who would willfully choose to inflict such repeated suffering upon themselves and those they love if it was a merely a matter of choice? I have witnessed Chris in the throes of sweaty, feverish, painful agony, but there's no way I can comprehend the compulsion to repeat it, time after time after time. Not even the addicted can do so.

Chris so desperately tried to win his fight. But tragically, the professional help he needed was extremely difficult or often even impossible to get. For those who work in jobs where there is scant or no health insurance, or who cannot work, or who lose their jobs because of the ravages of the illness, the despair is manifold. Often compounded by mental health issues, the disease of addiction is a life and death struggle made even more desperate by its attendant guilt and shame. Despite heroic efforts to overcome their despair enough to truly seek help, they too often find that there is no place available for them to get it.

On any day in Oklahoma, there are between 600 and 800 addicts who need rehabilitative treatment unavailable to them. The waiting lists are lengthy for the state-funded programs, and there are not even enough slots in private pay facilities for those who have insurance or other financial means to pay for them.

On numerous occasions, Chris tried to get a rehabilitative treatment placement, only to be told that it could be days or even weeks before one might become available. On the streets and with no viable means of support, he had to take his pitiful chances, hoping his luck might change, but knowing the odds were against him. And we were left to shuffle an incomplete deck, hoping for a full hand, trying to support him without enabling him.

Relying on short-term emergency room treatment and the incarceration of non-violent addicts and the mentally ill without hope of rehabilitation and treatment, can doom them to a life-long cycle of disease and despair. Meanwhile, all of us are paying for it, either monetarily or emotionally or both. Surely it makes sense, even if only economic sense, to increase the availability of preventative education and rehabilitative treatment programs. And isn't it also a compassionate thing to do.

While we still have much work to do to increase access to treatment in Oklahoma and the United States, I join the many families afflicted by this insidious disease who were so heartened by the bipartisan passage last July of the Comprehensive Addiction and Recovery Act (CARA).

I'm here today to honor our beloved son's struggle and ultimate death from drug addiction, and to represent the thousands upon thousands of individuals like him and families like ours. In the words of St. Francis of Assisi, "Start by doing what is necessary; then do what is possible; and suddenly, you find you are doing the impossible."

Just maybe, we can cut the frequency of those heart breaking, unexpected phone calls.

Nancy Hale
President and CEO of Operation UNITE
Subcommittee on Labor, Health and Human Services,
Education, and Related Agencies
Statement for the Record, April 5, 2017

Good morning. Chairman Cole, Ranking Member DeLauro and members of the subcommittee, Thank you for giving me this opportunity to speak with you today. I am Nancy Hale, president and CEO of Operation UNITE.

UNITE is an acronym for **U**nlawful **N**arcotics **I**vestigations, **T**reatment and **E**ducation. It is a three-pronged, comprehensive approach to create long-term success in combating substance abuse.

Operation UNITE was launched in April 2003 by Congressman Hal Rogers shortly after a special report, "Prescription for Pain," was published by the *Lexington Herald-Leader*. This series of articles exposed the addiction and corruption associated with drug abuse in southern and eastern Kentucky, which largely included Congressman Rogers' Fifth Congressional District.

Many of us were shocked to learn that, per capita, we were the top pain killer users in the entire world. Tragically, as a result, our commonwealth has been the epicenter for the explosion of opioid abuse: The drug overdose rate in Kentucky currently is more than 1.5 times higher than the national average. Rates in several counties are triple the national average.

Congressman Rogers and other local leaders feared that if we did not take swift and decisive action, an entire generation would have been wiped out. We held community meetings to find out the scope of the problem and what should be done. Teachers, preachers, parents, judges, and cops. Everyone we spoke to had stories – personal stories. And they were ready for action.

Based on their feedback, Operation UNITE pioneered a holistic approach that has become a model for other states and the nation. This comprehensive method involves law enforcement, treatment, and education/prevention initiatives working together.

Through collaborative partnerships, UNITE's progress in our 32-county region is evident. Fourteen years later, more than 100,000 youth have participated in UNITE's programs, tens of thousands of community members have volunteered, and more than 4,000 people have entered treatment using a UNITE voucher.

Let me start with the first pillar: Investigations and Enforcement.

UNITE has long been a leader in the state, participating in or overseeing many of the largest drug busts in Kentucky history.

For example, UNITE had one-fifth of the cases in Operation Flamingo Road -- a federal, state, and local law enforcement effort to arrest 518 people suspected of obtaining or distributing prescription pills from here to Florida. Over the last 14 years, UNITE detectives have:

- Removed more than \$12.3 million worth of drugs from the street,
- Arrested more than 4,400 bad actors,
- Achieved a conviction rate of more than 97 percent, and
- Received and processed nearly 22,000 calls to our drug tip line.

But we have also long recognized that we cannot arrest our way out of this unique epidemic. As one law enforcement official so powerfully observed: Investigations will grab headlines. Treatment and education will result in long-term results.

That is why Treatment is our second pillar.

Getting justice is only part of the equation. Getting into long-term recovery is what transforms substance users into healthy and productive members of their families and communities.

Many of the drug abusers who have their first experience with UNITE's law enforcement officers then benefit from our multi-faceted approach that includes treatment. We staff a treatment help line to connect people to resources and have supplied vouchers to help more than 4,000 low-income people enter long-term drug rehabilitation.

The UNITE treatment team responds to approximately 1,200 inquiries per month. Although the vast majority of these inquiries are seeking information about applying for a UNITE treatment voucher, a substantial number of inquiries are from individuals wanting information about Casey's Law (involuntary commitment), general information about the signs and symptoms of addiction, types of treatment available, or people who simply want to speak to someone about the addictive behavior of their loved one.

In addition, UNITE's assistance has helped increase the number of Drug Court programs in the region from five in 2003 to one in all 32 counties we serve. Participants obtain treatment and are more likely to return to productive lives, stay gainfully employed, pay child support, and meet other obligations.

Drug Courts in our service area have collected more than \$1.4 million in fines, restitution, and court costs, along with more than \$900,000 in child support. Participants also complete thousands of hours of community service each month.

UNITE has provided more than \$4 million to create 30 new Drug Court programs in 24 counties in addition to programs operated by the Kentucky Administrative Office of the Courts. Kentucky drug courts currently operate in 113 of the state's 120 counties.

The final pillar is Education and Prevention.

To make progress, we must not only cut off the supply, but decrease the demand as well. Education and prevention are the keys to reducing the demand for abusing or misusing legal substances or using illegal drugs. When demand is high, users are willing to use what is most available and affordable, and suppliers are creative in meeting these needs, whether it is prescription pills, heroin, meth, or synthetic drugs.

Offering youth alternatives to drug use through programming and hands-on education makes a huge difference. We must give them the facts. Children should be taught the effects of drugs on their minds and bodies from K-12. Repetitive, consistent messaging is needed.

And our focus should not only be on presenting facts and providing information on the effects of drugs on their bodies and brains, but should be on helping our youth make that one decision to not use any addicting substances, including alcohol, tobacco, marijuana, and other drugs. That focus holds great promise of a stronger, clearer, and more effective goal for public education and prevention.

UNITE's education programs and activities introduce youth and adults to a life without drugs. Some programs are geared to help youth avoid the dangers of the streets, but, for many, the danger is much closer – it is at home. UNITE shows children a different path, and it also helps them teach their parents or caregivers. For example, one Leslie County parent sought help for an addiction after her 4th-grader told her about UNITE and what she was learning in her “Too Good for Drugs” class.

Thus far, we have reached more than 100,000 students through various drug education programs and summer activities.

Our anti-drug programming includes “On the Move,” a mobile and interactive one-of-a-kind education initiative. It provides a hands-on experience to simulate distracted and impaired driving. “Life With A Record” is a prevention initiative that helps youth examine the criminal justice system and how seemingly harmless acts can impact their futures.

Camp UNITE is a free, weeklong leadership and adventure camp that provides middle school youth with an opportunity to engage in fun, constructive activities using a small group, peer mentorship format. Many participants have been directly impacted by substance abuse or are unable to afford a traditional summer camp program.

Other summer activities include “Shoot Hoops Not Drugs” and “Hooked On Fishing – Not On Drugs.”

Federal funding has been critical. It has helped UNITE reach across jurisdictions and county lines – and across professional territories.

For example, ARC grants have enabled us to educate prescribers on addiction, pain management, and state monitoring systems for prescription drugs known as PDMP's.

SAMHSA has helped us provide treatment resources through UNITE's vouchers, which is vital in a region faced with high poverty and unemployment. It also funded substance abuse counselors in the middle school and high schools, which was extremely effective. The impact was large, not only in the schools but also in the community. Unfortunately, schools were not able to sustain that effort when the grant money ran out.

In addition, AmeriCorps has been an invaluable part of our education efforts. Our 54 UNITE ServiceCorps members serve 17 school systems in 14 counties. They provide math tutoring, teach anti-drug and wellness curricula, have recruited more than 8,200 volunteers, and sponsor anti-drug UNITE clubs that have impacted more than 4,000 students in the last year alone.

And the results are dramatic: Last school year alone, the more than 1,500 students they tutored showed an average 30 percent growth in math knowledge. And the 3,300 students who took the anti-drug and health information curricula showed an average of 35 percent growth in drug awareness and healthy decision-making knowledge.

I am pleased that the federal CARA legislation enacted by this Congress last year will enable regional organizations like UNITE to take advantage of these new federal funds focused on addressing the opioid epidemic, and I am grateful to each of you who supported that bill.

Congress' collaboration on CARA must be replicated elsewhere. In the anti-drug world, we certainly have to collaborate with stakeholders across a variety of professions, institutions, schools and faith-based organizations. Not just law enforcement. Not just treatment. Not just education. Everyone must work together.

We were founded on community input, and that involvement continues and grows. Our nonprofit UNITE Coalitions in each of our counties know what their communities need. These coalitions are the key to after-care. People in recovery will eventually come back to their communities. They need support when they come home. Our coalitions make that happen. UNITE provides guidance and small amounts of funding to create those strong, local partnerships.

As a result, tens of thousands of people have participated in UNITE events and coalition activities to educate and deter people from taking drugs.

When it became unfortunately clear that the challenges we had been experiencing in rural Kentucky had exploded across the country, we worked to share UNITE's holistic approach through the establishment of the National Rx Drug Abuse & Heroin Summit – now the largest gathering of medical professionals, advocates, law enforcement and policy makers in the United States.

Our next Summit is April 17th through 20th in Atlanta. Many of your colleagues have attended in the past, and I hope to see you there this year.

That is a quick overview of some of Operation UNITE's strategies. Now, I would like to touch on several of the lessons we have learned over the last 14 years that may benefit similar organizations in your home districts.

The first is that you must bring all stakeholders to the table at the beginning. For example, we did not engage the medical community early enough. It was not until a local physician was tragically murdered for refusing to give a patient pain medicine that we all rallied together at the same table.

The second lesson learned is that UNITE should have done a better job working with families and helping them understand that addiction is a chronic disease that their loved ones would deal with for the rest of their lives. We needed to do more to help the families understand the disease and how to support their loved one when in long-term recovery.

A third lesson learned is that you must have a champion to lead, to motivate, to encourage, and to fight alongside you. For us, that champion is Congressman Rogers. Today, there are bipartisan caucuses in both the House and Senate to facilitate bringing a unified national approach to this difficult effort.

A fourth lesson is that you cannot expect short-term treatment to yield long-term results. Models of recovery should be based on long-term goals.

The final, and most important, take-away is that education and prevention are the tools to achieve those long-term results. The longer I am involved in fighting this epidemic, the more I am convinced that education – particularly K-12 prevention education – is the key to saving our next generation.

Through private donations, we are able to provide \$1,500 need-based scholarships to youth who have been actively involved in UNITE programs or have been impacted by substance abuse in their families.

It is only through collaboration and a holistic approach that we will succeed. And there is no better illustration of this than that of a young woman who was awarded an “I Am UNITE” college scholarship last year. I’ll call her Sarah.

Sarah is a scholarship recipient who devoted 300 hours of service learning during high school. She also was one of only four students in the country selected by Jobs for America’s Graduates for the honor of placing a wreath at the Tomb of the Unknown Soldier.

But before those successes, she had some stumbling blocks – like when she had to step over her father who was passed out on the floor from a drug overdose. Her father later was arrested as part of a UNITE drug investigation. But UNITE’s efforts in her life did not end there. If they had, her story – and his – might have turned out differently.

Her father went to jail, but UNITE provided a voucher for him to enter long-term treatment. After he successfully completed treatment, he addressed an assembly at her high school. Sarah confessed that she was proud of him for the first time.

Sarah is now headed to college, and her father is making strides of his own with his recovery.

The day after she received a UNITE scholarship, a gentleman called us inquiring about funds to get a Celebrate Recovery group started in his county so he did not have to travel to a neighboring county. He explained he did not know anything about computers and was illiterate, so he would need help downloading and completing the forms. That man was Sarah’s father.

Sarah and her family illustrate why the multi-pronged approach is the key to saving our families and communities. They also offer us hope, which is another important part of recovery.

That is why we created the Hope Wall, which features dozens of people who have been drug free for at least 18 months. When I look at those faces and think about these men and women returning to their families, my eyes are always drawn to one photo in particular – that of my own son. Knowing how each of these people, in long-term recovery, are giving back and helping others, is what should give us all hope.

Thank you for your time.

Funding Considerations in the Fight Against the Opioid Epidemic

What the Science Tells Us

Rosalie Liccardo Pacula

CT-469

Testimony presented before the House Appropriations Committee, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies on April 5, 2017.



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Funding Considerations in the Fight Against the Opioid Epidemic: What the Science Tells Us

Testimony of Rosalie Liccardo Pacula, Ph.D.¹
The RAND Corporation²

Before the Committee on Appropriations
Subcommittee on Labor, Health and Human Services, Education, Related Agencies
United States House of Representatives

April 5, 2017

Chairman Cole, Ranking Member DeLauro, and other distinguished members of the Subcommittee on Labor, Health and Human Services, Education and Related Agencies, thank you very much for the opportunity to testify before you today. I am a senior economist at the RAND Corporation, where I also serve as the co-director of RAND's Drug Policy Research Center and the director of the BING Center for Health Economics. RAND's mission, as a nonprofit, nonpartisan research organization, is to produce and disseminate objective information that can be used to help solve our nation's most pressing challenges. I was asked to speak to you today about the effectiveness of various programs that have been funded by this committee in the country's efforts to end the opioid epidemic. This is something that my RAND colleagues and I have spent considerable time evaluating in recent years, thanks to research support provided by the National Institute on Drug Abuse, the Office of the Assistant Secretary for Planning and Evaluation, and the Centers for Disease Control and Prevention.

Congress has made considerable investments to address the opioid crisis, most recently with the Comprehensive Addiction and Recovery Act and 21st Century Cures Act. While it is too soon to determine the effect of these laws on the opioid epidemic, I will speak to the existing evidence examining policies to stem opioid diversion and misuse and why it might be worth continuing to support some of them until clear evidence emerges related to the effectiveness and relative cost-effectiveness of each intervention.

In this testimony, I will begin by providing some general insights about what we know about drug epidemics more generally, and the relative effectiveness of different types of drug policy

¹ The opinions and conclusions expressed in this testimony are the author's alone and should not be interpreted as representing those of the RAND Corporation or any of the sponsors of its research.

² The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

strategies at different stages in drug epidemics. Such background is important because there are some broad lessons that should be considered when thinking about the effective allocation of society's resources in tackling the opioid problem today. I will then discuss what science tells us about the effectiveness of some of the current strategies supported by funding this subcommittee provides that combats the opioid epidemic. Specifically, this testimony will discuss the value of treatment, particularly medication assisted treatment, expanded availability of naloxone, enhancing prescription drug monitoring programs, and establishing guidelines for safe opioid prescribing. Many more strategies than these exist, including important supply reduction strategies that are undertaken by law enforcement. Given the limited time, I have narrowed my focus in today's remarks to specific strategies funded by the agencies under the jurisdiction of this subcommittee.

Relative Effectiveness of Drug Control Strategies During Phases of a Drug Epidemic

In the mid-1990s, RAND did groundbreaking work modeling the interaction between the supply and demand for cocaine, which enabled us for the first time to be able to consider the relative effectiveness and cost-effectiveness of alternative supply side strategies (e.g. crop eradication, local law enforcement) versus demand-side (e.g. prevention or treatment).³ Scholars continued to build on this work, developing dynamic models of other drug epidemics.⁴ A few scholars have begun modeling the specific dynamics of the opioid epidemic, and the general models provide several important insights for prioritizing opioid epidemic funding.⁵

1. Early in the development of a drug epidemic, when prevalence of use is increasing very rapidly, primary prevention and public awareness campaigns that deter new users are especially effective, as they reduce the pool of "susceptibles"—i.e., those who are at risk of using. Because of a phenomenon we refer to as "social contagion," prevention policies early in an epidemic have the added benefit of deterring more than just the one person they reach. Similarly, traditional law enforcement that aims to shrink the market through

³ S.S. Everingham and C.P. Rydell, "Modeling the Demand for Cocaine," Santa Monica, Calif.: RAND Corporation, MR-332-ONDCP/A/DPRC, 1994.

⁴ J.P. Caulkins, "Models Pertaining to How Drug Policy Should Vary over the Course of an Epidemic Cycle," in B. Lindgren and M. Grossman, eds., *Substance Use: Individual Behavior, Social Interactions, Markets, and Politics, Advances in Health Economics and Health Services*, Bingley, UK: Emerald Publishing, Vol. 16, 2005, pp. 407–439; D. Winkler, J.P. Caulkins, D.A. Behrens, and G. Tragler, "Estimating the Relative Efficiency of Various Forms of Prevention at Different Stages of a Drug Epidemic," *Socio-Economic Planning Sciences*, Vol. 38, No. 1, March 2004, pp. 43–56; G. Tragler, J.P. Caulkins and G. Feichtinger, "The Impact of Enforcement and Treatment on Illicit Drug Consumption," *Operations Research*, Vol. 49, pp. 352–362, 2001.

⁵ W. Wakeland, A. Nielsen, and P. Geissert, "Dynamic Model of Nonmedical Opioid Use Trajectories and Potential Policy Interventions," *American Journal of Drug and Alcohol Abuse*, Vol. 41, No. 6, 2015, pp. 508–518; R.L. Pacula, S.B. Hunter, A.J. Ober, K.C. Osilla, R. Vardavas, J.C. Blanchard, E.F. Drabo, K.J. Leuschner, W. Stewart, and J. Walters, *Preventing, Identifying, and Treating Prescription-Drug Misuse Among Active-Duty Service Members*, Santa Monica, Calif: RAND Corporation, RR-1345-OSD, 2016.

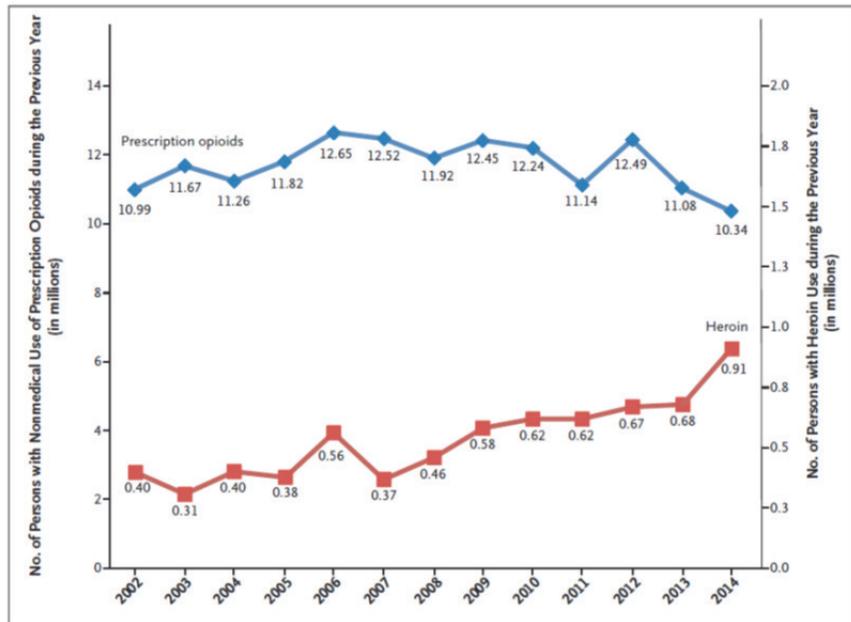
supply disruptions can also be quite effective during this phase, as it can tip the momentum of the upswing in use through “enforcement swamping.”

2. After new drug use peaks, secondary prevention (aimed at deterring existing users from transitioning to heavy use) and awareness campaigns focusing on the negative consequences associated with heavy use can be particularly effective. Treatment is also particularly important at this point, to help heavy users quit or reduce the harms experienced by heavy use.
3. The harms from an epidemic usually peak later than the peak in initiation and prevalence of use, as the greatest harms come from the stock of heavy users. Therefore, even if initiation rates or prevalence rates start to fall, sustained investment in treatment is key for reducing the overall harm of the epidemic and transitioning heavy users safely to nonuse. Law enforcement can also support efforts to divert people to treatment at this stage, by keeping prices high in the drug market and/or diverting heavy users to treatment.

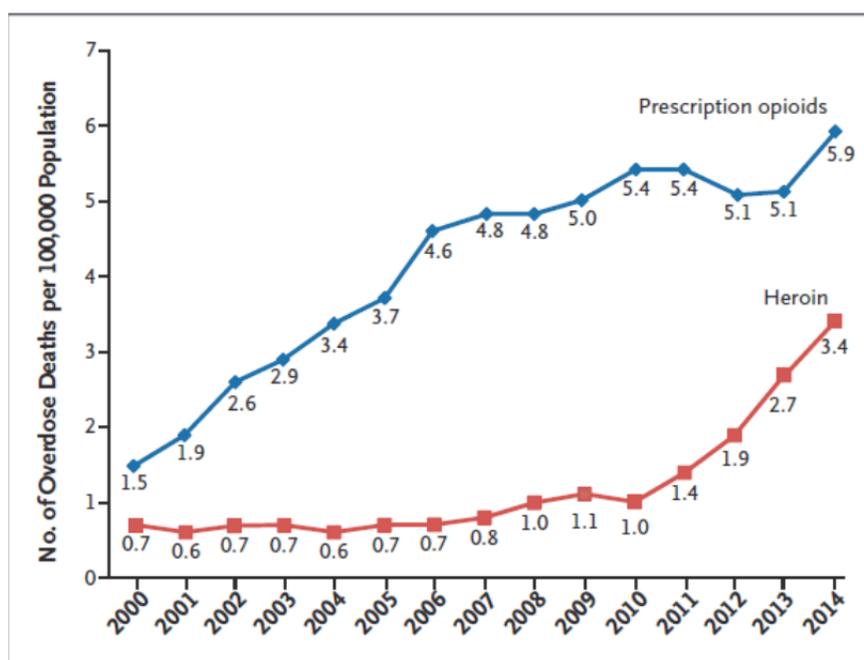
What does this suggest for the current opioid epidemic? One might think that by looking at trends in new initiates, annual prevalence rates and heavy use rates we could see where we are in the opioid epidemic. However, as Figure 1 demonstrates, this epidemic is complicated by the fact that it is fueled by the consumption of two types of opioids, prescription opioids and heroin, whose trends seem to be moving in very different directions.

Figure 1: Trends in Past Year Use and Mortality for Opioids

Part A: Millions of Persons Reporting Nonmedical Use of Prescription Opioids and Heroin in Past Year



Part B: Trends in Age-Adjusted Mortality Related to Prescription Opioids and Heroin



SOURCE: W.M. Compton, C.M. Jones, and G.T. Baldwin, "Relationship Between Nonmedical Prescription-Opioid Use and Heroin Use," *New England Journal of Medicine*, Vol. 374, No. 2, 2016, pp.154–163.

That makes it challenging to say exactly where we are in the opioid epidemic as a whole. As shown in Part A, in the past year, nonmedical use of prescription opioids appears to be declining from what may have been a leveling off between 2006–2012, while heroin use is clearly still on a rise (albeit at a lower absolute level than prescription opioids). Unfortunately, data past 2014 cannot be compared to prior years due to changes in how the data were collected in 2015, making it hard to know at this point of whether trends persisted or changed past 2014. Moreover, we cannot tell from these trends whether the two populations are independent or related. Given recent compelling evidence suggesting that they are not independent, it is hard to say definitively whether annual prevalence rates overall are rising or not.⁶ Harms from each group of opioids are clearly on the rise, however, as shown by mortality data in Part B. This means that for the population of users, there is a pretty high rate of transition from regular use to harmful use.

Effective Strategies to Combat the Opioid Epidemic Now

Without the luxury of knowing exactly where we are in this opioid epidemic, particularly if prescription opioid analgesics and heroin are considered together, it is hard to know what mix of

⁶ A. Alpert, D. Powell, and R.L. Pacula, "Supply-Side Drug Policy in the Presence of Substitutes: Evidence from the Introduction of Abuse-Deterrent Opioids," National Bureau of Economic Research Working Paper #23031, 2017; Compton, Jones, and Baldwin, 2016; T.J. Cicero, M.S. Ellis, and H.L. Surratt, "Effect of Abuse-Deterrent Formulation of OxyContin," *New England Journal of Medicine*, Vol. 367, No. 2, 2012, pp. 187–189.

strategies would be most effective overall. Moreover, law enforcement data, opioid prescribing data, and mortality data all confirm substantial geographic variation in the availability of and harm from both opioid analgesics and heroin, even across counties within the same state, suggesting that local communities are at different epidemic stages.⁷ A recent National Association of State Alcohol and Drug Abuse Directors study summarized what states were doing to combat the opioid epidemic as recently as May 2015, largely with support from federal dollars.⁸ Here is what we know about the effectiveness of some of the strategies that have been supported by the agencies this subcommittee funds.

Expanding Access to Treatment, Particularly Medication-Assisted Treatment

Opioid addiction is a chronic medical condition that is receptive to effective treatment.⁹ Pharmacotherapies, which predominantly include methadone, buprenorphine, and injectable naltrexone, are among the most effective interventions for opioid use disorders.¹⁰ Before 2002, the main opioid pharmacotherapy available was methadone, which can only be dispensed in a licensed opioid treatment program. The approval of buprenorphine, a partial opioid agonist that can be prescribed by waived physicians in their offices as well as in traditional opioid treatment programs, greatly increased access to medication-assisted treatment (MAT).¹¹ Options

⁷ D.C. McDonald, K. Carlson, and D. Izrael, “Geographic Variation in Opioid Prescribing in the U.S.,” *Journal of Pain: Official Journal of the American Pain Society*, Vol. 13, No. 10, 2012, pp. 988–996; L.M. Rosen, D. Khan, and M. Warner, “Trends and Geographic Patterns in Drug-Poisoning Death Rates in the U.S. 1999-2009,” *American Journal of Preventive Medicine*, Vol. 45, No. 6, 2013, pp. e19–e25; National Drug Intelligence Center, *National Drug Threat Assessment 2014*, Jonestown, Penn., 2010.

⁸ S. Wickramatilake, J. Zur, N. Mulvaney-Day, M.C.V. Klimo, E. Selmi, and H. Harwood, “How States Are Tackling the Opioid Crisis,” *Public Health Reports*, Vol. 132, No. 2, 2017, pp. 171–179.

⁹ A.T. McLellan, D.C. Lewis, C.P. O’Brien, and H.D. Kleber, “Drug Dependence, a Chronic Medical Illness: Implications for Treatment, Insurance, and Outcomes Evaluation,” *Journal of the American Medical Association*, Vol. 284, No. 13, 2000, pp. 1689–1695; National Consensus Development Panel on Effective Medical Treatment of Opiate Addiction, “Effective Medical Treatment of Opiate Addiction,” *Journal of the American Medical Association*, Vol. 280, No. 22, 1998, pp. 1936–1943.

¹⁰ N.D. Volkow, T.R. Frieden, P.S. Hyde, and S.S. Cha, “Medication-Assisted Therapies—Tackling the Opioid-Overdose Epidemic,” *New England Journal of Medicine*, Vol. 370, No. 22, 2014, pp. 2063–2066; National Institute on Drug Abuse, *Principles of Effective Treatment for Criminal Justice Populations*, Rockville, Md., 2006; R.P. Mattick, J. Kimber, C. Breen, and M. Davoli, “Buprenorphine Maintenance Versus Placebo or Methadone Maintenance for Opioid Dependence,” *Cochrane Database Syst Review*, Vol. 6, No. 2, 2014; D.A. Fiellin, M.V. Pantalon, M.C. Chawarski, B.A. Moore, L.E. Sullivan, P.G. O’Connor, and R.S. Schottenfeld, “Counseling Plus Buprenorphine-Naloxone Maintenance Therapy for Opioid Dependence,” *New England Journal of Medicine*, Vol. 355, No. 4, 2006, pp. 365–374; J. Kakko, K.D. Svanborg, M.J. Kreek, and M. Heilig, “1-Year Retention and Social Function After Buprenorphine-Assisted Relapse Prevention Treatment for Heroin Dependence in Sweden: A Randomised, Placebo-Controlled Trial,” *Lancet*, Vol. 361, No. 9358, 2003; pp. 662–668; P.J. Fudala, T.P. Bridge, S. Herbert, W.O. Williford, C.N. Chiang, K. Jones, J. Collins, D. Raisch, P. Casadonte, R.J. Goldsmith, W. Ling, U. Malkerneker, L. McNicholas, J. Renner, S. Stine, and D. Tusel, “Office-Based Treatment of Opiate Addiction with a Sublingual-Tablet Formulation of Buprenorphine and Naloxone,” *New England Journal of Medicine*, Vol. 349, No. 10, 2003, pp. 949–958.

¹¹ E.M. Oliva, J.A. Trafton, A.H. Harris, and A.J. Gordon, “Trends in Opioid Agonist Therapy in the Veterans Health Administration: Is Supply Keeping up With Demand?” *American Journal of Drug Alcohol Abuse*, Vol. 39, No. 2, 2013, pp. 103–107; A.W. Dick, R.L. Pacula, A.J. Gordon, M. Sorbero, R.M. Burns, D. Leslie, and B.D. Stein,

increased even further with the 2010 Food and Drug Administration approval of extended-release opioid antagonist naltrexone (XR-NTX).¹²

Recent federal legislation and many state policies have been shown to be effective at increasing MAT use.¹³ Research by RAND and others has shown that insurance parity, expanding the limits on patients a waived buprenorphine physician can treat from 30 to 100, and state Medicaid policies providing coverage of buprenorphine and placement on preferred drug lists have over time influenced MAT utilization and the locations in which it is provided.¹⁴ This is not enough, however. Much work still needs to be done to better understand why the majority of waived physicians do not come close to treating the number of patients allowed by their waiver.¹⁵ Moreover, expanding MAT utilization alone, without paying attention to the quality of the treatment received, might not generate a net public health gain if, for example, substantial numbers of newer providers are not adequately prepared or sufficiently incentivized to provide the quality, comprehensive care essential for safe and effective MAT treatment.¹⁶ Improving MAT quality may be particularly important for improving outcomes for historically underserved or high-risk populations, such as racial/ethnic minorities, individuals with HIV, and individuals in rural counties, who may not receive effective treatments for opioid use disorders at the same rate as nonminority individuals. Policies and programs that improve *delivery* of this

“Growth in Buprenorphine Waivers for Physicians Increased Potential Access to Opioid Agonist Treatment, 2002–11,” *Health Affairs (Millwood)*, Vol. 34, No. 6, 2015, pp. 1028–1034; B.D. Stein, R.L. Pacula, A.J. Gordon, R.M. Burns, D.L. Leslie, M.J. Sorbero, S. Bauhoff, T.W. Mandell, and A.W. Dick, “Where Is Buprenorphine Dispensed? The Role of Private Offices, Opioid Treatment Programs, and Substance Abuse Treatment Facilities in Urban and Rural Areas,” *Milbank Quarterly*, Vol. 93, No. 3, 2015, pp. 561–583; B.D. Stein, A.J. Gordon, A.W. Dick, R.M. Burns, R.L. Pacula, C.M. Farmer, D.L. Leslie, and M. Sorbero, “Supply of Buprenorphine Waivered Physicians: the Influence of State Policies,” *Journal of Substance Abuse Treatment*, Vol. 48, No. 1, 2015, pp. 104–111.

¹² E. Krupitsky, E.V. Nunes, W. Ling, D.R. Gastfriend, A. Memisoglu, and B.L. Silverman, “Injectable Extended-Release Naltrexone (XR-NTX) of Opioid Dependence: Long-Term Safety and Effectiveness,” *Addiction*, Vol. 108, No. 9, 2013, pp. 1628–1637; E. Krupitsky, E.V. Nunes, W. Ling, A. Illeperuma, D.R. Gastfriend, and B.L. Silverman, “Injectable Extended-Release Naltrexone for Opioid Dependence,” *Lancet*, Vol. 378, No. 9792, 2011, p. 665; author reply 666.

¹³ Stein et al., 2015a; Stein et al., 2015b; R.M. Burns, R.L. Pacula, S. Bauhoff, A.J. Gordon, H. Hendrikson, D.L. Leslie, and B.D. Stein, “Policies Related to Opioid Agonist Therapy for Opioid Use Disorders: The Evolution of State Policies from 2004 to 2013,” *Substance Abuse*, Vol. 37, No. 1, 2016; American Society of Addiction Medicine, “State Medicaid Reports,” 2015; L. Ducharme, and A. Abraham, “State policy influence on the early diffusion of buprenorphine in community treatment programs,” *Substance Abuse Treatment Prevention Policy*, Vol. 3, No. 1, 2008, pp. 17–27; T.L. Mark, R. Lubran, E.F. McCance-Katz, M. Chalk, and J. Richardson, “Medicaid Coverage of Medications to Treat Alcohol and Opioid Dependence,” *Journal of Substance Abuse Treatment*, 2015.

¹⁴ Dick et al., 2015; Stein et al, 2015a; Stein et al., 2015b; Ducharme and Abraham, 2008.

¹⁵ B.D. Stein, M. Sorbero, A.W. Dick, R.L. Pacula, R.M. Burns, and AJ Gordon (). “Underutilized Physician Capacity to Treat Opioid Use Disorder with Buprenorphine Opioid Agonist Medication Assisted Treatment,” *Journal of the American Medical Association*, Vol. 316, No. 11, 2016, pp. 1211–1212.

¹⁶ J.D. Baxter, R.E. Clark, M. Samnaliev, G. Aweh, E. O’Connell, “Adherence to Buprenorphine Treatment Guidelines in a Medicaid Program,” *Substance Abuse*, Vol. 36, No. 2, 2015, pp. 174–182; A.J. Gordon, W. Lo-Ciganic, G. Cochran, W. Gellad, T. Cathers, D. Kelley, and J. Donohue, “Patterns and Quality of Buprenorphine Opioid Agonist Treatment in a Large Medicaid Program,” Vol. 9, No. 6, 2015, pp. 470–477; American Society of Addiction Medicine, *The National Practice Guideline For the Use of Medications in the Treatment of Addiction Involving Opioid Use*. Chevy Chase, Md., 2015.

therapy, such as those currently being considered by CMS and AHRQ, could be just as important as expanding treatment.¹⁷

Expanding Availability of Naloxone

Naloxone is a medication that, when used immediately following an opioid overdose, can counter the life-threatening effects caused by depression of the central nervous system. Despite a push by the prior administration to expand access to naloxone as part of its opioid initiative, there remains considerable debate amongst clinicians, policymakers and researchers about whether providing education and naloxone kits does in fact save lives or instead discourages treatment and causes harm (by reducing interactions with emergency health care providers and/or encouraging increasing risky behavior).¹⁸ There is a growing body of evidence that naloxone can be safely administered by first responders and laypersons who are properly educated and trained in its administration, resulting in a life saved from a specific overdose episode.¹⁹ However, what remains unclear due to limited evidence is whether these programs lead to an increase or reduction in overall rates of opioid overdose, including fatal overdoses, within a community.²⁰ I

¹⁷ R. Chou, P.T. Korthuis, M. Weimer, C. Bougatsos, I. Blazina, B. Zakher, S. Grusing, B. Devine, and D. McCarty, *Medication-Assisted Treatment Models of Care for Opioid Use Disorder in Primary Care Settings*, Technical Brief No. 28, Rockville, Md.: Agency for Healthcare Research and Quality, December 2016; P.T. Korthuis, D. McCarty, M. Weimer, C. Bougatsos, B. Zakher, S. Grusing, B. Devine, and R. Chou, “Primary Care-Based Models for the Treatment of Opioid Use Disorders: A Scoping Review,” *Annals of Internal Medicine*, Vol. 166, 2017, pp. 268–278.

¹⁸ Assistant Secretary of Policy Evaluation, *Issue Brief: Opioid Abuse in the U.S. and HHS Actions to Address Opioid-Drug Related Overdoses and Deaths*, Washington, D.C., 2015; A.J. Ashworth and A. Kidd, “Take Home Naloxone for Opiate Addicts. Apparent Advantages May Be Balanced by Hidden Harms,” *BMJ*, Vol. 323, No. 7318, 2001, p. 935; D. Mountain, “Take Home Naloxone for Opiate Addicts. Big Conclusions Are Drawn from Little Evidence,” *BMJ*, Vol. 323, No. 7318, 2001, p. 934, author reply 935; A.R. Bazazi, N.D. Zaller, J.J. Fu, and J.D. Rich, “Preventing Opiate Overdose Deaths: Examining Objections to Take-Home Naloxone,” *Journal of Health Care of the Poor and Underserved*, Vol. 21, No. 4, 2010, pp. 1108–1113.

¹⁹ A.K. Clark, C.M. Wilder, and E.L. Winstanley, “A Systematic Review of Community Opioid Overdose Prevention and Naloxone Distribution Programs,” *Journal of Addiction Medication*, Vol. 8, No. 3, 2014, pp. 153–163; R. Fisher, D. O’Donnell, B. Ray, and D. Rusyniak, “Police Officers Can Safely and Effectively Administer Intranasal Naloxone,” *Prehospital Emergency Care*, Vol. 20, No. 6, 2016, pp. 675–680; D.P. Wermeling, “Review of Naloxone Safety For Opioid Overdose: Practical Considerations For New Technology And Expanded Public Access,” *Therapeutic Advances in Drug Safety*, Vol. 6, No. 1, 2015, pp. 20–31; M. Doe-Simkins, E. Quinn, Z. Xuan, A. Sorenson-Alawad, H. Hackman, A. Ozonoff, and A. Walley, “Overdose Rescues by Trained and Untrained Participants and Change in Opioid Use Among Substance-Using Participants In Overdose,” *BMC Public Health*, Vol. 14, No. 297, 2014.

²⁰ D.P. Wermeling, “Review of Naloxone Safety for Opioid Overdose: Practical Considerations for New Technology and Expanded Public Access,” *Therapeutic Advances in Drug Safety*, Vol. 6, No. 1, 2015, pp. 20–31; S.M. Bird, A. Mcauley, S. Perry, and C. Hunter, “Effectiveness of Scotland’s National Naloxone Programme for reducing opioid-related deaths: A before (2006–10) versus after (2011–13) comparison,” *Addiction*, Vol. 111, No. 5, 2016, pp. 883–891; A.Y. Walley, Z. Xuan, H. H. Hackman, E. Quinn, M. Doe-Simkins, A. Sorensen-Alawad, S. Ruiz, and A. Ozonoff, “Opioid Overdose Rates and Implementation of Overdose Education and Nasal Naloxone Distribution in Massachusetts: Interrupted Time Series Analysis,” *BMJ*, Vol. 346, 2013, p. 174; A. McAuley, J. Bouttell, L. Barnsdale, D. Mackay, J. Lewsey, C. Hunter, and M. Robinson, “Evaluating the Impact of a National Naloxone Programme on Ambulance Attendance at Overdose Incidents: A Controlled Time-Series Analysis,” *Addiction*, Vol. 112, No. 2, 2017, pp. 301–308.

am aware of only two U.S. studies that have looked at the impact of naloxone distribution on overall opioid mortality as an outcome. One of the studies looked narrowly at a training and distribution program adopted within specific communities in Massachusetts, and found the program did in fact reduce annual community levels of opioid-related mortality with no statistical increase in the rate of acute care hospital utilization, suggesting the program was effective at reducing overall harm.²¹ However, the study did not have a within-state control group, making it unclear if the findings were truly attributable to the program and not to broader aggregate trends. A very recent National Bureau of Economic Research working paper used a much more-sophisticated, quasiexperimental design, exploiting variation in state laws providing legal protections for naloxone prescribing and/or administration²². The authors of this study found that state adoption of naloxone laws was associated with a 9- to 11-percent reduction in opioid-related deaths overall. Findings from this study are perhaps the most supportive of an overall positive effect, but more research is needed to evaluate if these findings can be replicated in other data.

Enhancing Prescription-Drug Monitoring Programs

Prescription drug monitoring programs (PDMPs) have been promoted by the federal government to improve safety in opioid analgesic prescribing; help identify diversion of these medications; and reduce the harm associated with opioid analgesic abuse, including fatal and nonfatal overdoses.²³ As such, evaluations of their effectiveness have considered a variety of different behaviors and outcomes, including physician prescribing, patient behavior (doctor and pharmacy shopping), and broader population health outcomes, including fatal and nonfatal overdoses and admissions to substance abuse treatment.

While several studies have demonstrated the utility of proactive PDMPs at changing physician prescribing, the effectiveness of PDMPs at reducing the misuse and harm associated with prescription opioids continues to be assessed, as the current literature remains inconclusive about their effects.²⁴ There are a variety of legitimate reasons why previous studies have failed to

²¹ Walley et al., 2013.

²² D.I. Rees, J.J. Sabia, L.M. Argys, J. Latshaw, and D. Dave, *With a Little Help from My Friends: The Effects of Naloxone Access and Good Samaritan Laws on Opioid-Related Deaths*, Cambridge, Mass.: National Bureau of Economic Research, 2017.

²³ Centers for Disease Control and Prevention, “Prescription Drug Monitoring Programs (PDMPs),” March 2017; Government Accountability Office, “Prescription Drugs: State Monitoring Programs Provide Useful Tool to Reduce Diversion,” May 2002; Executive Office of the President, “Epidemic: Responding to America’s Prescription Drug Abuse Crisis,” 2011.

²⁴ Y. Bao, Y. Pan, A. Taylor, S. Radakrishnan, F. Luo, H.A. Pincus, and B.R. Schackman, “Prescription Drug Monitoring Programs Are Associated With Sustained Reductions in Opioid Prescribing by Physicians,” *Health Affairs (Millwood)*, Vol. 35, No. 6, 2016, pp. 1045–1051; D.F. Baehren, C.A. Marco, D.E. Droz, S. Sinha, E.M. Callan, and P. Akpunonu, “A Statewide Prescription Monitoring Program Affects Emergency Department Prescribing Behaviors,” *Annals of Emergency Medicine*, Vol. 56, No. 1, 2010, pp. 19–23; C. Ringwalt, M. Garrettson, and A. Alexandridis, “The Effects of North Carolina’s Prescription Drug Monitoring Program on the Prescribing Behaviors of the State’s Providers,” *Journal of Primary Prevention*, Vol. 36, No. 2, 2015, pp. 131–137; G.G. Franklin, J. Sabel, C.M. Jones, J. Mai, C. Baumgartner, C.J. Banta-Green, D. Neven, and D.J. Tauben, “A

generate conclusive results, particularly at the population level. First, while there has been wide adoption of state PDMPs, early state adopters were fundamentally different than the programs that exist today. For example, many early states did not require real-time updates or reporting of the system, making the timely dissemination of information or utility for identifying physician and pharmacy shopping limited.²⁵ Similarly, states tend not to require PDMP participation; as of May 2016, only 29 states require prescribers to register.²⁶ Moreover, only 34 of the states with PDMPs mandate their use by prescribers or dispensers who are registered in the state.²⁷ Thus, it is not surprising to see that in a recent nationally representative survey of primary care providers, only 54 percent made use of their state’s PDMP program despite a much larger share actually being aware of them.²⁸

Research on the differences between state PDMP programs will help us understand the impacts of different PDMP programs and identify how to enhance existing programs. Recent scientific evaluations are starting to do just that, and findings from these studies suggest that PDMPs can be effective at achieving their goals of reducing prescription opioid misuse and harm.²⁹

Establishing Guidelines for Safe Opioid Prescribing

Overprescribing of opioids—providing more days’ supply or much-higher dosages than what is commonly required to manage pain in most people, or prescribing opioids before trying alternative methods of pain control—has been shown to be a major risk factor for the

Comprehensive Approach to Address the Prescription Opioid Epidemic in Washington State: Milestones and Lessons Learned,” *American Journal of Public Health*, Vol. 105, No. 3, 2015, pp. 463–469; T.M. Haegerich, L.J. Paulozzi, B.J. Manns, and C.M. Jones, “What We Know, and Don’t Know, About the Impact of State Policy and Systems-Level Interventions on Prescription Drug Overdose,” *Drug and Alcohol Dependence*, Vol. 145, 2014, pp. 34–47; J.E. Brady, H. Wunsch, C. DiMaggio, B.H. Lang, J. Giglio, and G. Li, “Prescription Drug Monitoring and Dispensing of Prescription Opioids,” *Public Health Reports*, Vol. 129, No. 2, 2014, 139–147; L.J. Paulozzi, E.M. Kilbourne, and H.A. Desai, “Prescription Drug Monitoring Programs and Death Rates from Drug Overdose,” *Pain Medicine*, Vol. 12, No. 5, 2011, pp. 747–754; L.M. Reifler, D. Droz, J.E. Bailey, S.H. Schnoll, R. Fant, R.C. Dart, B. Bucher Bartelson, “Do Prescription Monitoring Programs Impact State Trends in Opioid Abuse/Misuse?” *Pain Medicine*, Vol. 13, No. 3, 2012, pp. 434–442; R. Simeone and L. Holland, “An Evaluation of Prescription Drug Monitoring Programs,” 2006.

²⁵ S.W. Patrick, C.E. Fry, T.F. Jones, and M.B. Buntin, “Implementation of Prescription Drug Monitoring Programs Associated with Reductions in Opioid-Related Death Rates,” *Health Affairs*, Vol. 35, No. 7, 2016, pp. 1324–1332.

²⁶ National Alliance for Model State Drug Laws, “States that Require All Licensed Prescribers and/or Dispensers to Register with the State PDMP,” May 2016.

²⁷ National Alliance for Model State Drug Laws, “Mandated Use of State Prescription Drug Monitoring Programs: Specified Circumstances Requiring Prescribers/Dispensers to Access PMP Data,” November 2017.

²⁸ L. Rutkow, L. Turner, E. Lucas, C. Hwang, and G.C. Alexander, “Most Primary Care Physicians Are Aware of Prescription Drug Monitoring Programs, but Many Find the Data Difficult to Access,” *Health Affairs (Millwood)*, Vol. 34, No. 3, 2015, pp. 484–492.

²⁹ B. Pardo, “Do More Robust Prescription Drug Monitoring Programs Reduce Prescription Opioid Overdoses?” *Addiction*, 2017; Patrick et al., 2016; M.M. Ali, W.N. Dowd, T. Classen, R. Mutter, and S.P. Novak, “Prescription Drug Monitoring Programs, Nonmedical Use of Prescription Drugs, and Heroin Use: Evidence from the National Survey of Drug Use and Health,” *Addictive Behaviors*, Vol. 69, 2017, pp. 69–77; Simeone and Holland, 2006.

development of an opioid use disorder.³⁰ Potentially inappropriate prescribing, which includes prescribing overlapping opioid analgesics and benzodiazepines, has also been verified in studies of both publicly and privately insured populations.³¹

Efforts to reduce these problems have largely emphasized the adoption of clinical guidelines for safe opioid prescribing. I am aware of only a couple of studies that focused on evaluating the impact of just adopting these sorts of guidelines, and both studies focused on effects within a single state. One study shows that implementation of these tools in Washington’s workers’ compensation system led to a 27-percent reduction in the morphine equivalent doses per day and a 35-percent reduction in the proportion of workers on high doses.³² Another study evaluated the state’s adoption of a PDMP and showed that the guidelines alone helped reduce opioid related fatalities by 27 percent between 2008 and 2012.³³

However, a recent evaluation of the Veterans Affairs (VA) Health Administration Opioid Safety Initiative demonstrated that system-wide adoption of clinical guidelines, including directives for stepped pain treatment and the adoption of a risk management tool to hold clinicians accountable for their prescribing practices, when coupled with other strategies for managing chronic pain patients and improving access to opioid treatment, led to a 25-percent decline in the number of veterans prescribed an opioid within the VA system, a 36-percent reduction in patients receiving inappropriately high opioid doses, and a 47-percent reduction in simultaneous, inappropriate prescription of opioids and benzodiazepines.³⁴ Perhaps even more significantly, there was a 50-percent drop in the rate of overdose deaths among veterans prescribed an opioid after program adoption. This strongly suggests that system-wide adoption of clinical guidelines, when coupled with effective education and training, can be very effective at changing physician practice, reducing inappropriate prescribing, in a manner that might actually improve patient health.

³⁰ M.J. Edlund, B.C. Martin, J.E. Russo, A. DeVries, J.B. Braden, and M.D. Sullivan, “The Role of Opioid Prescription in Incident Opioid Abuse and Dependence Among Individuals with Chronic Noncancer Pain: The Role of Opioid Prescription,” *Clinical Journal of Pain*, Vol. 30, No. 7, 2014, pp. 557–564.

³¹ B.D. Stein, J. Mendelsohn, A.J. Gordon, A.W. Dick, R.M. Burns, M. Sorbero, R.A. Shih, and R.L. Pacula, “Opioid Analgesic And Benzodiazepine Prescribing Among Medicaid-Enrollees with Opioid Use Disorders: The Influence of Provider Communities,” *Journal of Addictive Diseases*, Vol. 36, No. 1, pp. 14–22; K.M. Dunn, K.W. Saunders, C.M. Rutter, C.J. Banta-Green, J.O. Merrill, M.D. Sullivan, C.M. Weisner, M.J. Silverberg, C.I. Campbell B.M. Psaty, and M. Von Korff, “Opioid Prescriptions for Chronic Pain and Overdose: A Cohort Study,” *Annals of Internal Medicine*, Vol. 152, No. 2, 2010; pp. 85–92; J. Logan, Y. Liu, L. Paulozzi, K. Zhang, and C. Jones, “Opioid Prescribing in Emergency Departments: The Prevalence of Potentially Inappropriate Prescribing and Misuse,” *Med Care*, Vol. 51, No. 8, 2013, pp. 646–653; L.J. Paulozzi, G.K. Strickler, P.W. Kreiner, C.M. Koris, Centers for Disease Control and Prevention, “Controlled Substance Prescribing Patterns—Prescription Behavior Surveillance System, Eight States, 2013,” *MMWR Surveillance Summaries*, Vol. 64, No. 9, 2015, pp. 1–14.

³² G.M. Franklin, J. Mai, J. Turner, M. Sullivan, T. Wickizer, and D. Fulton-Kehoe, “Bending the Prescription Opioid Dosing and Mortality Curves: Impact of the Washington State Opioid Dosing Guideline,” *American Journal of Industrial Medicine*, Vol. 55, No. 4, 2012, pp. 325–331.

³³ Franklin et al., 2015.

³⁴ W.F. Gellad, C.B. Good, and D.J. Shulkin, “Addressing the Opioid Epidemic in the United States: Lessons From the Department of Veterans Affairs,” *JAMA Internal Medicine*, 2017.

Concluding Remarks

Under ideal circumstances, decisions are made based on solid evidence related to effectiveness, including cost-effectiveness calculations. However, at this time it is impossible to apply such strong criteria to funding decisions for the opioid epidemic. So much more information is needed regarding where we actually are in the opioid epidemic and how the use of heroin and opioid analgesics interact. Additionally, we need to better understand the true effectiveness of various programs in light of the changing state and local environments in which they are implemented. What works in some communities may not be particularly effective in others, due to demographic differences, epidemic stage, and/or existing policies that are already in place. Much scientific work is needed to disentangle these things before firm recommendations based on strong science can be offered. Nonetheless, budgetary decisions need to be made today.

My remarks are intended to provide insights regarding the probable effectiveness of key strategies already undertaken by agencies funded by this subcommittee. There are many other strategies to consider as well. In general, we know that demand-side interventions, including treatment and prevention, are cost-beneficial.³⁵ Moreover, as these strategies generally apply to use of any opioid, they provide the least risk of unintended consequences in terms of pushing individuals into black markets. We also know that many supply-side strategies, at least those targeting diversion of prescription opioids, have reduced the amount of opioids available in the market, although these strategies possibly have unintended consequences when they target only specific opioids (e.g., Schedule II opioids only included in PDMPs, rather than all opioids; abuse-deterrent formulations of OxyContin).³⁶ A combined approach that considers both demand and supply seems justified. Harm reduction strategies, such as naloxone distribution, should not be ignored. While they may come with some risk (e.g., engaging in more opioid abuse because of less risk of overdose), those hypothesized effects have not yet been scientifically demonstrated, and studies suggest the opposite may in fact be the case.

When making budgetary decisions, bear in mind that some policies, including prevention and treatment, take time before their effects are fully observed in aggregate prevalence numbers. Moreover, natural dynamics influence these epidemics beyond the policies we adopt to try to influence them. Given the availability of both legal and illicit opioid products in many communities, we must be particularly concerned about policies that target just one part of the opioid problem (e.g., prescription opioids) in one particular system (e.g., the VA or Medicaid); singular approaches that only target one of these products or in one health system could generate

³⁵ G.A. Zarkin, L.J. Dunlap, K.A. Hicks, and D. Mamo, “Benefits and Costs of Methadone Treatment: Results from a Lifetime Simulation Model,” *Health Economics*, Vol. 14, No. 11, 2005, pp.1133–1150; J.P. Caulkins, R.L. Pacula, S. Paddock, and J. Chiesa, “What We Can—and Cannot—Expect from School-Based Drug Prevention,” *Drug and Alcohol Review*, Vol. 23, No. 1, 2004, pp.79–87.

³⁶ D. Powell and R.L. Pacula “Prescription Opiates and Opioid Abuse: Regulatory Efforts to Limit Diversion from Medical Markets to Black Markets in the United States,” in E. Savona and M.A.R. Kleiman, eds., *Dual Markets—Comparative Approaches for Regulation*, New York: Springer, forthcoming.

substitution across drugs or across health systems.³⁷ Moreover, some highly restrictive supply side strategies, such as those that limit opioid prescriptions to five- or seven-day dosages, may make it very difficult for patients with legitimate needs to obtain medication. Supply strategies, whether implemented through the medical system or through law enforcement, must consider all of these things. That is why it is truly difficult to find the right balance of policies for managing the opioid epidemic.

Thank you for inviting me to testify before you today, and I welcome the opportunity to answer any questions you may have.

³⁷ Alpert, Powell, and Pacula, 2017; Cicero, Ellis, and Surratt. 2012; W.F. Gellad, X. Zhao, C.T. Thorpe, J.M. Thorpe, F.E. Sileanu, J.P. Cashy, M. Mor, J.A. Hale, T. Radomski, L.R. Hausmann, and M.J. Fine, “Overlapping Buprenorphine, Opioid, and Benzodiazepine Prescriptions Among Veterans Dually Enrolled in Department of Veterans Affairs and Medicare Part D,” *Substance Abuse*, Vol. 38, No. 1, 2017, pp. 22–25.