

THE FEDERAL RESPONSE TO THE OPIOID CRISIS

HEARING
OF THE
**COMMITTEE ON HEALTH, EDUCATION,
LABOR, AND PENSIONS**
UNITED STATES SENATE
ONE HUNDRED FIFTEENTH CONGRESS
FIRST SESSION
ON
EXAMINING THE FEDERAL RESPONSE TO THE OPIOID CRISIS

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OCTOBER 5, 2017
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THE FEDERAL RESPONSE TO THE OPIOID CRISIS

Thursday, October 5, 2017

U.S. SENATE
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS
Washington, DC.

The Committee met, pursuant to notice, at 10:03 a.m., in room 430, Dirksen Senate Office Building, Hon. Lamar Alexander, Chairman of the Committee, presiding.

Present: Senators Alexander [presiding], Murray, Collins, Cassidy, Young, Murkowski, Scott, Casey, Franken, Bennet, Whitehouse, Baldwin, Murphy, Warren, Kaine, and Hassan.

OPENING STATEMENT OF SENATOR ALEXANDER

The CHAIRMAN. The Senate Committee on Health, Education, Labor, and Pensions will please come to order.

Today's hearing is about the opioid crisis we're facing and what the Federal Government is doing about it. Senator Murray and I will each have an opening statement, and then we'll introduce the witnesses. After the witnesses' testimony, Senators will each have 5 minutes of questions.

The Senate has inefficiently scheduled three votes, starting now, and all of us would like to hear the witnesses' testimony, so we'll figure out what to do about that. The best thing to do is to go ahead and get started with our opening statements.

The opioid crisis is tearing our communities apart, tearing families apart, and posing an enormous challenge to health care providers and law enforcement officials.

The amount of opioids prescribed in the United States in 2015 was enough for every American to be medicated around the clock for 3 weeks, according to the Centers for Disease Control and Prevention.

In 2016, there were over 7.6 million opioid prescriptions for pain in Tennessee, according to the Tennessee Department of Health. That means there were 1,148 opioid prescriptions for every 1,000 persons.

In March, researchers published a study that found nearly one in five patients who were prescribed an initial 10-day supply of opioids were found to still be using opioids a year later.

Last year, 1,631 Tennesseans died of a drug overdose, 12 percent more than the year before, mostly due to an increase in overdoses of synthetic opioids, including fentanyl, a pain medication that is

50 to 100 times stronger than morphine and can kill with just a small dose.

In Blount County, where I live in Tennessee, there were 21 people who died from an opioid overdose in 2016 alone.

Last year was the highest rate of drug overdose deaths in recorded history in our State. Nearly 3 out of 4 of the drug overdoses in Tennessee are related to opioids.

Last year, over 1,000 babies born in Tennessee were born addicted to opioids.

The rate of Tennesseans being prescribed opioids is one of the highest in the country.

This is a crisis, not just in Tennessee, but across the country.

Since 1999, the rate of overdose deaths involving opioids, including prescription drugs and heroin, has nearly quadrupled in our Nation. Ninety-one Americans die every day from an opioid overdose.

I hope today's distinguished panel of witnesses can give this Committee an update on the Federal response to the crisis, what's working, and what needs work.

This Committee has worked together to pass laws that help prevent addiction, encourage appropriate prescribing, and improve treatment.

In July 2016, the Comprehensive Addiction and Recovery Act—we call it CARA—was signed into law. This legislation established new programs and authorities, reauthorized existing ones, and encouraged law enforcement, public health departments, and health care providers to work together to combat substance abuse.

A few weeks ago, the Administration announced that, under CARA, \$144 million in grants will be awarded to 58 recipients, including states, cities, health care providers, and community organizations.

Tennessee will receive \$6 million of that money.

Then in December 2016, as part of the 21st Century Cures Act, we worked together to update drug abuse programs out of the Substance Abuse and Mental Health Services Administration and provide \$1 billion to states for prevention and treatment efforts.

This past spring, the Administration began issuing grants funded by Cures, totaling \$485 million to all 50 states.

Tennessee received nearly \$14 million of that.

The most ambitious goal of 21st Century Cures was to drive the research discoveries predicted over the next decade by one of our witnesses today, Dr. Francis Collins, the Director of the National Institutes of Health, which he calls the National Institutes of Hope. He has predicted the development of an artificial pancreas, organs built from patients' own stem cells, an HIV/AIDS vaccine, a Zika vaccine, and non-addictive painkillers. Non-addictive ways to treat pain could be medical devices or drugs.

While there is an urgent need for this, it is not at all a new idea. In 1928, what became known as the "Committee on the Problems of Drug Dependence" formed to organize research in pursuit of a non-addictive painkiller. We all know the importance of finding a way to deal with pain. We were having a conversation just before the hearing. One report, according to the New York Times, is about a third of Americans have intermittent pain. Dr. Collins says that

25 million Americans live with pain every day. This is not to minimize the number of Americans who need some form of help relieving pain.

I want to hear today about the public-private partnership that the National Institutes of Health is leading, and about what policies FDA has put in place to make sure that the opioid alternatives submitted to FDA are prioritized appropriately and get the attention they ought to. I have heard from numerous companies that have either submitted to the FDA or have products for pain in development, and I want to make sure they have clear guidance on what is necessary for FDA to review them in a timely way. If traditional fast track, priority, or breakthrough pathways do not fit these products, I would like to hear how we could provide the help FDA may need.

Prescription drug monitoring programs, which are state-run electronic data bases that can track controlled substances prescribed by doctors and dispensed by pharmacists, are an important and innovative tool. I look forward to hearing today how we can help states better integrate prescription drug monitoring programs with electronic health records to help inform physicians' practices while protecting patient privacy.

Congress has accomplished a lot in a bipartisan way to provide funding and update programs to assist states and help combat this public health crisis. I look forward to hearing how the Administration is moving forward in this important work.

Senator Murray.

OPENING STATEMENT OF SENATOR MURRAY

Senator MURRAY. Well, thank you very much, Chairman Alexander. Thank you to all of our colleagues for coming together for this truly urgent discussion.

Every day, from every corner of the country, we hear more about the damage being caused by the opioid crisis: lives being taken off track; mothers and dads who worry about the late-night calls they might get, or what it means if no call comes through; children who have lost their parents; and communities, hospitals, and emergency services overwhelmed. It is hard to grasp the full scope and scale of this crisis, even as we learn more.

I was recently in Longview, Washington, a small town in my state, visited a local hospital, and I was told by the staff that nearly 50 percent of all babies born there last year have mothers who struggle with substance use. That was just overwhelming and heartbreaking. It speaks to what I've heard all over my state, in every community, from the big communities, Seattle and Everett, to smaller Bellingham, Spokane, the Tri-Cities, Vancouver, everywhere I go. In meetings I hear the same thing, with families and providers and patients and law enforcement professionals.

This is not somebody else's problem. It's all of ours. Again, that's why I am very glad that we have this opportunity today to discuss this and hear from leaders who are closest to these issues about what they are seeing and learning in each of their roles.

Thank you all for joining us today. I am very glad that you could all be here with us today, though I have to say I am very concerned that Dr. Fitzgerald has not sufficiently divested to be able to testify

on such an important issue. We'll be following up on that because we do need CDC to be at full strength and not subject to the distractions that have been plaguing this Administration.

Your agencies all play a critical role, and I know we are all looking forward to hearing how this administration is stepping up and where it is falling behind, and that includes on implementation of the Comprehensive Addiction and Recovery Act and the 21st Century Cures Act.

I will have specific questions for all of you, including how SAMHSA is making sure Federal funds to address this crisis are being used to help people in all our communities; what steps CDC can take to prevent opioid misuse in the first place; how NIH is working to support biomedical research that helps us better understand chronic pain; and how FDA is working to include public health considerations when it approves new pain products and assuring that non-addictive pain products are being handled with clarity, consistency, and an all-hands-on-deck approach.

I do want to make a couple of points from the outset. First of all is that today's hearing is only possible because the latest Trumpcare Bill met a dead end, because it's a no-brainer that undercutting the entirety of the country's health care system would set us back in addressing this crisis. What we've seen from every repeal bill is drastic cuts to funding for treatment and addiction services, hits to Medicaid and critical patient protections that are today provided under current law.

I hope that we can finally turn the page on those fights and focus on moving forward. On that I am, Mr. Chairman, very appreciative of the bipartisanship that many on this Committee have shown in our ongoing work on market stabilization.

Another step is making sure we are doing everything we can right now to fight this crisis head on, and I do have several concerns. The Administration has delayed critical steps that could help provide immediate relief to families suffering today, proposing budget cuts for prevention efforts around substance use disorder and mental health programs under SAMHSA; undermining the value of medication-assisted treatment in effectively managing opioid use disorders; and pushing the Department of Justice to treat addiction as a criminal justice issue.

Fortunately, we've made some progress in this Committee. Like everyone here, I am very proud to have worked on the 21st Century Cures Act, which authorized nearly \$1 billion for states to address the opioid crisis through prevention, treatment, and recovery efforts; and the CARA Act, which supports outreach for veterans and pregnant and postpartum women, expands access to medication-assisted treatments, and more.

I can't say clearly enough that our work is not over, and we must do more. As we work to build upon our work in CARA and Cures, it's absolutely critical that we put investments into making sure these policies have the impact that families and communities need.

We should be doing everything we can to tackle this crisis and push for actual results. Critical to that is that the Administration is a partner and not a hindrance to our efforts.

We have a lot to cover today, and I am very much looking forward to our conversation. I know, Mr. Chairman, a lot of our sen-

ators are juggling a lot of commitments today, including votes which have just started, and a budget day-long hearing, and many other hearings. I just want to make sure we include a statement for the record right now from Senator Sanders and anybody else before we move to questions.

The CHAIRMAN. We will be glad to do that.

I'm going to offer brief introductions of our witnesses and hope that we can hear all four of them before I have to leave to go vote, and then we'll see how to handle the three votes.

First, Dr. McCance-Katz is the Assistant Secretary for Mental Health and Substance Use, the lead agency. SAMHSA is the lead agency within the Department of Health and Human Services related to substance abuse and mental health.

Dr. Debra Houry, Director of the National Center for Injury and Prevention Control, the Centers for Disease Control and Prevention.

Dr. Francis Collins, who has been Director of the National Institutes of Health since 2009.

Dr. Scott Gottlieb, who is Commissioner of the Food and Drug Administration, who was confirmed in May of this year.

Dr. McCance-Katz, why don't we begin with you? I will ask each of you to please summarize your comments in about 5 minutes.

STATEMENT OF ELINORE F. MCCANCE-KATZ

Dr. MCCANCE-KATZ. Thank you, Senator Alexander. Chairman Alexander, Ranking Member Murray, and Members of the Senate Health, Education, Labor, and Pensions Committee, thank you for inviting me to testify at this important hearing. I'm honored to testify today along with my colleagues from the Department of Health and Human Services on the Federal response to the opioid crisis.

Over the past 15 years, communities across our Nation have been devastated by increasing prescription and illicit opioid abuse, addiction, and overdose. In 2016, over 11 million Americans misused prescription opioids, nearly 1 million used heroin, and 2.1 million had an opioid use disorder due to prescription opioids or heroin.

Most alarming are the continued increases in overdose deaths, especially the rapid increase in deaths involving illicitly made fentanyl and other highly potent synthetic opioids since 2013. The Trump Administration is committed to bringing everything the Federal Government has to bear on this health crisis.

The Department of Health and Human Services has identified five specific strategies that are guiding the response. This comprehensive, evidence-based opioid strategy aims to improve access to treatment and recovery services to prevent the health, social, and economic consequences associated with opioid addiction and to enable individuals to achieve long-term recovery; to target the availability and distribution of overdose-reversing drugs to ensure the broad provision of these drugs to people likely to experience an overdose; to strengthen public health data reporting and collection to improve the timeliness and specificity of data and to inform a real-time public health response as the epidemic evolves; to support cutting-edge research that advances our understanding of pain and addiction, leads to the development of new treatments, and identi-

fies effective public health interventions to reduce opioid-related health harms; and to advance the practice of pain management to enable access to high-quality, evidence-based pain care that reduces the burden of pain for individuals, families, and society while also reducing the inappropriate use of opioids and opioid-related harms.

HHS appreciates Congress' dedication to this issue as evidenced by passage of the 21st Century Cures Act and the Comprehensive Addiction and Recovery Act.

In my role as Assistant Secretary for Mental Health and Substance Use at HHS, I lead the Substance Abuse and Mental Health Services Administration. I appreciate the opportunity to share with you a portion of SAMHSA's portfolio of activities in alignment with HHS' five strategies and how SAMHSA is implementing the 21st Century Cures Act and CARA.

SAMHSA is administering the Opioid State Targeted Response grants program created by the 21st Century Cures Act. By providing \$485 million to states in Fiscal Year 2017, this program is increasing access to treatment, reducing unmet treatment need, and reducing opioid overdose-related deaths through the provision of prevention, treatment, and recovery services.

Further, HHS is working to ensure that the funding allocations and policies are as clinically sound, evidence-based, effective and efficient as they can be. SAMHSA has several initiatives aimed at advancing the utilization of medication-assisted treatment for opioid use disorder. For example, in the past 4 years more than 62,000 medical professionals have participated in online or in-person SAMHSA-funded trainings on medication-assisted treatment for opioid use disorders. SAMHSA regulates opioid treatment programs and provides waivers to providers that prescribe buprenorphine for the treatment of opioid addiction.

Last year, SAMHSA published a final rule allowing certain physicians who have had a waiver to prescribe buprenorphine for up to 100 patients to obtain a waiver to treat up to 275 patients. As of September 19th, 3,573 physicians have done so.

SAMHSA has also implemented the CARA provision that allows nurse practitioners and physician assistants to prescribe buprenorphine. As of September 19th, 2,756 nurse practitioners and 773 physician assistants have received a waiver from SAMHSA.

SAMHSA also promotes recovery from opioid and other substance use disorders through targeted grants such as last month's award of \$4.6 million over 3 years in the Building Communities of Recovery grant program created by CARA.

SAMHSA has been a leader in efforts to reduce overdose deaths by increasing the availability and use of naloxone to reverse overdose. SAMHSA is currently providing grants to prevent opioid overdose-related deaths, which are being used to train first responders as well as to purchase and distribute naloxone. Last month SAMHSA awarded additional grants authorized by CARA, including almost \$46 million over 5 years to grantees in 22 states to provide resources to first responders as well as substance use disorder treatment providers who work directly with populations at highest risk for overdose. states can also use opioid STR funds to purchase

and distribute naloxone, and some states are using a portion of their block grants for this purpose.

SAMHSA's National Survey on Drug Use and Health provides key national and State-level data on a variety of substance use and mental health topics, including opioid misuse. NSDUH is a vital part of the surveillance effort related to opioids, and the data from NSDUH has been used to track historical and emerging trends in opioid misuse, including geographic and demographic variability.

SAMHSA also works collaboratively with other agencies to better understand the epidemic through sharing of data and assessing the implications of that data.

Thank you again for the opportunity to share with you our work to combat the opioid epidemic, and I look forward to answering your questions.

The CHAIRMAN. Thank you, Dr. McCance-Katz.

For the information of senators, I'm going to stay through the four witnesses statements and then go vote. If you want to stay through that, we won't miss the vote, maybe leave when I leave, or you can fire me if I'm wrong.

[Laughter.]

Dr. Houry.

STATEMENT OF DEBRA HOURY

Dr. HOURY. Good morning, Chairman Alexander, Ranking Member Murray, and Members of the Committee. I am Dr. Deb Houry, Director of the National Center for Injury Prevention and Control at the CDC.

As an emergency physician, I was honored to join CDC 3 years ago to save even more lives in this role. I am pleased to have the opportunity to testify before you today.

CDC's expertise as the Nation's public health and prevention agency is essential in reversing the opioid epidemic. CDC is focused on preventing people from getting addicted in the first place. CDC has the unique role of leading prevention by addressing opioid prescribing, tracking trends, and driving community-based prevention activities.

America's opioid epidemic affects people from every community, and it is one of the few public health problems that is getting worse instead of better. Drug overdoses have dramatically increased, nearly tripling over the last two decades. Further, the opioid overdose crisis has led to a number of other problems, including increases in babies born withdrawing from narcotics and a drop in life expectancy for the first time since the AIDS epidemic in 1993.

Today's overdose fatalities are just the tip of the iceberg. For every one person who dies of an opioid overdose, over 60 more are already addicted to prescription opioids, almost 400 misuse them, and nearly 3,000 have taken one. Using a comprehensive approach as outlined in the HHS Priorities, we will work together to stop this epidemic.

CDC has been on the front lines since the beginning. Over a decade ago, after hearing alarming news from medical examiners about increases in overdose deaths, and after an outbreak investigation in North Carolina, CDC scientists made the connection to prescription opioids.

Today we are working closely with state health departments and providing guidance on best practices so states can rapidly adapt and we can use what we learned what works best in this evolving epidemic. CDC now funds 45 states and Washington, DC to advance prevention in key areas at the community level, including improving prescription drug monitoring programs, or PDMPs, improving prescribing practices, and evaluating policies.

In Georgia, where I have worked in the ER, these investments help make it easier for me to check the prescription history of my patients. In Kentucky, prompts were added to the PDMP to alert to high doses, which resulted in a 25 percent reduction in opioid prescribing to youth. These investments can literally save lives.

CDC is also leading improvements to the public health data we all rely on to understand the crisis. We are now releasing preliminary overdose data and have improved reporting significantly from a lag of 2 years down to 7 months.

As part of CDC's funding to states, we're ramping up our efforts to get more reliable and timely data from emergency rooms and medical examiners and coroners to enhance surveillance programs. For the first time, this program tracks non-fatal opioid overdoses so that we have a better understanding of the changing epidemic so that states can respond accordingly. This is the value of informed and nimble public health.

States call on CDC to provide on-the-ground assistance when they experience an opioid-related crisis. We helped Massachusetts identify that a surge in opioid deaths was caused by fentanyl, and we assisted Indiana to identify and contain an HIV and hepatitis C outbreak related to injections of prescription opioids. We truly appreciate the support we receive from this Committee for our Guideline for Prescribing Opioids for Chronic Pain, which we released last year. Now we are focused on making the guideline easy for clinicians to implement through interactive trainings and a mobile app.

We are also focusing on patients and families. Just last week, CDC released the Rx Awareness Communications Campaign to raise awareness about the risks of prescription opioids. That campaign features real-life accounts of individuals living in recovery and those who have lost someone to an overdose.

CDC's unique approach to surveillance and prevention are key in reversing the opioid epidemic. CDC continues to be committed to the comprehensive priorities outlined in the HHS Strategy and to saving the lives of those touched by this epidemic.

Thank you for your time, and I'm happy to answer any questions you might have.

The CHAIRMAN. Thank you, Dr. Houry.
Dr. Collins.

STATEMENT OF FRANCIS COLLINS

Dr. COLLINS. Thank you. Good morning, Mr. Chairman, Ranking Member Murray, and distinguished Members of this Committee. My colleagues have given you a vivid picture of the vast scope of the opioid epidemic. I'd like to take a moment to put a personal face on this crisis, a crisis that has devastated the lives of so many Americans, Americans like a young man I'll call Jeff.

When this 29-year-old Alaskan Native returned from serving in the war in Afghanistan, he experienced a series of personal crises and sought relief in the wrong places. He got hooked on cheap heroin, and eventually he ended up homeless on the streets of Seattle.

Desperate to escape this downward spiral, Jeff sought help. He turned to NIH-funded researchers at the VA in Seattle, and they enrolled him in a new protocol for medication-assisted treatment, MAT. Unlike traditional treatment programs that have long waiting lists, Jeff was started on oral buprenorphine immediately. The results? Jeff stopped using heroin right away but still sometimes experienced strong cravings for opioids.

Researchers adjusted his treatment, giving him an additional evidence-based medicine to bring those cravings under control. I'm glad to tell you today that Jeff has not used heroin for several months, he's no longer homeless, and he's holding down a regular job.

I don't want to give the impression that Jeff's story is easy or typical. People who fall into opioid addiction, many starting with prescription drugs, have different stories, and they need different interventions. Jeff's story does show how research can provide a broader array of options for treating opioid use disorders.

Addiction is a powerful force, driven by the powerful ways in which opioids literally can rewire the brain. When people suffering from addiction seek help, we owe it to them to provide treatments that will work for them. Research can help us get there.

Currently, we have three FDA-approved medications for opioid use disorder—buprenorphine, methadone, and naltrexone. Relapse rates are way too high, and more options are needed to end this epidemic. We need to understand which individuals succeed on which medicine, in what doses, over what time period, combined with what kind of psycho-social support.

NIH has a successful record of partnering with industry to develop some of these new treatments and interventions. For example, many communities have invested in naloxone injection kits to enable their first responders to reverse opioid overdoses. Unfortunately, the kits are expensive and not everyone is comfortable administering an injection. In partnership with industry, NIH developed this naloxone nasal spray.

That was, by the way, just distilled water, in case anybody is worried about my using an inappropriate substance in the hearing room.

[Laughter.]

Dr. COLLINS. This can be far more easily administered by anyone and is now the most widely used antidote for overdose, saving many lives.

We're not stopping. Just last week, following a series of no less than seven action-oriented meetings since April, NIH, the FDA, and our industry partners invited more than 50 companies to explore a research partnership that would include two important research goals: first, to expand medication options to treat addiction, as well as to reverse overdose in the face of even more deadly opioids like fentanyl or carfentanil. The second goal, and critical for the long term, is to develop potent non-addictive medications for

pain. We must find better ways to help those 25 million Americans who suffer from pain on a daily basis.

The developing partnership will build on basic science insights that are opening new avenues for development of non-addictive drugs. For example, we once thought that the brain's pain and reward systems were inextricably intertwined, but we've recently learned that when drug molecules bind to an opioid receptor, they can activate two different pathways, pain relief and reward. New technology is now being applied to design drugs that provide the pain relief without activating the reward system that leads to addiction.

Other potential targets for non-addictive pain medications have been identified through studies of neuroscience. One promising drug target has been identified by studying rare individuals who are born with genetic complete insensitivity to pain. Building on our evolving understanding of inflammation's role in chronic pain, the partnership will also seek to determine whether agents that reduce inflammation can provide potent pain relief.

That's not all. We're working with industry to explore ways to develop biomarkers that can distinguish different types of pain and predict likely responses to intervention. We will strive to develop objective measures of pain that can be used to compare experimental therapies with greater precision, and we'll explore the creation of a new clinical trial network to enable the rapid testing of promising new therapies and facilitate the sharing of such data.

There's a great deal to be done. For this effort to succeed, we do need all hands on deck, my Federal colleagues here, academic researchers, private sector partners, advocates for pain research, and last but certainly not least we need you, Members of Congress. Your support is essential to help end this terrible epidemic that is costing so many American lives.

Thank you for holding this hearing today.

The CHAIRMAN. Thank you, Dr. Collins.

Well, we are 75 percent complete.

Dr. Gottlieb, I'm going to recess the hearing for about 20 minutes so that—the floor has asked us to come vote because of the Budget Committee's meetings, et cetera. We'd like to hear your testimony, so we're going to recess for 20 minutes, vote twice—that's what I'm going to do—and then come back, and we'll hear you and then begin questions.

The hearing is recessed for 20 minutes.

[Recess.]

The CHAIRMAN. The Committee will come to order.

We'll resume the testimony, beginning with Dr. Gottlieb. Excuse us for having interrupted it, but we wanted to hear Dr. Gottlieb, and then we will proceed to questions.

There's one more vote, but we'll continue the hearing during the vote and Senators can leave and come back as they wish.

Dr. Gottlieb, welcome.

STATEMENT OF SCOTT GOTTLIEB

Dr. GOTTLIEB. Thank you, Chairman Alexander, Ranking Member Murray, and Members of the Committee. Thank you for the opportunity to testify today before the Committee on issues related

to the epidemic of opioid addiction that is devastating American families and our culture.

This crisis has gotten so large and pervasive that it's simply beyond the scope of any one of our agencies to make a meaningful impact. It's only by working together and in partnership with State and private entities that we're going to slowly begin to reverse the trend of new addiction and help move more people toward a life of sobriety.

An epidemic that might have been more fully within our grasp just a decade ago has now spread so wide and so deep that we need to acknowledge that it's not going to be reversed with any one collection of measures, and certainly not by any one single agency. FDA has engaged in efforts across multiple fronts in trying to do its part to more forcefully confront this crisis, and we're looking for ways to work more creatively with public and private partners.

There's a lot of good work that has already been done by my agency before I arrived to address these challenges and rethink some old dogma when it came to combatting addiction. I inherited a lot of creative ideas and new policies that were already in process. We've also set out some new directions in recent months, and I want to briefly frame for you how we're going to approach this challenge going forward.

I'm especially focused on three domains of activity. First, how do we reduce the rate of new addiction by also reducing overall exposure of American patients to opioid drugs? We know that most people addicted to opioids will be medically addicted. Their first exposure to opioids will be through a legitimate prescription. For many of these patients, that first prescription will be for an immediate-release formulation of these drugs.

The key is to reduce the rate of overall exposure to help make sure that only properly indicated patients are being prescribed opioids, and when they receive a prescription it's for a duration of use that is the shortest necessary to address their condition.

To address these goals, we've taken a number of recent steps, and we're pursuing some additional actions in the coming months. Among some of the steps we've already taken, for the first time we're extending our risk management programs to include our provider education requirements to immediate-release opioid drugs. We're also expanding this to cover all providers who come into contact with patients, including nurses and pharmacists.

We're also actively considering new steps to make that education mandatory, and also use our authorities to limit dispensing based on the indication for which an opioid is being prescribed. Last week our newly formed Opioid Steering Committee opened the public docket to solicit input on each of these specific questions.

The second domain of activity that we're focused on relates to new product innovation that can either render current opioid products less prone to abuse or, alternatively, see these products replaced entirely by non-addictive pain treatments and/or medical devices. Among the steps we've taken toward this second set of goals, FDA strongly supports a transition from the current market dominated by conventional opioids to one where the majority of opioids have meaningful abuse-deterrent properties. While these products can still lead to addiction, they are harder to manipulate in ways

that make them attractive for abuse by routes such as inhalation and injection.

In support of this transition, FDA is focusing its effort on determining how effective the current abuse-deterrent products are in the real world. Separately, FDA is also working to support the development of generic forms of abuse-deterrent opioids and will soon issue final guidance on the development of generic versions of these drugs.

At the same time, we're also working on improving the path for the development of non-opioid and non-addictive treatment alternatives. To more efficiently advance these drugs with these characteristics, FDA is using programs such as fast track and breakthrough therapy designations to facilitate the development of products that, for example, are intended to treat serious unmet medical needs. FDA's work also includes a more careful consideration of non-drug alternatives for pain such as medical devices that can deliver more localized analgesic. We plan to have more to say on this very soon.

To address these issues related to trials needed for approval, FDA is participating in public-private partnership with the Analgesic Clinical Trial Translation Innovations Opportunities Networks, or ACTTION.

The third domain on which we're taking new actions to address the opioid addiction crisis is when it comes to the development of better medical therapy to help those addicted transition to lives of sobriety. We're currently developing a policy that we believe will promote the development of additional therapies for the treatment of opioid addiction. We're also exploring ideas to help promote their broader adoption. Ensuring patients have access to effective medically assisted therapy for the treatment of addiction is a top priority.

These are just some of the domains on which we're actively addressing this crisis. It's clear that no lone agency, no single set of policies, and certainly no single action is going to meaningfully change our bleak trajectory. The scope of this crisis is just too large. That's why I'm especially grateful to be joined by my HHS colleagues here and why I'm grateful to this Committee for convening this discussion here today. We need to work together to have any chance of making real progress.

Thanks a lot.

The CHAIRMAN. Thank you, Dr. Gottlieb. Thanks to all the witnesses.

We'll now begin 5-minute rounds of questions.

Senator Murkowski.

STATEMENT OF SENATOR MURKOWSKI

Senator MURKOWSKI. Thank you, Mr. Chairman, for this very important hearing. I do apologize. I wasn't here to hear the testimony from the first group here, but thank you each for your contributions in this area.

As my colleagues know, Alaska is pretty rural. In fact, Alaska is so rural it's bush. Eighty percent of our communities are not accessible by road. Much comes in by mail when we think about the

drugs that impact our communities, and I want to ask about drugs that come in over the Internet.

The first question was raised in a meeting that I was in just this week with providers that serve our rural areas, and it was as it related to the medically assisted treatment and how these are administered, whether it's suboxone or others. It's our understanding that the prescribing provider is required to be physically in the room with the patient.

Well, in far too many of our rural communities, we don't have that provider. We do so much of the care by distance delivery. You've got a health aide that is administering. The question that was raised with me is whether or not there is any kind of an exemption option or a waiver option under the Ryan Haight Act that would allow providers to prescribe suboxone through telemedicine to these individuals that are in highly rural communities, bush communities. Is there a way that we can use these technologies to help in the event of an emergency? Do you have anything that you can offer me?

Dr. McCance.

Dr. MCCANCE-KATZ. Yes. Thank you, Senator Murkowski. Here's what I would say about that. While I don't have the Ryan Haight Act at my fingertips, I believe that what it requires is a valid physician-patient relationship, and that is generally characterized by at least one visit face-to-face where there is an examination that's done, a diagnosis that is made, and a treatment plan that then follows. Afterwards I think telemedicine can be used, and it may be possible that we can work with DEA around the issues of whether we can have in a telehealth kind of setting a provider who has done those things and can work with a waiver, a provider who might be in a distant place.

Those are the kinds of details that, to my knowledge, have not yet been worked out, but there is already precedent for telehealth where a provider is distant and can work with another practitioner who is actually seeing the patient in a community. That model exists. What doesn't exist and isn't well defined yet is the issue of controlled substance prescribing, so we can work with DEA on that.

Senator MURKOWSKI. Well, it is something that I'd like to explore with whomever is willing to work with us, because I look at this as an issue. We do some pretty extraordinary things with telehealth and how we dispense the controlled substances in a tightly regulated, controlled way, and we think that we've got the tools in place, but we do need to have some level of exemption or waiver option out there, so I'd really like to work with you.

Dr. MCCANCE-KATZ. Sure.

Senator MURKOWSKI.

Dr. Collins.

Dr. COLLINS. If I may, I think this is another wonderful example of how our efforts to help those who are seeking treatment for addiction need to have a broader range of options than what currently is possible, but we need to be sure those options are evidence-based.

Ultimately, what one would like to have is a sort of precision medicine approach to helping people who are addicted so that you find the right treatment in the right situation at the right dose

with the right kind of psycho-social support in the right MAT that works for that person. Obviously, the answer to that is going to be very different for somebody who is in the bush in Alaska versus somebody who is in an urban center.

NIH is very much interested in trying to contribute more evidence to those other options using our Clinical Trials Network, and I think you've raised a very important issue that we should look at closely.

Senator MURKOWSKI. Well, I look forward to working with you on that.

I do have a question about drugs over the Internet, but I'll wait for the second round.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Murkowski.

Senator Hassan.

STATEMENT OF SENATOR HASSAN

Senator HASSAN. Well, thank you, Mr. Chairman. I want to thank you and Ranking Member Murray for holding this hearing. I want to thank all the witnesses who are here today because I know how hard you're working on this issue.

The opioid epidemic, as you all know, is absolutely devastating my State of New Hampshire, and it's not something we're going to fix overnight. We didn't get here overnight, we're not going to fix it overnight.

One of the things that I think we really have to continue to focus on is that addiction is a chronic disease, and we need to realize the long-term nature of it because the reality is that part of this disease is relapse. The disease is multifaceted, and it's often made worse by the underlying trauma and mental health disorders, and on top of that it is complicated by co-occurring medical diseases, like ones that are spread by injection drug use, like hepatitis C and HIV. I was on the phone with a friend of mine who lost her 34-year-old son about a week ago. We're not sure yet whether it was an overdose or a heart event, a cardiac event related to substance use disorder, but this is the type of ongoing issue, along with long-term societal issues. We have teachers now who have children in their classrooms whose parents have overdosed. We have grandparents who are raising their grandchildren.

We are in this for the long haul, and so one of the things I want to emphasize is that while I appreciate greatly what the four of you and all of the people that you work with are doing, the Trump Administration's interest in repealing Medicaid expansion, which has been the critical, number-one tool in my state for getting treatment to people, and its proposed budget, really would undermine our efforts to combat this epidemic in our states.

I hope that while you're all doing this work, we realize that in the bigger picture the budget and the interest in repealing Medicaid expansion really poses difficulties for those people on the ground trying to get treatment to people who are suffering with this disease.

Dr. Gottlieb, I appreciate very much the work you've been doing. When you were last here before this Committee, you agreed that there was an outstanding question about the nomenclature we are

using in the term “abuse-deterrent formulation” and whether it’s conveying the right message to providers and patients, and I was glad to hear you speak about it just now.

Senator Young and I sponsored the Opioid Addiction Risk Transparency Act, which was recently signed into law and really is intended to make sure that health care doctors and, in turn, patients are provided with information about the limitations and patient care implications of opioids with so-called abuse-deterrent formulations. Now that the legislation has been signed into law and has given you the authorization, what steps has the FDA taken to use this authority provided by the Opioid Addiction Risk Transparency Act?

Dr. GOTTLIEB. Thank you for the question, Senator. We set out probably about 3 weeks ago, 4 weeks ago, to undertake a formal study of the nomenclature that we use and the lexicon that we use in describing abuse-deterrent formulations, and you and I have had the opportunity to talk about this, to make sure that we’re not conveying to providers and patients that a drug that has abuse-deterrent features is less prone to addiction, because we know it’s not. The abuse-deterrent features on the current drugs make them less prone to manipulation that allows them to be abused through inhalation and injection, but they still can cause addiction.

We’re looking at this scientifically, and we should have that information back in a reasonable timeframe, and I’d be happy to come in and talk to you about our results.

Senator HASSAN. Well, I would appreciate that. I would just urge you—we are now giving you all tools to get information out there, and these drugs were approved without a full understanding of this potential impact, and I think the more quickly you can move, the better off we will be, even as you’re gathering data.

Dr. GOTTLIEB. I firmly agree. I just want to make sure we’re science based. We will move quickly.

Senator HASSAN. Thank you.

Dr. McCance-Katz, we’ve talked a lot about the 2-year opioid State targeted response grants provided by Cures. I will say, like my colleague Senator Shaheen, who is not on this Committee but who has been leading the charge on this, I’ve got some real concerns about the formula used for 2017 because it didn’t provide adequate resources to New Hampshire, a State with one of the highest per capita death rates in the Nation but that was only eligible for \$3 million of the \$500 million available under the formula that was used.

In addition, addiction is a chronic condition, so we need long-term investments to address the crisis. Aside from the Cures money, there are other important Federal resources that we need to strengthen. As was described in your testimony, the Substance Abuse Prevention and Treatment block grant is fundamental, but it really hasn’t kept up with inflation in terms of dollars.

Because I see that I’m running out of time, I’ll just ask you if you can briefly speak to what SAMHSA is trying to do to address the significant decrease in value of the block grant today, especially in light of staggering increase for the need of such services.

Dr. MCCANCE-KATZ. Thank you, Senator Hassan. SAMHSA allows flexibility to the states to use the block grants for substance

abuse prevention and treatment. States present us plans, we provide them technical assistance, and we allow them to implement as they wish to do in their communities. Every state, of course, is different.

SAMHSA also works with the states in terms of pretty extensive ways of helping them to look at how they can best provide care. We have, in addition to funds in these block grants, as you know, which are the funds of last resort for individuals who are not covered by other third-party payers, including Medicaid—

The CHAIRMAN. We need to stick with the 5-minute time rule.

Dr. MCCANCE-KATZ. I'm sorry.

Senator HASSAN. Thank you. I'll wait for the second round and we'll follow-up then.

The CHAIRMAN. Thank you very much, Senator Hassan.

I'm going to call on Senator Young next, and then I believe Senator Bennet is next after that.

I'm going to go vote, and Senator Murray is going to preside.
Senator Young.

STATEMENT OF SENATOR YOUNG

Senator YOUNG. Thank you, Chairman. I have a lot to cover in 5 minutes, so I'm going to go fairly quickly here.

I'll begin with Dr. McCance-Katz. Doctor, good to see you again.

A small Hoosier community of 4,300 people was catapulted into the national spotlight just 2 years ago. We have over 200 of my fellow Hoosiers who were diagnosed with HIV and hep C primarily due to injection drug use. According to the CDC, injection drug use is now the primary cause of most hep C infections.

Doctor, what role do you think the Federal Government should play in ensuring that people with opioid use disorders are linked to screening and treatment of hep C and HIV?

A more narrow question. What do you think the Federal Government should do to prevent people who inject drugs from landing in jails and further escalating the hep C crisis in those facilities?

Dr. MCCANCE-KATZ. We do recommend integrated care. We have been focusing on—as an agency, we have focused on integrated care, both bringing primary care into our community health treatment programs and bringing behavioral health care into primary care.

We know that people—we advise that people should be screened. We've supported a program called Screening: Brief Intervention Referral to Treatment, for years now. We've done, I think, a pretty good job of getting that established nationwide, and by bringing those resources together we can identify early on, and hopefully before people get to the point of injection drug use, their needs for care and get them to the appropriate interventions.

Senator YOUNG. Do you have thoughts about local jails and things at the Federal level—I understand there are jurisdictional issues—we might be doing to help address what I would characterize as a crisis?

Dr. MCCANCE-KATZ. I would just say that addiction is not a crime, and so we have programs that we support throughout the Nation that work toward establishing drug courts and ways to divert people from the jail system to treatment, and we continue to

support those, and Congress has been very helpful to us in allowing us to do that.

Senator YOUNG. Thank you. I think I'll submit all these questions to each of you and give you the opportunity to respond as well.

Dr. Gottlieb, I'd like to move to you, sir. To encourage the development of new treatment options like non-opioid alternatives, you have committed to using all the agency's authorities, including fast track and breakthrough therapy designations. Now, during your confirmation hearing, you and I discussed the imbalance in the application of expedited programs like those I just mentioned across the various review divisions of the FDA. What sort of progress in your short term there have you been able to make to ensure the FDA reviewers in all divisions are using the tools available to them, sir?

Dr. GOTTLIEB. Thank you for the question. Within the context of the work that Dr. Janet Woodcock is doing with respect to the Office of New Drugs and some of the changes that she's implementing, structural changes that she's implementing, I think we have been able to bring more uniform adoption to certain policies, like the application of expedited programs, across different therapeutic areas. We're moving in that direction, in the direction you and I discussed.

With respect to this clinical area particularly, there have been drugs for the treatment of pain that have been granted fast track status. There are no publicly acknowledged drugs that have been granted breakthrough therapy, but we would certainly be willing to grant a drug that meets the legal criteria breakthrough status, targeted toward the treatment of pain. If there were such drugs that existed right now, I wouldn't be able to speak to it, but we would do it.

Senator YOUNG. OK. I'm going to ask this question, ask one of you to pipe up if you feel impelled to do so. If you don't, I'll call on one of you.

It relates to translating medical research to medical practice. I found out some years ago, when I was a member of the House of Representatives, it takes an average of 17 years for research evidence to reach clinical practice. Hoosiers don't have 17 years to wait for the best practices to be implemented in fighting and prevention of addiction.

How are you all working together? Are you working with medical associations—maybe you could speak to that—to ensure that the best practices are indeed translated into clinical practice? What can be done, if anything, by your agencies or Congress to speed up this research-to-practice pipeline?

Dr. MCCANCE-KATZ. We do work with collaboratively—SAMHSA works collaboratively with NIH. I think one of the real advantages of having an assistant secretary as the head of SAMHSA is that I can work collaboratively with other departments. Dr. Collins and I are already talking about the kinds of collaborations that will help us to disseminate best practices to communities.

I'm going to say something else that I think needs to be done more of, that SAMHSA will start to do this, and that is you have to bring people together that have the right kinds of skills. What

I mean by that is you have to bring people who are experts in the treatment of various disorders, in this case addiction, an opioid use disorder, and our State officials, because those are the people that are making the decisions about how practice is done in the various states and jurisdictions.

When we bring these folks together, then we should be able to better disseminate practices.

Senator YOUNG. Thank you. I'd just note—and I know I'm over time. Thank you so much. As I travel around my State, it's pretty clear to me that no one is certain as to what current treatments and outreach strategies have been rigorously tested and evaluated and which ones are best, which ones they should implement. I'd like to dialog with a number of you about that serious issue.

Senator MURRAY. [presiding] Thank you.
Senator Bennet.

STATEMENT OF SENATOR BENNET

Senator BENNET. Thank you, Madam Chair. Time, I know, is short because we're voting. I want to thank you and Chairman Alexander for holding this important hearing on a set of issues that touch every corner of our communities.

Last year there were 442 deaths in Colorado related to opioid overdoses. That includes overdoses from prescription opioids and heroin, as well as synthetic fentanyl. That's more than quadruple the number in 1999. Our State is trying to make progress in turning the clock back by provider education and prevention, but we have a lot more work to do.

Dr. Gottlieb, thank you for coming to Colorado. You're able to see some of that work in our emergency rooms and treatment centers when you visited in August. I'm grateful that you came to Colorado, and I want to thank all the witnesses who are here today for your work.

I also want to talk about jails. Jails in Colorado have been overwhelmed by the influx of people suffering with opioid addiction. Recently in Fremont County, Colorado, a rural part of our State, 100 out of 115 inmates were dependent on prescription opioids or heroin. I was in another jail in Colorado where the sheriff took me to the cells and he said, "I want you to see this," and he went and opened up the door. I said, "What do you want me to see?" He said, "I have women in my jails. I've never had women in my jails before," two cells of people addicted to opioids, because these folks immediately lose Medicaid coverage. Counties are struggling to find addiction treatment and the ability to manage their care. We heard from county administrators, especially in rural counties, like in Alamosa, how difficult it can be to provide this care when Medicaid is immediately terminated and they've got to stretch their budget somehow to meet this need.

Dr. McCance-Katz, I wonder, in your role in SAMHSA, you oversee the administration of grants to close gaps in care, although not specifically for these settings, jails. I wonder what we can do to help states manage this population of patients who are essentially locked out of access to treatment.

Dr. MCCANCE-KATZ. Absolutely, it's a huge issue that people lose their Medicaid as soon as they go into any kind of incarceration.

We do have programs at SAMHSA where, as I mentioned before, we divert people through drug courts into treatment rather than into jail. We also have offender reentry programs. We don't have a lot of funding for that right now, but we do have those programs going on in various parts of the country. We try to promulgate best practices from those programs.

There also is a large movement within the correctional system where people are being identified as opioid addicted and evaluated and started on medication-assisted treatments and hooked up to treatment as they're leaving the jail or prison, and that is a program that I hope we will be able to expand going forward.

Senator BENNET. Do you think it makes any sense, though, for us to be cutting off Medicaid when you have a population in a jail where 100 out of 115 people are addicted to opioids? Does that make any sense for us to cutoff their access to treatment or their funds?

Dr. MCCANCE-KATZ. Senator, I would say that that is a decision that would need to be made at the level of Congress and the President, and within HHS we will implement whatever Congress and the President agree upon. At this point, it is as you say.

Senator BENNET. Is there anybody on this panel who thinks that a jail cell is an appropriate place to do treatment for opioid addiction, or a preferred place to do treatment for opioid addiction?

Dr. MCCANCE-KATZ. It absolutely is not the place to do treatment for opioid addiction.

Senator BENNET. Dr. Collins.

Dr. COLLINS. I certainly agree that addiction is not a crime. It would be worth mentioning that we have an opportunity with those who have ended up in this difficult circumstance, in jail, that once they have become opioid free during the course of their time in jail, there's an opportunity to help them maintain that State by injectable naltrexone, which currently lasts about a month. We've done studies to look and see what the success rate of that is in terms of keeping people from slipping back into addiction, and it's substantially better than some of the other alternatives.

One of the things we're working on right now with industry as a partner is could we come up with an injectable form that lasted for 6 months, because that would keep the momentum going in terms of somebody reentering the workplace and finding themselves on a better path. A month is good; 6 months would be a lot better.

Senator BENNET. I understand you are working on that, and it cannot come soon enough, so I thank you for that.

Senator MURRAY. Thank you.

Senator Collins.

STATEMENT OF SENATOR COLLINS

Senator COLLINS. Thank you very much, Madam Chairman.

You like hearing those words, right? Again.

[Laughter.]

This morning's headline in the largest newspaper in the State of Maine says this: "Portland, Falmouth Officials Deliver Bleak Report on Opioid Crisis: It's Getting Worse." This headline disturbed me greatly because I feel there's been so much focus on the opioid

problem, the epidemic that is tearing apart our communities and costing the lives of so many. We've passed legislation. We've increased funding. We recognize that you have to focus on education and prevention, law enforcement, treatment and recovery. Yet we seem not to be making the kind of progress that we need to make.

Already, for the first 6 months in the State of Maine, 185 people died from overdose. That means that, if that number remains stable, we're going to have a very similar death rate, 376 deaths, that we did last year.

The CDC has put out my favorite chart which shows that for every one overdose death, we have an enormous problem underneath.

My question to each of you is what more do we need to do? Why are the efforts that everybody is making and working so hard not working?

Dr. GOTTLIEB. I'll just briefly comment, Senator. I appreciate the question. I think that one of the places where FDA can have an outsized impact—and we all have different roles to play—is trying to reduce the rate of new addiction by taking steps to decrease the overall rate of exposure to opioids. We know this comes down to math. A certain percentage of patients who are exposed to opioids will become addicted, and the key to reducing the rate of new addiction is to reduce overall exposure.

We're going to do that, first and foremost, by changing prescribing behaviors among physicians. Most people, as I mentioned, who become addicted will become medically addicted. They'll move on. Oftentimes it will be for an immediate-release formulation of a drug, Vicodin or Percocet. They'll move on to higher-dose formulations, and eventually the low-cost alternative, which is street drugs.

We've taken steps in recent months to increase provider education, for example around immediate-release formulation drugs. We're looking at steps we can take to try to limit dispensing. I mentioned the proposal that we put out recently asking for comments from the public around this, and we're also looking at what we can do with respect to mandatory education. The key for us is to try to reduce overall exposure.

Senator COLLINS. I think you're absolutely right, that we have to put more effort at the front end of this problem and reduce access by changing prescribing habits, and particularly by allowing partial fills, by training physicians that they should only give 10 pills, not 50, that sort of thing.

Dr. Collins, do you have anything to add?

Dr. COLLINS. I totally agree with what my colleague has just said. I also want to say we really need to push them into the space of having alternatives to opioids for those 25 million people who do suffer daily from chronic pain. We can't leave them hanging with nothing to help them, and what they have right now is not helping them with chronic pain where opioids are really not the appropriate treatment. Yet, we do not at the present time have great alternatives.

Certainly from NIH's perspective, putting our foot on the accelerator, working with industry in an unprecedented way to try to cut in half the time that it takes to develop that next generation

of non-addictive but highly effective pain medicines is something that we now want to see happen.

We're currently spending about \$116 million a year on opioid use. We think that needs to be greatly increased by a factor of 4 or 5, and together with industry we can do something here to speed up this process of coming up with better alternatives.

Senator COLLINS. Thank you.

Dr. Houry.

Dr. HOURY. I would add that I think Washington has been one of the states that has really integrated their prescription drug monitoring programs with their ER records, and they've seen a lot of proactive reporting. We're preventing those people on that pyramid from getting addicted. It's identified people who are taking high-dose morphine doses and then sending alerts to physicians so they know to intervene and consider tapering that patient off.

The flip side, too, I would say, is really to do more surveillance. We just started in Maine our syndromic surveillance, where we're using what we use in bioterrorism where you look at EMS or emergency department data to look at new trends, and this is how Maine and many other states here on this panel are being able to detect new community outbreaks. We did that in Georgia and we picked up five overdoses from the fake Percocet pills. Now you know where in communities to intervene more quickly.

Senator COLLINS. Thank you.

Dr. McCance-Katz.

Dr. MCCANCE-KATZ. I agree with everything that my colleagues have said, but I'm also going to say that we still do not have adequate access to treatment, to evidence-based treatment for people who need it. As long as that situation occurs, we're going to continue to have the terrible kinds of tragedies that are the opiate epidemic.

We need more specialty care. We need integration of addiction treatment into primary care. We need to use our certified community behavioral health centers to provide addiction treatment. We need to educate practitioners starting at the undergraduate level—medical school, nurse practitioner school, physician assistant school. That's just my view. Everybody should come out being eligible, having gotten the education, to get that data waiver.

They need more than classroom experience. They need practical experience. The State that I come from, Rhode Island, we had started a program where clinicians could come to our Centers of Excellence to get that practical experience to give them the confidence to provide that care in their communities. We need to be doing all of these things.

Senator COLLINS. Thank you.

The CHAIRMAN. [presiding] Thank you, Senator Collins.

Senator Murray.

Senator MURRAY. Thank you.

We know that 2 million people suffer from opioid addiction nationwide, and there are targeted approaches like safer opioid prescribing practices and medication-assisted treatment, important parts of it. I hear so often that it's really important to make sure that everyone has access to appropriate health care to prevent and treat substance use disorders.

Medicaid expansion has really been life-saving for a lot of people who suffer from opioid use disorder. In my home State of Washington, we have 30,000 newly eligible enrollees who are now accessing substance use disorder services because of Medicaid expansion. That's why it's so troubling, quite frankly, to see so often this going after Medicaid.

I wanted to ask you, Dr. McCance-Katz, do you think coverage of preventive and treatment services for substance use disorders, including through Medicaid, is important to combatting the opioid crisis?

Dr. MCCANCE-KATZ. Yes, I do.

Senator MURRAY. I think that's really important, a short statement but really important, and I hear it from everyone, so thank you.

The President's budget proposal cuts SAMHSA's budget for preventing substance use disorder. I'm sure you know that. How would those cuts affect your ability to serve affected people by this crisis?

Dr. MCCANCE-KATZ. Well, we would have to, whenever we get the appropriation, we would have to look at it and determine what programs would no longer be able to be implemented as a result. We look to Congress and the President to come to an agreement that we hope will allow us to continue our programs.

Senator MURRAY. OK. Well, I think this is really important, and we need more support, not less, and I've been working on the Appropriations Committee to increase our prevention activities, and I hope that we get support for that.

I wanted to ask all of you, as you all know, this Committee worked very hard to pass the 21st Century Cures Act, which among other things provided a billion dollars, as you know, for funding for our states to respond to this crisis. I was really pleased that my State, Washington State, has used their part of this funding to partner with Washington State University to analyze evidence-based practices related to youth misuse and abuse of prescription drugs, including opioids.

Can each one of you speak about how your agencies are currently using evidence-based practices for prevention and treatment, and the importance of the Federal Government promoting the use of evidence-based policies?

I'll start down here with you, Dr. McCance.

Dr. MCCANCE-KATZ. SAMHSA has a number of programs that address both prevention and treatment. Our block grants include a 20 percent set-aside for prevention interventions. We work closely with experts in the field and the states to provide them information and dissemination of best practices regarding prevention interventions, as well as for evidence-based treatment of substance use disorders.

I think that your point is a very important one about youth. We learned from our National Survey on Drug Use and Health this year that transitional-age youth are really struggling both with increasing amounts of substance abuse, including alcohol, by the way, very troubling, but also with increases in depression and suicidality. One of the things that I've done since starting at SAMHSA is that we have put together a project that will bring ex-

perts together to better inform how to address mental health issues and substance issues in transitional-age youth.

Senator MURRAY. OK.

Dr. Houry.

Dr. HOURY. One of the things we're doing is we're working through the Heroin Response Strategy, so on the ground with a lot of the high-intensity drug trafficking areas. We're on the ground with public safety helping them develop public health interventions, things like academic dovetailing, where if there's a high prescribing area, you send somebody to counsel the physicians and learn more about that.

We're also looking for more warm handoffs. If there's an overdose, the person is then linked to services, looking for ways to really integrate the primary care practices and prevention efforts along with public safety.

The second thing is using the best available evidence as we have it, like when we developed our Chronic Pain Guideline, and making sure that then we can translate it into tools for providers. We have a mobile app, now downloaded 17,000 times, that providers can use the best available research to integrate into their own practice.

Senator MURRAY. Dr. Collins, we have about 7 seconds.

Dr. COLLINS. Very quickly, the NIH, of course, is in the business of generating the evidence, and there's a lot we still need to know.

Very critical, we do not know the appropriate duration of MAT that provides the opportunity for people to actually remain free of opioids. That is a lot longer than many of the programs currently offer.

I would also say we need to know more about non-drug approaches to treating pain, and that's another way to keep people from getting addicted to opioids. We just started an \$81 million program with the VA and the Department of Defense to look at this in terms of returning veterans and figure out what other kinds of things, such as transcranial magnetic stimulation, acupuncture, and so on, might turn out to be quite effective in this space and would keep people from getting into this terrible downward spiral.

Senator MURRAY.

Dr. Gottlieb.

Dr. GOTTLIEB. I can do this in negative 15 seconds.

[Laughter.]

I'll mention three things we're looking at right now.

We're evaluating the prescribing guidelines around current treatments, currently medically assisted therapy. We recently updated those guidelines to recommend, among other things, that the continuation of buprenorphine in particular might need to be done in perpetuity, so changing the duration of use.

We're currently reevaluating the guidance that we give to drug developers around the development of different MAT. We'll be issuing soon, in some timeframe—I don't want to say soon, but within the next year certainly—updated guidance with respect to the development of MAT.

We're also looking at steps we can take, and we've been taking active steps to try to bring naltrexone over the counter, naloxone over the counter—excuse me—and also what we can prescribe around the co-administration of that with opioids.

Senator MURRAY. OK. Thank you all very much.
 The CHAIRMAN. Thank you, Senator Murray.
 Senator Cassidy.

STATEMENT OF SENATOR CASSIDY

Senator CASSIDY. Thank you all.

First, let me address a couple of comments Senator Murray made suggesting that the latest Republican effort to do something about Obamacare has cut resources. Actually, for non-expansion states, there would be billions more. For example, Senator Baldwin's State of Wisconsin would have hundreds of millions, if not billions more to provide services for those who otherwise would not have. You can say that for every single non-expansion state. For expansion states, they're typically held harmless.

Also, states are given the flexibility to move resources where they needed to be used. Folks who shake their head no haven't read the bill, and I say that not to be rude but just to point it out.

Second, panel, thank you for your hard work.

Dr. McCance-Katz, I understand that when I speak to practitioners of treatment programs, that there is great variability in outcomes. Some do it really well, some do it not so well, and a cynic would say some do it for profit but not for the patient's benefit. You nod your head gently yes, and that's what I get whenever I speak.

Is there a way to monitor the outcomes data associated with these different treatment programs to see which are doing it well and which not? I understand that SAMHSA has client-level data called Treatment Episode Data Sets. Can this be aggregated into a per-facility assessment? If not, why not?

Dr. MCCANCE-KATZ. The Treatment Episode Data Set is a data set where the various facilities actually enter their data, and states can get information on those facilities, so that is possible to do. If there's any confusion about it, we are ready and able to help with doing that.

Senator CASSIDY. Now, you say states could do that. I'm told that some of the insurance companies—someone mentioned United. I don't know if it is United, but it does a very good job of finding out, based on outcomes data, which treatment center is doing well, which is not. Now, we're spending lots of money on this. I guess as a guy who wants to see these patients treated, I know without outcomes data we may not be doing what we should be doing with scarce Federal taxpayer resources.

Why isn't this just kind of automatic? If a State is applying for a grant, you have to show that you are monitoring outcomes data for treatment programs, and those that are doing well expand it, those not so well correct it. I'm asking that.

Dr. MCCANCE-KATZ. What I would say is that with the 21st Century Cures Act and the STR money, we are starting to work with the states on exactly those kinds of issues, and we will be asking them to look at those kinds of data, and they should be able to do it with things like TEDS.

As far as the insurance data goes, this is something that I could look at with my staff to find out whether there's a way we can access that data through an agreement.

Senator CASSIDY. You know, after Hurricane Katrina, I found that the people who were aggregating all this data, suddenly the doctor in Oklahoma could access the records of the people in Louisiana. It was opened up. Now, I guess what I'm asking, maybe Dr. Houry for you, is there any kind of—does DEA or do you have access to these prescription data clearinghouses? It's my experience that there are certain physicians that are high-intensity prescribers. Dr. Gottlieb mentioned it's just math. If somebody is writing higher scripts, there's going to be more people addicted. It seems like you should be able to figure out, whether it's a pain doctor or a cancer doctor, or whether it's an FP who is just moving between states with a pill mill, do we have access to that? If not, what do we need to give you access to it?

Dr. HOURY. Each State owns their own PDMP, or prescription drug monitoring program data. One of the things we've been doing is working with states to allow them to identify these prescribers and working with medical boards, because it's really driven at the State, not the Federal level.

Senator CASSIDY. I thought this was a DEA function. Is this entirely State, or is this also a Federal role?

Dr. HOURY. The prescription drug monitoring program can be owned by a board of health, a board of pharmacy. It can be owned by law enforcement. It varies who it's owned by. CMS, though, in partnership with CDC, this past year did issue letters to the top 5 percent of prescribers under Medicare. There's different ways we can do it at the Federal level. It's usually at the State level, and this is what we're working with State medical boards and with our State grantees to address.

Senator CASSIDY. What is the progress in that? Because when I used to write to controlled substances, you had my DEA number. You knew exactly it was me, and you knew my practice just by looking in the phone book. When I talk to drug detail folks, they say, oh, you know who the pill mill is because you go in and it's somebody writing a \$500 check for a 5-minute visit and walking out with a big prescription pad, as opposed to a pain doctor who really does it right and you have a waiting room full of patients waiting to be seen. I'm thinking, well, the drug detail person knows it; how come we're having such a hard time figuring it out?

Dr. HOURY. DEA is the one that monitors it for illicit use. What I would say is on our website we now list by county prescribing rate. Anybody can go in and see where are the highest prescribing counties. That way state health departments can really intervene and see where the highest prescribers are.

Senator CASSIDY. Do we have a sense—I'm sorry, I'm almost over my negative 15. Do we have a sense of whether or not those counties are actually doing that? Because we have this data. We should be having those pill mill docs.

Dr. HOURY. I think it varies on the State. I know that actually Rhode Island was one of the ones that was doing academic detail, and New York State as well, to where they were identifying the high prescribers and sending them letters and visiting to go over evidence-based practices.

Senator CASSIDY. OK. I yield back.

Senator MURRAY. [presiding] Thank you.

Senator Murphy.

STATEMENT OF SENATOR MURPHY

Senator MURPHY. Thank you very much. Thank you all for being here.

Let me just note that Dr. McCance-Katz is our first Assistant Secretary for Mental Health and Substance Abuse. This Committee, in a bipartisan way last year, passed the Mental Health Reform Act, which eventually ended up part of the 21st Century Cures Act, which created the position, and we were all very excited to support Dr. McCance-Katz for that position. It's kind of wild that we did not have someone at HHS for all those years who was focused at the top level of leadership on these questions of mental health and substance abuse. We're very glad you're here.

Senator WHITEHOUSE. She's from Rhode Island.

Senator MURPHY. She's from Rhode Island.

Thank you all for being here.

I want to pose this question to Dr. Gottlieb and Dr. Houry to talk a little bit about what the data tells us with respect to the progress we're making on prescription patterns. For years, pain medication scripts were going up and up and up, and what I've seen the last few years tells us that we're finally bending the curve downward. SAMHSA has a document out that suggests that maybe the actual number of pills that are being prescribed may not be heading in the right direction as fast, but overall the number of prescriptions are going down. As you've all noted, the epidemic continues to get worse.

I think a lot of us have hung our hat on this idea that if you get hold of the over-prescription, that you will make a big impact ultimately on the number of overdoses and addictions, but that doesn't seem to be the case.

What does the data tell us about how we're doing on the over-prescription of medications, and why is this heading in the wrong direction if we're finally getting a handle on pain meds?

Dr. HOURY. What I would say is we are starting to go in the right direction. The amount of opioids prescribed has gone down about 10 to 15 percent. If you look at where we are, though, compared to 1999, we're still three times what we were. The slope is going down, but there's still tremendous progress that needs to be made.

The second thing is I've actually got a paper coming out next week in JAMA that looks at how there's not a huge increase in the number of people injecting drugs, but what we're seeing is the fentanyl that's on the streets is very potent, and that's what's driving a lot of those fatalities. It's the potency of the drug. We're seeing that people are still continuing to get addicted to opioids in the first place and then move on to heroin and fentanyl. Now they're moving on to something that's even deadlier.

Senator MURPHY.

Dr. Gottlieb.

Dr. GOTTLIEB. I would just add—I agree with everything that was said. I would just add I think the scripts are a lagging indicator to the impact because people have become addicted and they're now to the point where they're moving on to low-cost alter-

natives, which are the street drugs that are increasingly laced with fentanyl and other things that can cause great harm.

I'm also reluctant, quite frankly, Senator, to draw firm conclusions from the data points we have. It's encouraging that scripts are declining. I think we need some sustained data points to conclude that we've really started to impact prescribing patterns.

Senator MURPHY. Dr. Collins, what are the additional avenues for research on pain management? Drugs are not the only way to manage pain, and yet insurance companies seem to drive payment toward prescriptions rather than to other methods that maybe in the short term are more expensive but in the long term may keep you off of these dangerous drugs. What are the additional avenues we need to do to help give doctors and potentially insurance companies some different ways to manage pain other than the drug?

Dr. COLLINS. It's a great question. I think the pain clinics that we used to have maybe 20 years ago which were multi-modality efforts to try to provide opportunities for people with chronic, significant pain ways to manage their pain gave a much better opportunity for something other than an opioid prescription to be the answer. Those pain clinics are harder to find now, in part because they weren't particularly well compensated for the doctors who were spending a lot of time with each patient trying to figure out what's the optimum approach.

We do know that for people with chronic pain, if you work through this carefully, there are other alternatives such as, in many cases, cognitive behavioral therapy. Chiropractors, in fact, do provide benefit to people with low back pain. We've seen that. The opportunity to use such things as acupuncture, certainly transcranial magnetic stimulation, the ability to do various local kinds of nerve blocks for somebody who has a very localized form of pain, all of those do, in fact, have evidence behind them, but there are relatively few practitioners now that have that full array of options available to them. All too often, the answer is to write that opioid prescription and send the patient out again.

Senator MURPHY. I would just very quickly note, I think that is, in part, because of the problem you identified, which is insurance reimbursement. Insurers are not willing to reimburse either for the scope of services or for the amount necessary to bring providers in, and it speaks to the way that risk allocation simply does not work for this population, because if you don't keep someone off of this pathway to addiction, you may not as the insurer actually bear the responsibility, because the cost to the individual is so catastrophic that they are likely going to come off your insurance plan because they end up in jail or they end up homeless or they end up out of work.

We've got to have a conversation about how you structure risk allocation here to promote insurers to pay for the stuff that actually keeps you off of that pain medication pathway.

Thank you, Mr. Chairman.

Senator YOUNG. [presiding] Thank you, Senator Murphy.
Senator Kaine.

STATEMENT OF SENATOR KAINE

Senator KAINE. Thank you, Mr. Chair, and thanks to the witnesses.

In Virginia in 2016, 1,460 people died of overdoses, and that was a 38 percent increase over the previous year, even while everybody was paying attention to it. We've had a Governor's Emergency Task Force. We've been paying attention to it. Eighty percent of the deaths were overdoses related to opioids, and a significant reason for the increase is the increased presence of fentanyl, more potent opioids that are killing people.

You are the pros, and so I want to ask you a big-picture question. When John F. Kennedy was president he said we're going to put a man on the moon by the end of the decade, and that was bold and audacious. A lot of people thought it wasn't possible, but we organized an awful lot of efforts around it, and we not only put a man on the moon but some of what we did to organize efforts produced all kinds of other great scientists and mathematicians, and even Tang orange drink, which I still enjoy.

[Laughter.]

Senator KAINE. I was with a group of technology leaders recently, and I asked them what should we be saying we want to do by 2030? As you might imagine, technologists, many of them said low and no-carbon energy, various strategies for dealing with climate, cures for cancer, but somebody said we should set the goal of being addiction free by 2030. That's not what I expected a technologist to tell me, but I was kind of interested and struck by that.

I guess what I want to ask you first is you should set a bold and audacious goal that is at the very edge of human ability to reach but reachable and not one that is laughable. Would setting such a goal, addiction free by 2030, be doable even if incredibly difficult, or is it too far beyond our capacity so it's sort of not doable and hence not worth making?

Dr. COLLINS. Well, I'll start. I love bold and audacious ideas, and that has served us well not just with going to the moon but also with other things like the Genome Project and now the Cancer Moonshot and other things. I do think a combination effort represented by the folks at this table, and many others, is just what is needed, and let's be bold about it.

Certainly from NIH's perspective, there are things that we are thinking about, although they are hard to imagine pulling off without a lot more resources, the idea of building a partnership with industry to come up in a short time with better alternatives for medication-assisted treatment, with better antidotes for overdoses that actually work for people who have fentanyl or carfentanil in their system where the current Narcan doesn't always seem to have quite the long duration and potency it needs.

Particularly to develop this new generation of non-addictive but highly potent pain medicines where we have good drug targets lined up. We're years away from actually being able to bring those to the clinic, even with lots of help from FDA and speeding that regulatory process. We need to actually speed that up, put our foot down on the accelerator. That's going to take hundreds of millions of dollars over what's currently going into it.

Then finally I would say it would be great if we could set up right now a few demonstration projects, maybe two or three states that would be put forward as the place to try to see could we actually, if we had all hands on deck both in terms of treatment and prevention and research, put the whole enterprise together in one coordinated way and see what we could achieve in terms of really changing the whole landscape of how we prevent and treat this.

Dr. GOTTLIEB. You talked about an addiction-free society. I fear that people will always find things to abuse, but I think we can solve this problem. It's going to take a lot, and I think first and foremost—and Dr. Collins has talked about finding non-addictive alternatives for the treatment of pain. I think we also have to sharply change prescribing patterns. A whole generation of physicians, my generation, was taught to treat pain very differently than the generation before me, and probably the generation that's in school right now, and it's going to take a while to reeducate us.

The final thing I'd say is—and we haven't focused as much on it today—I think we need to do much more to enforce the border and look inside the international mail facilities at how we're pulling packages and examining them to keep dangerous drugs out of the country. I will tell you I visited the IMF in New York, and the thin blue line between safety and risk in these IMFs is very tenuous, and it's unrelated to anything with respect to the work ethic of CBP or FDA and those facilities. They work very hard. This is simply a matter of resources, and I think we need to take a look at that.

Dr. MCCANCE-KATZ. Senator, what I want to say is that I don't know that we can eliminate addiction by 2030, but I do think we can remove the stigma and make it just like any other disorder or disease so that people can get the care that they need. We need to do that very quickly. We can certainly do it by 2030.

Dr. HOURY. I agree. I think we need to balance the treatment with the prevention. I think right now there's a lot of folks—absolutely what we need to do is treat those people who are addicted. When you look at the pipeline and you see that right now there are 92 million U.S. adults who took a prescription for opioids in the last year, I'm worried about that 3 percent that's going to go on to get addicted. How do I prevent them?

Two months ago when I was in the ER, I saw a woman who overdosed and passed away. I looked through her record and saw that she had so many visits to the emergency department in the years prior, and if we could have prevented at any step along the way, we would have prevented that addiction, and we ultimately would have prevented her demise. To me, that's the value of being addiction free by 2030, is preventing people from getting addicted in the first place.

Senator KAINE. Mr. Chair, thank you.

Senator YOUNG. Thank you, Senator Kaine.

Senator Whitehouse.

STATEMENT OF SENATOR WHITEHOUSE

Senator WHITEHOUSE. Thank you, Chairman.

I'd like to ask the panel's help with a couple of things as we go forward. We've talked about prescription drug monitoring pro-

grams, the PDMPs. The problem that has long existed with them has been a lack of integration between states, a mish-mash of different reporting requirements, and a poor or fraught relationship with law enforcement.

We got some additional money for grants to support improvements in the PDMPs. DOJ is going to operate that, but I do think they will be looking for interagency support on all of that, and I hope that you will support PDMP grants that do a better job of crossing State lines. It is ridiculous for somebody to be able to go from Woonsocket to Attleboro and have it not picked up across the Rhode Island-Massachusetts border.

We just went through a terrific fight at the State legislative level between the doctors and law enforcement about law enforcement access to PDMP records. In part, that was a fight because there had been such weak policy work done at the Federal level to sort out what makes sense for law enforcement to have and what maybe doesn't make sense for law enforcement to have.

I hope that those two areas will be a focus of yours if you're consulted and as you deal with PDMPs.

The second thing has to do with the next half-billion in Cures Act money. I hope that all of your agencies will vigorously support making sure that that gets into the December funding bill. We shouldn't have to wait around for that.

I hope also that you will support efforts here to, in the terms and conditions for the grants that the \$500 million will flow out into, try to encourage alignment with the goals of CARA. We sent a big bipartisan signal with that. It doesn't have to be a hard stop, but it ought to be part of the consideration by which grant applications are measured.

Another one would be a higher focus on the extent to which particular States have been impacted by the problem. We're going to try to make sure that that gets into the funding measure, but I really think that those are important considerations, and I hope that we will have your support on those as we lobby for them toward the December spending.

The last thing, and this will be more in the nature of a question, you can have all kinds of medically assisted treatment, you can have all kinds of experts who are properly trained, but if people don't have access to the treatment, then it really doesn't matter. You've got to catch them. The two places where I think we have the greatest frustration are emergency rooms. We just did a good program in Rhode Island so they actually do connect, and you don't leave an emergency room if you come in for an overdose without a treatment coach, without a recovery coach. The second is people who volunteer, who come in and say I'm desperate, I finally need treatment. You can't tell somebody like that, sure, come back Tuesday 2 weeks from now and we'll be able to see you. You might as well tell them to go—well, I won't use the term.

I hope that we can think of ways to try to catch people when they're most amenable, because they've just had a horrible experience with an overdose and maybe had their lives saved in the ER. Part of that is the recovery coach. Part of that is also breaking through HIPAA. You know, it is bonkers that a mom and a dad may not know that a 22-year-old or 24-year-old child has been in

and out of the emergency room for overdose. That is not what HIPAA was intended to do.

If you could give us some advice on ways that we should be fixing that, I know my time is running short and it's a long thing, so feel free to make that a response for the record. We need to fix this. We cannot have people turned away at their time of openness to this or sent back out into the street after they've turned up in an ER.

Dr. McCance-Katz, you've got Rhode Island privilege to answer.

Dr. MCCANCE-KATZ. I'm going to talk about Rhode Island, Senator. We do have a program in Rhode Island that places recovery coaches with people who have overdosed. Here's the other thing that we're doing in Rhode Island that we will start talking to the rest of the states about. Here's what we've learned, and I know this because I have worked in Rhode Island hospital ED with some of these folks, and what we see is that when they come in and their overdose is reversed, one of the things we need to be aware of is that's often not the time they're interested in treatment because they're going through withdrawal and they really want to get out of the ED.

What we are doing in Rhode Island is asking people to sign a consent form so that our recovery coaches can contact them a few days later, and we think that that is going to make a big difference in getting people to the care they need.

Senator WHITEHOUSE. I'm familiar with that. I just want to see it more of a national model.

Dr. MCCANCE-KATZ. That's where SAMHSA comes in, and we will be disseminating those kinds of models, absolutely.

Senator WHITEHOUSE. Thanks.

Senator YOUNG. Thank you, Senator Whitehouse.

Senator Franken.

STATEMENT OF SENATOR FRANKEN

Senator FRANKEN. I'm going to go to a different line of questioning. To Senator Whitehouse's last question about being able to get people into recovery when they're at that moment, there aren't the beds, and we have to make sure that there are. That's another piece of this.

I want to talk about my experience in my state within the Native American community. Neonatal abstinence syndrome has more than doubled in my state in the past 4 years, and Native American communities have been disproportionately affected. This condition, which is obviously related to maternal substance use during pregnancy, is characterized by feeding difficulties, hyper-irritability, seizures—you had this in your testimony, doctor—all these difficulties.

Last year, Native American babies within Minnesota's Medicaid program were 10 times more likely to be born with neonatal abstinence syndrome than white children. For several years now, we've heard a growing and urgent cry for help from clinicians and tribal leaders about the epidemic and in particular its impact on Indian Country. That's why, in the Indian Affairs Committee, I asked Indian Health Services Acting Director Admiral Weahkee how the

Administration could address this issue and the opioid epidemic in Indian Country more broadly, and he had two recommendations.

First, bring tribes to the table. Second, consider community and culturally specific drug abuse prevention and treatment programs. Yesterday I sent a letter to Governor Christie, who is the chair of the President's commission on combatting this and asking him to consider these recommendations and specifically address how to combat this crisis in Indian Country in his final report to the President.

My question for all of you, and I'd like to begin with Dr. McCance-Katz, can you speak to what your offices are doing to address substance use disorders, particularly opioid addiction, in Indian Country? As part of your answer, can you describe how you're engaging with tribal communities and working to develop and implement culturally specific programs?

Dr. MCCANCE-KATZ. SAMHSA has a branch that is dedicated to issues in tribal communities. We're very well aware of the issues around the need to be culturally sensitive to Native American groups and to support their ability to deliver those services that are specific to their people.

SAMHSA just yesterday posted a funding announcement to fund an addiction technology transfer center that is specific for Native American people, and we will be awarding that very soon.

In addition, we also have the Behavioral Health Coordinating Committee for HHS has worked on a plan to identify what the needs are for mothers and for infants that are opioid exposed, and the recommendations have come forward, and we are in the process now of putting together a plan to address what's in that report. That should be coming in the next few months.

Dr. HOURY. Some of the things we have done is we worked first with the Indian Health Service to have them adopt the CDC guideline in all the IHS clinics, so now they have the same evidence-based treatment. Then I went to the Northern Cheyenne reservations last month and spent time with the tribes to see how we could best provide technical assistance. To your point, that is really using their practices. We have a workgroup at CDC focused on American Indian tribal populations so that we can really have, I think, much more culturally aware treatments.

The other thing I would say is we participate in the Epi-Aid, or the outbreak investigation in Minnesota to look at some of the substance use issues that some pregnant women were having that were Native populations. Then we also have a program at CDC called Indian Health and Wellness, which is a very holistic approach to chronic diseases, as well as some substance issues, using culturally informed practices.

Senator FRANKEN. OK.

Dr. COLLINS. Certainly, the National Institute on Drug Abuse, directed by Nora Volkow, has had a particular interest in trying to reach out to Indian communities. We're running several research projects to try to understand the differences and similarities about how the opioid crisis has affected these populations, with full engagement of tribal members because we've learned over many years that this is a circumstance where we need to do a lot of listening and not quite so much talking.

Out of that has come, I think, some suggestions of different ways to try to achieve better prevention strategies, and I believe that maybe as soon as next week Dr. Volkow is meeting with the Chief Medical Officer of the Indian Health Service to discuss additional ways that we might get engaged in trying to help out with this very serious problem.

Dr. GOTTLIEB. I'll just briefly note that we're taking steps to broaden inclusion criteria as part of our mandate under 21st Century Cures, and that includes culture-based criteria. We also certainly have taken and will continue to take steps to encourage the study of treatment in the prenatal setting, and particularly treatment for addiction.

I will just quickly point you to a solicitation that Dr. Houry put out in July or August, recently, for a very large study that would look at MAT in a prenatal setting, and that may be another opportunity or vehicle to address some of these issues.

Senator FRANKEN. I'm not going to ask another question. I just want to bring up the connection between trauma. In Indian Country there's all kinds of trauma. There's historical trauma, which people talk about all the time, which is very real, but there's also the trauma of having a parent who has had addiction, domestic violence, just poverty, being exposed because of housing in Indian Country, being exposed to other families' traumas or behavior that is traumatic.

This will be for the record, and I'm done. Dr. Collins, I'd love to see the research between not just trauma in Indian Country and addiction, but trauma and addiction, because I think that sometimes in treating addiction—and this is about treating people and recovery—is addressing trauma. Thank you.

Senator YOUNG. Thank you, Senator Franken.

Senator Baldwin.

STATEMENT OF SENATOR BALDWIN

Senator BALDWIN. Thank you. I really want to thank the witnesses for all your work on this epidemic.

I am concerned that as our Federal response to this epidemic has evolved, so has the epidemic—you've been testifying to that this morning—especially now with the rise of fentanyl and other synthetic, highly potent opioids.

In Milwaukee, Wisconsin, which is close to Chicago, a major port of entry, they have seen 101 fentanyl-related deaths this year, and that has already exceeded the total number for last year. It's clear that more action is needed.

Dr. Gottlieb, I wanted to start with you because FDA plays an important role with Customs and Border Protection in stopping illegal drugs at our border. Serious gaps remain as more and more fentanyl is smuggled in from places like China. You recently shared that the FDA will be increasing efforts to stop the illicit entry of fentanyl in international mail facilities. We actually had a chance to talk a little bit about this earlier this week. Can you describe for the Committee the FDA's plan and tell us what additional authorities or tools you need from Congress to modernize our global supply chain security to protect against this evolving threat?

Dr. GOTTLIEB. Thank you for the question, Senator. I appreciated the opportunity to discuss this briefly with you earlier this week.

We recently committed to triple the number of FDA officials that we have in the IMFs, the international mail facilities. In tripling that number, we only brought it from 8 to 22. As you can imagine, we still have a very small footprint. We have a mandate that we share with CBP to inspect packages and also do testing, which we're very good at, to look for opioid analogs in some of these packages that come in. That will increase our ability to inspect packages four-fold, but we're still inspecting a very small fraction of the packages that are carrying drugs.

We know that the system is simply being overwhelmed with packages coming in with illegal narcotics. We're looking to what additional steps we can take in this regard to try to step up both our footprint in the IMFs, as well as how we go about doing our work. I recently met with the commissioner of CBP, and we committed to work together to try to look at these issues, and they've been very good partners to us.

With respect to your question about authorities, we do have some specific ideas around certain seizure authorities that could help us, and I'd be happy to talk to Congress about that. A lot of our seizure authorities are based on old maritime law and they're sometimes hard to implement against a modern threat. I'd be happy to work with you and talk with you about how we may improve our footprint there.

Senator BALDWIN. Thank you.

Dr. Houry, as we work to stem the tide of illegal opioids like heroin and fentanyl, obviously so many of my colleagues have referenced our need to continue focusing on the efforts to prevent. Unfortunately, as noted, addiction often begins with a prescription from a doctor for a broken bone, to address chronic pain, and it's why I strongly support the CDC's work in developing the Safe Opioid Prescribing Guidelines to ensure that our providers have access to the most updated scientific-based tools to best care for their patients.

The issue—and I'm certainly reminded of the 2012 article by Dr. Atul Gawande comparing driving changes of the Cheesecake Factory to changes in recipes, et cetera, to the slow pace of making changes in medicine. He famously said that in medicine, good ideas take an appallingly long time to trickle down, and he compared the example of the Cheesecake Factory driving changes in 7 weeks, whereas guidelines to reduce migraines in patients that were issued 13 years prior had only been implemented in about one-third of the cases. I think a lot of people remembered that.

Can you please provide me with an update on CDC's work supporting and educating providers in implementing and disseminating these guidelines, what's working well and what are the CDC's plans to develop new tools for providers and the public to educate about safe use?

Dr. HOURY. Absolutely, and we actually use a tool, Gawande, to develop a checklist, because we thought the author of the Checklist Manifesto was probably the person we should turn to. We have a checklist with his consultation on the guideline, and that has been downloaded I think over 20,000 times at this point.

We're doing a lot more than that. We also have now worked with 60 different medical schools to get the guideline integrated into medical schools so that first-and second-year medical school students, as we were talking about, by the time they come out of medical school now understand about safe and effective pain management utilizing our guideline.

We also developed a mobile app that has all the different guideline recommendations in it, but also things like brief motivational interventions, so how do you have those difficult conversations with patients. Then we're doing online trainings that medical schools or people like myself who still need that continuing education can use. We've developed six online trainings at this point for that.

Then we're working with different pharmacy and insurance companies as well, and we've seen that Cigna adopted our guideline a year ago, a 12 percent reduction in prescribing already. Just last week, CVS has now announced that they are implementing our guideline in all their Caremark facilities. We're doing a lot to make sure that it's translated.

For things like acute pain, we're also developing some additional materials based on our guideline recommendation 6. That way providers have that information. We've been talking with dentists and emergency physicians as well around that acute pain aspect.

We're really excited. I did not want all the work that went into the guideline to become a document that went nowhere. We worked really closely with medical societies, pharmacists, nurses, et cetera, to make sure that this is used.

Senator YOUNG. Thank you, Senator Baldwin.
Senator Warren.

STATEMENT OF SENATOR WARREN

Senator WARREN. Thank you.

About five people die every day in Massachusetts from an opioid overdose. Now, we think we're seeing the number of overdose deaths declining slightly, but we are seeing more and more overdose deaths that involve fentanyl. As you know, fentanyl is an incredibly potent synthetic opioid. It's about 100 times stronger than morphine.

Recently, the CDC collaborated with the Massachusetts Department of Public Health and the Office of the Chief Medical Examiner to study fentanyl overdoses. This study, which was released just last year, found that for opioid-related fatalities in the State in which it was possible to conduct a toxicology screen, 74 percent of individuals tested positive for fentanyl.

Now, the assistance from the CDC means that we can now do a better job of responding to the epidemic. For example, when someone presents with an overdose involving fentanyl, it requires multiple doses of the overdose-reversal medications in order to revive them. When we know that three out of every four overdose deaths in Massachusetts involve fentanyl, we are better prepared when someone presents unconscious.

The question I want to ask, Dr. Houry, is how does the CDC track the use of opioids so that states and communities at a local level can know more about this epidemic?

Dr. HOURY. We're doing it in a few ways. The first is through our National and Vital Statistics system, and that's where we're now releasing preliminary overdose data. The lag time happened 2 years because of all the time it took to register death certificates and conduct toxicological analyses. We're now down to about a 7-month lag. That still wasn't good enough, so we're trying to see how we can get more data to states and localities quicker.

Now we have what we call our Enhanced Syndromic Surveillance Program, which is where we use bioterrorism techniques where we're pulling data from our emergency departments, EMS, really the field, to look for trends and changes, and we now are funding 32 states and Washington, DC. to do that, thanks to the increase that Congress appropriated in Fiscal Year 2017.

Senator WARREN. Let's talk about that a little bit, because it is urgent that we do this. We are now seeing drugs even more potent than fentanyl emerging. Fentanyl is 100 times more potent than morphine, but carfentanil is 100 times more potent than fentanyl and is now starting to show up.

The increasing role, I think, of these powerful drugs is part of the reason that a group of Democratic colleagues got together to press the congressional leadership for additional funding to fight the opioid epidemic in the last budget deal. Our pressure worked. We got additional money for the opioid epidemic, and some of this went directly to the CDC.

Dr. Houry, could I ask you just to give a brief word about how that additional funding helped the CDC support states as they fight this epidemic, including the emergent problems, like the problems we have with fentanyl and carfentanil?

Dr. HOURY. Absolutely. We were able to get that surveillance system from 12 to 32 states. That was fantastic. In addition, we were able to get funding to coroners and medical examiners for the first time. All those states now have additional funding for toxicological testing and enhanced capacity, and we were also able to take our communications campaign and 22 additional states are now able to use it in their states.

Senator WARREN. Well, that's a lot out of what was really a pretty modest increase, but at least we got some money in there.

You know, I'm really glad to hear this. This is why we fought for those funds, and why we're going to keep fighting for more money for you going forward.

I recently conducted a survey of addiction treatment and recovery service providers in Massachusetts to try to better understand what's working in their fight and the challenges they face in combatting this epidemic, and the results of the survey are incredibly informative, but they shed light on only one piece of the opioid epidemic puzzle.

We need the CDC's assistance so that we can understand the other emerging patterns and respond quickly to them.

I just want to thank you and thank all of you for your work on this issue, and I continue to look forward to working with you.

Dr. HOURY. I do as well. Thank you.

Senator WARREN. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. [presiding] Thank you, Senator Warren. Once again, you're below time. Thank you for that.

Let me ask a couple of questions. I know Senator Murkowski stated she wanted a second round of questions.

Dr. Collins and Dr. Gottlieb, you both testified in your statements about this, and you've answered questions about this today, but I wanted to reemphasize it, and that is the non-addictive pain medicine.

Dr. Collins, you said that 25 million Americans live with some pain every day, as they would in the hospital. Between zero and 10, what degree of pain do they have? Is that *de minimis*, or is it 3, 4, or 5? Or a 7, 8, or 9?

Dr. COLLINS. It's sufficient to interfere with quality of life on a daily basis. That would be more than a 2 or a 3. I'm not sure that there's a precise digital rendition of that. Those are people who have daily pain that interferes with their daily experience.

The CHAIRMAN. Well, that's maybe 1 out of every 12 Americans.

Dr. COLLINS. Yes, sir.

The CHAIRMAN. A larger number have pain.

Dr. COLLINS. Sure, on a more acute basis.

The CHAIRMAN. Yes. You said, as I mentioned in my opening statement, I think we were all struck by your testimony when we were working on the Cures legislation and it had an impact about the medical miracles that are headed our way. We sufficiently fund biomedical research, and then we move treatments and drugs and cures through the investment regulatory process fast enough to get in the hands of people.

Let's take non-addictive pain medicine. You're taking some extraordinary steps, Dr. Collins, involving funding and involving organizing researchers and companies on non-addictive pain medicine. Dr. Gottlieb, on your side of the ledger, you have several tools—priority review, breakthrough fast track, other tools—to get whatever products are produced approved more rapidly.

Is there anything else you need from us in order to move these new ideas more rapidly through the regulatory process?

Dr. GOTTLIEB. Well, sir, I would just touch on one other area where we would need to make progress and new innovation. I think Congress, through the 21st Century Cures and CARA, gave us a lot of new tools to do this, and that's just with respect to the kinds of development tools that get used to evaluate these products, how we design clinical trials, how we measure outcomes in this setting, the kinds of scales we use to receive patient-reported outcomes, their reliability.

We're making investments in all of those areas to try to make the standards by which we judge new products more rigorous, more efficient, so that we can move products through the development process while still applying our gold standard for an assurance of safety and effectiveness.

I'll just briefly say that in addition to everything that we're talking about and doing with respect to trying to develop non-opioid and non-addictive alternatives to the current drugs, I would also just point to medical device alternatives that in many cases can treat pain more locally.

Sometimes treating pain that's localized with a systemic therapy isn't the most efficient way to do that, and we've approved more than 200 devices for the treatment of pain and have approved about 10 that are highly novel. That pipeline also looks pretty rich.

Dr. COLLINS. I can certainly say from NIH's perspective that the opportunity to move this forward, with now full engagement with industry, seems like something that we just have to do. At the present time, just in terms of resources, we have no special resources set aside for this, and that would certainly be something that would accelerate the process.

Right now, as I mentioned earlier, we're spending about \$116 million a year on opioid use disorder research. We need to ramp that up by a factor of 4 or 5 if we're going to fully put our foot down on the accelerator for this, and I'm not quite sure where that would be coming from.

We also could use some help from Congress in a couple of other ways. It would be great if we had a way of very flexibly and rapidly funding research, something called Other Transaction Authority, something that we're using for the Precision Medicine Initiative with great benefit and which we don't have at the present time for opioid use disorder research. Working with companies, we could go a lot faster if we had some relief from some of the limitations of how quickly we can fund something that needs to happen.

Finally I would say if we had the opportunity for relief from the very heavy restrictions on doing research that involves drugs that are in Schedule I, a research track, for instance, for that, that would help us as well. It has been sort of an inhibition.

Finally, although I said finally before, I'll say finally one more time—

[Laughter.]

Dr. COLLINS. I mentioned earlier this dream of maybe being able to launch demonstration projects, maybe in two or three states, where we really pulled everything together, all of the care delivery and the research, the emergency room, the primary care physicians, the hospitals, everything to try to figure out if we were really serious about this and pulled all of the parties together that have a role in solving this particular crisis, we might learn something pretty interesting. That we could do also, although it would require substantial resources.

The CHAIRMAN. Thank you, Dr. Collins.

I'll ask staff to follow-up with Dr. Collins on all three of those suggestions, particularly the first two, to see if we need legislative language, and then we'll see if we can find a way to do that. Maybe opioids could be a pilot for Other Transaction Authority that we could then use in precision medicine and other areas. Thank you for the specific suggestions.

Dr. Gottlieb, if you have any, we'll be glad to have those as well.

Now, I have about 300 8th graders that are waiting for me at about 12:45 from Tennessee, and I don't want to miss them, but I want Senator Murkowski and Senator Hassan to have a chance to ask their questions. What I'll do is call first on Senator Murkowski and next on Senator Hassan. If I'm gone by the time you finish, if you could kindly wrap up the Committee hearing, whichever one of you goes last, I would appreciate it.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Senator Alexander. We do not want you to miss the students out there.

I came back because I wanted to ask a question about how we are dealing with the ability, the pretty easy ability of individuals to purchase online drugs, illicit drugs or, unfortunately, in Alaska we're seeing the purchasing of drugs that have not been rescheduled, and so they're effectively legal to purchase over the Internet.

I was at the healing center in Bethel just a few months ago and talking with folks about where are people getting their drugs in a community like Bethel, where the only way in and out is flying in, and no question about it, they were very open in where they got their drugs, actually naming some of the websites that are out there. It is just common knowledge. Unfortunately, this is a reality that we're dealing with.

I know that, Dr. Gottlieb, there was a target through the FDA of these rogue websites that are illegally selling opioids, other prescription drugs out there, and this was an effort led by Interpol. I understand 13 letters were sent to operators of over 400 websites, seized almost 100 domain names linked to online illicit drug sales. I was looking at the article. It's not like these folks are hiding these websites. I mean, one of the names of the websites is BuyHydrocodoneOnline.com. There is no secret there.

The question that I have is whether or not that effort was successful, whether or not there's going to be an ongoing follow-up of this. I struggle with how I go back to people in these villages that are saying, hey, it's coming in the mail, it's coming in every day, how are you going to stop it?

What's my response? What progress are we making?

Dr. GOTTLIEB. Well, we're making progress, Senator, but not enough. These rogue operators, to your point, are hiding in plain sight. We'll have other operations. This was an operation we conducted recently with international partners, including Interpol, as you mentioned. We'll have other operations. We don't announce those in advance.

I mentioned that we increased the number of FTEs, a request I made when I came to the agency, the number of personnel we had in the international mail facilities, from 8 to 22. We tripled our footprint. We physically maxed out our space in the IMFs. That's why I couldn't put more people in there, and that's in part why we're talking to our good partners in CBP about getting more space, so we can put more resources in.

Having gone to the IMFs and having looked at the operations we have there and the hard-working people we have in these facilities, I can tell you that the people who are shipping drugs into this country aren't going to a lot of efforts to disguise their tracks because they know that only a small percentage are getting seized, and as soon as they find out that we're seizing drugs coming in from one route, they'll just change the route of delivery, and they are simply overwhelming the system. I think we need to be looking much harder at that.

We also increased the number of personnel we have dedicated to our cyber crimes unit, looking at the dark web, where a lot of these

drugs are being ordered. There, too, I think there's a lot more that we want to be doing.

Senator MURKOWSKI. Well, I'm certainly hopeful that within FDA it's kind of a multi-agency approach to how we're going to deal with this, working with Postal Service, working with DEA. Again, as you say, they're hiding in plain sight, and it doesn't take a genius to figure out how to access this and bring these products into the communities.

I want to ask one more question here, and that is about treatment. Senator Franken raised it, treatment facilities in our reservations in the lower 48. We've had some conversations about how in Alaska this 16-bed limit on Medicaid reimbursement, the IMDs, is a real limiting factor for us. I also appreciate that as much as we need inpatient, when we have outpatient treatment, a lot of the population that we're dealing with are individuals that are homeless. They don't have the alternate or transitional housing that they need. They're coming out of incarceration.

You've got the housing piece of it, but it kind of speaks to the kind of treatment that goes on within the prison system itself. It's my understanding that the treatment for those that are incarcerated, they lose any preexisting Medicaid benefits when they are due to be released, when they come in, and then they have to re-apply at the time of the release. You've got a situation where, at a time somebody might need the treatment most, they don't have that coverage.

What are we doing as we're dealing with the need for treatment for those that are in this situation, which is really very much in flux? Whether you're in prison or you're coming out of prison, those that are in an outpatient but really have no place, how big of an issue is the housing piece in terms of how we deal with treatment?

Dr. MCCANCE-KATZ. I think that the housing issue is a very significant one, and we know that a large number of homeless folks in our country have either substance use disorders or serious mental illness. It's also true that people, once they're incarcerated, they do lose any Medicaid benefits that they might have had.

What needs to happen is—we know when people's sentences are going to flatten, when they're going to be released, and we have to be working with the justice system, with the Department of Corrections months ahead of that to make sure—

Senator MURKOWSKI. We're not doing that well right now.

Dr. MCCANCE-KATZ. We're not doing it well, but there are models for it. My State of Rhode Island has a very nice model for that that SAMHSA actually does work to disseminate to other states, as well. We also provide technical assistance around other promising types of interventions of that type that other states are starting to explore.

It's an issue that will require not only resources that we can provide through the government but also community resources. We have to be working with people in the community, recovery coaches, peers, faith-based groups and other types of support within communities, families and significant others that will help people with these issues, and the goal would be to bring all of them together so that that happens before somebody comes out of incarceration.

Senator MURKOWSKI. Unfortunately, I think that's where we've got a real big gap right now.

Dr. MCCANCE-KATZ. We do. You are right.

Senator MURKOWSKI. Yes. Thank you.

Senator HASSAN. [presiding] Thank you, Senator.

Thank you, witnesses, for being here for quite a long time. We are pulling up the rear here, but we are very grateful for your fortitude not only here today but in your leadership every day of the week.

I wanted to focus on something that we are grappling with in New Hampshire. Dr. McCance-Katz, this is really a question for you in particular and SAMHSA's role in the substance misuse workforce, because when we discuss the opioid addiction epidemic, we talk a lot about improving access to treatment, but one thing I think we don't pay enough attention to is the insufficient infrastructure that makes expanding access to treatment such a challenge.

Part of that infrastructure is the addiction treatment workforce. I hear often about the importance of integrating treatment into primary care, and while I agree that it's critically important, I also think we need to recognize that 90 percent of the addiction treatment workforce are non-physicians. All of these professionals are on the front lines of this opioid addiction epidemic. Stress is high. They are too often underpaid, and it means turnover can also be very high. In turn, it's very hard to build a workforce with experience and firsthand knowledge.

I'm interested, Doctor, in your thoughts in particular. What can SAMHSA do to help recruit, train, employ and, most importantly, retain the frontline provider workforce we so desperately need to treat this epidemic?

Dr. MCCANCE-KATZ. You're right, the vast majority of people who will provide services to those who have substance use disorders will be non-physicians. SAMHSA has a number of types of training programs that do not just focus on physicians. They focus on advanced practice clinicians such as advanced practice nurses, nurse practitioners, physician assistants.

We also encourage interactions and collaboration with our colleagues at HRSA because they do have funding programs to train various types of health care professionals that SAMHSA does not have purview over, but we do work collaboratively with them, and we can offer different types of curricula for training.

We work with national stakeholder groups that are involved in the credentialing of the various professions to make sure that training on recognition and treatment of substance use disorders gets into the curriculum, and we will continue all of those efforts.

Senator HASSAN. Well, thank you.

Because it's running late, I thought what I would do is ask you all, because the record will remain open for some time, to just reflect on what it is that your agency isn't doing right now that it could be doing or should be doing to help us combat this crisis. If you would be willing to submit that in writing, I would greatly appreciate it.

I would also just add that one of the questions I get on the ground in New Hampshire—and sadly, this has been the focus of

my work both as a Governor and now as a Senator for some time because of the nature of the epidemic and the mortality rates in particular in New Hampshire—is people ask me why we don't have more resources than we already do, knowing how hard everybody here is working. They do ask me the question that relates back to the stigma that you talked about, Dr. McCance-Katz, that if this were a different kind of epidemic, would we have more money on the ground? Would we be having a debate at all about whether we needed more resources?

I think it's a good question. The people in my state have been extraordinarily brave, starting with parents who finally started writing obituaries for their children that said their son or daughter died of a heroin overdose. I mean, think about the courage that that takes, and the courage it takes for people to come forward to their elected officials and say I'm in treatment right now, or I'm raising my granddaughter because my daughter died of an overdose last month.

People have been willing to stand up and talk about this illness, and they're helping us understand it as the illness it is, but the stigma is still out there. I hope that with every piece of energy you all have and the jobs that you have been entrusted with, you will speak to the need for us to devote resources to what is an epidemic, a disease that will include relapse and have co-occurring problems that will challenge us moving forward, and that it's not something going away in a year or two.

We will stop, we hope, the over-prescribing, and we'll get a better handle on training with our physicians. At the end of the day, this is an illness. There will be other substances that may trigger addiction and other kinds of addiction going forward, and I just thank you for the work you're already doing, but I hope I can ask you to be even greater champions for the notion that this is an illness and that people need care.

With that, I'm going to turn over the gavel to Senator Warren, who will ask her second round and then close out the hearing. Thank you so much.

Senator WARREN. [presiding] Thank you. Thank you, Senator Hassan.

Again, thank you all for being here and for staying late into the day.

In Massachusetts, the opioid epidemic is devastating, but we are fighting back with everything we have. We're picking up every possible tool and trying to figure out how we can both reduce the number of people who are addicted or become addicted and how to deal with those who have addictions.

One of the things we've been focused on is figuring out how to limit the number of pills left sitting in patients' medicine cabinets. From 2000 to 2015, the number of opioid prescriptions in Massachusetts increased by roughly 175 percent. It is a particular problem because, as you know, of the people who abuse prescription opioids, almost 80 percent of them started with pills that were prescribed legally to someone—themselves, friends, relatives.

To reduce the number of pills in circulation, Senator Capito and I introduced a bill called the Reducing Unused Medications Act, which allows the partial filling of opioid prescriptions. That means

patients are able to have a pharmacist fill only a few days worth of their opioid prescription, and then they can return for more if they still feel the need. If they don't, those pills never make it into anyone's medicine cabinet.

Now, that bill was signed into law in 2016. Dr. Gottlieb, when you formed your Opioid Steering Committee at the FDA, I sent you a letter about the partial fill legislation that Senator Capito and I managed to get passed last year, and I want to thank you for your response on that.

Let me just ask you, so we can get it on the record, do you think partial fill of opioid prescriptions is one way to cut down on the number of opioids in circulation?

Dr. GOTTLIEB. I do, Senator, and I've been on the record supporting various measures that we can try to rationalize dispensing. Anything that we can do in that regard that makes sense that can be implemented without untoward side effects, untoward consequences, I would support.

Senator WARREN. Good, good. Now that we have this new tool available to us to help tackle the opioid epidemic, we realize that for it to work, a lot of people need to know about it, and that means a lot of doctors need to know about it, a lot of pharmacists need to know about it, a lot of patients need to know about it.

I wanted to ask you, Dr. McCance-Katz, you are the person in charge over at SAMHSA, and I want to ask whether or not SAMHSA has a role to play in engaging everyone on this issue so that patients actually can do partial fills and not end up with a medicine cabinet full of opioids that they don't need.

Dr. MCCANCE-KATZ. Absolutely, SAMHSA does have a role to play. We do outreach and training and work with both providers and with communities. I would see this as something that would fall under the purview of some of our prevention activities, and this is definitely something that SAMHSA could play a role in.

Also, we will continue to work with CDC because they have a very large role to play in this as well.

Senator WARREN. Good, good. That's what we all want to do. Senator Capito and I worked on this legislation so that patients would have the power to reduce the number of pills they take home, and we just keep looking for places where we can reduce the number of opioids in circulation.

Recently, Senator Capito and I sent letters to Governors across the country and to a number of national medical associations to try to continue this conversation around the implementation of the partial fill bill, and their efforts to try to reduce the number of pills in circulation. We're making progress, but not enough has been done yet. I look forward to working with all of you on this as we go forward.

Again, thanks from everyone on this Committee. Thanks from the people across America for your coming today and bringing us up to date on your efforts, for the work that you already have done, and for the work you will do in the future. We really need you out there fighting.

With that, today's hearing is the first in a series of hearings this Committee intends to hold on the opioid crisis. We plan to hold a second hearing next month looking at the situation on the ground

in the states. We'll hear State and local perspectives on the challenges they face and the successes they've had in combatting this crisis.

The hearing record will remain open for 10 days. Members may submit additional information for the record within that time if they would like.

The HELP Committee will meet again on Tuesday, October 17th, to continue our hearings on examining the costs of prescription drugs.

Thank you all for being here today.

The Committee stands adjourned.

ADDITIONAL MATERIAL

WRITTEN TESTIMONY OF WITNESSES FROM THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS): ELINORE McCANCE-KATZ, DEBORAH HOURY, FRANCIS COLLINS, AND SCOTT GOTTLIEB

Good morning Chairman Alexander, Ranking Member Murray, and Members of the Committee. Thank you for the opportunity to discuss the opioid crisis in the United States and the Federal response. From the start of his Administration, President Trump has made addressing the opioid epidemic a top priority, and at the Department of Health and Human Services (HHS) we share the President's commitment to bringing an end to this crisis, which is exacting a toll on individuals, families, and communities across the country. The Department has made the crisis a top clinical priority and is committed to using our full expertise and resources to combat the epidemic.

Over the past 15 years, communities across our Nation have been devastated by increasing prescription and illicit opioid abuse, addiction, and overdose. According to the Substance Abuse and Mental Health Services Administration (SAMHSA)'s National Survey on Drug Use and Health (NSDUH), in 2016, over 11 million Americans misused prescription opioids, nearly 1 million used heroin, and 2.1 million had an opioid use disorder due to prescription opioids or heroin. Over the past decade, the U.S. has experienced significant increases in rates of neonatal abstinence syndrome (NAS), hepatitis C infections, and opioid-related emergency department visits and hospitalizations. Most alarming are the continued increases in overdose deaths, especially the rapid increase since 2013 in deaths involving illicitly made fentanyl and other highly potent synthetic opioids. Since 2000, more than 300,000 Americans have died of an opioid overdose. Preliminary data for 2016 indicate at least 64,000 drug overdose deaths, the highest number ever recorded in the U.S. Too many of our citizens are being robbed of their God-given potential in the prime of their life.

The opioid epidemic in the U.S. is fundamentally tied to two primary issues. The first issue was the significant rise in opioid analgesic prescriptions that began in the mid-to-late 1990's. Not only did the volume of opioids prescribed increase, but well-intentioned healthcare providers began to prescribe opioids to treat pain in ways that we now know are high-risk and have been associated with opioid abuse, addiction, and overdose, such as prescribing at high doses and for longer durations. The second issue is a lack of health system and healthcare provider capacity to identify and engage individuals, and provide them with high-quality, evidence-based opioid addiction treatment, in particular the full spectrum of medication-assisted treatment (MAT). It is well-documented that the majority of people with opioid addiction in the U.S. do not receive treatment, and even among those who do, many do not receive evidence-based care. Accounting for these factors is paramount to the development of a successful strategy to combat the opioid crisis. Further, there is a need for more rigorous research to better understand how existing programs or policies might be contributing to or mitigating the opioid epidemic.

In April 2017, HHS outlined its five-point Opioid Strategy, which provides the overarching framework to leverage the expertise and resources of HHS agencies in a strategic and coordinated manner. The comprehensive, evidence-based Opioid Strategy aims to:

- Improve access to prevention, treatment, and recovery support services to prevent the health, social, and economic consequences associated with opioid addiction and to enable individuals to achieve long-term recovery;

- Target the availability and distribution of overdose-reversing drugs to ensure the broad provision of these drugs to people likely to experience or respond to an overdose, with a particular focus on targeting high-risk populations;
- Strengthen public health data reporting and collection to improve the timeliness and specificity of data and to inform a real-time public health response as the epidemic evolves;
- Support cutting-edge research that advances our understanding of pain and addiction, leads to the development of new treatments, and identifies effective public health interventions to reduce opioid-related health harms; and
- Advance the practice of pain management to enable access to high-quality, evidence-based pain care that reduces the burden of pain for individuals, families, and society while also reducing the inappropriate use of opioids and opioid-related harms.

To date, the Department has taken significant steps to advance the goals of our Opioid Strategy. While this statement does not represent an exhaustive list of HHS activities underway, SAMHSA, CDC, NIH, and FDA bring unique expertise and capabilities that enable HHS to take a comprehensive, complementary, and flexible approach to the opioid crisis.

Substance Abuse and Mental Health Services Administration (SAMHSA)

As HHS's lead agency for behavioral health, SAMHSA's core mission is to reduce the impact of substance abuse and mental illness on America's communities. SAMHSA supports a portfolio of activities that address all five prongs of HHS's Opioid Strategy.

Improving Access to Prevention, Treatment, and Recovery Support Services

SAMHSA administers the Opioid State Targeted Response (STR) grants, a 2-year program authorized by the 21st Century Cures Act (P.L. 114-255). By providing \$485 million to states and U.S. territories in fiscal year (FY) 2017, this program allows states to focus on areas of greatest need, including increasing access to treatment, reducing unmet treatment need, and reducing opioid overdose related deaths through the provision of the full range of prevention, treatment and recovery services for opioid use disorder. The President's Budget requests \$500 million for this program in fiscal year 2018, the full level authorized by Congress.

The Substance Abuse Prevention and Treatment Block Grant (SABG), first authorized in 1992, is a vital source of funding for states that accounts for approximately 32 percent of total State substance abuse agency funding. For many people seeking to recover from opioid addiction, this public funding represents the only support for treatment. In addition, the block grant's flexible structure enables states to use the funds to address pressing challenges within their communities, such as the opioid crisis.

SAMHSA also has several initiatives aimed specifically at advancing the utilization of MAT for opioid use disorder, which is proven effective but is highly underutilized. SAMHSA's Medication Assisted Treatment for Prescription Drug and Opioid Addiction (MAT-PDOA) program expands MAT access by providing grants to states with the highest rates of treatment admissions for opioid addiction. Twenty-two states are currently funded by MAT-PDOA, and in September 2017, SAMHSA awarded \$35 million dollars over 3 years in additional MAT-PDOA grants to six states.

SAMHSA also provides critical funding for MAT for specific high-risk and vulnerable populations, such as those involved with the criminal justice system and pregnant and postpartum women. SAMHSA's criminal justice grantees can use up to 20 percent of their grant awards for the purchase of FDA-approved medications for treatment of opioid and alcohol addiction. Since 2013, SAMHSA has seen a steady increase in the number of drug courts integrating MAT into their programs with 57 percent of active programs currently integrating MAT.

Under SAMHSA's Pregnant and Postpartum Women's (PPW) program, which serves women with opioid or other substance use disorders who are pregnant and/or newly parenting, grantees are encouraged to ensure access to MAT for opioid addiction, which has been shown to improve birth outcomes. Last month SAMHSA awarded \$9.8 million over 3 years for new State Pilot PPW grants authorized by the Comprehensive Addiction and Recovery Act (CARA, P.L. 114-198) and \$49 million over 5 years in new PPW service grants to support the

recovery of pregnant and postpartum women struggling with substance abuse, including opioid addiction.

A well-documented challenge to improving access to opioid use disorder treatment is a lack of providers who can provide MAT. SAMHSA supports a number of training initiatives to increase the number of qualified healthcare providers who can provide treatment for opioid addiction. In the last 4 years, more than 62,000 medical professionals have participated in online or in-person trainings on MAT for opioid addiction through SAMHSA's Provider's Clinical Support System (PCSS)-MAT. This program is a national training and clinical mentoring project that provides mentoring of newly trained physicians by experienced specialists, maintains a library of evidence-based practice materials, and offers at no cost to the trainee the required DATA 2000 waiver training to enable providers to prescribe buprenorphine for opioid addiction treatment.

SAMHSA regulates opioid treatment programs (OTPs), which dispense methadone and may also dispense and prescribe buprenorphine and administer extended-release naltrexone. In coordination with the Drug Enforcement Administration (DEA) and states, territories, and the District of Columbia, SAMHSA reviews new and renewal applications for OTPs through an accreditation process that ensures programs have sound risk management practices in place and are using evidence-based treatments. SAMHSA also oversees physicians, nurse practitioners (NPs), and physician assistants' (PAs) ability to prescribe buprenorphine in office-based outpatient treatment settings. Last year, SAMHSA published a final rule which allows certain qualified physicians who have obtained a waiver to prescribe buprenorphine for up to 100 patients for at least a year, to now acquire a waiver to treat up to 275 patients. The regulation provides that these licensed physicians can become eligible for the patient limit of 275 either by being board certified in Addiction Medicine or Addiction Psychiatry or by practicing in a qualified practice setting.

These physicians are required to complete a SAMHSA reporting form each year to ensure that physicians prescribing at the new, higher level are in compliance with safe and appropriate prescribing practices. As of September 19th, 3,573 physicians have obtained a waiver to treat up to 275 patients. Most recently, SAMHSA began processing waivers to allow NPs and PAs to prescribe buprenorphine in accordance with the requirements of CARA. As of September 19th, 2,756 NPs and 773 PAs have received a waiver.

SAMHSA also promotes recovery through targeted grants, such as last month's award of \$4.6 million over 3 years in Building Communities of Recovery program grants, created by CARA. The purpose of this program is to mobilize resources within and outside of the recovery community to increase the availability and quality of long-term recovery supports for individuals in or seeking recovery from addiction. These grants are intended to support the development, enhancement, expansion, and delivery of recovery support services as well as promotion of and education about recovery. Programs will be principally governed by people in recovery from substance abuse and addiction who reflect the community served.

Targeting Overdose-Reversing Drugs

SAMHSA has been a leader in efforts to reduce overdose deaths by increasing, through funding and technical assistance, the availability and use of naloxone to reverse overdose. SAMHSA's "Opioid Overdose Prevention Toolkit," first released in 2013, is one of SAMHSA's most downloaded resources. The Toolkit provides information on risks for opioid overdose, recognition of overdose, and how to provide emergency care in an overdose situation. The Toolkit is intended for community members, first responders, prescribers, people who have recovered from an opioid overdose and family members, as well as communities and local governments.

SAMHSA provides a number of funding streams that can be used to expand access to naloxone. States are able to use Opioid STR funds to purchase and distribute naloxone, and some states are also using a portion of their SABG funds for opioid overdose prevention activities.

SAMHSA is currently providing \$11 million per year in Grants to Prevent Prescription Drug/Opioid Overdose Related Deaths to 12 states. These grants are also being used to train first responders on emergency medical care to be rendered in an overdose situation and how to administer naloxone as well as how to purchase and distribute naloxone.

In September 2017, SAMHSA awarded funding for grants authorized by CARA, including almost \$46 million over 5 years to grantees in 22 states to provide resources to first responders and treatment providers who work directly with the populations at highest risk for opioid overdose.

Strengthening Public Health Data and Reporting

SAMHSA's National Survey on Drug Use and Health (NSDUH) provides key national and State level data on a variety of substance use and mental health topics, including opioid misuse. NSDUH is a vital part of the surveillance effort related to opioids, and the data from NSDUH has been used to track historical and emerging trends in opioid misuse, including geographic and demographic variability.

SAMHSA also works collaboratively with other agencies to better understand the epidemic through sharing of data and assessing the implications of that data and develops publications based on NSDUH and other national surveys and data. Examples of recent SAMHSA publications include: Trends in the Use of Methadone, Buprenorphine, and Extended-release Naltrexone at Substance Abuse Treatment Facilities; Trends in Average Days' Supply of Opioid Medications in Medicaid and Commercial Insurance; and Opioid Prescribing Trends for Adolescents and Young Adults with Commercial Insurance and Medicaid.

Supporting Cutting-Edge Research

SAMHSA is building on existing partnerships with the NIH to improve the research to practice pipeline and is committed to promoting evidence-based practices and service delivery models. The newly formed Office of the Chief Medical Officer and the National Mental Health and Substance Use Policy Laboratory, which were authorized through the 21st Century Cures Act to promote evidence-based practices and service delivery models, will be pivotal to these efforts. Additionally, the National Mental Health and Substance Use Policy Laboratory will assist in addressing the opioid crisis through its evaluation of models that would benefit from further development and through expanding, replicating, or scaling evidence-based practices across wider areas as we seek to increase access to and delivery of the best treatment services for opioid use disorders across America.

Centers for Disease Control and Prevention (CDC)

As the Nation's public health and prevention agency, CDC's expertise and leadership is essential in reversing the opioid epidemic. It was CDC that first identified the increase in opioid overdose deaths in 2004, and since then the agency has applied its scientific expertise to track the epidemic and develop evidence-based prevention strategies. Through various programs and initiatives, CDC supports all five parts of the Secretary's Opioid Strategy:

Strengthening Public Health Data and Reporting

Timely, high-quality data help both public health officials and law enforcement understand the extent of the problem and how it is evolving, develop interventions, focus resources where they are needed most, and evaluate the success of prevention and response efforts. Understanding that data is crucial, CDC is helping states build capacity to monitor the scope of the epidemic and better focus their prevention activities through several programs and activities.

CDC's Overdose Prevention in states (OPIS) provides resources and scientific support to 45 states and Washington, DC. through three programs. The first two programs, Prescription Drug Overdose: Prevention for states (PFS) and Data-Driven Prevention Initiative (DDPI), provide states with the resources, tools and technical expertise to execute and evaluate prevention strategies to improve safe prescribing practices and prevent prescription drug misuse, abuse, and overdose. States use their funding to advance prevention in four key areas: 1) Enhancing Prescription Drug Monitoring Programs (PDMP) and leveraging them as public health tools; 2) Improving health system and insurer practices for safer opioid prescribing; 3) Evaluating policies that may have an impact on the opioid epidemic (e.g., naloxone distribution and Good Samaritan laws); and 4) Quickly responding to emerging and critical needs.

CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program, the third program under OPIS, funds 32 states and Washington, DC. Started in 2016, ESOOS strives to improve the timeliness of reporting both fatal and non-fatal opioid overdoses and associated risk factors in order to inform public health responses within and across states. What is particularly unique and innovative about this program is the use of emergency department and emergency

medical services (EMS) data to track and analyze morbidity data. ESOOS uses this data to establish an early warning system to detect sharp increases (e.g. potential outbreaks) or decreases (e.g. successful intervention efforts) in non-fatal overdoses.

CDC has made progress in improving the timeliness of data reporting and is now releasing quarterly and, as of August 2017, monthly provisional counts of overall drug and opioid overdose deaths in the Vital Statistics Rapid Release (VSRR) series. CDC also relies on its existing infrastructure to monitor rates of new cases of HIV and viral hepatitis in many states. CDC is working with Coroners and Medical examiners to improve both comprehensive toxicology efforts that help with the detection of fentanyl analogs and the capacity for mortality surveillance by identifying ways to help strengthen case management systems to report data more easily and quickly. While CDC has made progress, improvements are needed to build infrastructure (medical examiners, coroners, toxicological testing, additional electronic reporting, etc.). A stronger disease detection system will identify potential problems sooner.

CDC is also tracking opioid use among pregnant and reproductive-aged women and its impact on the mother and newborn as a part of the Treating for Two: Safer Medication Use in Pregnancy initiative. Pilot programs are underway to obtain state-level estimates of NAS to better understand hospital readmissions and long-term adverse outcomes among infants identified with NAS.

In addition to providing funding and technical assistance, CDC conducts epidemiological investigations (Epi-Aids) in states, providing on the ground assistance during a public health crisis. Between 2012 and 2015, Massachusetts experienced a surge of opioid-related deaths, from 698 to 1,747, with over 74 percent of these deaths involving fentanyl. The Massachusetts Department of Public Health (MDPH) called on CDC to help investigate the extent to which illicitly manufactured fentanyl (IMF) contributed to the surge in opioid-related overdose deaths. CDC worked closely with the MDPH, SAMHSA, and DEA to determine whether IMF mixed with or sold as heroin was the primary cause of the surge of deaths and found that 82 percent of fentanyl-related overdose deaths were suspected to have involved IMF.

To stop the surge, CDC recommended that the MDPH train physicians, treatment providers, and law enforcement on overdose prevention, screen at-risk people for heroin or fentanyl use, and expand access to naloxone. CDC also recommended outreach to those who experienced an opioid overdose, had a history of substance abuse, or were accessing health programs for active users to link them to treatment and educate them on the dangers of fentanyl.

Often, CDC's work in states leads to further, national initiatives. The 2015 response to an HIV and Hepatitis C (HCV) outbreak in Scott County, Indiana, led to a CDC analysis which identified over 220 U.S. communities that could be especially vulnerable to HIV and HCV outbreaks among persons who inject opioid drugs. One of those states, Tennessee, used CDC's assessment to do further analysis of the state's vulnerabilities. As a result, Tennessee is working to direct its HIV and viral hepatitis resources where they are most needed.

In addition to working with states, a partnership across sectors is necessary. CDC has been working on initiatives with law enforcement agencies, like the DEA, to strengthen public health and law enforcement collaboration on the Federal level.

In addition, the Heroin Response Strategy (HRS), funded by the Office of National Drug Control Policy (ONDCP) and deployed in eight High Intensity Drug Trafficking Areas (HIDTAs), covering 20 states, links public health and public safety at the State level. CDC works with the HIDTA directors to sharpen strategic directions, ensure proper coordination and training, support the 20 public health analysts embedded in the program, and improve performance measurement. There is currently a shortage of evidence to guide public health-law enforcement integrated community response, thus as part of the HRS, CDC is launching eight pilot projects across the 20-State initiative to build scientific evidence about what works.

Advancing the Practice of Pain Management

Another of CDC's key focus areas is supplying health care providers with the tools and resources necessary to advance the practice of pain management. In March 2016, CDC released the Guideline for Prescribing Opioids for Chronic Pain, which was developed to help primary care doctors provide safer, more ef-

fective care for patients with chronic pain outside of active cancer, palliative, and end-of-life care. The Guideline provides 12 voluntary recommendations for prescribing opioids for patients 18 and older, in primary care settings, based on the most current scientific evidence. This helps patients and physicians better understand and assess risks and benefits of opioid therapy and determine the optimal method for each patient to manage their pain.

CDC has created a number of resources for health care providers to make the guideline easy to understand and access. Earlier this year, CDC launched the first in a series of interactive, online trainings which provide sample scenarios, feedback, and resources for each recommendation. CDC is also capitalizing on technology to help disseminate the Guideline through the development of an Opioid Guideline Application (mobile app) which contains all of the Guideline recommendations, a morphine milligram equivalent (MME) calculator, and an interactive interviewing feature to help providers prescribe with confidence. Other materials developed for providers, pharmacists, and patients include graphics, fact sheets, posters, and podcasts, all available on CDC's website.

CDC is also committed to educating consumers about the risks of opioids and the importance of discussing safer, more effective pain management options with their healthcare providers. In September 2017, CDC released the Rx Awareness communications campaign to increase awareness about the risks of prescription opioids and deter inappropriate use. The campaign features real-life accounts of individuals living in recovery, and those who have lost someone to an overdose. CDC is running digital, radio, and out-of-home campaign ads for 14 weeks in select states (KY, MA, NM, and OH) with broader release anticipated in 22 additional OPIS funded states.

Improving Access to Prevention, Treatment, and Recovery Support Services

CDC brings scientific expertise and leverages existing relationships with health systems to link patients who need MAT to the appropriate care. As part of the OPIS effort, several states funded under the PfS program are supporting health system approaches to link patients to treatment and recovery services. For example, states are building systems that facilitate better linkages to treatment, emergency room peer patient navigators, and data dashboards to identify hot spots for treatment needs.

Additionally, CDC is conducting an epidemiologic study to assess what type of MAT (methadone maintenance; buprenorphine; naltrexone) or counseling and other non-medication interventions is most effective, and which contextual, provider, and individual factors influence implementation, prevent relapse, and improve patient well-being over a 2-year period. This study can help identify who may benefit from which type of treatment to ensure individuals receive the treatment best suited to their needs.

Targeting Overdose-Reversing Drugs

CDC is currently working with SAMHSA to evaluate its Grants to Prevent Prescription Drug/Opioid Overdose-Related Deaths program with the goals of describing and understanding the scope and impact of naloxone education and distribution efforts in high-need communities and to identify barriers and potential solutions to increase program effectiveness. Additionally, states funded under OPIS are evaluating practices to improve the distribution and use of overdose reversing drugs and Good Samaritan laws (policies that protect the victim and the bystander from drug possession charges). States utilize CDC data to identify communities experiencing a significant increase in opioid overdose deaths, which helps to inform both the targeted distribution of naloxone and the training of community members, EMS, and law enforcement on naloxone administration.

Supporting Cutting-Edge Research

To better understand the epidemic, identify risk and protective factors, and determine effective interventions, CDC also funds innovative research to prevent misuse and abuse. One CDC funded project at the Carolinas Medical Center in Charlotte, North Carolina, is working to assess and compare changes in prescribing behaviors when providers are presented with electronic alerts on potential misuse or abuse of opioids. This research will inform efforts to improve clinical decisionmaking. In addition, CDC funds academic research centers to conduct translational research in order to better understand how to get information into the hands of practitioners. For example, the Johns Hopkins Injury Control Research Center (ICRC) is working to reduce injured patients' risk for opioid

misuse through mobile health technology while the West Virginia University (WVU) ICRC was instrumental in the development and implementation of a pilot take-home program for naloxone in rural communities. There were at least 25 overdose reversals in the first 9 months of the program in 16 counties. As part of a rapid response project using CDC funds, the WVU ICRC distributed 8,250 naloxone kits to first response agencies and take-home naloxone programs throughout the State in the first half of 2017.

National Institutes of Health (NIH)

NIH is the lead HHS agency providing support for cutting-edge research on pain and opioid misuse, addiction, and overdose. Drug addiction is a complex neurological condition, driven by many biological, environmental, social, and developmental factors. Continued research will be key to understanding the crisis and informing future efforts. Pain is an equally complex condition. To this end, NIH supports a range of activities to advance research on pain and addiction.

Supporting Cutting-Edge Research

Because the most effective way to end opioid misuse and addiction is to prevent it from beginning, NIH is supporting innovative research to better understand what makes an individual vulnerable to opioid misuse. For example, the Adolescent Brain Cognitive Development (ABCD) study, the largest long-term study of brain development and child health in the U.S., will help build an evidence base to draw on for a future of precision medicine approaches to prevent opioid addiction.

With the goal of bringing scientific solutions to the opioid crisis, NIH is exploring ways to promote 1) new, innovative medications and technologies to treat opioid addiction and improve overdose prevention and reversal interventions, and 2) safe, effective, non-addictive strategies to manage pain. In April 2017, NIH Director Francis S. Collins, M.D., Ph.D., met with research and development leaders from the world's leading biopharmaceutical companies to discuss new ways for government and industry to work together to address the opioid crisis. NIH continued meetings throughout the summer. As part of these ongoing discussions, NIH participated in a recent meeting with Pharmaceutical CEOs convened by Governor Christie, co-chair of the President's Commission on Combating Drug Addiction and the Opioid Crisis, in Trenton, New Jersey, on September 18th. Some advances NIH is working to promote may occur rapidly, such as improved formulations of existing medications, longer-acting overdose-reversal drugs, and repurposing of treatments approved for other conditions. Others may take longer, such as novel overdose-reversal medications and identifying biomarkers to measure pain in patients. Our goal for these activities is to cut in half the time needed to develop new safe and effective therapeutics to help end the opioid crisis.

NIH will continue to build upon breakthroughs in the treatment of opioid addiction and the reversal of opioid overdose and find ways to advance the development of new products. For example, buprenorphine, one of the three FDA-approved options for MAT treatment, was developed through a partnership between NIH and industry. The intramural program of the National Institute on Drug Abuse (NIDA) conducted the early clinical studies on buprenorphine and then later partnered with industry to develop user-friendly and abuse deterrent formulations. In addition, a NIH public-private partnership helped to develop the only FDA-approved intranasal naloxone product to reverse opioid overdose, an invaluable tool to those on the front lines combating the opioid crisis. In 2013, NIDA funded a biopharmaceutical company for clinical studies to evaluate the pharmacokinetic properties—how much and how rapidly the naloxone is absorbed—of an intranasal formulation. In 2015, the intranasal naloxone was approved by the FDA. With knowledge gained from neuroscience advances, NIH researchers now seek ways to turn the tide in the opioid crisis through a wider range of formulations of existing and new medications, as well as innovative strategies to treat opioid use disorder and prevent and reverse overdose.

NIH is also working toward preventing the most serious health consequences for infants born with NAS. Currently, NIH research aims to determine more precise dosing of buprenorphine in pregnant women, and to reduce the time to develop new treatments. NIH is also launching a new effort on opioid use in pregnancy, to study the effects of medically supervised opioid withdrawal on mother and newborn, and better understand the genetic or epigenetic factors associated with opioid use on neonatal outcomes. NIH will also develop and pilot a common study protocol to generate evidence for best practices in treating

newborns with NAS, through a partnership between the NIH Neonatal Research Network and the new IDeA States Pediatric Clinical Trials Network.

NIH researchers are also working to build an understanding of how to effectively integrate prevention and treatment services within healthcare and community systems. For example, NIH is studying strategies to improve the implementation of MAT for people with opioid use disorder in the criminal justice system. This research aims to optimize implementation of evidence-based screening, assessment, and treatment services by juvenile justice agencies and improve coordination with community healthcare providers in a way that promotes long-term recovery from opioid addiction in real-world settings.

Advance the Practice of Pain Management

Our mission to end the opioid crisis will not be successful until we can provide patients with better options for the treatment of pain, which touches 25 million Americans every day. NIH funds a broad range of research on pain, from basic research into the molecular, genetic, and bio-behavioral basis of chronic pain to large-scale clinical studies of potential treatments. NIH funded basic research has identified a myriad of potential targets for future non-addictive therapies. Pathological pain and addiction are classic disorders of brain circuits and the neurotechnologies emanating from the US BRAIN Initiative enable scientists to explore these circuits to advance both diagnostics and therapeutics. Research efforts to understand and alleviate pain depend on better objective measures of the pain experience for patients. To address this, NIH also supports development of resources to advance the research agenda. One example is the Patient-Reported Outcomes Measurement Information System (PROMIS). PROMIS provides a rigorously tested patient-reported outcome measurement tool to measure pain, fatigue, physical functioning, and emotional well-being.

NIH works with Federal partners across government to carry out cutting-edge research on pain. Through the Interagency Pain Research Coordinating Committee, NIH developed the Federal Pain Research Strategy, a long-term strategic plan to coordinate and advance the Federal research agenda on pain. The Strategy's research priorities include prevention of acute and chronic pain, management of acute pain, transition from acute to chronic pain, and understanding the disparities that influence pain and pain management. Ongoing projects that already are advancing the goals laid out in the Strategy include the NIH-DoD-VA Pain Management Collaboratory program, which recently announced \$81 million in research funding to implement cost-effective large-scale clinical research in military and veteran healthcare delivery organizations, focusing on non-pharmacologic approaches to pain management and other comorbid conditions.

Beyond research activities, NIH is engaged in efforts to advance the HHS Opioid Strategy pillar of advancing the practice of pain management. NIH worked with HHS and agencies across government to develop the National Pain Strategy, the government's first broad-ranging effort to improve how pain is perceived, assessed, and treated, which highlights the need for evidence based treatments. NIH is actively working with other Departments and Agencies and external stakeholders to implement the Strategy. In addition, NIH is supporting Centers of Excellence for Pain Education that act as hubs for the development, evaluation, and distribution of pain management curriculum resources for medical, dental, nursing, pharmacy and other schools to enhance education about pain and pain care.

Food and Drug Administration (FDA)

FDA, the Agency responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices, is focusing on three broad areas to help address the opioid crisis: lowering overall exposure to opioid drugs and, in turn, reducing the number of new cases of addiction; enabling more opportunities for those currently addicted to opioid drugs to seek MAT that can help them recover; and helping expedite the development of progressively more-effective abuse deterrent formulations of opioid drugs, and better still, non-opioid alternatives for the treatment of pain. To advance these goals, FDA, earlier this year, established an Opioid Policy Steering Committee that brings together the Agency's most senior career leaders to explore and develop additional tools and strategies to confront the opioid crisis.

Support Cutting-Edge Research

Abuse Deterrent Formulations (ADF): FDA's emphasis on assessing the full public health effects of opioids is reflected in the Agency's ongoing work to sup-

port the development of forms of prescription opioids that deter abuse. The Agency strongly supports a transition from the current market dominated by conventional opioids to one in which the majority of opioids have meaningful abuse-deterrent properties. In support of this transition and potential future actions against products without these properties, FDA is focusing its efforts on determining how effective the current abuse deterrent products are in the real world. To assist this effort, the Agency recently gathered independent experts for a scientific workshop to discuss both the existing science and what else is needed to properly assess the impact of opioid formulations with abuse-deterrent properties on misuse, abuse, addiction, overdose, and death. Separately, FDA is working to support generic forms of abuse deterrent opioids by issuing final guidance on their development, in recognition of the important role generic drugs play in the United States.

Alternatives to Opioids for Pain: FDA strongly supports the development of new treatment options for patients in pain, especially treatments that do not have the same addictive features of traditional opioids. To advance both non-addictive and non-pharmacologic treatments for pain, FDA commits to using all of the Agency's authorities. This includes programs such as the Fast Track and Breakthrough Therapy Designations that are intended to facilitate development and to expedite review of products that, for example, are intended to treat a serious condition for which there is an unmet medical need. As a part of these efforts, FDA is meeting with innovators who are pursuing non-opioid alternatives for the treatment of pain to provide guidance on their individual products. Agency steps also include a more careful consideration of non-drug alternatives for pain, such as medical devices that can deliver more localized analgesia. FDA is considering how to more closely fit medical device alternatives into a comprehensive approach to the development of treatments for pain.

We know that developing non-opioid and non-addictive pain medicines is challenging for many reasons; therefore, FDA is interested in progressing the entire field of pain drug development. To address the issues related to the trials needed for approval, FDA has participated in a public-private-partnership (PPP) under the Critical Path initiative, the Analgesic Clinical Trial Translation, Innovations, Opportunities, and Networks (ACTION). The ACTION PPP is a collaboration among a broad spectrum of national and international groups aimed at advancing the science in this area, including academia, FDA and other government agencies, pharmaceutical and device companies, professional organizations, and patient advocacy groups.

At the same time as we are prioritizing work on non-opioid and non-abusable pain medicines, FDA is also taking new steps to help facilitate the development of medications that can help patients with addiction recover as well as overdose reversal drugs, such as naloxone. FDA is laying the groundwork for naloxone to be available more broadly and is supporting research aimed at encouraging the potential development of over the counter naloxone products.

Advance the Practice of Pain Management

Changes in Prescribing: To reduce the rate of new opioid addiction, we need to decrease overall exposure to opioids. For many people, that first prescription will be for an immediate release (IR) formulation of the drug. Some people will go on to become addicted and abuse longer-acting formulations that can deliver higher doses, especially when manipulated. Some of these people will eventually move onto street drugs, such as heroin, which are increasingly the low-cost alternative. We know that this route of addiction correlates with exposure. A certain percentage of patients exposed to opioids will go on to develop an addiction to the drugs. One approach to reducing the rate of new addiction, then, is to reduce exposure to prescription opioid drugs. To accomplish this, we need to explore ways to use our regulatory authorities to influence how opioids are prescribed to make sure that only appropriately indicated patients are prescribed opioids, and that the prescriptions are written for durations and doses that properly match the clinical reason for which the drug is being prescribed in the first place. We are exploring whether FDA should take additional steps to make sure that general prescribing and the number of opioid doses that an individual patient can be dispensed, is more closely tailored to the medical indication. Among other steps, FDA is soliciting public input on these questions in the form of a public docket that was established the week of September 25.

Expanded Education through Modification of Opioid REMS, and Changes to the Education Blueprint: Since 2012, FDA has required manufacturers of extended-release long-acting opioids to make available educational

materials through a Risk Evaluation and Mitigation Strategy (REMS). We know that most of the exposure to opioids is not from extended-release or long-acting formulations, but from IR formulations like hydrocodone and acetaminophen or oxycodone and acetaminophen combinations. In fact, about 90 percent of all opioid prescriptions in the United States are written for IR formulations of these drugs. IR opioid products serve as the gateway for patients and non-patients who may continue to use or misuse these products, which could lead to new addiction. Given this fact, we need to advance policies that rationalize the prescribing and dispensing of IR opioid drugs.

As one step, FDA has determined that a REMS to support education is also necessary for the prescribing of IR opioid products. This regulatory tool is needed to ensure that the benefits of these drugs continue to outweigh the risks of adverse outcomes (addiction, overdose, and death) resulting from inappropriate prescribing, abuse, and misuse, and that providers are properly informed about suitable prescribing and the risks and benefits associated with opioid drugs. FDA has announced its intention to update the existing REMS on extended-release/long-acting opioid analgesics, and for the first time, extend these same regulatory requirements (including prescriber training) to the manufacturers of IR opioid analgesic products. FDA is currently implementing that plan. We have also announced plans to revise the Blueprint used to create education materials to include broader information on pain management, including the principles of acute and chronic pain management; non-pharmacologic treatments for pain; and pharmacologic treatments for pain (both non-opioid analgesic and opioid analgesic). To start this process, the relevant letters, detailing the new requirements, were recently sent to sponsors that manufacture the IR drugs.

In addition to the efforts described above, HHS continues to engage with a broad range of stakeholders—State and local governments, addiction specialists, medical, nursing, dental, and pharmacy providers, community and faith-based organizations, private-sector partners, community organizations, and law enforcement partners—to share best practices, build collaborations, and identify barriers that could prevent success. We are committed to this fight and will continue to advance a multi-pronged strategy, never forgetting that behind all the statistics are individuals, families, and communities who are being torn apart each day. Our guiding vision must be to improve the lives of all Americans who have been touched by this crisis. That will be the true measure of our success.

Last, HHS, through the President's fiscal year 2018 budget, has requested more than \$800 million to continue to support the Department's critical opioid investments. We look forward to continuing to work with Congress to identify solutions and to secure the funding needed to turn the tide against the opioid crisis.

Thank you again for inviting SAMHSA, CDC, NIH, and FDA to testify today. We look forward to answering your questions.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR ALEXANDER

Question 1. Do you need additional authorities, on top of the modernizations for substance use disorders and opioid abuse programs and services in the 21st Century Cures Act and in the Comprehensive Addiction and Recovery Act (CARA), to fight the opioid crisis? If so, please provide specific authorities that would be helpful

Answer 1. HHS is determining at the Department level what authorities or changes in statute would be helpful.

Question 2. Section 319 of the Public Health Service Act gives the Secretary of HHS the authority to determine that a public health emergency exists, allows for waivers of various Medicare and Medicaid regulations, movement of volunteer and Federal medical and public health professionals to areas hardest hit by the emergency, ability to access resources traditionally used for the Strategic National Stockpile, and the ability of the FDA to allow drugs and devices to come to market prior to full approval under its Emergency Use Authorization. Are any of the authorities that are available under a Public Health Emergency Declaration necessary to help address the opioid abuse crisis? If any, please list, and provide specific examples of why such authority is helpful.

Answer 2. HHS is thoroughly reviewing the available authorities and analyzing how they can be applied in the context of the opioid epidemic. As decisions are made, we will be happy to share them with you, but we are committed to carrying out our five-point strategy and stemming the tide of this epidemic.

Under FDA's Emergency Use Authorization (EUA) authority (section 564 of the Federal Food, Drug, and Cosmetic Act (FD&C Act)), FDA may authorize the use of an unapproved medical product, or an unapproved use of an approved medical product, in response to an actual or potential chemical, biological, radiological, or nuclear (CBRN) emergency.

Before FDA may issue an EUA, several steps are required under section 564. The Secretary of Health and Human Services (HHS) first must declare that circumstances exist to justify issuance of the EUA ("EUA declaration"). This type of HHS declaration is specific to the EUA authority (i.e., it is distinct from a Public Health Emergency (PHE) declaration under section 319 of the Public Health Service Act) and must be based on one of four types of section 564 determinations issued by the Secretary of Department of Defense (DoD), Department of Homeland Security (DHS), or HHS. For example, a section 564(b)(1)(C) determination by HHS would be "that there is a public health emergency, or a significant potential for a public health emergency, that affects, or has a significant potential to affect, national security or the health and security of United States citizens living abroad, and that involves a [CBRN] agent or agents, or a disease or condition that may be attributable to such agent or agents."¹ FDA also must determine whether the statutory criteria for issuance of an EUA are met before issuing an EUA (e.g., the benefits of the product for the emergency use outweigh its risks; there is no adequate, approved, alternative product available; etc.).

Therefore, issuance alone of a PHE under section 319 is not sufficient for FDA to issue an EUA. The Secretary of HHS would need to determine whether to make an additional determination and appropriate declaration pursuant to FDCA Section 564 for a medical product or category of medical products. Also, an assessment would need to be made as to whether the opioid emergency would be considered an emergency under section 564 (e.g., as a chemical or biological threat), and which products might benefit from being authorized for use under an EUA (and whether there are existing available, alternative, and approved products).

We are not aware of an unapproved product that could be used in response to the opioid emergency that would meet the relevant criteria. For example, an opioid antagonist would not meet the criteria because adequate and approved alternatives are available (e.g., naloxone injectors and nasal sprays).

In addition to the EUA authority, FDA has other emergency use authorities under section 564A of the FD&C Act applicable to certain FDA-approved medical products, allowing for response flexibilities without FDA having to issue an EUA. For example, section 564A(d) allows FDA to authorize emergency dispensing of certain FDA-approved medical products without requiring an individual prescription for each recipient/patient, if: (1) permitted by State law, or (2) in accordance with an order issued by FDA (i.e., an "emergency dispensing order"). Although FDA may grant such flexibilities without having to issue an EUA or without issuance of an EUA declaration, these authorities are only applicable to certain FDA-approved medical products intended for use (or used) when a CBRN emergency determination under section 564(b)(1) is in place. Therefore, a determination of a public health emergency or of a significant potential for a public health emergency under section 564(b)(1)(C), as described above, or one of three other types of determinations made by the Secretary of DoD or Secretary of DHS under section 564(b)(1), is required.

For additional information about these FDA authorities, please see:

- EUA:
<https://www.fda.gov/EmergencyPreparedness/Counterterrorism/ucm182568.htm>.
- Emergency dispensing orders:
<https://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/ucm495126.htm>.
- Emergency use guidance:
<https://www.fda.gov/downloads/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/UCM493627.pdf>

Question 3. How do you ensure coordination between the multiple divisions that review products indicated for pain, whether from a migraine, a joint injury, or chronic pain?

Answer 3. FDA encourages collaboration among its organizational components. In line with these efforts, FDA established an opioid task force in 2013 to share infor-

¹Section 564(b)(1)(C) of the FD&C Act.

mation, build upon existing initiatives, and develop new ones. Since inception, the task force has met regularly and embarked on a multi-pronged and targeted approach aimed at combating misuse, abuse, and addiction at critical points in the lifecycle of an opioid product, from development through use. Earlier this year, FDA established an Opioid Policy Steering Committee that brings together the Agency's most senior career leaders to explore and develop additional tools and strategies to confront the opioid crisis. In addition, review divisions within the Center for Drug Evaluation and Research (CDER) regularly consult one another when a product being developed for pain involves more than one area of expertise. For example, the Division of Anesthetic, Analgesia, and Addiction Products (DAAAP) reviews most of the products indicated for pain, and consults with the Division of Oncology Products for products under development for the pain associated with chemotherapy induced peripheral neuropathy. The Division of Bone, Reproductive, and Urological Products reviews products to treat pelvic pain syndromes and consults DAAAP to maintain consistency with relevant pain endpoints. In addition, FDA's Office of Regulatory Policy in CDER also assists with internal consistency. Also, FDA regulations aim to ensure consistency of clinical and regulatory programs and product quality measures. Types of documents used to promote consistency across Centers and among divisions also include guidances and Manuals of Policies and Procedures (MaPPs).

Guidance documents represent the Agency's current thinking on a particular subject. These documents are prepared for FDA review staff and applicants/sponsors to provide information as to the processing, content, and evaluation/approval of applications and also provide information as to the design, production, manufacturing, and testing of regulated products. These establish policies intended to achieve consistency in the Agency's regulatory approach and identify inspection and enforcement procedures. The Agency has issued numerous draft and final guidance documents related to pain, analgesia, formulation, and a variety of other topics for industry, which are available to the public via our website: <https://www.fda.gov/RegulatoryInformation/Guidances/ucm122044.htm>.

CDER's MaPPs provide instructions for internal practices and procedures followed by CDER staff to help standardize the drug review process and other activities. MaPPs address external activities as well. All MaPPs are available for the public to review to get a better understanding of office policies, definitions, staff responsibilities, and procedures.

Question 4. It would be beneficial for companies to be able to discuss with doctors how their drugs can help with the opioid crisis and potentially prevent or minimize the risk of addiction by avoiding opioid use, but it is not clear what studies would be necessary to make that claim. What studies are required for chronic pain labels to include information about how that drug may compare to, or spare the use of, opioids? Please provide information on how studies can make opioid sparing claims, and any plans the agency has to formalize that policy in a guidance document.

Answer 4. FDA is focusing on data for modifying drug labeling that can then help drive more appropriate prescribing. Drug labeling is the primary communication tool about the safety and efficacy of approved drug products. Labeling changes are intended to inform prescribers about the risks associated with opioids including abuse, misuse, addiction, overdose, and death and to weigh the benefits for pain management against risks. Currently, FDA does not have a guidance document specifically regarding opioid sparing claims. However, sponsors wanting to add these claims to their drug labeling are encouraged to discuss their plans for data to support these findings during meetings with the review divisions. This would include meetings before the Investigational New Drug Application (IND) has been submitted (preIND meeting), meetings after initial data become available from Phase 2 clinical trials (End of Phase 2 meeting), and meetings throughout development.

We recognize that there is a high level of interest regarding FDA's views on firms' communications about their medical products. We are committed to an ongoing dialog with industry and other stakeholders, and, when needed, providing guidance to clarify the agency's thinking on these issues. On January 19, 2017, FDA announced the availability of a draft guidance for industry entitled "Medical Product Communications That Are Consistent With the FDA-Required Labeling—Questions and Answers." This draft guidance provides information for manufacturers, packers, and distributors and their representatives (collectively "firms") of drugs and medical devices for humans, including those that are licensed as biological products, and animal drugs (collectively "medical products"), about how FDA evaluates their medical product communications, including their promotional materials, that present information that is not contained in the FDA-required labeling for the product but that may be consistent with the FDA-required labeling for the product. The draft guidance both describes FDA's thinking on the types of information that are consistent

with the FDA-required labeling and provides general recommendations for how this information can be conveyed in a truthful and non-misleading way. The draft guidance also provides some examples to illustrate these concepts. The agency is considering the comments it received on this draft guidance and working to issue a final guidance on this topic. We encourage companies to read the guidance and talk to us about any study and product-specific questions they have in this area.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR MURRAY

Question 1. I was pleased that you have been fulfilling the promise you made at your confirmation hearing to act swiftly and decisively to stem the opioid crisis. In your testimony, you mention that FDA is examining the risk-benefit assessment of new and existing opioid products to take into account the public's health, not just the safety and efficacy of the drug to treat pain. How is FDA implementing this new framework to assess opioids, as well as non-addictive pain treatments in development, to help patients and families across the country?

Answer 1. When it comes to regulating opioids, FDA assesses diverse risks and benefits to ensure that it is considering the full public health implications of any decisions. We recently sought the withdrawal of Opana ER from the market after determining that risks of its continued use outweighed the benefits. As an integral part of our efforts to address this epidemic, we're exploring how this risk / benefit mandate can be further defined in support of our commitments to help stem the tide of opioid addiction. FDA will continue to examine the risk-benefit profile of all approved opioid analgesic products and take further actions as appropriate as a part of our response to this public health crisis.

2. Non-addictive pain treatments can reduce the need for opioids for many patients. FDA has several expedited approval pathways to speed safe and effective products that treat serious or life-threatening conditions to patients and families. Pain itself is not what we think of on its face as a life-threatening condition.

Question 2a. Given the serious and life-threatening nature of opioid addiction, which non-addictive pain treatments seek to prevent, does FDA believe it has the authority to expedite products that meet the other criteria for one of the existing expedited approval pathways? Has FDA used any of these pathways for non-addictive pain products?

Answer 2a. FDA is committed to working with sponsors and with researchers who are developing non-opioid and non-addictive pain medications to bring these new options to patients as expeditiously as possible. FDA has a number of programs, such as Fast Track and Breakthrough Therapy Designation, which are intended to facilitate the development and review of products that, for example, are intended to treat a serious condition for which there is an unmet medical need. Novel non-opioid medications with the potential to provide effective pain relief, and that satisfy the applicable legal criteria, may be appropriate candidates for such programs. Indeed, we have issued Fast Track Designation for more than 30 non-opioid analgesics and Breakthrough Therapy Designation for 12 non-opioid analgesics.

Question 2b. How is FDA working with and guiding companies developing products intended to prevent opioid use and seeking an opioid-sparing indication on the drug label?

Answer 2b. The Agency is actively working with, and assisting, sponsors with their drug development programs. Sponsors may encounter both clinical and non-clinical challenges specific to their drug development programs. In line with these challenges, the Agency is open to working with sponsors who are interested in developing new potential treatments, and we strongly encourage manufacturers and drug developers to contact the Division of Anesthesia, Analgesia, and Addiction Products in the Center for Drug Evaluation and Research so that we can provide targeted advice specific to their drug development programs. For more information, please see our draft guidance entitled Analgesic Indications: Developing Drug and Biological Products (<https://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM384691>), which, when finalized, will provide the Agency's recommendations on such development.

Currently, FDA does not have a final guidance document regarding opioid-sparing claims. However, sponsors wanting to add these claims to their drug labeling are encouraged to discuss their plans to support these findings during meetings with the review divisions including meetings before the Investigational New Drug Application (IND) has been submitted (preIND meeting), meetings after initial data become available from Phase 2 clinical trials (End of Phase 2 meeting), and meetings throughout development.

Question 2c. How is FDA coordinating among the different review divisions, charged with reviewing pain treatments with different mechanisms of action and indications, to ensure that developers of non-addictive pain products are receiving consistent advice regarding trial and outcomes design?

Answer 2c. FDA encourages collaboration among its organizational components. In line with these efforts, FDA established an opioid task force in 2013 to share information, build upon existing initiatives, and develop new ones in. Since inception, the task force has met regularly and embarked on a multi-pronged and targeted approach aimed at combating misuse, abuse, and addiction at critical points in the lifecycle of an opioid product, from development through use. Earlier this year, FDA established an Opioid Policy Steering Committee that brings together the Agency's most senior career leaders to explore and develop additional tools and strategies to confront the opioid crisis. In addition, review divisions within the Center for Drug Evaluation and Research (CDER) regularly consult one another when a product being developed for pain involves more than one area of expertise. For example, the Division of Anesthetic, Analgesia, and Addiction Products (DAAAP) reviews most of the products indicated for pain, and consults with the Division of Oncology Products for products under development for the pain associated with chemotherapy induced peripheral neuropathy. The Division of Bone, Reproductive, and Urological Products reviews products to treat pelvic pain syndromes and consults DAAAP to maintain consistency with relevant pain endpoints. In addition, FDA's Office of Regulatory Policy in CDER also assists with internal consistency. Also, FDA regulations aim to ensure consistency of clinical and regulatory programs and product quality measures. Types of documents used to promote consistency across Centers and among divisions also include guidances and Manuals of Policies and Procedures (MaPPs).

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Question 3. In Washington state, we have standing orders and collaborative practice agreements which help to increase access to Naloxone through pharmacies, clinics, and first responders.² However, these kinds of programs vary from State to state, and it is difficult to access naloxone as compared to over-the-counter availability. How is FDA working with naloxone manufacturers to assess the whether or not the science supports a change to over-the-counter status, and what are your next steps?

Answer 3. Prevention and treatment of opioid overdose is an urgent public health priority, and FDA recognizes the need to improve access to naloxone for the emergency treatment of known or suspected overdoses until emergency medical help arrives. The Agency is focusing on: (1) expanding the utilization of naloxone; (2) accelerating the development and availability of new naloxone formulations and user friendly products; and (3) identifying and disseminating the best practice naloxone delivery models and strategies. FDA is reviewing options, including over-the-counter (OTC) availability, to make naloxone more accessible to treat opioid overdoses, building on the Agency's recent approval of intranasal naloxone. To lay the groundwork for naloxone to be available more broadly, FDA is supporting research to facilitate the development of labeling for a potential OTC version of naloxone aimed at encouraging manufacturers to develop over the counter naloxone products. In addition, FDA has contacted every maker of an approved naloxone product and offered to meet with them to discuss the OTC process, and several have taken FDA up on this offer.

²<https://www.nwphp.org/documents/training/hot-topics-1/http20150224notes.pdf>.

4. OTC Pain Products

Over the counter (OTC) acetaminophen can provide a safe and non-addictive pain management strategy for some patients, especially those for whom NSAIDs are contraindicated. In 2014, FDA took action to limit the amount of acetaminophen in combination prescription drug products to reduce the risk of inadvertent acetaminophen overdose. As a part of this action, FDA announced that the agency would take future regulatory action to restrict access to high-dose OTC acetaminophen. However, it seems that the agency has not initiated this action.

Question 4a. Does FDA still intend to take regulatory action limiting the dose of OTC acetaminophen?

Answer 4a. Yes, FDA remains focused on helping to ensure safe use of acetaminophen in adults and children. To achieve this goal, FDA is working on a proposed rule intended to reduce the recommended daily adult dose of acetaminophen in OTC pain relief products consistent with the previous action for prescription combination drug products containing acetaminophen to a dose that is still effective for pain relief, but will reduce the likelihood of liver damage. Acetaminophen is currently the most common cause of drug-induced liver injury in the US.

FDA also is working on a proposed rule addressing acetaminophen dosing instructions in the labeling of OTC acetaminophen products for children that are based upon weight as well as age to reduce unintentional overdose. FDA has previously issued guidance recommending that the concentration of single-ingredient liquid acetaminophen products used in children be standardized to reduce dosing errors and to require warning statements on the labels of acetaminophen-containing prescription drugs to let consumers know that rare but serious skin reactions may occur with acetaminophen. In addition, manufacturers of OTC acetaminophen-containing products have voluntarily implemented safety-related changes to their labeling.

While working on rulemaking on these issues, FDA has provided public advisories and guidance to industry to make the public and drug manufacturers aware of the risks discussed above. FDA has also worked to educate consumers about the risks of taking multiple acetaminophen-containing products at the same time.

Question 4b. Would OTC monograph reform legislation provide meaningful alternatives, such as labeling changes, to address issues of inadvertent overdose from OTC acetaminophen?

Answer 4b. FDA is committed to enhancing its core mission, which includes efforts to ensure and improve the safety and effectiveness of OTC Monograph drugs. Americans use OTC drugs every day, and these products will become increasingly important as patients take greater control of their own health. Under the current regulatory framework, FDA faces significant challenges in completing monographs, addressing safety issues such as those raised by acetaminophen, and supporting innovation in the OTC marketplace. One of the administrative mechanisms under discussion in connection with monograph reform would enable FDA to use administrative orders, rather than lengthy and cumbersome rulemaking procedures, to implement needed changes in existing and proposed OTC monographs. We anticipate that this, and other regulatory alternatives, would materially advance FDA's ability to implement changes needed to better address urgent safety issues in a timely fashion and ensure the safety and effectiveness of OTC products while also promoting innovation and choice for patients and consumers. A wide range of stakeholders has come together to support these reforms and we hope to continue to work with Congress on legislation to make them a reality.

5. Compounding

Question 5. Some pharmacy compounders have suggested that they can play a role in reducing drug costs by offering less expensive copies of generic and brand drugs. In January, 2016, you wrote in a letter to the editor of the Wall St. Journal that allowing for "a dual market—one for approved generics and one for widely marketed compounded drugs to compete with them... would undermine our generic drug model, without fixing the regulatory woes that are the real culprit in reducing generic drug competition." Is it still your view that compounding is not an appropriate solution to address drug pricing concerns?

Answer 5. Yes. Compounded drugs are not a solution to drug pricing concerns. Compounded drugs are not FDA-approved and therefore lack the assurance of safety, efficacy, and quality that the drug approval process provides. Even after the 2012 fungal meningitis outbreak, in which contaminated compounded drugs led to more than 60 deaths and 750 cases of infection from which patients continue to recover, FDA continues to frequently investigate serious adverse events associated with compounded drugs. FDA also routinely identifies egregious conditions in the production of sterile drugs during inspections of compounding pharmacies. Because

of these and other risks, compounded drugs should only be used when an FDA-approved drug product is not available to meet patients' medical needs.

We have been alerted to several examples of drug compounders who are making copies of FDA approved products. We are concerned that, unless FDA acts expeditiously to finalize the 503B regulatory framework, the agency will inadvertently create marketplaces of inadequately regulated compounded medications that run counter to the intent of the law.

Question 5a. The FDA has not finalized the guidance entitled, Compounded Drug Products That Are Essentially Copies of Approved Drug Products Under Section 503B of the Federal Food, Drug, and Cosmetic Act³, which clarifies the agency's interpretation of the law on which products may not be compounded under 503B because they are "essentially a copy" of a marketed product. When does FDA plan to finalize this guidance document?

Answer 5a. While we cannot provide an exact timeframe, FDA is working diligently to issue the final guidance. Implementing the compounding provisions of the Drug Quality and Security Act, including this guidance, is a top priority for the Agency.

Question 5b. The Interim Policy on Compounding Using Bulk Drug Substances Under Section 503B of the Federal Food, Drug, and Cosmetic Act⁴, and the current list of Bulk Drug Substances Nominated for Use in Compounding Under Section 503B⁵, have been taken together by some compounders as permissive to allow the production of copies of FDA approved products. Does the FDA plan to reform the guidance to provide clarity, and amend the bulk drug substances list to eliminate drugs approved by the FDA?

Answer 5b. After enactment of the Drug Quality and Security Act, there was a great deal of uncertainty concerning the bulk drug substances that could be used in compounding by outsourcing facilities while FDA develops the list of bulk drug substances that can be used in compounding under section 503B. If FDA did not adopt the interim policy, nearly all compounding would have shifted to facilities operating under section 503A. This is because section 503A compounders may compound using bulk drug substances that are the subject of an applicable USP/NF monograph or, if an applicable monograph does not exist, drug substances that are components of FDA approved drugs. FDA did not believe such a policy was in the best interest of the public health because, unlike outsourcing facilities, facilities operating under section 503A are exempt from Current Good Manufacturing Practice requirements and are not subject to routine FDA oversight.

However, FDA is also cognizant of concerns that the Agency's interim policy articulated in the guidance that you referenced could result in outsourcing facilities undermining the drug approval process by compounding large volumes of drugs that are similar to or that can be compounded from FDA-approved drugs. FDA is considering whether any revisions to its interim policy are appropriate in light of these concerns.

Question 5c. Does FDA plan to take action against compounders who produce copies of approved FDA products?

Answer 5c. The Agency plans to issue final guidances regarding the "essentially a copy" provisions of sections 503A and 503B of the Federal Food, Drug, and Cosmetic Act as soon as possible. We hope that the guidance documents on this topic, once final, will yield voluntary compliance with these statutory provisions. In situations where we cannot achieve such voluntary compliance, we intend to consider appropriate action.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR BURR

1. Promising alternatives to pain management are underway in North Carolina, with some of these treatments completely changing the way we think about providing relief to those battling pain or addiction.

Question 1a. Is the agency facing any barriers to reviewing data and information on innovative products that have the potential to help with this crisis?

³ <https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM510153.pdf>.

⁴ <https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM469122.pdf>.

⁵ <https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM469122.pdf>.

Question 1b. If so, do you believe additional tools are needed for these innovators to demonstrate the safety and effectiveness of their products to help those battling an opioid addiction?

Answer 1a. and 1b. There is a critical need to encourage the development of novel treatments for chronic pain, including non-opioid alternatives, as well as new and innovative treatments for substance use disorders in order to augment our currently limited treatments. Encouraging the development of these products requires both scientific and translational development. FDA has previously, and is currently, working in these areas, including through our participation in the ACTTION⁶ public private partnership (PPP) and other PPP and consortia initiatives in a wide variety of areas relevant to pain treatment, opioids, substance use treatment, drug safety, and accelerated drug development. For example, the Consortium for Addiction Research on Efficacy and Safety (CARES) is working to create consensus on the design and analysis of addiction clinical trials, which would be a valuable step toward reducing barriers to drug development.

That said, we are encouraged by the broad interest in research targeted to developing novel treatments to treat pain and opioid addiction. The Agency is also working with the National Institute on Drug Abuse (NIDA), discussing mechanisms to collect data and to support the use of new endpoints for trials of drugs intended to treat opioid use disorder. For instance, there is interest in exploring the novel endpoints, in addition to abstinence, that could be used to support approval of new therapies. FDA and NIDA are also working to encourage the development of non-opioid pain medications, and we have been involved in discussions with National Institutes of Health to facilitate development of non-addictive pain treatment. NIH has recently convened three meetings with industry and researchers to explore how to quickly bring new treatments for pain, addiction, and overdose to market. These meetings are the foundation of a public-private partnership being explored by NIH with industry to formally advance these activities. These efforts will be pursued in partnership with FDA and the Centers for Medicare & Medicaid Services (CMS) to ensure that products can quickly move from discovery and development to approval and implementation in clinical practice.

Question 2. How does the FDA communicate different levels of risks to providers for schedule II and schedule III opioids? If the agency does not provide warnings based on the different levels of risk according to their DEA assigned schedule, why is this the case?

Answer 2. Practitioners who wish to prescribe medications that are controlled substances are required to have a DEA registration. The DEA provides a Practitioner's Manual⁷ which provides important information and instructions for practitioners seeking a DEA registration including definitions of the different schedules of the Controlled Substances Act, along with examples of products listed in each schedule. In Section 3 of the DEA Application for Registration (Form-224) practitioners are required to select the drug schedules for which they seek DEA registration. The choices include Schedule II Narcotic, Schedule II Non-Narcotic, Schedule III Narcotic, Schedule III Non-Narcotic Schedule IV and Schedule V. Based on this process, practitioners are expected to understand the schedules they select on their DEA registration. Information is provided at the top of the first page of the FDA approved product labeling in order to alert prescribers to whether a product is a controlled substance, and if so, under which schedule it is listed.

In addition, any applicant or holder of an approved application for a drug that is scheduled under the Controlled Substances Act (whether classified as Schedule II, III, IV, or V) can discuss appropriate warning statements in labeling with FDA if they believe these statements should be modified.

Question 3. The Drug Quality & Security Act was intended to place tight restrictions on the use of bulk active pharmaceutical ingredients for compounding. Is the FDA aware of situations in which outsourcing facilities are compounding the active pharmaceutical ingredients in opioids? If so, what is the clinical need for the bulk compounding of these products and how is the agency working with stakeholders to mitigate any risks that may result from such activity?

Answer 3. In June 2017, outsourcing facilities submitted reports to FDA listing the drug products they compounded during the previous 6-month period. This reporting included certain injectable drug products that contain the same active ingredient as certain drugs subject to the extended-release (ER) and long-acting (LA) opioid analgesics REMS (ER/LA REMS). The ER/LA REMS is applicable to dosage

⁶ACTTION: Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks

⁷<https://www.deadiversion.usdoj.gov/pubs/manuals/pract/practmanual012508.pdf>.

forms intended for use with patients outside of the hospital setting including oral, transmucosal, and transdermal dosage forms. FDA recently announced that it will be expanding the REMS to include immediate-release (IR) opioid analgesics in dosage forms intended for use with outpatients. The existing REMS does not apply to injectable solutions, the products that outsourcing facilities are making according to the June 2017 reports, nor will the expanded REMS because these products are administered under the care of health care professionals in inpatient settings and not dispensed directly to patients.

With respect to clinical need associated with bulk drug substances that are components of drugs approved with a REMS, as you may know, section 503B of the Federal Food, Drug, and Cosmetic Act (FD&C Act) directs FDA to develop a list of bulk drug substances for which there is a clinical need. The FD&C Act requires that FDA publish a proposed list in the Federal Register, seek public comment, and then issue a final list. FDA is in the process of developing its proposal for public comment and is prioritizing this effort.

Our current assessment is that many of the opioid products compounded by outsourcing facilities are convenience forms—for example, prefilled syringes—that are widely used in outpatient surgeries and other medical procedures. One reason for establishing the outsourcing facility industry was the likelihood that production of sterile, injectable products under FDA standards and oversight would be safer than compounding at clinical sites or, as was the case before Drug Quality and Security Act passage, large-scale compounding by 503A facilities.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR COLLINS

Question. Dr. McCance-Katz and Dr. Houry [or whole panel], according to SAMHSA, in 2014 an estimated 28,000 adolescents had used heroin in the past year and an estimated 16,000 were current heroin users. One part of addressing this epidemic is ensuring that younger generations are informed about the dangers of opioids. The Drug Enforcement Agency is working with partners to provide science-based information to children about the risks of opioids, such as through its “360 Strategy” on heroin and opioids and “Operation Prevention.” Could you speak about collaboration between SAMSHA and CDC on these law enforcement initiatives, particularly with respect to reaching young people?

Answer. N/A

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR FRANKEN

Question 1. It is anticipated that President Trump may declare the opioid crisis a national emergency as soon as this week. How will this emergency declaration affect the ways in which your agency is addressing the opioid epidemic in the United States? How will the declaration affect the way that individuals with opioid addiction receive treatment services across the United States? Many states including Alaska, Arizona, Florida, Virginia, Maryland, and Massachusetts have also declared their own state-wide disaster or emergency declarations. How will a Federal declaration build on these State efforts? From your perspective, is there a State response that stands out as particularly effective or innovative at reducing opioid misuse and addiction?

Answer 1. FDA is committed to taking additional steps to more forcefully confront the epidemic of opioid addiction. This includes taking aggressive action to prevent new addictions and opioid-related deaths, and help those currently addicted regain control and restore them to their communities. FDA is expediting existing efforts and actively reviewing potential actions to address this crisis.

Consistent with its statutory authority and role, the Agency is focused on promoting the development of opioids that are harder to manipulate and abuse, and non-opioid pain treatments; supporting important efforts to increase the use of, and access to, the potentially life-saving antidote naloxone; encouraging the safe adoption, and more widespread use of, FDA-approved medically assisted treatments to help combat addiction; and working with Federal, state, and international partners to stop the flow of heroin and extremely potent, and often deadly, synthetic drugs like illicitly made fentanyl. In addition, FDA will use its platform to work to break the stigma associated with addiction and the use of medications that can help people live lives of sobriety.

State responses are critical to addressing this crisis, and this effort requires an all-of-the-above approach that will require each of us to work together. FDA, other agencies, State governments, health care providers, industry, policymakers, patients, and their families.

Question 2. Research shows a strong connection between a person's health and stable housing, despite the fact that they are often treated as separate issues. I'm interested in how supportive housing—housing with social service supports—can help to address the opioid crisis, particularly in Indian Country where this epidemic has hit communities especially hard. I have heard from Native American leaders in Minnesota who have explained that stable housing not only removes the stress of where someone is going to sleep at night, but also helps people avoid unhealthy situations, reducing the risk of relapse. I asked you all about this issue during the hearing. What specific initiatives does your agency have underway to better understand the connection between health, housing, and substance use disorders, and what actions are you taking to incorporate supportive housing programs into your work to address the opioid epidemic? And what more is needed to develop these supportive housing programs further, especially in rural and other underserved areas?

Answer 2. No FDA Response

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR HASSAN

Question 1. In your view, what is the top action that your agency is not doing now that you think it should be doing to address the opioid epidemic?

Answer 1. FDA is committed to fighting the opioid epidemic and will continue to push forward using a multi-pronged strategy as part of the overall HHS Opioid Strategy. To advance this strategy, FDA is working to break the stigma associated with medications used for addiction treatment, and is taking a more active role in speaking out about the proper use of these drugs.

Another area FDA has committed to exploring further is how opioid drug products are packaged, stored, and ultimately—when no longer needed—discarded. Though FDA has already been working on several efforts to explore solutions in this area, FDA is committed to exploring its existing authorities to find new and impactful ways of regulating these product features to improve patient safety.

FDA is reconsidering how it address risk and benefit to make sure it is taking appropriate measure of the risk associated with misuse and abuse of opioid drugs, both as part of our pre-and post-market review. As one part of this effort, we requested earlier this year that Endo Pharmaceuticals withdraw its reformulated Opana ER from the market, based on our analysis of the risks associated with that drug's illicit use.

Finally, it's crucial that we build upon our capacity to detect and disrupt the flood of illegal opioids and other products that are being imported through the international mail facilities. More than 340 million packages reach the U.S. every year; given that massive volume, it's estimated that only a small percentage of the illicit drugs smuggled through the IMFs are being intercepted. FDA can and must do more to penalize and deter the criminal misconduct that contributes to and worsens this crisis. Criminal investigations and enforcement are just some the many different tools that FDA and others will need to bring to bear against the opioid crisis. The crisis has reached the point that we will need to take an aggressive, comprehensive, and all-in approach to combatting it.

Question 2. In your view, what is the most promising emerging research that can help address the opioid epidemic?

Answer 2. Consistent with its statutory authority and role, FDA is focusing on three broad areas to help address the opioid crisis: lowering overall exposure to opioid drugs and, in turn, reducing the number of new cases of addiction; enabling more opportunities for those currently addicted to opioid drugs to seek medication assisted treatment (MAT) that can help them recover; and helping expedite the development of progressively more-effective abuse deterrent formulations of opioid drugs, and better still, non-opioid alternatives for the treatment of pain. To advance these goals, FDA is supporting cutting-edge research assessing abuse-deterrent formulations, alternatives to opioids for pain, and the development of medications that can help patients with addiction recover as well as overdose reversal drugs.

Question 3. What is your and your agency's perspective on the recommendations from the president's bipartisan Commission on Combating Drug Addiction and the Opioid Crisis?

Answer 3. FDA was pleased to see that the President's Commission on Combating Drug Addiction and the Opioid Crisis highlighted areas that are also a priority for HHS. HHS is currently reviewing the recommendations and assessing actions that may be taken beyond those already underway in support of the Department's five point HHS Opioid Strategy.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR HATCH

Question 1. Commissioner Gottlieb, I applaud the FDA's July 28th announcement on the comprehensive plan regarding tobacco and nicotine regulation and appreciate FDA's continued efforts to promote and protect public health. Harm reduction strategies are paramount to tobacco, as they are to opioids. Your remarks announced that a regulation would be forthcoming regarding the Substantial Equivalence (SE) application and approval process, which many would argue is badly needed, as the current process is unclear due to conflicting and shifting expectations. Can you give any estimate as to when the proposed rule will be published and opened for public comment?

Answer 1. We agree that issuing a proposed rulemaking on the content and format of substantial equivalence reports is very important, and issuing that rule is one of the Center for Tobacco Product's highest priorities. We look forward to sharing more on this matter as we can.

Question 2. Your announcement also suggested that the Center for Tobacco Products would be examining the resources currently dedicated to review of so-called provisional products and determining whether those resources would be better utilized in advancing the policy objectives outlined in your announcement. Can you please comment on the status of that review?

Answer 2. FDA is currently assessing the current application review process for these products to ensure it makes the best use of resources to protect public health. Following this review, it may be possible that some products in the review queue could be excluded from review based on our understanding of their characteristics. We expect to complete our review in the coming months.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR ROBERTS

Question 1. In February 2014, the FDA published a draft guidance entitled, "Analgesic Indications: Developing Drug and Biological Products" to provide more clarity to sponsors on the development of prescription drugs for the management of acute, chronic and breakthrough pain. Does the FDA plan to respond to comments and finalize this guidance? If so, what is the expected timeline to do so?

Answer 1. FDA published the draft guidance entitled, "Analgesic Indications: Developing Drug and Biological Products" in February 2014. The draft guidance, when finalized, is intended to serve as a focus for continued discussions on relevant issues among the Division of Anesthesia, Analgesia, and Addiction Products, pharmaceutical sponsors, the academic community, and the public. Since FDA published this draft guidance, the Agency has received numerous comments and questions that raise complex issues requiring extensive review and analysis. There were questions regarding the appropriate length of efficacy studies for chronic pain drug development, specifically opioids. There were also questions about which chronic pain patient populations are appropriate for efficacy studies with respect to analgesic drug development. Currently, the guidance remains under discussion, and the Agency is actively working to respond to comments and finalize this guidance.

Question 2. While the FDA has approved several abuse-deterrent formulations (ADF) in the last several years, ADFs continue to represent a very small portion of the market despite their benefits of deterring deliberate abuse of opioids. Several states have sought to eliminate barriers to access by placing ADFs on their formularies on a basis not less favorable than non-ADF products, and requiring coverage of ADFs at the same cost-sharing tier as non-ADF products. How does FDA work within HHS to ensure government payers are aware of the most recent approved products, as well as their clinical benefit to certain populations, to help appropriately determine coverage policies?

Answer 2. Although insurance companies and other payors often rely in part on FDA's approval of medications in making their coverage decisions, the Agency does not have authority to intervene in such decisions. Regarding ADF formulations, the Agency strongly supports a transition from the current market dominated by conventional opioids to one in which the majority of opioids have meaningful abuse-deterrent properties. Recognizing the importance of generic drugs to ensure patient access, FDA expects to soon release the final version of a guidance document laying out the testing that generic sponsors should follow to bring generic versions of ADF opioids to market.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR WARREN

1. Expanded access to Naloxone

Access to naloxone, a prescription drug meant to reverse an opioid overdose, saves lives. However, more could be done to expand access to naloxone. In August 2016, the FDA outlined the steps it was taking to ensure greater access to naloxone, including “helping manufacturers pursue approval of an OTC naloxone product, including helping to develop the package label that would be required for such a product.”⁸ The FDA indicated that it had created a model Drug Facts Label and accompanying pictogram that could provide consumers with necessary information about how to use naloxone safely, and was engaged in label comprehension testing of this model label. In your response to a question for the record about naloxone submitted after your nomination hearing in April, you said that you “support increased access to drugs like naloxone, which can arrest or reverse opioid overdoses,” and that if confirmed, you would “commit to working with FDA to quickly get up to speed on [the] specific issue [of expanded access to naloxone].” Given that you are now over 5 months into the job:

Question 1a. What is the current status of FDA efforts to develop and test a package label for an OTC naloxone product?

Answer 1a. Prevention and treatment of opioid overdose is an urgent public health priority, and FDA recognizes the need to improve access to naloxone for the emergency treatment of known or suspected overdoses until emergency medical help arrives. The Agency is focusing on: (1) expanding the utilization of naloxone; (2) accelerating the development and availability of new naloxone formulations and user friendly products; and (3) identifying and disseminating the best practice naloxone delivery models and strategies. FDA is reviewing options, including over-the-counter (OTC) availability, to make naloxone more accessible to treat opioid overdoses, building on the Agency’s recent approval of intranasal naloxone. FDA is facilitating the development of labeling for a potential OTC version of naloxone, which is currently only available by prescription.

To help facilitate the potential availability of OTC naloxone, the FDA has developed a draft model naloxone drug facts label (DFL) and an accompanying simple pictogram that would be placed next to the DFL to correspond with the DFL directions, and the FDA has initiated label comprehension testing to determine whether consumers can easily understand the information. This study is currently ongoing.

Question 1b. What efforts does the FDA have underway to encourage physicians to co-prescribe naloxone with opioid medications?

Answer 1b. Naloxone and co-prescribing is a multi-agency, multi-sector priority, bringing together the National Institutes of Health (NIH)/the National Institute on Drug Abuse (NIDA), the Centers for Disease Control and Prevention (CDC), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Health Resources and Services Administration (HRSA). The Agency has spoken to members of the community-based organizations that first pioneered lay administration of naloxone, medical professionals, policymakers, public health officials, first responders, product developers, researchers, and, of course, patients and their families, to explore and discuss issues surrounding the use of naloxone. In addition, the draft revisions to the FDA Education Blueprint for Health Care Providers Involved in the Management or Support of Patients with Pain emphasizes the importance of having naloxone available.

Question 1c. What additional steps could the FDA take to safely facilitate increased rates of co-prescribing of naloxone with opioid medications?

Answer 1c. FDA will continue to use the information from its discussions to help inform its work moving forward, including considering the development of naloxone co-prescribing guidelines and OTC access to naloxone.

Question 1d. What additional steps can the FDA take to work with interested manufacturers to continue expanding access to naloxone?

Answer 1d. FDA has initiated consumer behavior studies to develop a model drug facts label (DFL) that will help with self-selection and provide basic instructions for use. The sponsor of specific products will be responsible for developing a DFL for the instructions of use that are unique for their product. While the FDA does not yet know the outcome of the studies, it believes the availability of the results of these studies will lessen the burden on sponsors to develop a DFL, and could encourage sponsors to switch their products over the counter. Once the study has been completed, FDA plans to make the results publicly available to aid development of over the counter naloxone products.

⁸ Karen Mahoney, “FDA Supports Greater Access to Naloxone to Help Reduce Opioid Overdose Deaths,” FDA Voice (August 10, 2016) (online at: <https://blogs.fda.gov/fdavoices/index.php/2016/08/fda-supports-greater-access-to-naloxone-to-help-reduce-opioid-overdose-deaths/>).

In addition, FDA has contacted every maker of an approved naloxone product and offered to meet with them to discuss OTC. Several have taken FDA up on this offer. FDA will continue to work with these sponsors as they move forward in development.

2. Safe Drug Disposal

Safe drug disposal options are an important tool to help limit the volume of unused medications in circulation. Twice a year, the U.S. Drug Enforcement Agency holds National Prescription Drug Take Back Days, meant to help individuals dispose of unused medicines. 450 tons of drugs were disposed of in the last national take-back day in May.⁹ In September 2014, the DEA released the final rule on “Disposal of Controlled Substances,”¹⁰ aimed at making it easier to for individuals to dispose of unused medicines and allow for more continuous collection opportunities. Over a year ago, Massachusetts announced its “first statewide safe medication disposal program with Walgreens to fight substance misuse,”¹¹ and today in Massachusetts, in addition to semi-annual national take-back days, there are a number of permanent kiosks where individuals can go to dispose of unused medications.¹²

Question 2a. In its efforts to reduce the volume of unused medications in circulation, what is the FDA doing to study safe drug disposal technologies?

Answer 2a. Combating opioid misuse, abuse, and addiction has long been both a public health priority and a priority for the Agency. FDA has established an Opioid Policy Steering Committee that is actively exploring a wide range of options for addressing the opioid epidemic, including take-back programs. Additionally, FDA is exploring innovative designs for drug packaging, storage, and/or disposal, options that may enhance opioid safety.

FDA is hosting a public workshop on December 11–12, 2017, entitled “Packaging, Storage, and Disposal Options to Enhance Opioid Safety-Exploring the Path Forward.” The purpose of the public workshop is to host a scientific discussion with expert panel members and interested stakeholders regarding the role of packaging, storage, and disposal options within the larger landscape of activities aimed at addressing abuse, misuse, or inappropriate access of prescription opioid drug products (opioids); guiding principles and considerations for the design of packaging, storage, and disposal options for opioids; integrating packaging, storage, and disposal options into existing health care and pharmacy systems, including both open and closed health care systems (e.g., a closed system such as the U.S. Department of Veterans Affairs); data needs and how to address challenges in assessing the impact of packaging, storage, and disposal options in both the premarket and postmarket settings; and ways in which FDA could encourage the development and assessment of packaging, storage, and disposal options for opioids that have the potential to enhance opioid safety.

3. Women and opioids

The 21st Century Cures Act included a provision that I worked on to support the inclusion of women and minorities in clinical trials at the NIH. The FDA has also been working to support efforts to diversify clinical trials.¹³ CDC data shows the rate of deaths from prescription opioids is increasing “471 percent among women, compared with an increase of 218 percent among men.”¹⁴

Question 3a. How could the FDA’s efforts to promote diversity in clinical trials help address the disproportionate increase in opioid death rates experienced by women?

Question 3b. What other steps can the FDA take to address the increasing impact of the opioid epidemic on women?

⁹“DEA Brings in Record Amount of Unused Prescription Drugs on National Prescription Take Back Day,” U.S. Drug Enforcement Administration (May 8, 2017) (online at: <https://www.dea.gov/divisions/hq/2017/hq050817a.shtml>).

¹⁰Federal Register, Vol. 79, No. 174 (September 9, 2014) (Online at: <https://www.deadiversion.usdoj.gov/fedregs/rules/2014/2014-20926.pdf>).

¹¹“Baker-Polito Administration Announces First statewide Safe Medication Disposal Program with Walgreens to Fight Substance Misuse,” The Official Website of the Governor of Massachusetts (September 7, 2017) (online at: <http://www.mass.gov/Governor/press-office/press-releases/fy2017/statewide-safe-medication-disposal-program-launched.html>).

¹²“Safely Dispose of Prescription Drugs,” Mass.gov (online at: <https://www.mass.gov/safely-dispose-of-prescription-drugs>) (accessed October 25, 2017).

¹³Califf, Robert, “2016: The Year of Diversity in Clinical Trials,” U.S. Food & Drug Administration (January 27, 2016) (online at: <https://blogs.fda.gov/fdavoice/index.php/2016/01/2016-the-year-of-diversity-in-clinical-trials/>).

¹⁴“Final Report: Opioid Use, Misuse, and Overdose in Women,” U.S. Department of Health and Human Services Office on Women’s Health (July 13, 2017) (online at: <https://www.womenshealth.gov/files/documents/final-report-opioid-508.pdf>).

Answer 3b. FDA has a long history of efforts to help ensure that clinical trials are designed to evaluate the effects of drugs on men and women. FDA encourages industry to consider separately the effects of drugs on men and women to determine whether sex differences exist and whether we need more information to assess variations. FDA, including its Office of Women's Health, is dedicated to advancing women's health through policy, science, and outreach to advocate for the inclusion of women in clinical trials and for subgroup data analysis by sex. There are decades of research on the question of how females respond differently to drugs, including opioids, and sex differences in addiction, including to opioids.

In addition, FDA-approved labeling for many drugs already include information on dose considerations or side effect profiles related to age, health problems, or sex. When findings suggest safety issues that FDA thinks are important, it requires companies to put that information in labeling, and, sometimes, to do additional studies. For opioid analgesic applications, FDA regularly evaluates the pharmacokinetic, safety, and efficacy data for differences based on sex.

Furthermore, FDA's MedWatch program enables FDA to learn about adverse experiences that may be associated with the use of a drug post-approval. FDA uses MedWatch reports filed by consumers and health professionals, and mandatory adverse event reports filed by manufacturers, to identify problems in marketed products. The information received from a report of an adverse drug experience is added to the FDA Adverse Event Reporting System data base. The collected reports are monitored and observed for emerging patterns. In the event that there may be potential for a widespread product problem, the Agency will initiate action as needed.

Scientific publications by FDA review scientists are an additional source of relevant demographic information for approved drugs, biologics, and medical devices. Depending on the safety concerns, FDA may decide to exercise its authority under section 505(o)(4) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) to require certain holders of approved applications for prescription opioid drug products to make safety labeling changes, thus better communicating drug risks in labeling to patients and prescribers.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR WHITEHOUSE

1. The 21st Century Cures Act authorized \$1 billion over 2 years to support efforts to combat the opioid epidemic. The second half of that money is expected to be made available as part of the fiscal year 2018 appropriations bill. Though I was pleased to see the first \$500 million get out to states quickly, I think we can improve how the next \$500 million is used and allocated.

Question. First, we could allow grantmakers approving applications for these funds to consider whether the proposed uses of this funding are aligned with the goals of the Comprehensive Addiction and Recovery Act (CARA). Second, in evaluating applications for this funding, more consideration could be given to states most affected by the epidemic. Do you support aligning the uses of the next tranche of 21st Century Cures Act opioid funding with the best practices set forth in CARA and/or prioritizing funding to states most affected by the opioid epidemic?

Answer. FDA defers to SAMHSA. Please see SAMHSA's response.

RESPONSE BY DR. GOTTLIEB TO QUESTIONS OF SENATOR YOUNG

Question 1. Some researchers have found that it takes an average of 17 years for research evidence to reach clinical practice. How are you all working together to ensure our best practices actually reach the patient in a reasonable amount of time? Are you working with medical associations and boards to ensure that best practices are translated into clinical practice? What can be done at the Federal level to speed up this research to practice pipeline?

Answer 1. FDA has participated in a public-private-partnership (PPP) under the Critical Path initiative, the Analgesic Clinical Trial Translation, Innovations, Opportunities, and Networks (ACTTION). The ACTTION PPP is a collaboration among a broad spectrum of national and international groups aimed at advancing the science in this area, including academia, FDA and other government agencies, pharmaceutical and device companies, professional organizations, and patient advocacy groups. FDA is also engaging with other stakeholders outside of the drug approval process, such as pharmacy benefit managers and provider groups, to determine what role FDA can play in impacting prescribing behaviors.

We know that developing non-opioid and non-addictive pain medicines is challenging for many reasons. Therefore, FDA is interested in progressing the entire field of pain drug development, and FDA supports cutting-edge research aimed at encouraging the potential development of these products. At the Federal level, the

Agency is also working with the National Institute on Drug Abuse to encourage the development of non-opioid pain medications, and has been involved in discussions with National Institutes of Health in a series of meetings to facilitate development of non-addictive pain treatments.

Question 2. Too many unused opioids dangerously remain in medicine cabinets throughout America. They pose a real threat to health and safety—especially to young Americans. Will drug take back programs be a component of our government's response to this national emergency?

Answer 2. FDA is actively exploring a wide range of options for addressing the opioid epidemic, including take-back programs. In addition, the Agency is exploring how opioid drug products are packaged, stored, and ultimately—when no longer needed—discarded. FDA is committed to exploring its existing authorities to find new and impactful ways of regulating these product features to improve patient safety. One area it is exploring is packaging innovations that could work to improve storage and encourage prompt disposal to reduce the available supply and reduce the risk for third-party access, such as a child accidentally ingesting pills he or she found in a medicine cabinet.

FDA held a public workshop on December 11 and 12, 2017, to explore these issues. The purpose of the public workshop is to host a scientific discussion with expert panel members and interested stakeholders regarding the role of packaging, storage, and disposal options within the larger landscape of activities aimed at addressing abuse, misuse, or inappropriate access of prescription opioid drug products (opioids); guiding principles and considerations for the design of packaging, storage, and disposal options for opioids; integrating packaging, storage, and disposal options into existing health care and pharmacy systems, including both open and closed health care systems (e.g., a closed system such as the U.S. Department of Veterans Affairs); data needs and how to address challenges in assessing the impact of packaging, storage, and disposal options in both the premarket and postmarket settings; and ways in which FDA could encourage the development and assessment of packaging, storage, and disposal options for opioids that have the potential to enhance opioid safety.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR ALEXANDER

Question 1. Do you need additional authorities, on top of the modernizations for substance use disorders and opioid abuse programs and services in the 21st Century Cures Act and in the Comprehensive Addiction and Recovery Act (CARA), to fight the opioid crisis? If so, please provide specific authorities that would be helpful.

Answer 1. The Department of Health and Human Services (HHS) is undergoing a department-wide process to identify what authorities or changes in statute would be helpful.

Question 2. Section 319 of the Public Health Service Act gives the Secretary of HHS the authority to determine that a public health emergency exists, allows for waivers of various Medicare and Medicaid regulations, movement of volunteer and Federal medical and public health professionals to areas hardest hit by the emergency, ability to access resources traditionally used for the Strategic National Stockpile, and the ability of the FDA to allow drugs and devices to come to market prior to full approval under its Emergency Use Authorization. Are any of the authorities that are available under a Public Health Emergency Declaration necessary to help address the opioid abuse crisis? If any, please list, and provide specific examples of why such authority is helpful.

Answer 2. HHS is thoroughly reviewing the available authorities and analyzing how they can be applied in the context of the opioid epidemic. As decisions are made, we will be happy to share them with you, but we are committed to carrying out our five-point HHS Opioid Strategy and stemming the tide of this epidemic.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR MURRAY

1. While opioids are commonly used for pain management, we know that doctors, patients, and their families must weigh the risks and benefits of such potentially addictive medication when a loved one is in pain. This is particularly concerning since your agency's own analysis published in 2015 found that more than one in ten adults in the U.S. experienced chronic pain, and nearly 40 million suffered from severe pain.

In your May 2017 article with Dr. Volkow on the role of biomedical research in combatting the opioid epidemic [in the *New England Journal of Medicine*], you ac-

knowledge that a factor driving this crisis is the limited number of alternative treatments available for pain, particularly for managing chronic pain.

Question 1a. How is NIH working to identify opportunities to develop alternatives to opioids for pain management? Which treatments are most promising? What are their risks and benefits?

Answer 1a. In 2016 NIH spent \$483 million on pain research ranging from cellular and molecular mechanisms of acute and chronic pain to safe, effective therapy development, to large scale clinical trials. The portfolio includes many projects that address the pressing need to develop new non-opioid, non-addictive pain treatments. Studies range from early stage drug target discovery focused on molecular pathways of pain signaling including exploration of receptors and channels as potential non-addictive analgesic targets to testing in behavioral models. A number of targets identified through NIH basic science, such as the nerve growth factor receptor and pain-related ion channels, are now being pursued in industry sponsored clinical trials of non-addictive treatments.

NIH is developing opioids with reduced risk of addiction and abuse. NIH supported investigators are developing new compounds that exhibit novel properties as a result of their combined activity at different opioid receptors (μ , δ , and κ). Compounds with combined activity at the μ and δ receptors or at all three receptors can induce strong analgesia without producing tolerance or dependence in animal models. In addition, discovery of adjunct medications that can be combined with opioids to reduce the needed dose promise to result in lower potential for dependence and addiction. Innovative methods are being explored for drug delivery to increase specificity and efficacy and to reduce analgesic side effects, as well as modified formulations to enhance delivery.

NIH supports an initiative, the Blueprint Neurotherapeutics Program, for small molecule drug discovery and development. For example, NINDS funds studies through this program that aim to develop non-addictive κ opioid receptor antagonists for migraine and a safe, non-opioid analgesic that can be taken orally to reduce diabetic nerve pain.

Other non-pharmacological approaches show promise for pain management. A tissue-based tool for screening potential migraine drugs is under development and a library of small molecules is being leveraged to screen for candidates for optimization as analgesics. Tissue engineering and regeneration to create tissue scaffolding and microenvironments to promote wound healing, and joint cartilage and intervertebral disc replacements is being applied to relieve pain. Neural stimulation technologies for chronic intractable pain are being improved. For example, wearable ultrasound devices and implantable micro-stimulators are being tested for peripheral and central nervous system targets to relieve pain.

Evaluation and dissemination of complementary and integrative health approaches are a crucial component of quality pain management. NIH supported studies include mechanism-based clinical studies on cognitive behavior therapy, exercise, yoga, acupuncture, massage and fitness, and mindfulness practices are important component of the NIH Federal pain research portfolio.

Question 1b. In my role as the top Democrat on the Labor-H Appropriations Subcommittee, I was pleased that Chairman Blunt and I were able to secure an additional \$2 billion for NIH in our bipartisan bill. What more do you need from Congress to bolster this work?

Answer 1b. NIH is grateful for the funding and modernizations under 21st Century Cures Act that have streamlined research and enabled new creative approaches to support research as part of the NIH mission. The Department of Health and Human Services is undergoing a department-wide process to identify what authorities or changes in statute would be helpful and funding to carry them out.

2. NIH has been instrumental in supporting and testing treatments for opioid addiction. NIH also has focused research efforts on the prevention of opioid addiction, which will also be important in our fight.

Question 2a. Can you describe NIH's current research efforts and how they may impact the prevention and treatment of opioid use disorder?

Answer 2a. Addressing the opioid crisis is a top priority for the Department of Health and Human Services, including NIH and NIDA. NIH supports a broad portfolio of research to develop and test strategies for the prevention and treatments of opioid use disorder (OUD). In addition, NIH is launching a public-private collaborative research initiative to address the opioid crisis. The initial plan for this initiative was recently described by Drs. Collins and Volkow in the *New England Journal of Medicine* and includes three major areas for advancement: (1) *safe, more effective, and non-addictive strategies* for chronic pain management to prevent misuse of and addiction to prescription opioids; (2) new and innovative opioid addiction treatments

to reduce drug use and support recovery; and (3) overdose reversal interventions to reduce mortality and promote access to treatment.¹

To identify the scientific strategies with the greatest potential, NIH brought together innovative experts from government, industry, and academia for a series of three cutting-edge science meetings. Plans are underway to develop a draft strategy for collaborative activities including major goals of the initiative, action steps, key partners, deliverables, timeline, and resources (in-kind and financial costs) to fully carry out the proposed action steps. The Foundation for the National Institutes of Health will solicit input on the final draft from participants including Federal partners as well as other relevant stakeholders. Upon final approval of the plan, it will be posted on the NIH website at: <https://www.nih.gov/opioid-crisis>.

Promising potential action steps related to OUD treatment and overdose prevention include:

1. **Develop new formulations, combinations, and means to deliver** existing medications to increase treatment effectiveness and support long-term recovery.

a. **Medications for opioid addiction** (*e.g.* extended release buprenorphine and naltrexone)

b. **Overdose prevention** and reversal (*e.g.* increased potency naloxone for fentanyl and carfentanil overdoses)

c. **New technologies** (*e.g.* implants, pumps, neural stimulation) to enhance treatments for pain and substance use disorder, and to prevent/reverse overdose.

NIDA also continues to fund a robust prevention portfolio that builds upon solid epidemiological findings and insights from genetics and neuroscience research, applying this knowledge to develop effective strategies to prevent initiation of drug use and escalation of use to addiction among youth. Highly effective evidence-based drug use prevention interventions and drug addiction treatment approaches have been developed and tested. These are well detailed in the Surgeon General's Report on Alcohol, Drugs and Health.² NIH's current prevention portfolio encompasses a broad range of research to (1) increase our understanding of the factors—including genetic, psychological, and environmental—that enhance or mitigate an individual's risk for drug use and substance use disorders; and (2) develop and test intervention strategies targeted to high-risk populations. For example, KEEP SAFE is a family based and skill-focused program designed to prevent substance use and other related health risking behaviors among youth in foster care. Research indicated that the intervention significantly reduced substance use in foster youth at 18 months post-baseline and that the intervention influenced substance use through two processes: youths' improved quality of relationships with caregivers at 6 months post-baseline and fewer associations with deviant peers at 12 months post-baseline. This suggests that these two processes may be important targets in substance use prevention programs for foster youth.

Broad adoption of evidence-based prevention interventions has been limited due to implementation challenges that span financial, regulatory, geographic, attitudinal, and logistical issues. Ongoing research is working to develop strategies to translate evidence-based practices in a way that confers population-level impact,³ including for developing implementation capacity, and implementation and sustainability of evidence-based practices across systems and settings. For example:

- Organizational and system supports for evidence-based implementation
- Work-force development and training
- Ongoing fidelity monitoring
- Continuous quality improvement
- Financing

In addition, NIH supports basic research to understand the impact of drug use during adolescence on brain development. Adolescence is a period of intense brain and cognitive development. During this time, one's environments, experiences, and exposures shape brain structure and function, and ultimately adult identity. Brain research, particularly in the last decade, has opened new windows to understanding the adolescent brain, but there is much we still do not know about the normal trajectory of brain development during adolescence and the many experiences that may

¹Volkow, N. D. and F. S. Collins (2017). "The Role of Science in Addressing the Opioid Crisis." *New England Journal of Medicine* 377(4): 391-394.

²Surgeon General's Report on Alcohol, Drugs, and Health. 2016. at <https://addiction.surgeongeneral.gov/>

³Spoth R, Rohrbach LA, Greenberg M, et al. Addressing core challenges for the next generation of type 2 translation research and systems: the translation science to population impact (TSci Impact) framework. *Prev Sci* 2013;14:319-51.

enhance or disrupt it, such as substance use. To address this gap, NIH, in partnership with CDC, is funding the landmark Adolescent Brain Cognitive Development (ABCD) Study⁴, a multi-site, longitudinal investigation of 10,000 children from ages nine and ten into early adulthood. As of October 2017, 5,433 youth have enrolled in the study. The actionable information coming out of this study will be a foundation upon which to develop and refine substance use prevention and treatment as well as other health promotion interventions that are rooted in a deep understanding of the neurobiological and psychosocial factors that influence adolescent health and wellness to optimize the well-being and success of our Nation's children.

Finally, NIH would like to note that this year, a new study called the Advancing Clinical Trials in Neonatal Opioid Withdrawal Syndrome (ACTNOW) will evaluate treatment options and improve clinical care of infants with NAINOWS. The study is collaboration between The Eunice Kennedy Shriver National Institute of Child Health and Human Development's (NICHD) Neonatal Research Network (which has 30 years of experience in conducting clinical trials with newborns) and the new Idea States Pediatric Clinical Trials Network (within the NIH Office of the Director's Environmental Influences on Child Health Outcomes (ECHO) Program), with sites located in rural and medically underserved communities. This joint research effort will use the reach of both networks to assess the communities they serve, determine the prevalence of NAS, understand current approaches to managing NAINOWS cases (including non-pharmacological approaches), and develop protocols for conducting large scale studies across the country to inform clinical care for affected infants.

Question 2b. We know there are medications for treating opioid addiction, but how can we make sure these treatments are properly utilized to give every patient the best chance of achieving and maintaining recovery for the long term?

Answer 2b. NIDA supported the development of all three medications approved for the treatment of OUD—buprenorphine, methadone, and naltrexone. NIDA funds a broad portfolio of research to develop and test strategies to increase access to these lifesaving drugs. For example, NIDA's Juvenile Justice Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS) program is working to improve prevention and treatment of SUD among criminal justice involved youth. The JJ-TRIALS cooperative was established in 2013 and is composed of six research centers and one coordinating center. The main study is a randomized trial that involves 36 sites in seven states and is testing the effectiveness of two implementation strategies for promoting system-wide improvements in SUD prevention and treatment services. Thus far, JJ-TRIALS has led to the development of the Juvenile Justice Behavioral Health Services Cascade, a framework for measurement of unmet substance use treatment needs to identify services delivery needs and develop strategies to address them.

In addition, NIDA's Clinical Trials Network (CTN) conducts research to develop and test strategies for integrating OUD treatment in general healthcare settings including primary care and emergency departments. Ongoing and planned studies of relevance to the opioid crisis will be testing:

- A collaborative care model for management of OUD in primary care with engagement of multiple healthcare systems⁵
- Models for addressing OUD in emergency departments,⁶ including utilization of a long-acting depot formulation of buprenorphine that was recently approved by the FDA⁷
- Pilot usability testing of clinical decision support tools for treating OUD in primary care settings⁸
- A pilot model of coordinated care management between physicians and pharmacists for buprenorphine treatment⁹

Other ongoing research is examining the strategies that are being used to increase access to OUD medications through the SAMHSA State Targeted Response to the Opioid Crisis Grants that were funded through the 21st Century Cures Act. Five NIDA-funded research projects will help evaluate:

⁴<http://abcdstudy.org/index.html>.

⁵<https://www.drugabuse.gov/about-nida/organization/cctn/ctn/research-studies/primary-care-opioid-use-disorders-treatment-trial>

⁶<https://www.drugabuse.gov/about-nida/organization/cctn/ctn/research-studies/opioid-use-disorder-in-emergency-department>.

⁷<http://www.indivior.com/investor-news/indivior-submits-new-drug-application-u-s-fda-rbp-6000-buprenorphine-monthly-depot/>.

⁸<https://www.drugabuse.gov/about-nida/organization/cctn/ctn/research-studies/clinical-decision-support-opioid-use-disorders-in-medical-settings-pilot-usability-testing-in-emr>.

⁹<https://www.drugabuse.gov/about-nida/organization/cctn/ctn/research-studies/pharmacy-screening-collaborative-opioid-use-disorder-care-pharm-oud-care>.

- The creation and deployment of the Patient Decision Aid for Medication-Assisted Treatment (PtDA-MAT), a patient-centered decision tool to promote the use of medications, assess patient values and preferences, and incorporates scientific evidence to increase patients' understanding of possible medication risks, benefits, alternatives, and their associated outcomes.¹⁰
- The Recovery Initiation and Management after Overdose (RIMO) protocol for individuals who are revived from an opioid overdose. The protocol is initiated within a week of nonfatal overdose and includes assertive recovery supports and facilitates linkage with evidence-based treatment for OUD using medications.¹¹
- Planned Outreach, Intervention, Naloxone, and Treatment (POINT), an emergency department-based outreach program for engaging opioid overdose survivors in Indiana with treatment. Recovery coaches are deployed to emergency departments to assist patients with accessing medication-assisted treatment after discharge from the emergency department.¹²
- A Rhode Island initiative is focused on expanding the medication assisted treatment workforce by developing and testing a pharmacist-delivered intervention for the management of patients who are stable on medications. This model will also be refined and tested to provide continuity in medication assisted treatment for patients who are being released from incarceration.¹³
- The Hub & Spoke model for provision of medication assisted treatment in primary care settings. This model is being tested in Washington State with a study that focuses on adults with OUD who are covered by Medicaid.¹⁴

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR COLLINS

Question 1. Dr. McCance-Katz and Dr. Houry [or whole panel], according to SAMHSA, in 2014 an estimated 28,000 adolescents had used heroin in the past year and an estimated 16,000 were current heroin users. One part of addressing this epidemic is ensuring that younger generations are informed about the dangers of opioids. The Drug Enforcement Agency is working with partners to provide science-based information to children about the risks of opioids, such as through its “360 Strategy” on heroin and opioids and “Operation Prevention.” Could you speak about collaboration between SAMSHA and CDC on these law enforcement initiatives, particularly with respect to reaching young people?

Answer 1. NIH defers to SAMHSA and CDC.

Question 2. Dr. Collins, I want to hone in on pain—how we measure and communicate pain. This has long been a problem for individuals with Alzheimer’s disease and those with certain intellectual and developmental disabilities. Perhaps—as the over-prescription of opioids over the past several years suggests—the one through ten smiley face system to indicate level of pain is not working. What is a three for one person might be a nine for another. Could you give us an update on research to improve how we measure pain, so that we can appropriately and adequately treat it?

Answer 2. Quantitative and reliable measures of pain are a crucial component of pain management and essential to quality research. The National Pain Strategy and the Federal Pain Research Strategy call for improved objective measures for pain, especially in populations with cognitive and communication impairment, and non-verbal children. As pain is a perception mediated by specific neural circuits, investigators are making progress detecting pain circuit activity in human subjects using techniques such as functional MRI. The Brain Research through Advancing Innovative Neurotechnologies® (BRAIN) Initiative is focused on developing tools to monitor and modulate brain circuits which could transform how we measure pain and guide how we treat patients suffering from pain.

NIH is developing approaches to address the need for improved pain assessment. The NIH Patient-Reported Outcomes Measurement Information System (PROMIS) program provides rigorously tested patient reported outcome (PRO) measurement tools that use information technology, psychometrics, and qualitative, cognitive, and

¹⁰https://projectreporter.nih.gov/project_info_description.cfm?aid=9513338&icde=36846083&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

¹¹https://projectreporter.nih.gov/project_info_description.cfm?aid=9511074&icde=36846131&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

¹²https://projectreporter.nih.gov/project_info_description.cfm?aid=9513197&icde=36846207&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

¹³https://projectreporter.nih.gov/project_info_description.cfm?aid=9513201&icde=36846245&ddparam=&ddvalue=&ddsub=&cr=4&csb=default&cs=ASC&pball=

¹⁴https://projectreporter.nih.gov/project_info_description.cfm?aid=9513139&icde=36846292&ddparam=&ddvalue=&ddsub=&cr=2&csb=default&cs=ASC&pball=

health survey research to measure PROs on pain and associated conditions of fatigue, physical function, sleep, and depression.

NIH supported studies have validated quantitative sensory testing to measure pain sensitivity, threshold, and modulation as physiologic indicators of chronic pain in children [https:// www.ncbi.nlm.nih.gov/ pubmed/ 28151835](https://www.ncbi.nlm.nih.gov/pubmed/28151835) and adults [https:// www.ncbi.nlm.nih.gov/ pubmed/24275224](https://www.ncbi.nlm.nih.gov/pubmed/24275224).

Current NIH Funding Opportunity Announcements call for the development of a technology or device that objectively indicates the presence and level of pain: *RFA-DA-18-012* and *RFA-DA-18-013*.

Assessing and measuring pain in people with communication deficits including dementia and other cognitive impairment, and young non-verbal children is complex. For these populations, it is necessary to use observational tools based on behavioral cues as an indicator of pain. One such tool is based on guidelines from the American Geriatrics Society and uses facial expression, negative vocalization, body language, changes in activity, and social interactions and mental status [https:// www.ncbi.nlm.nih.gov/ pubmed/ 25519741](https://www.ncbi.nlm.nih.gov/pubmed/25519741). This is a complex approach and further evidence to support its validity is needed. Another tool for assessment of pain in older adults with cognitive impairment is the Pain Assessment in Advanced Dementia scale. NIH funded investigators provided a case study on the tool for pain management [https:// www.ncbi.nlm.nih.gov/pmc/articles/ PMC4443668/figure/F1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4443668/figure/F1) . Pain assessment tools for newborns and infants similarly rely on behavioral indicators. For example, *the Neonatal facial coding system* and the *Premature Infant Pain Profile* have been validated in newborns. The latter uses video recordings to monitor facial expression and quality of sleep.

The *Eunice Kennedy Shriver* National Institute for Child Health and Human Development (NICHD) actively supports research on pain and pain measurement. The NICHD is presently co-funding, with the National Institute of Nursing Research (NINR), a study to develop an objective, automated way of measuring pain by analyzing facial, head, and body movement. Other studies are assessing ways of measuring pain related to specific conditions, to better understand how different types of pain may affect individuals during illness and recovery. In one study, NICHD-funded investigators are assessing pain measures in women undergoing hysterectomy. Another study focusing on gynecological pain is assessing a variety of pain testing tools including psychological evaluation. The NICHD has active Funding Opportunity Announcements specifically focusing on vulvodynia or chronic vulvar pain. Children and adolescents are being studied prospectively to determine if predictors of the transition from acute to persistent musculoskeletal pain can be identified. For individuals with intellectual or neurodevelopmental disabilities, e.g., cerebral palsy, who may be nonverbal or have difficulty self-reporting, NICHD has funded a small pilot study to identify biomarkers in saliva from children with cerebral palsy with and without chronic pain. This noninvasive test showed that that children with and without pain had different levels of several types of molecules in saliva.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR FRANKEN

Question 1. It is anticipated that President Trump may declare the opioid crisis a national emergency as soon as this week. How will this emergency declaration affect the ways in which your agency is addressing the opioid epidemic in the United States? How will the declaration affect the way that individuals with opioid addiction receive treatment services across the United States? Many states including Alaska, Arizona, Florida, Virginia, Maryland, and Massachusetts have also declared their own state-wide disaster or emergency declarations. How will a Federal declaration build on these State efforts? From your perspective, is there a State response that stands out as particularly effective or innovative at reducing opioid misuse and addiction?

Answer 1. Subsequent to this October 5, 2017, hearing President Trump directed HHS to declare and HHS did declare the opioid crisis and a nationwide national public health emergency.

NIH is the lead HHS agency providing support for cutting-edge research on pain and opioid misuse, addiction, and overdose and to that end NIH will continue to use its resources and expertise to support the Federal response to combat the opioid crisis.

In terms of how individuals with opioid addiction receive treatment services and the State responses, NIH defers to SAMHSA and CDC.

Question 2. Research shows a strong connection between a person's health and stable housing, despite the fact that they are often treated as separate issues. I'm interested in how supportive housing—housing with social service supports—can

help to address the opioid crisis, particularly in Indian Country where this epidemic has hit communities especially hard. I have heard from Native American leaders in Minnesota who have explained that stable housing not only removes the stress of where someone is going to sleep at night, but also helps people avoid unhealthy situations, reducing the risk of relapse. I asked you all about this issue during the hearing. What specific initiatives does your agency have underway to better understand the connection between health, housing, and substance use disorders, and what actions are you taking to incorporate supportive housing programs into your work to address the opioid epidemic? And what more is needed to develop these supportive housing programs further, especially in rural and other underserved areas?

Answer 2. Unstable housing is associated with a range of negative health outcomes including mental illness and substance use disorder.¹⁵ Thus, addressing housing instability is a major component of effective prevention, treatment, and recovery supports and is an ongoing subject of research. NIDA is currently funding several projects on supportive housing, drug use, and associated health outcomes in homeless adults, youth, and women. Ongoing studies are:

- Comparing supportive housing models for HIV-positive and at-risk chronically homeless adults in Chicago;¹⁶
- Examining how to better engage substance using homeless youth in drop-in center services;¹⁷
- Evaluating Ecologically Based Treatment (EBT) interventions with young, substance-using homeless mothers in Ohio;¹⁸
- Exploring HIV risk, drug use, and social networks among homeless persons transitioning to housing in Los Angeles and Long Beach, CA;¹⁹
- Pilot testing an e-learning version of an evidence-based intervention called the Housing First Technical Assistance and Training program in Chicago and central Indiana;²⁰
- Studying health outcomes and effects on healthcare utilization of a Chicago homelessness-prevention intervention utilizing Homelessness Prevention Call Center (HPCC) to connect individuals to emergency financial assistance;²¹ and
- Conducting a clinical trial of a mindfulness-based cognitive-behavioral intervention to reduce substance use and victimization (robbery, assault) among homeless youth.²²

Some studies are also focused on improving housing and other health outcomes among criminal-justice-involved individuals re-entering the community after incarceration, including:

- A study of the use of case management and motivational interviewing in sober living homes to reduce HIV risk among offenders;²³ and
- A study of the impact on substance use and recidivism of a needs-focused intervention for homeless female ex-offenders.²⁴

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR HASSAN

Question 1. In your view, what is the top action that your agency is not doing now that you think it should be doing to address the opioid epidemic?

Answer 1. There is an urgent need to expand the number of treatment options for individuals experiencing pain, misusing opioids, and those with opioid use disorders. To identify research priorities to help address this problem, NIH convened innovative experts from government, industry, and academia for a series of three cutting-edge science meetings this summer. These meetings are informing the launch of a new public-private collaborative research initiative on pain and opioid

¹⁵ Tsai J, Rosenheck RA. Risk Factors for Homelessness Among US Veterans. *Epidemiologic reviews.* 2015;37:177-195.

¹⁶ https://projectreporter.nih.gov/project_info_description.cfm?aid=9188535&icde=36727330&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

¹⁷ https://projectreporter.nih.gov/project_info_description.cfm?aid=9060915.

¹⁸ https://projectreporter.nih.gov/project_info_description.cfm?aid=9188535&icde=36727330&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

¹⁹ https://projectreporter.nih.gov/project_info_description.cfm?aid=9220823&icde=36727292&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

²⁰ https://projectreporter.nih.gov/project_info_description.cfm?aid=9086316T1.

²¹ https://projectreporter.nih.gov/project_info_description.cfm?aid=9220271T1.

²² <https://projectreporter.nih.gov/projectG7XinfoG7Xdescription.cfm?aid=8875452T1>.

²³ https://projectreporter.nih.gov/project_info_description.cfm?aid=9231408&icde=36846571&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=T1.

²⁴ https://projectreporter.nih.gov/project_info_description.cfm?aid=9420456&icde=36846537&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=T1.

addiction. The initial plan for this initiative was recently described by Dr. Collins and Dr. Volkow in the *New England Journal of Medicine* and includes three major areas for advancement: (1) safe, more effective, and non—addictive strategies for chronic pain management to prevent misuse of and addiction to prescription opioids; (2) new and innovative opioid addiction treatments to reduce drug use and support recovery; and (3) overdose reversal interventions to reduce mortality and promote access to treatment.²⁵

Plans are underway to develop a draft strategy that will include major goals of the initiative, action steps, key partners, deliverables, timeline, and resources (in-kind and financial costs) to fully carry out the proposed action steps. The Foundation for the National Institutes of Health will solicit input on the final draft from participants including Federal partners as well as other relevant stakeholders. Upon final approval of the plan, it will be posted on the NIH website at: <https://www.nih.gov/opioid-crisis>

Question 2. In your view, what is the most promising emerging research that can help address the opioid epidemic?

Answer 2. Drs. Collins and Volkow recently published an article in the *New England Journal of Medicine* that discusses priorities for advancement as well as promising emerging research toward the development of: *safe, more effective, and non-addictive strategies* for chronic pain management to prevent misuse of and addiction to prescription opioids; (2) *new and innovative opioid addiction treatments* to reduce drug use and support recovery; and (3) *overdose reversal interventions* to reduce mortality and promote access to treatment.²⁶

These promising strategies included:

- Approaches to reverse or prevent opioid induced respiratory depression and overdose, such as new targets like 5-hydroxytryptamine type 1A (5-HT1A) agonists, ampakines, and phrenic-nerve-stimulation devices.
- Wearable devices that can detect an overdose when it is occurring and signal for help, automatically inject naloxone, or both.
- Treating opioid addictions with agents already in use for other indications, such as Lorcaserin, an FDA-approved diet drug that was found to reduce opioid seeking in a rodent model, and Lofexidine, an α_2A -adrenergic-receptor agonist that is currently used in the United Kingdom for opioid detoxification.
- Novel pharmacologic approaches to treat OUD, including medications that target neurokinin-1 receptors or kappa-opioid receptors.
- Vaccines against prescription opioids, heroin, and fentanyl, which induce antibodies to opioids in the bloodstream to keep them from entering the brain.
- Modified opioid drugs, such as μ -opioid receptor biased agonists (e.g. TRV130) that may treat pain while reducing the risk for addiction and overdose associated with common opioid pain medications.
- New pharmacological approaches to treating pain including:
 - kappa-opioid antagonists
 - cannabinoids
 - sodium channel Nav1.7 antagonists
 - tumor necrosis factor inhibitors
 - monoclonal antibodies that target nerve growth factor
 - Antibodies that target calcitonin gene—related peptide for treating migraine
- High-frequency repetitive transcranial magnetic stimulation for the treatment of pain or addiction.
- Viral-based gene therapies and transplantation of progenitor cells to treat pain.

Question 3. What is your and your agency's perspective on the recommendations from the president's bipartisan Commission on Combating Drug Addiction and the Opioid Crisis?

Answer 3. NIH was pleased to see that the President's Commission on Combating Drug Addiction and the Opioid Crisis highlighted areas that are also a priority for HHS. HHS, in collaboration with the White House, is currently reviewing the recommendations and assessing actions that may be taken beyond those already underway in support of the Department's five point HHS Opioid Strategy. The Commission's recommendations could be grouped into eight or nine main areas, including

²⁵ Volkow, N. D. and F. S. Collins (2017). "The Role of Science in Addressing the Opioid Crisis." *New England Journal of Medicine*.

²⁶ Volkow, N. D. and F. S. Collins (2017). "The Role of Science in Addressing the Opioid Crisis." *New England Journal of Medicine* 377(4): 391-394.

expanding access to evidence-based addiction treatment and overdose treatment, as well as better use of strengthening of public health surveillance data. NIH is working with the Department and the administration to achieve these ends.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR ROBERTS

Question 1. A June 2016 article titled, “The effect of an abuse-deterrent opioid formulation (OxyContin) on opioid abuse-related outcomes in the postmarketing setting” is available on the NCBI/NIH data base and indicates a reduction in abuse, misuse, overdose, addiction and other outcomes with the use of abuse-deterrent formulations (ADFs). Do you believe ADFs should be used more broadly to address the opioid epidemic?

Answer 1. Abuse-deterrent formulations can be useful tools for reducing misuse of prescription opioids. While prescription opioids can be misused through oral consumption, misuse through injection drug use and/or snorting crushed pills often occurs and presents a higher risk for adverse consequences, including addiction and overdose due to the more rapid delivery of the drug to the brain. Abuse-deterrent formulations can make snorting and injection drug use less feasible, by making it harder to prepare the medication for ingestion through snorting or injection. These formulations can also be made less rewarding by combining them with an opioid antagonist—such as naloxone or naltrexone—that is only released to block the effects of the opioid agonist if the pill is injected or snorted. In addition, abuse-deterrent formulations can make it harder to break or chew an extended release pill for oral ingestion with immediate release. This makes it more difficult to ingest a large and potentially dangerous dosage of opioids immediately that was intended to be released into the body over the course of several hours.

The June 2016 article titled “The effect of an abuse-deterrent opioid formulation (OxyContin) on opioid abuse-related outcomes in the post-marketing setting” is a review article that highlights promising findings from ten studies that indicate that an abuse-deterrent formulation of OxyContin had three types of impacts: reduced misuse, reduced doctor-shopping, and reduced fatalities.²⁷ Depending on the measure used, misuse of OxyContin fell by between 27 and 48 percent. So-called “doctor-shopping,” where patients receive prescriptions from multiple prescribers, went down by 50 percent, and overdose fatalities dropped by 65 percent.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR WARREN

1. Syringe Exchange Problems & Supervised Injection Facilities

Syringe Exchange Programs, also known as Syringe Services Programs (SSPs), are locations where individuals can go to get sterile needles and syringes, safely dispose of used items, and get education on safer practices and even treatment for other medical, social, or mental health needs. The CDC and the Institute of Medicine, among other scientific organizations, report that needle exchanges are “highly effective in preventing the spread of HIV/AIDS.”²⁸ While Federal funds can support SSPs, they cannot be used to specifically purchase needles or syringes. In order to receive Federal funding for SSPs, states or local communities must get permission from the CDC, and then they can redirect other Federal funds to support SSPs.²⁹

Question 1a. What is the NIH doing to study Syringe Exchange Programs, also known as Syringe Services Programs?

Answer 1a. The National Institute on Drug Abuse (NIDA) has a long history of supporting research related to SSPs. The science regarding SSPs and their effectiveness for HIV prevention is well established. Current NIDA-funded research is used to extend and test ways that these programs can provide a range of services to reduce drug use and HIV risk and promote entry into treatment for drug use disorders and related comorbidities like HIV and HCV. SSPs sites often serve as a bridge to perform outreach to otherwise unreached populations. In addition, these sites are often integrated into research studies as venues for recruiting out of treatment drug users.

The NIH supported ten projects on SSPs in fiscal year 2017 that evaluated the feasibility and efficacy of novel community-supported risk-reduction groups to ex-

²⁷ Coplan, P. M., et al. (2016). “The effect of an abuse-deterrent opioid formulation (OxyContin) on opioid abuse-related outcomes in the postmarketing setting.” *Clinical Pharmacology and Therapeutics* 100(3): 275-286.

²⁸ Wadman, Merideth, “Drug, HIV crises hit HHS nominee Price close to home,” *Science* (December 2, 2016) (online at <http://www.sciencemag.org/news/2016/12/drug-hiv-crises-hit-hhs-nominee-price-close-home>).

²⁹ “Syringe Services Programs,” Centers for Disease Control and Prevention (online at <https://www.cdc.gov/hiv/risk/ssps.html>). (page last updated September 28, 2017).

pand drug-free social networks;³⁰ assessed clinical outcomes from onsite treatment delivery,³¹ HIV/HCV testing, and linkage to care for SSP participants;³² determined SSP uptake patterns in rural, resource-poor areas;³³ and developed complementary intervention strategies for enhancing access to evidence-based structural HIV prevention interventions for highly vulnerable persons who inject drugs.³⁴

Question 1b. Research has also shown the benefits of Supervised Injection Facilities (SIFs), where people can use their own drugs, under medical supervision.³⁵ Research indicates that SIFs help lower risks of HIV and hepatitis transmission, limit overdose deaths, and increase the number of people seeking out addiction treatment. Would you support studying supervised injection facilities to determine how they might best be used as a tool in the fight against the opioid epidemic?

Answer 1b. Supervised Injection Facilities (SIFs) are new in the U.S., and research is needed to evaluate their impact on local drug use and related health consequences, such as overdose and the transmission of infectious diseases (HIV, HCV, etc.). These sites sometimes test drugs for content, which enables a surveillance of illicit drugs that can be difficult to perform otherwise.

Because there is only one SIF in the US, located in Seattle, WA (and a small number that are in the planning stage), it is not feasible to propose a research funding initiative.

2. Safe disposal

Safe drug disposal options are an important tool to help limit the volume of unused medications in circulation. Twice a year, the U.S. Drug Enforcement Agency holds National Prescription Drug Take Back Days, meant to help individuals dispose of unused medicines. 450 tons of drugs were disposed of in the last national take-back day in May.³⁶ In September 2014, the DEA released the final rule on “Disposal of Controlled Substances,”³⁷ aimed at making it easier for individuals to dispose of unused medicines and allow for more continuous collection opportunities. Over a year ago, Massachusetts announced its “first statewide safe medication disposal program with Walgreens to fight substance misuse,”³⁸ and today in Massachusetts, in addition to semi-annual national take-back days, there are a number of permanent kiosks where individuals can go to dispose of unused medications.³⁹

Question 1a. In its efforts to reduce the volume of unused medications in circulation, what is the NIH doing to study safe drug disposal technologies?

Answer 1a. Safe disposal of unused prescription drugs is a crucial part of efforts to prevent opioid misuse, and it depends not only on the availability of disposal opportunities but also patient education about the necessity of safe drug storage and disposal. Permanent drug disposal boxes, being tried in various communities, may be more convenient than scheduled Take-Back events, and also may be perceived as more anonymous.

NIDA is currently funding a project studying the usage and impact of permanent prescription drug disposal boxes in central Appalachia. A 2-year study of eight collection sites in five Tennessee counties yielded on average 1.39 pounds or 618.5 units of controlled substances per 1,000 residents; the most commonly disposed sub-

³⁰ https://projectreporter.nih.gov/project_info_description.cfm?aid=9310470.

³¹ https://projectreporter.nih.gov/project_info_description.cfm?aid=9411340.

³² https://projectreporter.nih.gov/project_info_description.cfm?aid=9482514,

https://projectreporter.nih.gov/project_info_description.cfm?aid=9412019,

https://projectreporter.nih.gov/project_info_description.cfm?aid=9231414,

https://projectreporter.nih.gov/project_info_description.cfm?aid=9220762,

³³ https://projectreporter.nih.gov/project_info_description.cfm?aid=9481503

³⁴ https://projectreporter.nih.gov/project_info_description.cfm?aid=9410729, https://projectreporter.nih.gov/project_info_description.cfm?aid=9341537, https://projectreporter.nih.gov/project_info_description.cfm?aid=9502152.

³⁵ Frakt, Austin, “JAMA Forum: Safe Injection Facilities Reduce Individual and Societal Harms,” JAMA (April 5, 2017) (online at: <https://newsatjama.jama.com/2017/04/05/jama-forum-safe-injection-facilities-reduce-individual-and-societal-harms/>).

³⁶ “DEA Brings in Record Amount of Unused Prescription Drugs on National Prescription Take Back Day,” U.S. Drug Enforcement Administration (May 8, 2017) (online at: <https://www.dea.gov/divisions/hq/2017/hq050817a.shtml>).

³⁷ Federal Register, Vol. 79, No. 174 (September 9, 2014) (Online at: https://www.deadiversion.usdoj.gov/fed_regs/rules/2014/2014-20926.pdf).

³⁸ “Baker-Polito Administration Announces First statewide Safe Medication Disposal Program with Walgreens to Fight Substance Misuse,” The Official Website of the Governor of Massachusetts (September 7, 2017) (online at: <http://www.mass.gov/Governor/press-office/press-releases/fy2017/statewide-safe-medication-disposal-program-launched.html>).

³⁹ “Safely Dispose of Prescription Drugs,” Mass.gov (online at: <https://www.mass.gov/safely-dispose-of-prescription-drugs>) (accessed October 25, 2017).

stances were hydrocodone, tramadol, oxycodone, and alprazolam;⁴⁰ these are the first reported outcomes associated with permanent drug donation boxes. This project is part of a larger project at East Tennessee State University to build institutional substance use disorder research infrastructure, and to develop strategies to mitigate the negative impact of prescription drug misuse in Appalachia and elsewhere. The researchers are also studying pharmacist-patient communication around the need for safe drug storage and disposal.

3. Maternal Mental Health & Opioids

In August, the Massachusetts Executive Office of Health and Human Services released a report on opioid overdoses that revealed that “mothers with [opioid use disorder] had a significantly higher co-occurrence of mental health diagnoses.” They also found that “Rates of opioid-related overdose decrease during pregnancy and are lowest during the second and third trimesters, but significantly increase in the postpartum period, with the highest rates 6 month—one year after delivery.”⁴¹ The National Institute of Mental Health has acknowledged that “drug abuse problems” were a risk factor for postpartum depression,⁴² and the CDC has shown that “1 in 9 women experiences postpartum depression.”⁴³ In an effort to address a lack of screening tools for postpartum depression, a provision was included in the 21st Century Cures Act that created a grant program to support screening of postpartum depression services⁴⁴—but moms are not yet routinely screened.

Question 3a. What is the NIH doing to help address this issue?

Question 3b. Does NIH collect dual diagnosis data on substance use and maternal mental health for the pregnant and postpartum opioid user population?

(Answers, both a. and b.): The National Institutes of Health (NIH) supports research on prevention, treatment, and mental health services to inform the work of other Federal agencies in their efforts to provide evidence-based treatment and service delivery. These research efforts help to inform clinical practice, such as the American College of Obstetricians and Gynecologists’ recommendation that clinicians screen patients at least once during the perinatal period for depression and anxiety symptoms using a standardized, validated tool.⁴⁵

In 2015, the National Institute of Mental Health (NIMH) issued a notice prioritizing research on women’s mental health during pregnancy and the postpartum period.⁴⁶ NIMH-funded efforts to address and understand maternal mental health range from basic research, including understanding biological risk factors, to establishing an evidence-base for effective services and interventions, such as connecting a diverse population of women to appropriate treatment. One such study followed more than 3,000 first-time mothers and identified six trajectories of depression from the third trimester of pregnancy through the first year postpartum.⁴⁷ A history of anxiety or depression, unattached marital status, and inadequate social support were significantly associated with higher odds of experiencing greater depression. NIMH also funded a study to better understand the genetic contribution to the risk of postpartum mood disorders using novel smart phone technology for participant recruitment.⁴⁸ Study findings support the need for tailored treatments that improve outcomes for women with perinatal depression. Findings from a third NIMH-funded study indicated collaborative care for perinatal depression improves outcomes (e.g., reduced depression severity and increased remission rates) in socioeconomically disadvantaged women.⁴⁹ These findings demonstrate a collaborative care model can be integrated into a local public health care system; NIMH is currently funding a clinical trial examining how to most effectively

⁴⁰ Gray, J., et al. (2015). “Prescription Disposal Practices: A 2-Year Ecological Study of Drug Drop Box Donations in Appalachia.” *American Journal of Public Health* 105(9): e89-e94.

⁴¹ “An Assessment of Fatal and Nonfatal Opioid Overdoses in Massachusetts (2011-2015),” Massachusetts Department of Public Health, 55-57 (August 2017) (online at: <http://www.mass.gov/eohhs/docs/dph/stop-addiction/legislative-report-chapter-55-aug-2017.pdf>).

⁴² “Postpartum Depression Facts,” National Institutes of Mental Health (online at: <https://www.nimh.nih.gov/health/publications/postpartum-depression-facts/index.shtml>) (accessed October 25, 2017).

⁴³ “Depression Among Women,” Centers for Disease Control and Prevention (online at: <https://www.cdc.gov/reproductivehealth/depression/index.htm>) (accessed October 25, 2017).

⁴⁴ See Sec. 10005: 21st Century Cures Act (online at: <https://www.Congress.gov/114/plaws/publ255/PLAW-114publ255.pdf>).

⁴⁵ <https://www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/co630.pdf?dmc=1&ts=20171109T1840330384>

⁴⁶ <https://grants.nih.gov/grants/guide/notice-files/NOT-MH-15-013.html>.

⁴⁷ <https://www.ncbi.nlm.nih.gov/pubmed/?term=27310295>.

⁴⁸ https://projectreporter.nih.gov/project_info_description.cfm?aid=9269581&icde=36779139.

⁴⁹ <https://www.ncbi.nlm.nih.gov/pubmed/26345179>.

implement collaborative care for perinatal depression on a large scale in primary care clinics serving low-income women.⁵⁰

The emergent public health opioid epidemic that is affecting individuals across the country includes pregnant women and infants who were exposed prenatally to opioids. One study supported by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), for example, is determining whether more accurate prescribing of buprenorphine is possible based on how pregnant women metabolize the drug. In addition to supporting investigator-initiated grants, NICHD has two new research efforts specifically aimed at addressing the health outcomes of opioid use disorder in pregnancy. A new funding opportunity, with the National Institute on Drug Abuse (NIDA), will support clinical studies of medically supervised withdrawal, research on how pregnant and postpartum women metabolize medications used to treat opioid use disorder, and studies on how genetic factors may interact with the effects of opioid use during pregnancy. Applications for funding are expected to include grants that will collect information about depression and other mental health issues, since these conditions affect the success of treatment. NIDA also is partnering with the Appalachian Regional Commission on a toolbox for use by local health departments in rural areas to implement service delivery plans that address the opioid epidemic. To assist the Department of Health and Human Services with its implementation of the Protect Our Infants Act of 2015 (P.L. 114–91), NIDA is coordinating with other HHS divisions on several action steps, including collecting substance-and diagnosis-specific data about prenatal substance use to help determine adequate treatment capacity, and to identify unmet service and care-coordination needs and disparities in access.

NICHD also is leading the Task Force on Research Specific to pregnant women and lactating women⁵¹ established by the 21st Century Cures Act. The Task Force will be looking at prescription medications used by pregnant and lactating women and their effects. These medications include opioids prescribed to pregnant and lactating women. The Task Force has held three meetings, the first of which was in August 2017. Subsequent to the date of this hearing, two other meetings have been held, one in November 2017 and another in February 2018. As directed, the report of the Task Force findings and recommendations will be submitted to the HHS Secretary in September 2018.

Finally, NIH would like to note that in 2017, a new study called the Advancing Clinical Trials in Neonatal Opioid Withdrawal Syndrome (ACT NOW) will evaluate treatment options and improve clinical care of infants with NAS/NOWS. The study is a collaboration between NICHD’s Neonatal Research Network (which has 30 years of experience in conducting clinical trials with newborns) and the new IDEa States Pediatric Clinical Trials Network (within the NIH Office of the Director’s Environmental Influences on Child Health Outcomes (ECHO) Program), with sites located in rural and medically underserved communities. This joint research effort will use the reach of both networks to assess the prevalence of NAS, understand current approaches to managing NOWS cases, including non-pharmacological approaches, and develop protocols for conducting large scale studies across the country to inform clinical care for affected infants.

4. Marijuana research

Currently, 28 states and D.C. have laws providing for the use of marijuana for medical purposes, or “medical marijuana.” As more Americans use marijuana for treatment as prescribed by their physician, it is critical that the Federal Government reduce barriers to research on the drug.

In particular, it is critical that we accelerate research on effective alternatives to opioids for pain treatment in light of the opioid epidemic—including marijuana and its components. A 2014 JAMA Internal Medicine study showed that in states that passed legislation allowing for the use of medical marijuana, the fatal opioid overdose rate is 25 percent lower than in other states.⁵² This is one of many promising studies that show marijuana as a potential alternative pain treatment with an impact on the opioid epidemic. NIH and the National Institute on Drug Abuse

Question 4a. What specific actions have you taken, in consultation with Director Nora Volkow, to encourage qualified research applications on the potential health benefits of marijuana and its components?

⁵⁰https://projectreporter.nih.gov/project_info_description.cfm?aid=9256545&icde=36817899.

⁵¹<https://www.nichd.nih.gov/about/advisory/PRGLAC>.

⁵²Marcus A. Bachhuber, Brendan Saloner, Chinazo Cunningham et al., “Medical Cannabis Laws and Opioid Analgesic Overdose Mortality in the United States, 1999–2010,” *Journal of the American Medical Association* (October 2014) (online at <http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1898878>).

Answer 4a. While there is a growing body of research suggesting the potential therapeutic value of cannabinoids for pain, epilepsy, and other health conditions, promising early findings do not always translate to effective treatments,⁵³ and in general, adequate and well-controlled trials are lacking. Patients across the country are using marijuana strains and extracts that have not undergone rigorous clinical trials and are not regulated for consistency or quality.

NIH shares the Committee's concerns in this area and believes that more research is needed on both the harms associated with marijuana use and the therapeutic potential of marijuana and its constituent compounds. NIH welcomes investigator-initiated research proposals for pre-clinical and clinical research evaluating marijuana and its constituent cannabinoids for treating disease. In addition, to facilitate more research on the therapeutic potential of cannabinoids, NIH has released funding opportunity announcements (FOAs) on:

- Fast-Track Development of Medications to Treat Cannabis Use Disorders⁵⁴
- Effects of Cannabis Use and Cannabinoids on the Developing Brain⁵⁵
- Developing the Therapeutic Potential of the Endocannabinoid System for Pain Treatment⁵⁶
- Blueprint Neurotherapeutics Network Small Molecule Drug Discovery and Development for Disorders of the Nervous System⁵⁷
- Clinical Evaluation of Adjuncts to Opioid Therapies for the Treatment of Chronic Pain⁵⁸

Despite efforts to stimulate research on marijuana, the progress of therapeutics development and clinical trials has been slow, in part due to the increased time, costs, and administrative efforts associated with the regulatory framework for conducting research on these and other Schedule I compounds. Specifically:

Single source of marijuana for research purposes: Currently, there is one registration for marijuana cultivation in the US—the University of Mississippi, which, through a contract with NIDA, supports the cultivation and distribution of research-grade marijuana for the country. While the NIDA supply of marijuana has diversified to include different strains of interest to researchers, it is not possible to provide access to the diversity of strains and products currently available through State dispensaries.

Making marijuana for research available from other sources potentially could both speed the pace of research and afford individual developers and researchers more options in formulating marijuana-derived investigational products for eventual marketing.⁵⁹

Widespread perceptions of the difficulty of doing research on Schedule I drugs: The perception throughout the scientific community of barriers to Schedule I research can disincentivize scientists from engaging in this type of research. Most biomedical research in the country is conducted by graduate students and postdoctoral fellows, who are under significant pressure to complete their research projects in a few years. Many avoid research areas where barriers may pose significant or unpredictable delays in the initiation of their research.

Discrepancies between Federal and State laws: NIH is unable to fund researchers to analyze marijuana products available in State dispensaries, since obtaining these samples would violate Federal law. Understanding the characteristics of the marijuana that is being dispensed, including the potency (i.e., amount of THC) and concentration of other components (e.g., CBD), is important for studying the impact of medical and recreational marijuana on individual and public health. In addition, there are open questions about the legality of state-funded research using marijuana from State dispensaries. Universities and researchers are concerned about the potential impact of this type of research on their ability to obtain DEA licenses or Federal funding, even if they are not using Federal funds.

Path from use of NIDA-supplied marijuana to market: The University of Mississippi, under the contract with NIDA, currently produces a limited supply of marijuana extracts for researchers to use in drug development. Drug developers would need to transition from using NIDA-supplied marijuana products to other sources before FDA approval and market entry. It may be challenging for a pharmaceutical

⁵³Gloss, D. and B. Vickrey (2014). Cannabinoids for epilepsy. Cochrane Data base of Systematic Reviews. C. The Cochrane. Chichester, UK, John Wiley & Sons, Ltd.

⁵⁴<https://grants.nih.gov/grants/guide/pa-files/PA-15-267.html>.

⁵⁵<https://grants.nih.gov/grants/guide/pa-files/PA-14-162.html>

⁵⁶<https://grants.nih.gov/grants/guide/pa-files/PA-15-188.html>.

⁵⁷<https://grants.nih.gov/grants/guide/pa-files/PA-17-205.html>.

⁵⁸<https://grants.nih.gov/grants/guide/pa-files/PA-14-225.html>.

⁵⁹https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Cannabinoid%20Research.

company to demonstrate equivalency between the marijuana used in the clinical trials and the drug product that will be marketed. While FDA has provided guidance on how this should occur,⁶⁰ the process requires additional time and resources of the developer.

NIH is committed to working with Congress and our Federal partners to facilitate more research on both the harms, and therapeutic potential, of marijuana and cannabinoids, and to reduce barriers to research. NIH will continue working closely with the ONDCP, DEA, and FDA to explore ways to streamline these processes to facilitate research.

Question 4b. Please describe in detail all of the current NIH research occurring on the therapeutic benefits of marijuana as an alternative pain treatment.

Answer 4b. NIH supports a broad portfolio of research on cannabinoids and the endocannabinoid system (ECS). In fiscal year 2016, NIH supported 292 projects totaling over \$115 million⁶¹ on cannabinoid research including 53 projects (\$28 million) on research evaluating the therapeutic potential of cannabinoids.⁶² Research on the therapeutic potential of cannabinoids included 26 studies related to pain. These studies include:

- A randomized controlled trial of dronabinol (THC) and vaporized cannabis for neuropathic low back pain.⁶³
- An observational study of the effects of edible cannabis and its constituent cannabinoids on pain, inflammation, and cognition.⁶⁴
- Research on the use of cannabinoid receptor type 2 (CB2) agonists for treating breast cancer induced bone pain.⁶⁵
- Cannabinoid based therapeutics for pain in sickle cell disease.⁶⁶
- Studies exploring the therapeutic potential of compounds that modulate the ECS such as diacylglycerol kinase, fatty acid amide hydrolase (FAAH), fatty acid binding proteins (FABPs), and G-protein receptor 55.⁶⁷
- Research on the use of cannabinoid compounds as adjunct therapies with opioids or non-steroidal anti-inflammatories (NSAIDs) to improve pain control and reduce adverse events.⁶⁸
- Studies of the therapeutic effects of cannabis and cannabinoids on HIV-related pain.⁶⁹
- Studies of the efficacy of peripherally restricted cannabinoids for cancer and chemotherapy-induced pain.⁷⁰
- Basic research on:
 - the mechanisms through which cannabinoids and the ECS modulate pain,⁷¹
 - the role of cannabinoids in modulating hyperalgesia⁷²
 - the role of CB2 receptors in peripheral neuropathy⁷³
 - the role of the ECS in the efficacy of spinal manipulation therapy for neuropathic pain⁷⁴

⁶⁰ [https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Cannabinoid %20Research](https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Cannabinoid%20Research)

⁶¹ [https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Cannabinoid %20Research](https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Cannabinoid%20Research)

⁶² [https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Therapeutic%20Cannabinoid %20Research](https://report.nih.gov/categorical_spending_project_listing.aspx?FY=2016&ARRA=N&DCat=Therapeutic%20Cannabinoid%20Research)

⁶³ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=8964406

⁶⁴ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9361825

⁶⁵ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9329913

⁶⁶ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9301005

⁶⁷ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9205939

⁶⁸ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9328534

⁶⁹ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9222649

⁷⁰ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9040444

⁷¹ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=8878443

⁷² https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9247769

⁷³ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9324176

⁷⁴ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9557937

⁷⁵ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9271603

⁷⁶ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9056010

⁷⁷ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9309675

⁷⁸ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=8918260

⁷⁹ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9107004

⁸⁰ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9279120

⁸¹ https://projectreporter.nih.gov/project_info_description.cfm?icde=0&aid=9377578

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR WHITEHOUSE

The 21st Century Cures Act authorized \$1 billion over 2 years to support efforts to combat the opioid epidemic. The second half of that money is expected to be made available as part of the fiscal year 2018 appropriations bill. Though I was pleased to see the first \$500 million get out to states quickly, I think we can improve how the next \$500 million is used and allocated.

Question. First, we could allow grant makers approving applications for these funds to consider whether the proposed uses of this funding are aligned with the goals of the Comprehensive Addiction and Recovery Act (CARA). Second, in evaluating applications for this funding, more consideration could be given to states most affected by the epidemic. Do you support aligning the uses of the next tranche of 21st Century Cures Act opioid funding with the best practices set forth in CARA and/or prioritizing funding to states most affected by the opioid epidemic?

Answer. NIH fully supports the goals of the Comprehensive Addiction and Recovery Act (CARA), in particular the importance of providing support for prevention, treatment and recovery services that are evidence-based and targeted to areas of need. As resources provided through the 21st Century Cures Act are allocated, NIH endorses approaches to use these funds to support evidence-based and effective prevention and treatment strategies. In alignment with the goals of CARA, NIDA plans to fund research projects that test approaches for expanding access to medication for the treatment of opioid use disorder in the context of states' plans for use of funds authorized under the 21st Century Cures Act that were disseminated under SAMHSA's State Targeted Response to the Opioid Crisis Grants. These efforts will generate additional evidence about effective strategies for the implementation of medication-assisted treatment in specific communities and geographic areas most affected by the opioid crisis.

RESPONSE BY DR. COLLINS TO QUESTIONS OF SENATOR YOUNG

Question 1. Some researchers have found that it takes an average of 17 years for research evidence to reach clinical practice. How are you all working together to ensure our best practices actually reach the patient in a reasonable amount of time? Are you working with medical associations and boards to ensure that best practices are translated into clinical practice? What can be done at the Federal level to speed up this research to practice pipeline?

Answer 1. Implementation science is a vital piece of NIDA's research portfolio that seeks to determine the most effective ways to translate research into clinical practice. A recent area of focus has been to determine the most effective implementation strategies for the specific needs of communities hit hardest by the opioid crisis, including research specific to New Hampshire, Appalachian regions, and rural communities. NIDA will also be funding projects to test approaches for expanding access to medication for the treatment of opioid use disorder in the context of states' plans for use of funds authorized under the 21st Century Cures Act that were disseminated under SAMHSA's State Targeted Response to the Opioid Crisis Grants.

For direct clinician engagement, NIDA leads an initiative, NIDAMED, that focuses on development and dissemination of science-based resources to educate health professionals and those in training about substance use disorders (SUD) prevention and treatment; and enhancing awareness of addiction as a treatable brain disorder. Among other things, the NIDAMED initiative brings the latest science to clinicians by hosting a centralized Web Portal where relevant resources can be accessed, including continuing medical education (CME). In 2012, NIDAMED created two CME courses to train providers on safe opioid prescribing practices, entitled Safe Prescribing for Pain and Managing Pain Patients Who Abuse Prescription Drugs. More than 100,000 clinicians completed these modules and were certified while they were available.

The current phase of the NIDAMED initiative was developed with a Coalition of Health Professions Organizations, and resulted in the latest CME, the Adolescent Substance Use and Rx Medication Misuse CME/CE, launched in June 2017 on the NIDAMED Web Portal. As of October 2017, over 1,000 primary care clinicians have completed the course. Through this project, NIDA has created multiple online modules that focus on: (1) prescription opioids; (2) marijuana; (3) screening for substance use; (4) key messaging to communicate to adolescents and their caregivers about drugs; (5) successful ways for clinicians to engage in conversations with adolescents (ages 13–18), and their parents; and (6) how best to address issues such as privacy and confidentiality. This CME also provides clinician/patient communication tools which include brochures/handouts and an in-office, mobile ready game or app that clinicians can use with adolescents to help initiate a conversation about substance use and provide information about the consequences of use.

To encourage the translation of research into clinical practice, NIH is also engaged in efforts to expand the addiction medicine workforce. NIAAA, NIDA, and SAMHSA are focused on improving physician training in diagnosis, prevention, and treatment of alcohol and other drug misuse across the continuum of medical training, from medical school through residency, fellowship, and beyond. For example, NIAAA supported the development of model programs for residency training in addiction medicine and accreditation of new addiction medicine fellowship training programs. These and other efforts have paved the way for integrating addiction medicine into graduate medical education at more than 40 academic medical centers across the country and laid the groundwork for addiction medicine being recognized as a medical subspecialty. NIAAA and its Federal partners are also engaging with medical education groups to design and implement national standards for training in addiction medicine for medical students and residents.

NIAAA is also working to close the treatment gap by encouraging integration of addiction medicine into routine medical care. To assist healthcare professionals in implementing alcohol screening and brief intervention in their practices, NIAAA developed Helping Patients *Who Drink Too Much: A Clinician's Guide for adults and Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide*. These tools are designed to help health care providers overcome barriers to alcohol screening such as lack of familiarity with the process and time constraints.

Question 2. Too many unused opioids dangerously remain in medicine cabinets throughout America. They pose a real threat to health and safety—especially to young Americans. Will drug take back programs be a component of our government's response to this national emergency?

Answer 2. NIH defers to the Drug Enforcement Administration (DEA), the component of the government that manages and coordinates the National Prescription Drug Take Back Day.

Question 3. What are the current gaps in research focused on preventing addiction? What have we learned about preventing and treating addiction that we are not putting into practice? What are the barriers to deployment?

Answer 3. While many evidence-based drug use prevention strategies have been developed, they remain highly underutilized. Ongoing research is working to develop strategies for implementation and to develop new strategies targeted to high-risk populations. Increased evidence about the neurobiological mechanisms underlying effective prevention interventions could inform more targeted approaches, and increased evidence about the specific populations for whom interventions are effective could lead to more efficient and optimized strategies.

More research is needed to improve strategies for prevention of risky drug use among those aged 18–30, and to develop evidence-based strategies for the prevention of opioid misuse that preserve access to effective pain management. In addition, more research is needed to develop strategies for transforming health systems and other public and private service platforms for successful integration of sustainable, evidence-based drug use prevention interventions.

Highly effective evidence-based drug use prevention interventions and drug addiction treatment approaches have been developed and tested. These are well detailed in the *Surgeon General's Report on Alcohol, Drugs and Health*,⁷⁵ and notably include school, family, and community-based drug use prevention. For prevention, broad adoption of evidence-based interventions has been limited due to implementation challenges that span financial, regulatory, geographic, attitudinal, and logistic issues. Ongoing research is working to develop strategies to translate evidence-based practices in a way that confers population-level impact,⁷⁶ including for developing implementation capacity, and implementation and sustainability of evidence-based practices across systems and settings—for example:

- Organizational and system supports for evidence-based implementation
- Work-force development and training
- Ongoing fidelity monitoring
- Continuous quality improvement
- Financing

As models are developed for efficient scale-up of evidence-based approaches that demonstrate community-level impact, adaptation will be required for specific set-

⁷⁵ Surgeon General's Report on Alcohol, Drugs, and Health. 2016. at <https://addiction.surgeongeneral.gov/>.

⁷⁶ Spoth R, Rohrbach LA, Greenberg M, et al. Addressing core challenges for the next generation of type 2 translation research and systems: the translation science to population impact (TSci Impact) framework. *Prev Sci* 2013;14:319-51.

tings and systems (e.g. criminal justice, child welfare, military, rural areas) based on their unique needs. Effective deployment of evidence-based prevention and treatment would benefit from coordinated Federal, State and local level implementation strategies to achieve population-level impact.

Question 4. While increasing access to treatment is important, we also need to make sure people in treatment are receiving services that really work. What current treatments and outreach strategies have been proven through rigorous evaluation to work best? Do we need more research and innovation in this area?

Answer 4. Abundant evidence shows that the medications methadone, buprenorphine, and extended release naltrexone all reduce opioid use and opioid use disorder-related symptoms, and they reduce the risk of infectious disease transmission as well as criminal behavior associated with drug use. These medications also increase the likelihood that a person will remain in treatment, which itself is associated with lower risk of overdose mortality, reduced risk of HIV and HCV transmission, reduced criminal justice involvement, and greater likelihood of employment. While these medications, in combination with psychosocial supports (medication-assisted treatment or MAT) are the standard of care for opioid use disorder (OUD), most patients who need them don't receive them.⁷⁷ Evidence-based behavioral treatments are also effective in the treatment of substance use disorders (SUD), and include such approaches as cognitive behavioral therapy and contingency management; best practices for treatment of SUD are comprehensively reviewed in the Surgeon General's Report on Alcohol, Drugs and Health.⁷⁸

Continued innovation will be vital to develop new treatments and to determine which treatments are most effective for which patients. Equally important is the advancement of implementation science to ensure that those who need treatment receive it efficiently and effectively. NIDA supports implementation research to develop strategies to address the specific needs of communities hit hardest by the opioid crisis, including research specific to New Hampshire, Appalachian regions, and rural communities. NIDA will also be funding projects to test approaches for expanding access to medication for the treatment of opioid use disorder in the context of states' plans for use of funds authorized under the 21st Century Cures Act that were disseminated under SAMHSA's State Targeted Response to the Opioid Crisis Grants.

For dissemination of best practices to clinicians, NIDA leads an initiative, NIDAMED, that focuses on development and dissemination of science-based resources to educate health professionals and those in training about prevention and treatment of SUDs; and enhancing awareness of addiction as a treatable brain disorder. Among other things, the NIDAMED initiative brings the latest science to clinicians by hosting a centralized Web Portal where relevant resources can be accessed, including continuing medical education (CME) relevant to primary care and treatment providers. In addition to the NIDAMED CME's for health care providers, curriculum resources were developed for current medical students and resident physicians to help prepare physicians and clinicians for the challenge of addressing substance use disorders in their patients.

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR ALEXANDER

Question 1. Do you need additional authorities, on top of the modernizations for substance use disorders and opioid abuse programs and services in the 21st Century Cures Act and in the Comprehensive Addiction and Recovery Act (CARA), to fight the opioid crisis? If so, please provide specific authorities that would be helpful.

Answer 1. The Department of Health and Human Services (HHS) is undergoing a department-wide process to identify what authorities or changes in statute would be helpful.

Question 2. Section 319 of the Public Health Service Act gives the Secretary of HHS the authority to determine that a public health emergency exists, allows for waivers of various Medicare and Medicaid regulations, movement of volunteer and Federal medical and public health professionals to areas hardest hit by the emergency, ability to access resources traditionally used for the Strategic National Stockpile, and the ability of the FDA to allow drugs and devices to come to market prior to full approval under its Emergency Use Authorization. Are any of the authorities that are available under a Public Health Emergency Declaration necessary to help

⁷⁷ <https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-addiction/efficacy-medications-opioid-use-disorder>

⁷⁸ Surgeon General's Report on Alcohol, Drugs, and Health. 2016. at <https://addiction.surgeongeneral.gov/>.

address the opioid abuse crisis? If any, please list, and provide specific examples of why such authority is helpful.

Answer 2. HHS is thoroughly reviewing the available authorities and analyzing how they can be applied in the context of the opioid epidemic. As decisions are made, we will be happy to share them with you, but we are committed to carrying out our five-point HHS Opioid Strategy and stemming the tide of this epidemic.

Subsequent to the date of the hearing, on October 26, then Acting HHS Secretary Hargan signed a Public Health Emergency Declaration. The action allows, with the concurrence of the Drug Enforcement Administration, for expanded access to telemedicine services, with respect to designated persons, designated locations and designated drugs, including services involving remote prescribing of medicine commonly used for substance abuse or mental health treatment. It may also help overcome bureaucratic delays and inefficiencies in the hiring process by allowing HHS to more quickly make temporary appointments of specialists with the tools and talent needed to respond effectively to our Nation's ongoing public health emergency if the Department determines that such hiring is necessary and subject to the availability of funds for such hiring. Finally, the action allows for the shifting of resources within HIV/AIDS programs to help people eligible for those programs receive substance abuse treatment, which may be important given the connection between HIV transmission and substance abuse.

RESPONSE BY DR. MCCANCE-KATZ TO QUESTIONS OF SENATOR MURRAY

1. Researchers have made many advances in our understanding of how the brain develops and responds to drug addiction. We have learned about biological, epidemiological, and social factors that contribute to our understanding of this disease. Sadly, we are still combating the stigma that addiction is a moral failing, rather than a health care issue. Rhetoric from the Trump Administration suggesting that prosecution has been prioritized over treatment is very concerning.

Question 1a. Can you address the consequences of stigmatizing mental health and substance use disorder?

Answer 1a. Failure to recognize and respond to addiction and other mental health diagnoses as neuro-biological disorders may discourage patients and their families from seeking treatment and other needed social services. Fear and shame may drive patients to hide their illness from health professionals treating them for other medical conditions. This practice has likely contributed to treatment services being separate from the rest of health care, has made it difficult to open and operate treatment programs due to public objections, and may deter health care professionals from pursuing career paths that involve or focus on treating people with addiction or mental illness. Under President Trump's leadership, HHS is determined to improve access to treatment and recovery services.

Question 1b. What role does SAMHSA have in helping to ensure the criminal justice system does not lead to the mistreatment of those with substance use disorder?

Answer 1b. SAMHSA promotes early intervention and treatment as healthier alternatives to detaining people with behavioral health conditions in the U.S. justice system. SAMHSA's role in the criminal justice system is to bring about strategic linkages with community-based behavioral health providers, the criminal justice system, and community correctional health programs; promote effective diversion and reentry programs; and foster policy development at the intersection of behavioral health and justice issues.

SAMHSA carries out its role through a variety of mechanisms, including administering grant programs, such as drug court grants, which the Administration has requested an expansion of in the Fiscal Year 2019 Budget Request, which was released subsequent to this hearing, and offender re-entry program grants; convening policy academies and expert meetings; providing training and technical assistance to the field; and developing and disseminating information resources. SAMHSA approaches this work through the identification of individuals with mental illness and addiction; pre-and post-adjudication diversion using evidence-based screening and assessment to ensure comprehensive treatment, supports, and services; diversion of individuals from the justice system into community-based treatment; and the provision of training and technical assistance for law enforcement officers, juvenile and family court judges, probation officers, and other judicial decisionmakers. To accomplish this, SAMHSA collaborates and coordinates with other Federal agencies (e.g., Department of Justice), the Office of National Drug Control Policy, and national, state, and local organizations (e.g., National Association of Drug Court Professionals, Treatment Alternative for Safe Communities and Bexar County, Texas).

Question 2. We know that many states terminate Medicaid eligibility for those who become incarcerated. Many of those in jails and prisons have significant health care needs, and coordinating coverage leads to better health outcomes. Requiring those just released from incarceration to enroll in Medicaid, along with finding housing and a job, adds to an already stressful situation and may lead to relapse. Are there ways to better facilitate their transition back into the community? What role can SAMHSA play in this process?

Answer 2. SAMHSA uses a two-pronged approach to help meet the needs of individuals returning to the community and the needs of the community. First, SAMHSA supports grant programs, such as the Offender Reentry Program, which develops models to expand and enhance substance use treatment services for individuals reintegrating into communities after being released from correctional facilities. Second, SAMHSA actively partners with other Federal agencies to address issues related to offender reentry through the implementation of policy changes and making recommendations to states and local governments.

For example, SAMHSA has worked closely with the Federal Interagency Reentry Council (FIRC) to address the important issue of Medicaid termination for those incarcerated, as well as the barriers to finding housing and jobs. Through FIRC, SAMHSA has worked with the Department of Labor, Department of Housing and Urban Development, and many other Federal agencies to address these issues through policy and by producing “Reentry Myth Busters.” “Reentry Myth Busters” is a series of fact sheets intended to clarify existing Federal policies that affect formerly incarcerated individuals and their families. These documents are available to the public and target states, SAMHSA grantees, and those who are incarcerated to assist with reentry challenges.

CMS released clarifying guidance in 2016 on Medicaid eligibility and suspension during incarceration and has encouraged states to suspend rather than terminate Medicaid while individuals are incarcerated and then immediately restart their benefits post-release. SAMHSA-funded grantees and Regional Administrators work with states to inform them of these possibilities. SAMHSA is exploring ways to better collaborate and coordinate across different grant programs to leverage resources and to increase and improve client access to community resources. For example, SAMHSA’s current grantees with grants in the areas of criminal justice and homelessness were provided information about each other’s programs, including contact information, so that they can collaborate to strengthen service provision.

SAMHSA is looking into extending this approach through partnerships with other Federal agencies.

Question 3. I spoke briefly about some of the positive impacts that SAMHSA “State Targeted Response to the Opioid Crisis” grants have had on our communities in Washington State. SAMHSA also awards block grants for substance abuse prevention and treatments, as well as community mental health services. These grants fund treatments for individuals without insurance, support services that may not be covered by insurance, and encourage prevention. There have also been changes in recent years to integrate effective interventions to address serious mental illness by focusing on evidence-based practices as part of the application process to receive a grant. What assistance is SAMHSA providing to the states to ensure that the block grants are being used as effectively as possible to address the opioid crisis in a comprehensive way?

Answer 3. States identify technical assistance (TA) needs in their block grant plans submitted to SAMHSA each year, or they can contact a State Project Officer to request TA at any time. On April 2, 2014, SAMHSA provided guidance to the recipients of the Substance Abuse Prevention and Treatment Block Grant (SABG) funds on the use of such funds to provide training and education regarding the prevention of prescription drug and heroin overdose and the purchase of naloxone and related materials to assemble overdose prevention kits. In December 2015, the Consolidated Appropriations Act provided states with the flexibility to utilize SABG funds to support certain services provided by syringe services programs under specific conditions. As a result, in March 2016 the HHS Office of HIV/AIDS and Infectious Disease Policy, in collaboration with CDC, HRSA, and SAMHSA, developed guidance on implementation of the current policy.

In addition, SAMHSA’s Addiction Technology Transfer Center (ATTC) Network deploys a variety of methods to accelerate the adoption and implementation of evidence-based and promising treatment and recovery-oriented practices and services by heightening the awareness, knowledge, and skills of the workforce addressing the needs of people with substance or other co-occurring health disorders; and fostering regional and national alliances among culturally diverse practitioners, researchers, policymakers, funders, and the recovery community. The ATTC grantees work di-

rectly with SAMHSA and states on activities aimed at improving the quality and effectiveness of treatment and recovery, and work directly with providers of clinical and recovery services, and others that influence the delivery of services, to improve the quality of service delivery across the Nation.

RESPONSE BY DR. MCCANCE-KATZ TO QUESTIONS OF SENATOR BURR

Question 1. When you came before this Committee for your confirmation hearing, you mentioned the need for innovative approaches to health care provider training to better address pain management and identification of substance abuse in the patients they are treating. What work is underway at SAMHSA to make these changes?

Answer 1. The SAMHSA funded Providers' Clinical Support System for Medication Assisted Treatment (PCSS-MAT) provides trainings on pain management and addiction. It also hosts podcasts, and provides up-to-date information on pain medicine and addiction topics designed to increase the general education of healthcare providers often with conferencing available at no cost.

The Medication-Assisted Treatment—Prescription Drug and Opioid Addiction, or MAT-PDOA program has engaged providers about pain management and identification of addiction through a variety of mechanisms since the program's inception. This engagement has been conducted through technical assistance activities such as onsite provider training, virtual provider training (webinars and online courses), strategic communication plan development, and public-facing product development (e.g. newsletters, toolkits, guides, white papers, etc.).

SAMHSA, through outreach by the Assistant Secretary, is meeting with national healthcare practitioner stakeholders to encourage them to add substance abuse screening and addiction recognition and treatment approaches to their curriculum. SAMHSA will assist with providing the curriculum at no cost to these groups. Encouraging Drug Addiction Treatment Act (DATA) waiver education in all medical education programs for practitioners eligible to obtain the DATA waivers (physicians, nurse practitioners, and physicians' assistants) would rapidly expand the workforce needed to treat patients with opioid use disorder and other addictions.

RESPONSE BY DR. MCCANCE-KATZ TO QUESTIONS OF SENATOR CASEY

Question 1. Increasingly grandparents and other relatives are stepping in to raise children when their parents cannot and we continue to see the numbers rise as a result of the opioid crisis. By stepping in to keep children out of foster care, grandparents and other relatives keep children with family and save taxpayers 4.5 billion dollars each year. Because of this, earlier this year Senator Collins and I introduced the Supporting Grandparents Raising Grandchildren Act. This bill will create a Federal Task Force, including Federal agencies like SAMHSA, to serve as a "one-stop-shop" of resources and information for grandparents raising grandchildren. We have bipartisan support for this legislation and support from many outside groups including Generations United, AARP and the American Association of Pediatrics. How do you think improved coordination and collaboration across the government and with experts will help these heroic grandparents?

Answer 1. Improved coordination and collaboration across government will be a tremendous benefit to these grandparents and other relatives. Benefits that could be found with better coordination may include enhanced integration of care with child-serving agencies that provide services. In addition, improved coordination and collaboration could result in providing better support to meet the grandparents' emotional, social, and physical well-being so that they are positioned to effectively parent and support the needs of their grandchildren (accessing existing services they might not be aware of).

Question 2. One of the major concerns of the opioid epidemic has been its impact on children. Following concerning reports in the media about infant deaths tied to maternal opioid use or abuse, I was proud to work with members of this Committee to pass the Plan of Safe Care Improvement Act, which was eventually included in the Comprehensive Addiction and Recovery Act in 2016. We strengthened the requirements under the Child Abuse Prevention and Treatment Act for states to ensure that health and child welfare professionals develop a plan of safe care, to ensure that we address the needs of both the infant and the affected family or caregiver when a child is born affected by either illegal or legal substances. States must now track the number of infants for whom a "Plan of Safe Care" has been developed and the Federal Government must monitor implementation of these plans. Can you update the Committee on how implementation of that effort is going, and what financial and technical resources states need to effectively implement this policy?

Answer 2. The Administration for Children and Families (ACF) has the authority and responsibility for the implementation of the Child Abuse Prevention and Treatment Act (CAPTA), including the amendments made by the Comprehensive Addiction and Recovery Act (CARA) (P.L. 114–198). At the same time, SAMHSA is pleased to continue our long partnership with ACF’s Administration on Children, Youth and Families (ACYF) on the National Center for Substance Abuse and Child Welfare (NCSACW), which is supporting the implementation of CARA’s provisions regarding infant plan of safe care. In September, the NCSACW began a review of the CAPTA State plans submitted to ACYF in fiscal year 2017 to better understand how states have implemented the CAPTA State plan requirements regarding the identification, notification, and response to infants with prenatal substance exposure. A summary report will be prepared from this review. The NCSASW will provide technical assistance that all states can use, as well as help individual states that want or need additional support.

3. I worked with the Majority Leader to pass the Protecting Our Infants Act, to improve the Federal Government’s response to the needs of infants born with neonatal abstinence syndrome. That law directed HHS, with significant input from your agency, to develop the Protecting Our Infants Act Final Strategy. On Wednesday, October 4, the Government Accountability Office released a report, as required by the Comprehensive Addiction Recovery Act, into Federal activities relating to neonatal abstinence syndrome. That report said: “HHS should expeditiously develop a plan for implementing the recommendations included in its strategy related to addressing NAS. HHS concurred that it should expeditiously address NAS, but noted implementation of the strategy is contingent on funding.”

Question 3a. Could you please comment on what the next steps are for HHS to implement the strategy?

Answer 3a. HHS has convened a department-wide workgroup that is developing an implementation plan based on the strategy. These recommendations will represent the best, most comprehensive thinking of experts from across the Department and are expected to support decisionmaking by departmental leadership with regard to specific agency priorities and funding, if needed.

Question 3b. What level of funding would HHS require to fully implement the strategy it developed?

Answer 3b. The workgroup is still in the process of formulating the implementation plan. The level of funding required will depend on the components of the final implementation plan.

RESPONSE BY DR. MCCANCE-KATZ TO QUESTIONS OF SENATOR CASSIDY

Question 1. In the interim report from the Presidents Commission on Combating Drug Addiction and Opioid Crisis, the Commission called for an increase use of screening measures to identify patients at high risk for developing Substance Use Disorder (SUD). They also reference the CDC finding that 40 percent of patients with a SUD also have a mental health issue. Realizing there is large overlap between SUD and Mental Health Disorders, what are you prepared to do to identify the mental health issues in patients at a high risk for developing an SUD?

Answer 1. SAMHSA collects and distributes the most comprehensive national and State data available over time on this issue through the National Survey on Drug Use and Health. In 2016, 43.2 percent of adults with a substance use disorder also met criteria for a mental illness. The high rate of co-occurrence of substance use disorders with mental illnesses argues for a comprehensive approach to intervention that identifies and evaluates each disorder concurrently and provides treatment as needed. This approach includes the need for broad screening and assessment tools that are less likely to result in a missed diagnosis. Accordingly, individuals entering treatment for mental illnesses should also be screened for addiction and vice versa. In response, SAMHSA has identified tools, such as the Alcohol Use Disorders Identification Test (AUDIT), the Mental Health Screening Form III, and the Beck Depression Inventory-II and is sharing these resources with states, providers, and others. SAMHSA is also committed to identifying people with, and at risk for, mental illness and addiction, and has identified tools for the screening and assessment of co-occurring disorders for those in the justice system, who are at elevated risk for both mental illness and addiction.

SAMHSA was the lead Federal agency, along with NIDA and NIMH, that documented the prevalence, treatment, and unmet treatment needs of U.S. adults with mental health and substance use disorders in a recent publication, *Prevalence, treatment, and unmet treatment needs of U.S. adults with mental health and substance use disorders* (Han et al, 2017). SAMHSA encourages the use of a core set of behav-

ioral health measures and screening tools. These measures include screening and brief interventions for unhealthy alcohol use, tobacco use, prescription drug abuse, and depression. Integrating these behavioral health measures into standard medical practice will identify individuals at risk for these disorders. Providing preventive care through screening and early intervention can reduce the prevalence and healthcare costs associated with undiagnosed and untreated behavioral health disorders.

SAMHSA's Screening, Brief Intervention and Referral to Treatment (SBIRT) program has recognized the role of co-morbidity since the inception of the SBIRT initiative and has encouraged grantees to include mental health (MH) screening as part of the regular substance use disorder screening and brief intervention for the past 11 years of the grant program. The grantees have been encouraged to utilize valid MH screening tools, such as the PHQ-2 and PHQ-9 when appropriate.

The substantial co-occurrence of mental illness and addiction speaks to the importance of integrated care—both integration of behavioral health services into primary care and integration of physical healthcare into behavioral health services. SAMHSA has a program addressing each of these approaches to collaborative care in its Primary and Behavioral Health Care Integration program and the Section 223 of the Protecting Access to Medicare Act Certified Community Behavioral Health Clinic program, a State demonstration with enhanced Medicaid funding on which SAMHSA has partnered with CMS extensively. These programs also seek to link to primary care for those receiving services.

Question 2. The CDC has found that less than half of the SUD patients with comorbid mental health issues have ever received treatment for their mental health issue. The Commission suggests this is due to lack of access, fear of shame and discrimination, and lack of motivation to seek treatment. Can you discuss with us how you plan on expanding access to programs and treatments and education/awareness to address the Commission's findings regarding patients with untreated mental health disorders?

Answer 2. SAMHSA is working to address the comorbid mental health issues of individuals with an addiction in a number of our treatment grant programs. Below we have highlighted these efforts within two grant programs and some of SAMHSA's training and technical assistance programs.

Programs

Answer 2a. Section 223 of the Protecting Access to Medicare Act Certified Community Behavioral Health Clinic (CCBHC) program. This 2 year demonstration program began on July 1, 2017 and involves eight states who are using SAMHSA developed criteria and a newly established CMS Prospective Payment System to increase access and provide quality mental and substance use treatment and recovery evidence-based practices for individuals with substance use and mental disorders. Treatment services for individuals with mental illness and/or addiction are integrated along with primary care screening in this demonstration program. Care coordination is a core service of this program, ensuring that people are connected to the services and treatment they need and that the community behavioral health clinic providing those services is accountable for that care. The national evaluation of the CCBHC demonstration is being managed by the HHS Office of the Assistant Secretary for Planning and Evaluation. The evaluation will examine how the demonstration impacts access to care; the scope of services provided; the quality of care; inpatient, emergency, and ambulatory service utilization; and how the prospective payment systems established by states cover the cost of care.

Answer 2b. Promoting Integration of Primary and Behavioral Health Care grant program. In fiscal year 2017, three states received funding to provide integrated treatment services for individuals with mental illness and/or addiction in conjunction with primary care services in clinics within each state. Primary recipients of these services are individuals with addiction including opioid use, individuals with a serious mental illness, and those with both a mental illness and an addiction. Funding is used by the states to focus on increasing access and engagement in treatment for individuals with behavioral health conditions. Embedding addiction treatment within primary care at some clinics decreases the stigma of seeking services. Providing health education and wellness activities including nutrition, exercise, and smoking cessation are all part of the grant program.

Training and Technical Assistance

Answer 2b. The Center for Integrated Health Solutions (CIHS) is a national training and technical assistance center in the Center for Mental Health Services on the bi-directional integration of primary and behavioral health care and related workforce development. CIHS provides an array of training and technical assistance

services to improve the effectiveness, efficiency, and sustainability of work to achieve the bi-directional integration of primary and behavioral health care to address the health care needs of individuals with mental illnesses, substance use, and co-occurring disorders. As a national resource, CIHS provides technical assistance for a national audience, as well as grantees in the Primary Care and Behavioral Health Integration (PBHCI) and Promoting Integration of Primary and Behavioral Health Care (PIPBHC) programs, Minority AIDS Initiative Continuum of Care (MAI CoC) grant programs, and entities funded through the Health Resources and Services Administration (HRSA), such as safety net providers and training and education programs. Two of the three states awarded PIPBHC grant funding are focusing their integration efforts on adults with mental illness and addiction including individuals using opiates. CIHS is providing technical assistance and training to these states and their grant funded clinics on implementing expanded integrated behavioral health and primary care treatment and supports to this population. In addition, CIHS directly and through its website, provides a wealth of information to the grantees and the Nation on multiple critical topics including, but not limited to, screening tools to identify mental illness and addiction, information on medication-assisted treatment, SAMHSA's Opioid Overdose Prevention Toolkit, and the management of chronic pain which includes links to guidelines for prescribing.

Answer 2c. SAMHSA's Providers' Clinical Support System-Medication Assisted Treatment (PCSS-MAT) is a national training and clinical mentoring project developed in response to the opioid use disorder crisis. The overarching goal of PCSS-MAT is to provide the most effective evidenced-based clinical practices in the prevention, identification, and treatment of opioid use disorders. The following are some modules specific to co-occurring disorders offered, at no cost, through PCSS-MAT: Primary Care Providers Working in Mental Health Settings; Managing Acute & Chronic Pain with Opioid Analgesics in Patients on Medication Assisted Treatment (MAT); and Integrated Management of Post-Traumatic Stress Disorder (PTSD) and Opioid Use Disorders.

Answer 2d. The SAMHSA Addiction Technology Transfer Center (ATTC) Network program strives to improve the quality of addictions treatment and recovery services by facilitating alliances among front line counselors, treatment and recovery services agency administrators, faith-based organizations, policymakers, the health and mental health communities, consumers, and other provider organizations in order to improve the ability of health care workers to be able to screen and diagnose co-occurring disorders. In the new 5-year cycle that started on September 30th 2017, the expected outcome of the ATTC program is to increase the capacity of specialized behavioral and primary health care providers to provide high quality, effective services for clients with addiction and co-occurring disorders.

Question 3. According to the Surescripts 2016 National Report, 98 percent of pharmacies and more than 64 percent of prescribing clinicians have adopted e-prescribing technologies in their practice settings. When it comes to controlled substances, uptake of e-prescribing is behind the curve, but growing rapidly in the last few years. Do you believe e-prescribing technologies can be further leveraged to provide prescription monitoring data around the Opioid crisis to healthcare providers, and patients at the point of care?

Answer 3. Yes. For example, the 2016 Surescript report found that there was a significant increase in the volume of e-prescriptions for naloxone (25,143) across all three dosage formulations (including traditional syringe injection). Therefore, this could be an important component in addressing overdose prevention. As states move to real-time uploads from the pharmacies to State prescription drug monitoring program (PDMP) data bases, e-prescribing of controlled drugs will increase timeliness and improve the accuracy of the prescription data, including proper identification of the patients in the state-controlled PDMP data base. Prescribers/pharmacists would have access to more reliable, up-to-date information to provide support in clinical judgment and to improve the quality of care for the patient. In addition, accurate identification of the patient helps prevent "doctor shopping" by a patient who may use multiple names and addresses.

Question 4. A Journal of Opioid Management study suggested that 89 percent of prescriptions written by hand deviated from "best practice" guidelines and were missing at least two forms of patient identification information. Could e-prescribing facilitate the creation of the type of whole, accurate and reliable information that would strengthen PDMPs?

Answer 4. Yes, e-prescribing could increase the accuracy and reliability of information to the PDMPs, particularly with regard to the patient's address of record.

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR COLLINS

Question. Dr. McCance-Katz and Dr. Houry [or whole panel], according to SAMHSA, in 2014 an estimated 28,000 adolescents had used heroin in the past year and an estimated 16,000 were current heroin users. One part of addressing this epidemic is ensuring that younger generations are informed about the dangers of opioids. The Drug Enforcement Agency is working with partners to provide science-based information to children about the risks of opioids, such as through its “360 Strategy” on heroin and opioids and “Operation Prevention.” Could you speak about collaboration between SAMSHA and CDC on these law enforcement initiatives, particularly with respect to reaching young people?

Answer. SAMHSA manages the Drug Free Communities grant program for the Office of National Drug Control Policy. SAMHSA’s Drug Free Communities and its Strategic Prevention Framework (SPF) grantees, including SPF for Prescription Drug grantees, often coordinates with the DEA on the local level to reach young people. Several of our grant award recipients are working with and attending the 360 Strategy sessions/summits across the country.

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR FRANKEN

Question 1. It is anticipated that President Trump may declare the opioid crisis a national emergency as soon as this week. How will this emergency declaration affect the ways in which your agency is addressing the opioid epidemic in the United States? How will the declaration affect the way that individuals with opioid addiction receive treatment services across the United States? Many states including Alaska, Arizona, Florida, Virginia, Maryland, and Massachusetts have also declared their own state-wide disaster or emergency declarations. How will a Federal declaration build on these State efforts? From your perspective, is there a State response that stands out as particularly effective or innovative at reducing opioid misuse and addiction?

Answer 1. Subsequent to the date of the hearing, on October 26, then Acting HHS Secretary Hargan signed a Public Health Emergency Declaration. The action allows, with the concurrence of the Drug Enforcement Administration, for expanded access to telemedicine services, with respect to designated persons, designated locations and designated drugs, including services involving remote prescribing of medicine commonly used for substance abuse or mental health treatment. It may also help overcome bureaucratic delays and inefficiencies in the hiring process, by allowing HHS to more quickly make temporary appointments of specialists with the tools and talent needed to respond effectively to our nation’s ongoing public health emergency if the Department determines that such hiring is necessary and subject to the availability of funds for such hiring.

Question 2. Research shows a strong connection between a person’s health and stable housing, despite the fact that they are often treated as separate issues. I’m interested in how supportive housing—housing with social service supports—can help to address the opioid crisis, particularly in Indian Country where this epidemic has hit communities especially hard. I have heard from Native American leaders in Minnesota who have explained that stable housing not only removes the stress of where someone is going to sleep at night, but also helps people avoid unhealthy situations, reducing the risk of relapse. I asked you all about this issue during the hearing. What specific initiatives does your agency have underway to better understand the connection between health, housing, and substance use disorders, and what actions are you taking to incorporate supportive housing programs into your work to address the opioid epidemic? And what more is needed to develop these supportive housing programs further, especially in rural and other underserved areas?

Answer. SAMHSA recognizes the value of recovery housing toward supporting an individual’s recovery from addiction and promoting long-term recovery. SAMHSA has sent a clear message to its grantees that recovery housing and other forms of recovery support services ought to be part of their equation for addressing the needs of those with opioid use disorders (OUDs). Many states have responded in kind, and others are planning activities next year. SAMHSA has informed states that the Substance Abuse Prevention and Treatment Block Grant and State Targeted Response to the Opioid Crisis Grant funds can be used for recovery housing as one component of a treatment plan when the individual is in treatment as long as a State judges that there is a need in their jurisdictions.

SAMHSA is also providing technical assistance to recovery housing managers, and State and local communities engaged in the provision of access to, or management of, recovery or sober housing. This effort includes providing informational webinars, white papers, technical expert panels, and State policy academies on

emerging best practices in the management and oversight of recovery housing, which are disseminated nationally. Moreover, SAMHSA is working with the National Alliance for Recovery Residences to develop a white paper on the use of recovery housing for those with OUDs who have been prescribed medication assisted treatment. In particular, rural and frontier areas, as well as Tribal Nations, have benefited from this work.

Through SAMHSA's work with the U.S. Interagency Council on Homelessness, we collaborate with over 19 Federal agencies to design and implement strategies, and provide guidance on the efficient use of resources to end homelessness. In doing so, we engage with the Department of Housing and Urban Development (HUD) on technical assistance and program development activities as they relate to the housing components of our homeless programs. This includes requiring our grantees to develop linkages to HUD's Coordinated Entry System. We also engage HUD in policy discussion related to recovery housing.

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR HASSAN

Question 1. In your view, what is the top action that your agency is not doing now that you think it should be doing to address the opioid epidemic?

Answer 1. SAMHSA was pleased to see that the President's Commission on Combating Drug Addiction and the Opioid Crisis highlighted areas that are also a priority for HHS. HHS, in collaboration with the White House, is currently reviewing the recommendations and assessing actions that may be taken beyond those already underway in support of the Department's five point HHS Opioid Strategy.

Question 2. In your view, what is the most promising emerging research that can help address the opioid epidemic?

Answer 2. The most important recent research is that which underscores effective treatment of opioid use disorder (OUD). For example, a paper (Tanum, et. Al. 2017) published after the hearing in December 2017 shows that both injectable naltrexone and buprenorphine-naloxone are effective in treatment of OUD. This is important because both of these medications can be prescribed by providers in the outpatient or office-based setting, and patients should have access to all medication assisted treatment options in determining what will be most effective for their recovery. A second publication (Strong et al., 2017) shows that those completing 28 day residential detoxification programs had higher death rates than program non-completers. This is very important in considering how to best provide care to individuals with OUD.

Question 3. What is your and your agency's perspective on the recommendations from the president's bipartisan Commission on Combating Drug Addiction and the Opioid Crisis?

Answer 3. SAMHSA was pleased to see that the President's Commission on Combating Drug Addiction and the Opioid Crisis highlighted areas that are also a priority for HHS. HHS is currently reviewing the recommendations and assessing actions that may be taken beyond those already underway in support of the Department's five point Opioid strategy. The Commission's recommendations could be grouped into eight or nine main areas, including expanding access to evidence-based addiction and overdose treatment, as well as better use and strengthening of public health surveillance data. We strongly support these goals and are working with the Department and the Administration to achieve the same ends. .

Question 4. In order to control costs, insurance companies often require utilization practices like prior authorization or fail-first policies for medication assisted treatment. While these are important measures to control costs, they also can be barriers to access to treatment for patients. What are your views about utilization review practices in the context of opioid use disorder treatment, like medication assisted treatment?

Answer 4. Research on the use of prior authorization requirements with psychiatric medications has revealed that prior authorization can reduce medication expenditures. However, these requirements also can have the unintended consequence of preventing proper and timely access to treatment. For example, these practices may deter providers from delivering care and patients from seeking it or remaining engaged in treatment. Thus, it is important that policies such as utilization review should be based on evidence and appropriate clinical criteria, not cost. In addition, "fail-first" protocols or similar non-quantitative limitations to coverage, when applied to addiction services, but not to comparable medical-surgical services, are potentially Mental Health Parity and Addiction Equity Act violations and therefore may be violations of law.

Question 5. How is SAMHSA working to ensure that the Substance Use Prevention and Treatment block grant is funding the most effective, evidence-based care? How is SAMHSA supporting block grant recipients to maximize the block grant's value in a State (for example, is SAMHSA helping states conduct needs assessments, program evaluations, and track patient outcomes)?

Answer 5. The Substance Abuse Prevention and Treatment Block Grant (SABG) plans are carefully reviewed by SAMHSA to ensure states are adhering to requirements. By statute, the states submit annual plans detailing how they propose to comply with program requirements and reports describing expenditures of program funds and activities conducted. These plans and reports are reviewed by SAMHSA staff to ensure SABG funds are being spent appropriately. SAMHSA staff works with the states and jurisdictions to make any adjustments necessary to help ensure that the funding is providing the most effective, evidence-based care based on community needs and resources available on the State and local levels. Prevention and treatment performance and outcome measures are reported annually by states and jurisdictions and are used to help improve services and assess the efficiency and effectiveness of funded activities.

Question 6. A Boston Globe article from October 7th entitled "Young victims of opioid crisis pay high price" explored the impact of opioid epidemic on children who have lost their parents to overdose and are now being raised by grandparents or are in the foster care system. Many of these children experienced severe trauma, and the full impact may not be realized until adulthood.

A What resources and guidance does SAMHSA have available to help practitioners and families address the long-term mental health and developmental issues that may arise in children who witnessed a parent or loved one overdose or who have been displaced from their immediate families because of an opioid use disorder?

Answer 6. SAMHSA and the Administration for Children and Families jointly fund the National Center on Substance Abuse and Child Welfare (NCSACW), a national resource center providing information, expert consultation, training and technical assistance to child welfare, dependency court, and substance abuse treatment professionals to improve the safety, permanency, well-being, and recovery outcomes for children, parents, and families. The NCSACW also provides webinars, assessment instruments, training and program toolkits, resource lists, and other publications.

In addition, SAMHSA's National Child Traumatic Stress Initiative (NCTSI) raises awareness about the impact of trauma on children and adolescents as a behavioral health concern. NCTSI's goal is to transform mental health care for children and adolescents affected by trauma throughout the country by improving the quality of community-based trauma treatment and services and increasing access to effective trauma-focused interventions. NCTSI develops and implements:

- Evidence-based interventions to reduce the mental health impact of traumatic experiences on children and adolescents
- Collaborations with all systems of care where children and adolescents who have experienced trauma receive services
- Successful education and training approaches, including training practitioners in trauma-informed and evidence-based treatment and services
- Data collection and evaluation activities
- Education and awareness raising with policymakers regarding trauma, resilience, and recovery
- Product development for professionals, policymakers, families, youth, and the public
- Partnerships with youth, families, and other consumers.

Question 7. What resources and guidance does SAMHSA have available to caregivers, including grandparents and foster parents, who are now taking care of these traumatized children?

Answer 7. Through SAMHSA's National Child Traumatic Stress Initiative, a range of resources have been developed to provide information and guidance to caregivers of children who have experienced traumatic events. Following is a list of resources for caregivers that have been created specifically for supporting child and family recovery in response to traumatic separation and grief, and substance abuse. Each is either hyperlinked or has the pdf link attached.

Helping Young Children with Traumatic Grief: Tips for Caregivers

This resource outlines the feelings of children struggling with the death of someone meaningful and what you can do to help.

Helping School-Age Children with Traumatic Grief: Tips for Caregivers

This resource explains the thinking of school-age children with traumatic grief and ways you can help.

Helping Teens with Traumatic Grief: Tips for Caregiver

This resource describes how teens may feel when struggling with the death of someone close and what caregivers can do to help.

Guiding Adults in Talking with Children about Death and Attending Services

This resource assists adults in talking to children about death and addresses issues around attending funeral or memorial services.

National Child Traumatic Stress Network (NCTSN) Speaker Series: The Role of Trauma Among Families Struggling with Substance Abuse: <http://learn.nctsn.org/course/index.php?categoryid=46>.

In this series, members of the NCTSN Trauma and Substance Abuse Collaborative Group, as well as presenters with real-life experience, offer perspectives on the intersections between trauma, caregiver substance use, parenting, and pre-natal substance use exposure.

- Supporting Caregivers of Youth with Substance Use Problems Affected by Trauma (2015)
- Opiate Exposed Newborns: Development, Assessment and Treatment (2014)
- Prenatal Exposure to Substances and Trauma: Fostering Parent and Child Well-being (2012)
- Understanding and Treating Caregiver Substance Abuse and Trauma: A Focus on the Family (2012)

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR WARREN

1. Understanding the Needs of Providers

Earlier this year, I sent a survey to behavioral health providers across Massachusetts to improve my understanding of how those on the front lines are dealing with the opioid epidemic. Over 50 organizations responded to the “Massachusetts Substance Use Disorder Treatment and Recovery Services Survey,” and were able to provide insight into the services they provide and the challenges they face.

In August, my office compiled the results of the survey and released a report, “Fighting Back: Massachusetts Health Care Providers and the Opioid Crisis.”¹ The report concluded that: (1) Massachusetts facilities that offer behavioral health services deliver affordable, high-quality care made possible by high rates of insurance coverage and access to treatment; (2) Massachusetts addiction treatment centers continue to face challenges in providing care, including long waiting lists, offering adequate referral services, hiring and retaining staff, and parity in behavioral health coverage; and (3) Many Massachusetts facilities rely on Federal financial support to carry out their critical work.

Hearing directly from providers, as well as other stakeholders on the front lines like hospitals, first responders, community advocates, and other public health officials has been critical to informing my Senate work on the opioid crisis.

Question 1a. Please describe any steps you have taken to communicate with behavioral health providers to learn more about their efforts to combat the opioid crisis and the challenges they face in providing quality addiction treatment.

Answer 1a. The SAMHSA Regional Administrators (RAs) are in constant communication with substance use, mental health, and other providers, in order to discuss methods to combat the opioid crisis. Many of the RAs have joined advisory councils and Committees, presented at multiple conferences, chair opioid consultation teams, and work closely with local individual providers, hospitals, substance use prevention and treatment providers, and primary care providers in order to understand the challenges of the opioid crisis and to develop strategies to overcome some of these challenges.

Some of the most common challenges include: 1) transforming the way pain is perceived, judged, and treated; 2) igniting community engagement in order to strengthen the response to the opioid epidemic; 3) understanding of outcome measures for medication assisted treatment in primary care settings; 4) clarifying “setting” and “level of care” within various payment schemes to resolve operational and policy barriers to billing for emergency care, regardless of the status of the patient; 5) education of “non-substance use providers” such as dentists; and 6) addiction workforce barriers such as State reciprocity of licensing, lack of providers in rural areas, telehealth capabilities, and reimbursement.

¹“Fighting Back: Massachusetts Health Care Providers and the Opioid Crisis,” Office of Senator Elizabeth Warren (August 2017) (online at: https://www.warren.senate.gov/files/documents/20170824_Opioid_Survey_Report.pdf).

Question 1b. Please describe any steps you have taken to communicate with other public health stakeholders, including State Departments of Public Health, to learn more about their efforts to combat the opioid crisis and the challenges they face.

Answer 1b. In order to combat the opioid crisis, the SAMHSA Regional Administrators have developed partnerships and Committees with stakeholders ranging from Single State Agencies, State Departments of Health, police departments, regional Offices of Minority Health, schools of medicine and dentistry, State Supreme Courts, and county-based Opiate Task Forces. These stakeholder partnerships have helped states and counties to develop strategic plans, create new resources, change policies and develop new, effective programs. Some of the efforts to combat the opioid crisis include: (1) plans to increase the number of medication-assisted treatment (MAT) providers; (2) conducting policy academies to help support the regulation of MAT for patients with Opioid Use Disorder (OUD); (3) creating the ability to purchase naloxone in certain stores without a patient specific prescription; (4) widely disseminating resources to providers, agencies, states, and local communities; (5) the use of a Regional Office Opioid Field Manual developed as a model by which Federal regional offices can collaborate and work directly with state, tribal, and local communities to address the opioid crisis; and (6) developing criminal justice offender re-entry programs that focus on opioid use issues.

Some of the ongoing challenges include: (1) determining the best way to use MAT in drug courts and incorporate recovery-orientated systems of care; (2) locating resources and programs for overdose prevention; (3) the inability of emergency department physicians to find placement for individuals desiring treatment; (4) Drug Abuse Treatment Act-waivered prescribers' inability to initiate, expand, and sustain practices due to lack of availability of staff with training or experience in OUD treatment; and (5) data collection.

In addition, SAMHSA staff discusses with State and local grantees their efforts to combat the opioid crisis and the challenges they face. For example, SAMHSA's Strategic Prevention Framework—Partnerships for Success, Strategic Prevention Framework for Prescription Drugs, and First Responder grantees are required to either develop or join an existing advisory council that collaborates/coordinates across State agencies to include State Departments of Health. These advisory councils allow for a collective voice in addressing the priority needs of the State around issues of substance use and abuse. Also, through ongoing communication with the Single State Authorities regarding the Substance Abuse Prevention and Treatment Block Grant, the Medication-Assisted Treatment—Prescription Drug and Opioid Addiction program, and the State Targeted Response to the Opioid Crisis Grants (STR), SAMHSA maintains regular contact with State agencies regarding their efforts in combatting the opioid crisis. The focus of the contacts is to ensure that the states have adequate data to develop good plans and that appropriate evidence-based programs and services are included in the plans for the State grantees. In addition, SAMHSA staff work with the states to address any challenges they are facing in implementing their plans and provides training and technical assistance to address these issues.

Finally, in August 2017, SAMHSA partnered with CMS and CDC to host a meeting for State teams that included State Medicaid officials, public health officials, and substance abuse authorities. The goal of the meeting was to bring together teams from each State that included State substance abuse authorities, Medicaid leadership, and other public health officials to develop comprehensive plans to address the opioid crisis that included all of the sources of funding available (both Federal and State dollars). The meeting was designed to support the states in learning effective strategies from each other and from national experts and to provide time for the State teams to meet and discuss strategy development. These plans were the foundation of the STR strategic plans that were submitted in September and also formed the basis of some State Medicaid waiver plans and work plans related to various state's opioid task forces.

2. Safe Drug Disposal

Safe drug disposal options are an important tool to help limit the volume of unused medications in circulation. Twice a year, the U.S. Drug Enforcement Agency holds National Prescription Drug Take Back Days, meant to help individuals dispose of unused medicines. 450 tons of drugs were disposed of in the last national take-back day in May.² In September 2014, the DEA released the final rule on "Dis-

²"DEA Brings in Record Amount of Unused Prescription Drugs on National Prescription Take Back Day," U.S. Drug Enforcement Administration (May 8, 2017) (online at:<https://www.dea.gov/divisions/hq/2017/hq050817a.shtml>).

posal of Controlled Substances,”³ aimed at making it easier to for individuals to dispose of unused medicines and allow for more continuous collection opportunities. Over a year ago, Massachusetts announced its “first statewide safe medication disposal program with Walgreens to fight substance misuse,”⁴ and today in Massachusetts, in addition to semi-annual national take-back days, there are a number of permanent kiosks where individuals can go to dispose of unused medications.⁵

In its efforts to reduce the volume of unused medications in circulation, what can SAMHSA do to raise awareness about these safe drug disposal opportunities?

Answer 2. SAMHSA promotes safe drug disposal opportunities (e.g., DEA’s National Drug Take Back Day events) via all of its communications channels, such as social media posts and e-blasts, direct communication with grantees and national organizations, and dissemination of this strategy in its public information products (e.g., Rx Pain Medications. Know the Options. Get the Facts.).

3. Maternal Mental Health & Opioids

In August, the Massachusetts Executive Office of Health and Human Services released a report on opioid overdoses that revealed that “mothers with [opioid use disorder] had a significantly higher co-occurrence of mental health diagnoses.” They also found that “Rates of opioid-related overdose decrease during pregnancy and are lowest during the second and third trimesters, but significantly increase in the postpartum period, with the highest rates 6 month-one year after delivery.”⁶ The National Institute of Mental Health has acknowledged that “drug abuse problems” were a risk factor for postpartum depression,⁷ and the CDC has shown that “1 in 9 women experiences postpartum depression.”⁸ In an effort to address a lack of screening tools for postpartum depression, a provision was included in the 21st Century Cures Act that created a grant program to support screening of postpartum depression services⁹—but moms are not yet routinely screened.

Question 3a. Does SAMHSA’s work to support pregnant and postpartum mother with opioid use disorder include screening women for perinatal depression? If so, what diagnostic tool is being used and how is this tool typically being administered?

Answer 3a. Yes, SAMHSA’s Pregnant and Postpartum Women (PPW) grantees are required to screen and assess clients for the presence of co-occurring addiction, depression, anxiety, and other mental disorders, as well as trauma. The PPW Program does not collect information on the diagnostic tools used.

Question 3b. Does SAMHSA collect dual diagnosis data on substance use and maternal mental health for the pregnant and postpartum opioid user population?

Answer 3b. PPW program grantees are required to collect the following information related to dual diagnosis.

Was the client screened by your program for co-occurring mental health and substance use disorders?

[IF YES] Did the client screen positive for co-occurring mental health and substance use disorders?

RESPONSE BY DR. MCCANCE-KATZ TO QUESTIONS OF SENATOR WHITEHOUSE

Question 1. The 21st Century Cures Act authorized \$1 billion over 2 years to support efforts to combat the opioid epidemic. The second half of that money is expected to be made available as part of the fiscal year 2018 appropriations bill. Though I was pleased to see the first \$500 million get out to states quickly, I think we can improve how the next \$500 million is used and allocated.

First, we could allow grant makers approving applications for these funds to consider whether the proposed uses of this funding are aligned with the goals of the

³Federal Register, Vol. 79, No. 174 (September 9, 2014) (Online at: https://www.deadiversion.usdoj.gov/fed_regs/rules/2014/2014-20926.pdf).

⁴“Baker-Polito Administration Announces First statewide Safe Medication Disposal Program with Walgreens to Fight Substance Misuse,” The Official Website of the Governor of Massachusetts (September 7, 2017) (online at: <http://www.mass.gov/Governor/press-office/press-releases/fy2017/statewide-safe-medication-disposal-program-launched.html>).

⁵“Safely Dispose of Prescription Drugs,” Mass.gov (online at: <https://www.mass.gov/safely-dispose-of-prescription-drugs>).

⁶“An Assessment of Fatal and Nonfatal Opioid Overdoses in Massachusetts (2011-2015),” Massachusetts Department of Public Health, 55-57 (August 2017) (online at: <http://www.mass.gov/eohhs/docs/dph/stop-addiction/legislative-report-chapter-55-aug-2017.pdf>).

⁷“Postpartum Depression Facts,” National Institutes of Mental Health (online at: <https://www.nimh.nih.gov/health/publications/postpartum-depression-facts/index.shtml>) (accessed October 25, 2017).

⁸“Depression Among Women,” Centers for Disease Control and Prevention (online at: <https://www.cdc.gov/reproductivehealth/depression/index.htm>) (accessed October 25, 2017).

⁹ See Sec. 10005: 21st Century Cures Act (online at: <https://www.Congress.gov/114/plaws/publ255/PLAW-114publ255.pdf>).

Comprehensive Addiction and Recovery Act (CARA). Second, in evaluating applications for this funding, more consideration could be given to states most affected by the epidemic. Do you support aligning the uses of the next tranche of 21st Century Cures Act opioid funding with the best practices set forth in CARA and/or prioritizing funding to states most affected by the opioid epidemic?

Answer 1. The funding opportunity announcement (FOA) for the State Targeted Response to the Opioid Crisis Grants (STR) is consistent with the goals of its authorizing statute, the 21st Century Cures Act. The program aims to address the needs of individuals with opioid use disorders through the provision of evidence-based prevention, treatment, and recovery support services.

Subsequent to the date of the hearing, on October 30, 2017, notification was sent to all Governors indicating that the funding allocation for the program will remain the same as it was in the first year of the program. Specifically, the letter stated, “[a]lthough there are some new data that could be factored into the funding formula, we have heard from many states that changing the formula at this juncture could potentially disrupt services and slow states’ progress in addressing this crisis. Therefore, we have decided that the funding allocation formula for the second year of the grant program will remain the same as the first year.” The letter also notes that SAMHSA will be working closely with states/territories to ensure the provision of evidence-based practices.

At the same time, states are using STR funds in ways that align with the best practices set forth in CARA. For example, Kentucky is working with three hospitals in its highest-risk urban regions to implement an emergency department (ED) intervention that includes a Bridge Clinic and peer support specialist. Individuals who present to an ED after an opioid overdose will be provided the opportunity to initiate treatment, including medication assisted treatment induction, at the ED or in close proximity at a Bridge Clinic. In addition, the coordinated response team administers screening tools and refers willing and eligible patients for a full clinical assessment by practitioners with expertise in addiction assessment and treatment. Peer Support Specialists and other staff follow-up with patients post ED discharge as part of an assertive engagement effort. Also, Massachusetts is using their existing recovery-oriented systems of care (ROSC) framework to support comprehensive, coordinated “wrap-around” services for individuals by building connections throughout its entire prevention, treatment and recovery service system with the goal of addressing opioid misuse, abuse and overdose that will evolve over time.

2. As you know, prescription drug monitoring programs (PDMPs) are helpful tools in identifying potential opioid abuse and educating prescribers, but there is room for improvement. Technical and legal barriers continue to limit interstate information sharing among PDMPs and the integration of PDMP information into electronic health records and pharmacy systems. And there isn’t consensus on the amount of access law enforcement agencies should have to PDMPs.

Question 2a. What are SAMHSA and CDC doing to improve the ability of PDMPs to exchange information across State lines and to integrate information into providers’ and pharmacists’ health IT systems? What resources are your agencies using to support that work?

Answer 2a. SAMHSA has awarded 25 Strategic Prevention Framework for Prescription Drugs grants to states and tribal organizations to develop capacity and expertise in the use of data from State run prescription drug monitoring programs (PDMPs). These awards fund State grantees to utilize PDMP and epidemiological (EPI) data to target prevention programming in high prevalence areas in the State or tribe. PDMP and EPI data are used to develop a community-level response to their identified substance use issues. Grantees are encouraged to expand efforts across State lines where relevant and associated laws permit. SAMHSA technical assistance and education initiatives describe PDMPs and encourage their use by providers as a best practice.

We strongly urge every State to work together toward interoperable PDMP as quickly as possible.

Question 2b. Are there best practices for access to and the use of PDMP information by law enforcement agencies? If not, does SAMHSA or CDC plan to work with stakeholders to develop best practices on access and use of PDMP information by law enforcement?

Answer 2b. SAMHSA supports ensuring that public health and law enforcement agencies use best practices for access to and use of the PDMP information. CDC continues PDMP work under the agency’s Overdose Prevention in States (OPIS) effort.

Question 3. Do regulations limiting the disclosure of patient records related to the diagnosis and treatment of substance use disorders impede access to treatment?

What are the best practices for notifying parents of a patient who recently experienced an overdose that an overdose has occurred? Does HIPAA prohibit such notification?

Answer 3. The Federal regulations at 42 C.F.R. Part 2 (Part 2) allow substance use disorder (SUD) patient information to be shared among providers in certain circumstances. For example, a patient can give written consent to authorize the sharing of his or her SUD treatment record with any treating provider. Part 2 typically does not apply to entire hospitals, emergency rooms (ER)/departments, or trauma centers. Accordingly, Part 2 is not an impediment to the sharing of SUD treatment records among providers in these settings, where the HIPAA Privacy Rule would continue to apply.

With regard to general medical facilities or staff within such facilities, Part 2 applies only to an identified unit in the facility that provides SUD services, or to staff within the facility whose primary function is the provision of SUD services. When Part 2 applies, it allows sharing without a patient's consent in medical emergencies, such as opioid overdoses. The determination of whether a medical emergency exists is made by the treating/disclosing provider. Information disclosed by a Part 2 program during a medical emergency can be further shared with medical providers as needed in order to diagnose or treat the patient during the emergency.

HHS' Office for Civil Rights has jurisdiction over HIPAA and recently released guidance related to whether and how health care providers can disclose protected health information to the family or friends of a patient who recently experienced an overdose. The guidance can be found at: <https://www.hhs.gov/sites/default/files/hipaa-opioid-crisis.pdf>.

At the same time, there are statutory limitations related to sharing protected SUD patient information absent written consent, and the exceptions to the consent requirements are limited. The statute has been an impediment to sharing addiction records in care coordination settings. Within the constraints of the statute, SAMHSA has been working diligently to issue clarifications and education providers about what information sharing is permissible under both the statute and the regulation.

As required by the 21st Century Cures Act (section 11002), SAMHSA held a public meeting on January 31, 2018, to obtain input about the impact of Part 2 on "patient care, health outcomes, and patient privacy." The information gathered during this Part 2 public meeting can help policymakers better assess what changes can and should be made under current regulations or whether statutory changes are required to accomplish such objectives.

Question 4. As you know, Rhode Island's innovative peer recovery coach program, AnchorED, has now been replicated by a number of states. Please summarize the current funding mechanisms at SAMHSA that can be used to support the training, certification, and hiring of peer recovery coaches.

Answer 4. Currently, SAMHSA funds several grant programs through which peers can be hired by Recovery Community Organizations (RCOs) like Anchor Recovery Community Centers to be trained in/on, such as: (1) the Targeted Capacity Expansion—Peer-to-Peer program; (2) the CARA-funded Building Communities of Recovery; (3) Medication-Assisted Treatment—Prescription Drug and Opioid Addiction; and (4) State Targeted Response to the Opioid Crisis (STR) grant programs. In addition, under the Substance Abuse Prevention and Treatment Block Grant authorization, states and jurisdictions have the flexibility to use funds for peer support services and professional development such as pre-employment education and post-employment training. Responsive to the needs of those with addiction and the national opioid epidemic, many grantees have begun using SAMHSA grant dollars, and SAMHSA-funded technical assistance to implement peer-based interventions in hospital emergency departments (EDs) within their own communities modeled after the AnchorED program. In addition, the Opioid STR grant program requires states to include recovery supports as part of the plan to address opioid use disorders and most states are supporting peer services to provide those recovery supports.

SAMHSA continues to provide technical support to states through policy academies, many of which have been supported to develop a peer recovery certification program and attendant training curricula. Over the course of the last several years, 41 states have developed a peer recovery certification, in large part because of this work. RCOs and other community-based organizations (e.g. Family Heroin Coalitions) continue to hire peer recovery coaches to assist those who may be pursuing recovery in the absence of treatment or before, during and after treatment at community-based RCOs.

RESPONSE BY DR. McCANCE-KATZ TO QUESTIONS OF SENATOR YOUNG

Question 1. Some researchers have found that it takes an average of 17 years for research evidence to reach clinical practice. How are you all working together to ensure our best practices actually reach the patient in a reasonable amount of time? Are you working with medical associations and boards to ensure that best practices are translated into clinical practice? What can be done at the Federal level to speed up this research to practice pipeline?

Answer 1. SAMHSA works collaboratively with NIH to follow best practice development. In addition, SAMHSA promulgates best practices, treatment guidelines, and evidenced-based approaches adopted by the major stakeholder groups (e.g., American Society of Addiction Medicine and the American Psychiatric Association). SAMHSA monitors grantees to assist them with implementation of evidence-based practices.

SAMHSA is also in the process of strengthening its evaluation efforts to be better positioned to identify best practices in its discretionary grant programs. SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ) is transitioning with the formation of a centralized evaluation office, which will oversee program evaluations across the Agency. CBHSQ also adopted a policy of posting results from all significant program evaluations on SAMHSA's publicly available website. SAMHSA evaluation policy now requires either an executive summary or a full report be posted for all significant evaluations at the end of an evaluation contract. This effort will help to ensure that evaluation findings, including best practices, are shared with the field and the public in a timely manner.

Finally, SAMHSA's National Mental Health and Substance Use Policy Lab taken over the identification of, and responsibility for, posting evidence-based programs and practices. SAMHSA expects that the new website for this information will be online soon. In the meantime, the National Registry of Evidence-based Programs and Practices remains available should an organization wish to use it.

Question 2. Too many unused opioids dangerously remain in medicine cabinets throughout America. They pose a real threat to health and safety-especially to young Americans. Will drug take back programs be a component of our government's response to this national emergency?

Answer 2. Yes. Proper medication disposal provides a safe way for people to get rid of prescription drugs kept in their homes. Take-back programs, a popular proper medication disposal strategy, provide avenues to reduce the supply available for diversion. SAMHSA will continue to assist with informing American communities about drug take back days led by the Drug Enforcement Administration.

Question 3. While increasing access to treatment is important, we also need to make sure people in treatment are receiving services that really work. What current treatments and outreach strategies have been proven through rigorous evaluation to work best? Do we need more research and innovation in this area?

Answer 3. Medication-assisted treatment (MAT) in the context of psychosocial services, such as counseling, has proved to be clinically effective in treatment of opioid use disorder (OUD).

The ultimate goal of these services is full recovery, which includes the ability to live a self-directed life and can include long-term or even life-long medication to support recovery. This treatment approach has been shown to:

- Improve patient survival;
- Increase retention in treatment;
- Decrease illicit opiate use and other criminal activity among people with addiction;
- Increase patients' ability to gain and maintain employment; and
- Improve birth outcomes among women who have addiction and are pregnant.

Research also shows that these medications and therapies can contribute to lowering a person's risk of contracting HIV or hepatitis C by reducing high risk practices such as injection drug use.

We need to use approaches to treat OUD shown to be effective including comprehensive MAT, which includes a combination of medication and psychosocial services, as well as recovery supports.

Question 4. Sec. 303 of the Comprehensive Addiction and Recovery Act (CARA) requires that all office-based providers of addiction treatment have "the capacity to provide directly, by referral, or in such other manner as determined by the [HHS] Secretary all drugs approved by the [FDA] for the treatment of opioid use disorder...and appropriate counseling and other appropriate ancillary services." What

has been SAMHSA's role in implementing this particular statute in CARA? What is the current status for its full implementation?

Answer 4. SAMHSA convened a meeting of training organizations in September 2016 to review the required elements of the Drug Abuse Treatment Act waiver training, based on CARA. All of the organizations who are allowed by statute to provide this training were invited to participate in that meeting, and all that participated agreed to a curriculum plan and set of learning objectives to meet the changes to the curriculum required by CARA. In July 2017, SAMHSA released a 24-hour MAT waiver course (an 8-hour and 16-hour component) for Nurse Practitioners and Physicians Assistants. It is a fully online course that will fulfil the 24-hour requirement established in CARA. The 8-hour component of the 24-hour MAT waiver course training is currently under revision. This curriculum includes information on all medications approved by FDA for the treatment of OUD, as well as information on the use of psychosocial interventions to support recovery as well.

[Whereupon, at 12:52 p.m., the hearing was adjourned.]

