Testimony of Dr. Debra Houry, Centers for Disease Control and Prevention (CDC)

before the

Energy and Commerce Committee, Oversight and Investigations Subcommittee

Hearing titled, "Fentanyl: The Next Wave of the Opioid Crisis"

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Chairman Murphy, Ranking Member DeGette, I would like to thank you for inviting me here today to discuss this very important issue. I'd also like to thank the committee for its continued interest in the prevention of opioid misuse and overdose. My name is Dr. Debra Houry, and I am the Director of the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention (CDC). The activities related to the prevention of opioid prescription drug overdose and illicit opioid use are under my leadership at CDC. As a trained emergency room physician, I have seen first-hand the terrible toll drug overdoses take on individuals, families, and communities, and I have a personal goal to do everything we can as public health professionals to help reduce that toll. The consequences of opioid addiction are a true epidemic, and I have heard the devastating stories from all over the country, big cities and rural America.

Within HHS, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) has been leading a targeted and coordinated policy and programmatic effort to reduce opioid misuse, use disorder, and overdose, including fentanyl use and overdose. The effort focuses on strengthening surveillance, improving opioid prescribing practices and the treatment of pain, increasing access to treatment for opioid use disorders, expanding use of naloxone to reverse opioid overdose, and funding and conducting research to better understand the epidemic and identify effective interventions. As part of this effort,

CDC has been instrumental in activities to improve surveillance, improving opioid prescribing practices and the treatment of pain, and conducting critical research to track the epidemic and identify effective public health interventions to reduce the harms of opioid use.

CDC's work is focused in three primary efforts: improving data quality, data timeliness, and tracking trends to monitor the epidemic; strengthening state efforts by scaling up promising and effective public health interventions because states are critical players in preventing prescription drug overdoses; and supplying healthcare providers with data, tools, and guidance for evidence-based decision making that improves population health. Reversing the epidemic requires changing the way opioids are prescribed. CDC is committed to giving providers and health systems the tools and evidence they need to improve how these are used and prescribed. CDC provides critical expertise in the prevention of opioid misuse, use disorder, and overdose deaths.

Drug overdose deaths in the United States have nearly tripled in the last 15 years. In 2015, there were more than 52,000 drug overdose deaths, and of those, 63 percent involved a prescription or illicit opioid.[1] In 2015, more than two million people age 12 and older had an opioid use disorder related to prescription opioids and nearly 600,000 had a heroin use disorder.[2] More than 1,000 people are treated in emergency departments each day for not using prescription opioids as directed.[3] Although prescription opioids were driving the increase in overdose deaths for many years, more recently, the

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[1] Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. MMWR Morb Mortal Wkly Rep. ePub: 16 December 2016. DOI: http://dx.doi.org/10.15585/mmwr.mm6550e1.

[2] https://www.cdc.gov/drugoverdose/pdf/guideline_infographic-a.pdf

[3] Substance Abuse and Mental Health Services Administration. Highlights of the 2011 Drug Abuse Warning Network (DAWN) findings on drug-related emergency department visits. The DAWN Report. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; 2013. Available from URL: http://www.samhsa.gov/data/2k13/DAWN127/sr127-DAWN-highlights.htm

large increase in overdose deaths has been due mainly to increases in heroin and synthetic opioid (other than methadone) overdose deaths, not prescription opioids. Importantly, the available data indicate these increases are largely due to illicitly manufactured fentanyl. Fentanyl is a synthetic and short-acting opioid analgesic that is 80 times more potent than morphine.[4] Fentanyl is approved in a variety of products for indications including the management of surgical/postoperative pain, as well as severe chronic pain, and breakthrough cancer pain in patients that are already opioid tolerant.[5] Fentanyl is administered to inpatients intravenously or prescribed in the form of transdermal patches or lozenges,[6] but illicitly manufactured fentanyl is often made and sold as counterfeit pills or mixed with or sold as heroin.[7] Fentanyl is fast-acting, so overdoses can occur in seconds to minutes after use instead of the longer time periods commonly associated with overdoses related to other opioid pain relievers and heroin and can be more difficult to reverse than overdose from heroin or other opioids, potentially requiring multiple doses of naloxone.[8] This makes the introduction of fentanyl to the illicit drug market very concerning. The rate of drug overdose deaths involving fentanyl more than doubled from 2013-2014 and some states have seen the dramatic effect of this drug much more so than others[9].

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[4] Gladden RM, Martinez P, Seth P. Fentanyl Law Enforcement Submissions and Increases in Synthetic Opioid–Involved Overdose Deaths — 27 States, 2013–2014. MMWR 2016; 65(33);837–843

[5] Peterson AB and Gladden RM, Delcher C, Spies E, Garcia-Williams A, Wang Y, Halpin J, Zibbell J, McCarty CL, DeFiore-Hyrmer J, DiOrio, M, and Goldberger B. Increases in fentanyl-related overdose deaths – Florida and Ohio, 2010-2015(https://www.cdc.gov/mmwr/volumes/65/wr/mm6533a3.htm). MMWR 2016; 65(33);844–849.

[6] https://www.cdc.gov/drugoverdose/opioids/fentanyl.html

[7] Gladden RM, Martinez P, Seth P. Fentanyl Law Enforcement Submissions and Increases in Synthetic Opioid–Involved Overdose Deaths — 27 States, 2013–2014. MMWR 2016; 65(33);837–843

[8] Peng PW, Sandler AN. A review of the use of fentanyl analgesia in the management of acute pain in adults. Anesthesiology 1999;90:576–99. https://www.ncbi.nlm.nih.gov/pubmed/9952166

[9] Gladden RM, Martinez P, Seth P. Fentanyl Law Enforcement Submissions and Increases in Synthetic Opioid–Involved Overdose Deaths — 27 States, 2013–2014. MMWR 2016; 65(33);837–843

For example, Massachusetts experienced a surge of opioid-related deaths, from 698 in 2012 to 1,747 in 2015[10] and over 74 percent of these drug overdose deaths involved fentanyl. In August of 2015, the Massachusetts Department of Public Health (MDPH) requested an epidemiological investigation (Epi-Aid) from CDC. The goal of the investigation was to understand the extent to which illicitly-made fentanyl (IMF) contributed to the surge in opioid-related overdose deaths because the supply had sharply increased in Massachusetts from 2013 to 2015.[11] CDC worked closely with the MDPH, the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Drug Enforcement Administration (DEA) to determine that illicitly-manufactured fentanyl mixed with or sold as heroin was primarily responsible for the surge of deaths from 2014 to 2015[12]. Eighty-two percent of fentanyl-related overdose deaths were suspected to involve illicitly-made fentanyl, four percent were suspected to involve pharmaceutical fentanyl, and the remaining 14 percent lacked sufficient evidence to determine the fentanyl source[13].

Using the findings from the investigation, CDC provided recommendations for the MDPH related to physicians, treatment providers, and law enforcement for screening at-risk people for heroin or fentanyl use, expanding access to naloxone, and providing training for overdose prevention. Those considered at risk included people in drug treatment facilities, in extended-stay residential treatment, and people who were incarcerated. The recommendations also included actively conducting outreach to high risk

[10] The number of opioid-related overdose deaths in 2015 estimated as of November 2016. For additional information http://www.mass.gov/eohhs/docs/dph/stop-addiction/current-statistics/data-brief-overdose-deaths-nov-2016-ma-residents.pdf

[11] For additional information https://emergency.cdc.gov/han/han00384.asp & http://www.cdc.gov/drugoverdose/data/fentanyl-le-reports.html

[12] The number of opioid-related overdose deaths in 2015 estimated as of November 2016. For additional information http://www.mass.gov/eohhs/docs/dph/stop-addiction/current-statistics/data-brief-overdose-deaths-nov-2016-ma-residents.pdf

[13] The number of opioid-related overdose deaths in 2015 estimated as of November 2016. For additional information http://www.mass.gov/eohhs/docs/dph/stop-addiction/current-statistics/data-brief-overdose-deaths-nov-2016-ma-residents.pdf

groups, such as people who have experienced an opioid overdose, people with substance use problems recently released from incarceration, or those accessing health programs for active users (e.g., syringe services and naloxone distribution programs) to link them to treatment and implementing messaging and education around the dangers of fentanyl.

In Ohio, there were 84 fentanyl-involved deaths in 2013, which increased to more than 526 in 2014 -- a 500 percent increase.[14,15] To examine the ongoing increase in fentanyl-related overdose deaths, the Ohio Department of Health (ODoH) also requested CDC's assistance in an Epi-Aid. CDC worked with the ODoH to develop specific recommendations to enhance public health surveillance; continue testing for fentanyl by coroners and medical examiners; target interventions towards identified high-risk groups, including individuals who have recently been released from an institution (either from jail or a hospital) and those with a history of mental illness; ensure first responders have ample supplies of naloxone and understand the need for multiple administration of naloxone for fentanyl cases; and expand the availability of naloxone for high-risk community members.

The rise in fentanyl, heroin, and prescription drug involved overdoses are not unrelated. In Ohio, CDC found that approximately 62 percent of all fentanyl and heroin involved overdose deaths were preceded by at least one opioid prescription from a healthcare provider during the seven years prior to death, and one in ten people who died from a heroin overdose, and one in five people who died from a fentanyl overdose, had an opioid medication prescribed to them at the time of their death. In fact, people who misuse prescription opioids -- that is, use other than as directed by a healthcare provider -- are at an

[14] Peterson AB and Gladden RM, Delcher C, Spies E, Garcia-Williams A, Wang Y, Halpin J, Zibbell J, McCarty CL, DeFiore-Hyrmer J, DiOrio, M, and Goldberger B. Increases in fentanyl-related overdose deaths – Florida and Ohio, 2010-2015(https://www.cdc.gov/mmwr/volumes/65/wr/mm6533a3.htm). MMWR 2016; 65(33);844–849.

[15] Spies E, Peterson AB, Garcia-Williams A, Halpin J, Gladden RM, Zibbell J, McCarty CL. Undetermined risk factors for fentanyl-related overdose deaths – Ohio, 2015 (EpiAid 2016-003). Trip Report Epi2. http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/health/injury-prevention/Ohio-PDO-EpiAid-Trip-Report_Final-Draft_3_18_2016.pdf?la=en

increased risk for heroin use. Among new heroin users, approximately three out of four report having misused prescription opioids prior to using heroin.[16] In addition, data show that people reporting past-year misuse of opioids were 19 times more likely to initiate heroin use than people who did not report past-year misuse of opioids.[17] There were an estimated 12.5 million people who misused prescription opioids in 2015.[18] While most people who misuse prescription opioids do not go on to use heroin, the small percentage (about four percent) who do account for a majority of people recently initiating heroin use.[19]

Some have suggested that policies meant to limit inappropriate opioid prescribing have led to an increase in heroin use by driving people who misuse opioids to heroin.[20] Recent research, however, has indicated otherwise. One study found that the shift to heroin use began before the recent uptick in these policies, but that other factors (such as heroin market forces, increased accessibility, reduced price, and high purity of heroin) appear to be major drivers of the recent increases in rates of heroin use.[21]

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[16] 6 Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. JAMA Psychiatry 2014;71:821–6.

[17] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States. August 2013. http://archive.samhsa.gov/data/2k13/DataReview/DR006/nonmedical-pain-reliever-use-2013.pdf

[18] Substance Abuse and Mental Health Services Administration. Results from the 2011 National Survey on Drug Use and Health: Detailed tables. In NSDUH Series H-41. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. 2012

[19] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States. August 2013. http://archive.samhsa.gov/data/2k13/DataReview/DR006/nonmedical-pain-reliever-use-2013.pdf

[20] Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. JAMA Psychiatry 2014;71:821–6.

[21] Wilson M. Compton, M.D., M.P.E., Christopher M. Jones, Pharm.D., M.P.H., and Grant T. Baldwin, Ph.D., M.P.H. Relationship between Nonmedical Prescription-Opioid Use and Heroin Use. New England Journal of Medicine. 2016; 374:154-163. DOI: 10.1056/NEJMra1508490.

CDC is committed to a comprehensive approach that protects the public's health and prevents opioid overdose deaths. We strive to do this by improving data quality and timeliness to better track trends, identify communities at risk, and evaluate prevention strategies; supporting states, localities, and tribes in their efforts to implement effective solutions and interventions; and equipping healthcare providers with data and tools needed to improve the safety of their patients.

To aid primary care providers in proper prescribing practices, CDC developed and published the *CDC Guideline for Prescribing Opioids for Chronic Pain* (Guideline or CDC Guideline). The Guideline is intended to improve the way opioids are prescribed through clinical practice guidelines to ensure patients have access to safer, more effective chronic pain treatment while reducing the number of people who misuse, have opioid use disorder, or overdose from these drugs. CDC has developed an app available for download to help providers put the Guideline recommendations into clinical practice. The app contains the full Guideline, a morphine milligram equivalent (MME) calculator, and an interactive motivational interviewing feature to help providers prescribe with confidence. In addition, CDC is launching a patient and provider education campaign to raise awareness among providers and patients about the opioid epidemic and the CDC Guideline. While opioids can sometimes be part of pain management, this new guideline aims to improve the safety of prescribing and curtail the harms associated with opioids, including opioid use disorder and overdose.

States are vital in battling this epidemic and, as resources are available, CDC is committed to equipping them with the resources and expertise they need to reverse the epidemic and protect their residents, families, and communities. Since 2014, CDC has invested in prevention efforts and surveillance activities in 44 states and Washington, DC. The most impactful state-level approaches to date have

tackled the epidemic on multiple fronts -- promoting effective PDMPs, leveraging the states' role as a healthcare payer to improve patient safety, and engaging hard-hit communities to focus efforts where the epidemic is the most severe.

CDC funds state health departments to focus on collaboration across sectors, including public health, law enforcement, and substance use services agencies, for a truly comprehensive response. Funded states are also advancing prevention on multiple fronts -- including making PDMPs more timely, easier to use, and able to communicate with the PDMPs of other states; implementing interventions that can be integrated within state Medicaid or Worker's Compensation programs to protect patients at risk; and bringing data-driven prevention to the communities struggling with the highest rates of substance misuse and use disorder and overdose. Critically, states have also been given the flexibility to use the program to respond to emerging crises, like fentanyl, and evaluate existing interventions so they know what works best to reduce overdoses and save lives.

To better understand the increase in heroin and fentanyl use and overdose, we are working with states to improve the collection of data. CDC funds twelve states for the Enhanced State Surveillance of Opioid-Involved Morbidity and Mortality program to improve tracking and reporting of illicit opioid overdoses, including fentanyl.

The opioid overdose surveillance system allows CDC to monitor changing trends and issues related to this epidemic, such as deaths from heroin containing fentanyl, and to understand how the epidemic evolves over time. CDC is working to improve the quality and timeliness of the surveillance data. The

delay in the collection and analysis of current surveillance data makes it difficult for public health to implement the most timely and effective interventions to reduce fatal and nonfatal opioid overdoses. Health departments and CDC often have to use death certificate data that are 12 to 23 months old and lack critical details on the drugs and circumstances contributing to the overdose. Consequently, these data are not always actionable given the rapid changes in types of opioids involved in overdose deaths.

CDC is implementing several strategies in the 12 funded states for improving surveillance of opioid overdoses. First, we are establishing an early warning system to detect sharp increases or decreases in nonfatal opioid overdoses by publishing, at a minimum, quarterly surveillance reports of emergency department visits and emergency medical services transports involving drug overdoses, opioid overdoses (including fentanyl) and heroin overdoses. We are doing this by leveraging existing national and state surveillance systems to collect new data on opioid overdoses. Second, we plan to collect preliminary information on the number and rate of opioid overdose deaths twice a year at the county level. Funded states are not required to submit data for all counties; they may provide fatal overdose data for a subset of counties. However, 11 of the 12 states are providing data on all opioid overdose deaths in their state. Third, approximately every eight months, we will analyze in-depth information from toxicology tests and death scene investigations of fatal opioid overdoses from deaths certificates and medical examiner reports to identify the specific opioid involved, the route of administration, and whether the opioid was illicitly produced or produced by pharmaceutical companies. The latter will be determined by analyzing evidence from the death scene investigation; a white powder at the scene gives an indication of illicitly manufactured fentanyl, while fentanyl patches would indicate pharmaceutically produced. Additionally, toxicology tests can determine whether fentanyl analogues are present, which also indicates illicitly manufactured fentanyl. The 12 funded states will collect the data and report it to CDC for analysis. The 11 states committed to providing data on all opioid overdose deaths will enter data on toxicology tests

and death scene investigators when conducted by coroner or medical examiners. Finally, approximately every eight months, we plan to provide information on key risk factors contributing to opioid overdose deaths, in order to understand how risk factors vary across communities. We plan to disseminate the data via our website and, depending on availability of funds, by developing data briefs, county maps, and a data dashboard.

Improved surveillance will support states to facilitate faster identification and response to spikes in overdoses leading to quicker, more tailored interventions. CDC is positioned to expand our surveillance of illicit opioids to all 50 states and DC should future opportunities come available.

In addition to the critical partnership with states, CDC believes this epidemic requires a partnership across sectors. As such, we have been working side by side with law enforcement agencies, like the DEA, to determine both risk factors for a fentanyl overdose and an implementation plan for prevention strategies. In fact, CDC is currently engaged in a personnel exchange with DEA: a CDC public health analyst has been embedded with DEA and a DEA analyst has been embedded with CDC. This will help to ensure communication across our agencies and strengthen our on-going collaboration.

In addition, the Heroin Response Strategy (HRS), funded by ONDCP and deployed in eight High Intensity Drug Trafficking Areas (HIDTAs), sets out to link public health and public safety. The HRS covers 20 states, from Georgia up to Maine, and as far west as Michigan. Under the governance of the eight HIDTA directors, CDC will ensure proper coordination, training, and measurable outcomes. CDC supports the training and technical assistance for the 20 public health analysts who are embedded in the

program. As part of the HRS, we are also launching eight pilot projects across the 20-state initiative to better understand what communities can do to prevent opioid overdose deaths. There is a shortage of evidence to guide community response, and CDC's initiative is designed to build scientific evidence about what works. Communities must be equipped with effective action steps in order to respond.

As the type of drugs available continues to change, it is imperative that law enforcement and public health continue to work together to prevent as many deaths as possible. We need a partnership that will focus on utilizing public health to prevent addiction from happening in the first place. Similarly, to successfully address this problem, effective treatment, along with effective prevention, is necessary. Without effective treatment, millions of Americans will continue to suffer from opioid use disorder and remain at high risk for overdose. Only together will all three components, law enforcement, treatment, and prevention, work to impact and reverse the worsening threat. Each has a critical role to play. For prevention, we know that without effectively preventing more Americans from developing opioid use disorder in the first place, we will never get ahead of the problem.

While we work to help the millions of Americans already facing addiction, we need to prevent more Americans from becoming addicted in the first place. Failing this, even more Americans will require treatment.

CDC has built relationships with other critical players in the opioid prevention effort as well as an infrastructure to deploy funds and technical assistance to the states to combat addiction and overdose on the ground where it is happening. As such, we are well positioned to prevent opioid misuse and

overdose through our critical prevention work. We strive to enhance our public health surveillance efforts to detect and speed the response to emerging and changing drug threats.

Second, we aim to connect people to evidence-based treatment at opportune moments, often after they have suffered an overdose. Lessons learned from CDC's work in HIV point to using patient navigators, emergency department and hospital discharge protocols, and police personnel to serve as connectors to help those at high risk of overdose find effective treatment.

Finally, our current relationships have laid the groundwork for continued collaboration with law enforcement. Recently, we have had discussions with DEA about adding a public health component to the DEA 360 cities, and about ways we can share data and collaborate on data dissemination. By working together we can share information and better identify drug traffickers, drug hot spots, and points of intervention.

We all know opioid misuse and overdose is a serious public health issue in the United States. The burden of opioid misuse and overdose affects not only individuals and families, but also communities, employers, the healthcare system, and public and private insurers. Addressing this complex problem requires a multi-faceted approach and collaboration between public health, clinical medicine, and public safety at the Federal, state, local, and tribal levels. But, it can be accomplished—particularly with the ongoing efforts of all of the entities represented here on this panel. CDC is committed to tracking and understanding the epidemic, supporting states working on the front lines of this crisis, and providing healthcare providers with the data, tools, and guidance they need to ensure safe patient care.

Thank you again for the opportunity to be here with you today and for your continued support of our work in protecting the public's health. I look forward to your questions.