EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF NATIONAL DRUG CONTROL POLICY
Washington, D.C. 20503

"The Countdown: Fentanyl Analogues and the Expiring Emergency Scheduling Order"

Committee on the Judiciary
United States Senate

Tuesday, June 4, 2019
10:00 a.m.
226 Dirksen Senate Office Building

Statement of
Kemp L. Chester
Assistant Director of the National Opioids and Synthetics Coordination Group
Office of National Drug Control Policy

Chairman Graham, Ranking Member Feinstein, and Members of the Committee, thank you for inviting me to testify today about fentanyl, its analogues, and the need to address analogues of synthetic drugs on a comprehensive basis.

In keeping with statutory responsibility to advise the President on drug policy issues and advance the President's drug control strategy, the Office of National Drug Control Policy appreciates the opportunity to synchronize Federal government efforts with Congressional action to address the critical threat of fentanyl analogues and synthetic opioids in a comprehensive fashion.

More than 70,200 Americans died from a drug overdose in 2017,[1] with 41 percent (28,466) of these deaths involving a synthetic opioid other than methadone (SOOTM). This is a statistical category that primarily includes illicitly produced synthetic opioids[2] like fentanyl and its analogues. As we have seen for the past several years, these synthetic drugs have been the principal driver of the historically high number of overdose deaths our Nation has suffered during the opioid crisis.

Fentanyl is a rapid-acting Schedule II opioid analgesic used for acute pain in trauma settings, chronic pain, anesthesia, end of life palliative care, and it has helped thousands of Americans manage their pain effectively. Fentanyl was first synthesized in 1959, and the key intermediates in its early preparation were benzylfentanyl and norfentanyl. Several fentanyl-related substances with accepted medical or veterinary uses, like carfentanil, sufentanil, and thiafentanil are also Schedule II controlled substances.

In the 1980s, a new approach to the synthesis of fentanyl was discovered using N-phenethyl-4-piperidone (NPP) and 4-anilino-N-phenethylpiperidine (4-ANPP) as the key

intermediates in fentanyl synthesis. Because of the outsized role illicitly produced fentanyl was playing in America's opioid crisis, in March 2017, under United States leadership, the international community placed strict controls on these two precursor chemicals to prevent the widespread proliferation of illicitly produced fentanyl, principally supplied from China.

On February 6, 2018, the Drug Enforcement Administration (DEA) and their colleagues in the Food and Drug Administration (FDA) worked in collaboration to place all fentanyl-related substances under Schedule I on a temporary basis for a two-year period. This scheduling action included all fentanyl analogues as part of that class of drugs. Fentanyl analogues have additions or substitutions to the core fentanyl molecule as described under the DEA temporary scheduling of fentanyl-related substances. Those fentanyl analogues not used for human or veterinary purposes have been placed under control as Schedule I substances, either on a permanent or emergency basis, because of the current lack of evidence for their medical utility and their high potential for abuse and death. Additions or substitutions to the fentanyl molecule are not technically difficult, and given the possible number of variations to the fentanyl molecule observed to date, there is the potential for 3,024 analogues[3] that may be created from the fentanyl molecule. These resulting analogues have a wide variance in potency. Some fentanyl analogues, like acetylfentanyl, are less potent than fentanyl. Others, like carfentanil, are many times more potent.

However, in addition to the threat posed by fentanyl analogues, we have seen the illicit drug industry begin to produce a family of non-fentanyl synthetic opioids such as the U-series drugs that have caused fatalities in the United States. These non-fentanyl opioids may have the same qualitative effect on the human body as fentanyl or a fentanyl analogue, but they are not

fentanyl-related in their chemical structure, and therefore are not controlled under DEA's temporary scheduling order.

Moreover, we have also begun to see an increase in the illicit production of other substances similar to fentanyl, sometimes consisting of molecular additions, deletions, or substitutions to the fentanyl skeleton, currently placing their precise regulatory status in question. At this time, we do not know if these substances, being seized at America's ports of entry and mail facilities, are being used as precursor chemicals to make illicit fentanyl or for some other purpose.

In short, in addition to the much more common fentanyl and fentanyl analogues, today we are facing a vast array of new synthetic opioids that are powerful, potentially dangerous, and deadly. They are relatively inexpensive to manufacture and can be shipped directly to consumers or illicit dealers in the United States in very small packages that are extremely difficult to detect. The global drug industry is able to synthesize thousands of these chemicals in drug libraries each year to determine new substances that may be marketable to those suffering from addiction based on each drug's desired effects. It is a consumer-driven enterprise that combines basic market demands with 21st century science. It would not be an exaggeration to say that given what we know about the dynamism and rapid pace of illicit drug production we see today, the synthetic opioid that will be killing Americans in 2021 or 2022 has not yet been invented.

In 2017, more than 83,400 domestic drug seizures submitted for forensic testing involved fentanyl or fentanyl analogues.[4] This represents nearly twice the number of such submissions in 2016 and a nearly five-fold increase since 2015.[5] While fentanyl seizures are most typically in a powder, salt, or rock-like form, seized quantities of fentanyl and fentanyl analogue capsules,

tablets, and liquid have also increased dramatically alongside solid kilogram forms in recent years.[6]

In 2018, at least 318,634 tablets and capsules seized within the United States were subjected to DEA laboratory testing according to DEA's STARLiMS forensic drug chemistry database. Of those, approximately 108,015, or 34 percent, were determined to contain fentanyl or a fentanyl analogue as its primary drug, with or without other illicit drugs and non-narcotic substances.[7] This represents nearly five times the number of fentanyl and fentanyl analogue-containing tablets and capsules analyzed by DEA's laboratories in 2016.

According to the DEA, national law enforcement reports of fentanyl remained steady from 2001 to 2005, followed by a noticeable increase in 2006, which was likely attributable to a single fentanyl lab in Mexico. Following the seizure of that lab, fentanyl reports continued to remain steady until significant increases occurred from 2014 through 2017. In 2017, fentanyl was the fifth most frequently encountered drug by law enforcement, accounting for 32 percent (56,530) of all narcotic analgesic exhibits submitted for analysis.[8]

During this same period, Customs and Border Protection (CBP) experienced a similar proliferation of the entire range of fentanyl-related substances. Between 2012 and early 2016, CBP encountered 7 new fentanyl analogues, and then encountered 12 new fentanyl analogues during a 261-day span in late 2016 and 2017. The time between CBP encounters with new non-fentanyl opioids averaged 6 months from 2012 to 2016, but in 2017 CBP encountered 5 new non-fentanyl opioids in a 150-day span. However, the most drastic increase in CBP laboratory encounters came in those fentanyl-related substances with molecular deletions whose illicit use is not yet known. Between 2009 and 2016, CBP encountered two of these substances 44 months apart, but in 2017 CBP encountered 6 of these new substances in one 276-day period. In total,

from 2016 to 2018, CBP encountered either a new fentanyl analogue, a non-fentanyl opioid, or a fentanyl substance utilizing a molecular deletion nearly every single month (33 total).[9]

Further complicating our understanding of this dynamic environment are inconsistencies in toxicology practices in drug death investigations across the country, which makes a full understanding of the true impact of these new and emerging substances elusive. According to analysis conducted by the Centers for Disease Control and Prevention on the literal text present on death certificates, 29 percent (18,335) of all drug overdose deaths in 2016 involved fentanyl, making it the most frequently involved drug in overdose deaths that year.[10] However, limited available data at the state-level suggests the death toll due to fentanyl analogues is significant. For example, in Florida in 2017, 1,685 deaths involved a fentanyl analogue with the most common analogues being carfentanil (637), furanyl fentanyl (365), and cyclopropyl fentanyl (210).[11] In Maine, in the first six months of 2018, fentanyl analogues were involved in 37 deaths with acetyl fentanyl and methoxyacetyl fentanyl being the most common.[12] In Ohio, between January and February of 2017 alone, 48 percent (135) of all drug deaths involved acryl fentanyl, 31 percent (87) involved furanyl fentanyl, and eight percent (22) involved carfentanil.[13] The demand for, and the quantity of, illicit fentanyl and fentanyl analogues in the United States market are both increasing, and they continue to have a devastating effect on the health and safety of America's communities.[14]

President Trump's leadership on this issue[15] led to Chinese President Xi's acknowledgement of China's role in the production and trafficking of illicit fentanyl, and secured President Xi's commitment that the Government of China would schedule all fentanyl drugs as a class.[16,17] This was a welcome and much needed development. China began its process of

scheduling fentanyl as a class on May 1, 2019, and we have early indications that China is following through with enforcement actions in the fulfillment of this commitment.

Controlling fentanyl as a class here in the United States, as we have asked China to do, is now absolutely imperative to addressing the dynamic and ever-changing threat of synthetic opioids. However, our experience has shown that the scheduling of just specific fentanyl analogues does not limit the quantity of the illicit substance, but rather causes illicit drug producers to expand the substance types as to fall outside of the scheduling regime to circumvent detection and law enforcement actions. Over the past several years, as regulatory action was taken against a particular fentanyl analogue, we saw traffickers simply switch their production and trafficking efforts to a different fentanyl analogue or non-fentanyl synthetic opioid. Therefore, while the class scheduling of fentanyl in the United States is absolutely necessary, more must be done to fully addressing the dynamic drug environment we currently face.

It is quite possible that permanent fentanyl class scheduling not only will serve to codify the current temporary class scheduling that the DEA has in place, and which has undoubtedly had a positive effect on our current crisis, but also will provide a framework for us to better address rapid and emerging changes in the dynamic illicit drug market, seize the initiative from illicit drug producers and traffickers, and set the United States on a path to better preventing these drugs from entering the country before they kill Americans. As stated in the Administration's *National Drug Control Strategy* issued earlier this year, "While confronting today's drug crisis to arrest its growth and reduce its effects, we must also further develop the capability, knowledge, and infrastructure to respond to the evolving nature of the drug threat as we move deeper into the twenty-first century."[18]

One of the most critical tools we can provide our law enforcement partners in the midst of the most challenging drug environment in our history is a regulatory and legal framework that allows them to do what they need do to protect Americans from the ever-evolving and potent synthetic drugs. And as we seek to broaden the universe of synthetic drugs being brought under regulatory control, we must be equally aggressive in maintaining that our research community has efficient access for testing, and that we continue to utilize the process of moving them into their appropriate place within the scheduling regime once their potential for medical merit, dependency, and abuse is demonstrated. With classwide scheduling we are not only maintaining but also streamlining the application process. As a result, instead of research based on individual substances, the process will continue to allow for research on an entire class of compounds.[18] It must be noted that expiration of a temporary classwide scheduling results in the termination of this streamlined process, which results in research reverting to an individual substance by substance application.

I would like to thank this Committee and your Congressional colleagues for your foresight and leadership in addressing this critical national security, law enforcement, and public health challenge. On behalf of the Administration, ONDCP looks forward to working with you on legislative solutions to address this extremely complex dynamic.

---

[1] H Hedegaard, AM Miniño, and M Warner. Drug Overdose Deaths in the United States, 1999-2017. NCHS Data Brief No. 329. National Center for Health Statistics, Centers for Disease Control and Prevention. November 2018. Available at: https://www.cdc.gov/nchs/data/databriefs/db329-h.pdf .
[2] "Synthetic Opioid" refers to opioids which are not plant-derived (fentanyl, fentanyl analogues, and other novel opioids). Heroin, which is plant-derived, is not a synthetic opioid.
[3] U.S. Department of Homeland Security, Customs and Borders Protection.Analysis
[4] U.S. Department of Justice, Drug Enforcement Administration. National Forensic Information Laboratory System (NFLIS). Extracted by ONDCP in April 2019.
[5] *Ibid*.
[6] El Paso Intelligence Center (EPIC), National Seizure System (NSS). Extracted by ONDCP on August 28, 2018.
[7] U.S. Department of Justice, Drug Enforcement Administration. STARLiMS forensic drug chemistry database. Analysis by ONDCP on export through April 15, 2019

[8] U.S. Department of Justice, Drug Enforcement Administration, Diversion Control Division. NFLIS-Drug 2017 Annual Report. Retrieved from https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/NFLIS-Drug-AR2017.pdf
[9] U.S. Department of Homeland Security, Customs and Borders Protection. Analysis of FTIR data on drugs encountered at points of entry in May 2019.
[10] Spencer MR, Warner M, Bastian BA, Trinidad JP, Hedegaard H. Drug overdose deaths involving fentanyl, 2011–2016. National Vital Statistics Reports; vol 68 no 3. Hyattsville, MD:

[11] University of Florida College of Medicine. Florida Drug-Related Outcomes Surveillance and Tracking System (FROST). Deaths with Fentanyl Analogs in 2017. Queried by ONDCP in May 2019
[12] Sorg, Marcella. University of Maine. Margaret Chase Smith Policy Center. Maine 2nd Quarter Drug Death Report: January – June 2018.
[13] Daniulaityte, R., Juhascik, M., Strayer, K., Sizemore, I., Harshbarger, JD, Antonides, H., Carlson, R. Overdose deaths related to fentanyl and its analogs: Ohio, January-February 2017. Morbidity and Mortality Weekly Report. 2017;66(34):904-908.
[14] U.S. Department of Justice Drug Enforcement Administration: 2017 National Drug Threat Assessment, October 2017, DEA-DCT-DIR-040-17. https://www.dea.gov/docs/DIR-040-17_2017-NDTA.pdf.
[15] Executive Office of the President, Office of National Drug Control Policy. (January 2019). 2018 National Drug Control Strategy. Available at, https://www.whitehouse.gov/wp-content/uploads/2019/01/NDCS-Final.pdf.
[16] https://www.whitehouse.gov/briefings-statements/remarks-president-trump-president-xi-china-joint-press-statement-beijing-china/ ,
[17] https://www.whitehouse.gov/briefings-statements/statement-press-secretary-regarding-presidents-working-dinner-china/
[18] Executive Office of the President, Office of National Drug Control Policy. (January 2019). 2018 National Drug Control Strategy. Available at, https://www.whitehouse.gov/wp-content/uploads/2019/01/NDCS-Final.pdf.
[18] 83 Fed. Reg. 5188 February 6, 2018