

February 22, 2019

INFORMATION

MEMORANDUM FOR THE SECRETARY

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FROM: James F. McDonnell
Assistant Secretary for Countering Weapons of Mass Destruction

SUBJECT: **Use of counter-WMD authorities to combat fentanyl**

Purpose: Discuss plans to use appropriate CWMD authorities against fentanyl. Under this construct, fentanyl would be considered a WMD material when certain criteria are met (e.g. quantity and configuration).

Key Issues:

- Fentanyl’s high toxicity and increasing availability are attractive to threat actors seeking nonconventional materials for a chemical weapons attack. In July 2018, the FBI Weapons of Mass Destruction Directorate assessed that “...fentanyl is very likely a viable option for a chemical weapon attack by extremists or criminals.”
 - As little as two to three milligrams of fentanyl can induce respiratory depression, respiratory arrest, and possibly death. And some fentanyl analogues, such as carfentanil, are orders of magnitude more potent.
- In the policy arena, the federal interagency has long regarded fentanyl as a chemical weapons threat.

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- The recent authorization of the DHS CWMD Office through P.L. 115-387, Countering Weapons of Mass Destruction Act of 2018, provides an opportunity to apply DHS CWMD assets and capabilities to the fentanyl problem through the lens of WMD.
 - The CWMD Office can assist in countering fentanyl and its analogues through: managing and developing requirements for technology development, supporting the deployment of sensors (i.e. detection technology), and providing analytical expertise to the operating components.
- CWMD, as a support component, already provides direct support to DHS front line operating Components for WMD detection and prevention. The development and deployment of new capabilities that include fentanyl as a target substance would be a minor adjustment to current activities.
 - As an example, although Office of Health Affairs and Domestic Nuclear Detection Office, as DHS legacy organizations, had not previously planned specifically for countering the Hydrogen Sulfide threat, the newly organized CWMD Office (limited to 872 authorities) was immediately able to develop and field countermeasures and training and deploy detection equipment in twenty urban areas.
- CWMD Office efforts will focus on quantities and configurations that could be used as mass casualty weapons. However, many activities, such as support to fentanyl interdiction and

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detection efforts, would tangentially benefit broader DHS and interagency counter-opioid efforts.

- Additionally, DHS/CWMD is in a position to help coordinate and leverage efforts from across DHS and the broader federal CWMD enterprise toward the fentanyl problem set. Relevant activities include using tools from the CWMD community for supply chain interruption, to include interdiction and targeting as is currently done for other WMD materials.

Background:

- Over the past several years, the federal WMD policy community has periodically discussed the chemical weapons threat from fentanyl and other pharmaceutical-based agents.
 - Senior USG officials have made public statements at the Organization for the Prohibition of Chemical Weapons emphasizing that no country should be developing, producing, stockpiling, or using these agents even in a law enforcement scenario.
 - In parallel, the Department of Defense (DOD) has been developing materiel capabilities against these non-traditional agents within its Chemical and Biological Defense Program.
 - However, certain operational CWMD entities at DOD and elsewhere have been slow to act due to concern of getting pulled into the counter-narcotics mission.
- Within the past couple years, there has been a reinvigorated interest in addressing fentanyl and its analogues as WMD materials due to the ongoing opioid crisis.
- In April 2018, you signed a Material Threat Determination for Pharmaceutical-Based Agents (including fentanyl), indicating that these chemical agents pose a material threat to the U.S. population. This was the first step toward enabling Project BioShield funding and acquisition for medical or other security countermeasures that enhance preparedness for this threat.
- Recently, senior leaders in DOD, such as the Commander of U.S. Southern Command (USSOUTHCOM), have proposed formally designating fentanyl as a WMD material. Over the past two months, DHS/CWMD has had informal discussions on the topic with USSOUTHCOM, the Defense Threat Reduction Agency, U.S. Special Operations Command, USCG, CBP, and ICE.
 - These conversations revealed a general consensus that fentanyl, in certain configurations, has properties that make it a chemical with the potential for mass casualty effects.

Next Steps:

- CWMD will brief DHS operating components on counter-WMD efforts related to fentanyl, and discuss how best to incorporate these efforts into existing DHS interdiction, counter-opioid, and other operational activities.
- DHS/CWMD will host an interagency planning event (including DHS components) to perform a DOD-style “opportunity analysis” model on the fentanyl supply chain including from bulk manufacturing overseas to smuggling through pathways into the U.S.

Attachment(s): Classified slides are available upon request.



This Killer Opioid Could Become a Weapon of Mass Destruction

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(Bloomberg) -- It would take only 118 pounds of fentanyl to kill 25 million people.

That's how much of the powerful opioid painkiller Nebraska State Trooper Sam Mortensen found in April when he stopped a truck marked "U.S. Mail" swerving onto the shoulder along Interstate 80.

Rolling up the trailer door revealed an empty hold. But just below a refrigeration unit, behind a plastic panel secured with mismatched bolts, Mortensen found 42 brick-shaped packages, weighing 54 kilograms, full of fentanyl. The drug is so potent that even a small amount — the equivalent of a few grains of salt — can be lethal.



“Is that even believable? Can you even imagine?,” President Donald Trump said in October when Mortensen was honored at the White House for making one of the largest fentanyl seizures in U.S. history. The truck’s two drivers were arrested. “Trooper Mortensen, that was a job well done.”

Fentanyl has emerged as the most dangerous of a group of drugs blamed for creating a U.S. public health crisis. American deaths linked to fentanyl grew more than 50 percent to 29,406 last year, from 19,413 in 2016, according to the National Institute on Drug Abuse (NIDA). Relatively easy to manufacture, the drug is turning up more on the streets as dealers strive to meet still-enormous demand for opioids in the U.S.

Fentanyl is ever-evolving as suppliers try to avoid detection and still boost the potency of the drug using what are called analogues — essentially chemical cousins.

“There’s never been a drug like fentanyl before,” said Josh Bloom, senior director of chemical and pharmaceutical research at the American Council on Science and Health. “For street drugs, this absolutely destroys anything else in terms of lethality and danger.”



Fentanyl is 50 times more potent than heroin, with which it is often mixed. In its strongest form, called carfentanil, it is used legally as an elephant tranquilizer. Law enforcement officers and first responders have been warned to handle fentanyl with extreme caution; some have fallen seriously ill after getting it on their skin or clothing.

The fatal potential of even glancing contact with fentanyl is a major reason why national security experts are becoming alarmed at the prospect of it being used to sow terror. The drug is “a significant threat to national security,” Michael Morell, the former acting director of the Central Intelligence Agency under President Barack Obama, wrote last year. “It is a weapon of mass destruction.”

The use of fentanyl as a weapon isn’t new. In 2002, 50 armed rebels held more than 800 hostages in a crowded theater in Moscow, demanding the

withdrawal of Russian forces from Chechnya. After a few days, Russian forces used a gas, reported by state news agency Interfax to be fentanyl, to incapacitate the attackers, though more than 100 hostages were also killed.

As a tool of terror, the drug would work best in a closed space, said Daniel Gerstein, a senior policy researcher at Rand Corp. who served as acting undersecretary in the Department of Homeland Security's Science and Technology Directorate in the Obama administration. Open-air release likely wouldn't be as effective, as the drug could become too diluted, he said.

If ground-up fentanyl is placed on everyday objects, people could easily put their fingers in their mouths or rub their eyes and have a deadly reaction, said Bloom, the American Council on Science and Health official.

Containing a fentanyl attack would be difficult for police and emergency medical officials. Overdoses of the drug are hard to reverse with existing formulations of antidotes such as the Narcan nasal spray.

Narcan is carried by many police and paramedics, especially in areas hard-hit by the recent opioid epidemic. But people incapacitated by fentanyl frequently require multiple doses. Even some police and other emergency officials who've mistakenly ingested or absorbed the drug have needed multiple blasts of Narcan to be brought back.

Last year, police officer Chris Green made a traffic stop in East Liverpool, Ohio, and ended up with fentanyl powder on his shirt. After another officer pointed it out back at the station, Green brushed it off with his hand. Soon, paramedics were rushing him to the hospital.

"He realizes something ain't right," said Police Chief John Lane. "He gets lightheaded."

Green survived after being given four doses of Narcan. Though skin contact with fentanyl isn't typically deadly, Green had used sanitizer on his hands, which hastened the absorption of the fentanyl through his skin. A video distributed to law enforcement in August by U.S. Customs and Border Protection warns against using hand sanitizer and says those who have touched fentanyl shouldn't touch their eyes, nose or mouth.



The U.S. Biomedical Advanced Research and Development Authority, known as Barda, is tasked with developing medical countermeasures. In September, it penned a potential \$4.6 million contract with Opiant Pharmaceuticals Inc. to produce a reliable single-dose fentanyl antidote.

“Fentanyl-based drugs have been used in conflicts in other countries, so we know it’s possible, and we need to be ready to save lives and protect Americans from potential health security threats,” said Barda Director Rick Bright. He said repeat doses of naloxone, as Narcan is known generically, could be difficult to administer in a terror attack.

Opiant, based in Santa Monica, California, plans to test a nasal-spray version of a drug called nalmefene with the goal of counteracting fentanyl in one shot. In addition to the Barda deal, Opiant scored a \$7.4 million grant from NIDA earlier this year to develop the new antidote. It is aiming to file for Food and Drug Administration approval in 2020.

“Nalmefene is five times more potent than naloxone,” Roger Crystal, chief executive officer of Opiant, said. “It’s fighting fire with fire.”

The FDA approved injectable nalmefene, called Revex, in 1995, but Baxter International Inc. discontinued it in 2008. Crystal said the market has room for Narcan and nalmefene, but the more potent of the two will become dominant, especially with fentanyl becoming a central concern of drug enforcement. He thinks fentanyl production, currently focused in China, will increase in the U.S. as officials crack down on shipments at the border.

“It doesn’t take much more than a half-competent chemist to be able to manufacture it,” Crystal said. “And it’s cheaper to manufacture than heroin.”

Fentanyl is also extremely lucrative. One kilogram purchased from China for \$3,000 to \$5,000 can generate revenue of up to \$1.5 million in the U.S., Paul Knierim, deputy chief of operations in the Office of Global Enforcement for the Drug Enforcement Administration, told a congressional panel in September. China agreed at a trade summit with the U.S. this month to regulate fentanyl as a controlled substance.

“Because we’re in a fentanyl crisis, there’s more fentanyl around, and for that reason the ability to get hold of it and getting it into the wrong hands isn’t that hard,” Crystal said.