



FEDERAL BUREAU OF INVESTIGATION
INTELLIGENCE BULLETIN

FBI Weapons of Mass Destruction Directorate
6 July 2018
FBI IB109 201876

(U//FOUO) Fentanyl Very Likely a Viable Option for a Chemical Weapon Attack in the United States for Extremists and Criminals, Low Probability High Impact Event

(U//FOUO) The FBI assesses fentanyl is very likely^a a viable option for a chemical weapon (CW) attack by extremists^b or criminals; however, the impact of such an attack is dependent on multiple variables. The FBI further assesses fentanyl use as a CW, by either criminals or extremists, is a low probability, high impact event due to no known credible threat reporting regarding the use of fentanyl for a CW event in the United States. This assessment is made with high confidence,^c based on FBI, Drug Enforcement Administration (DEA), and Center for Disease Control (CDC) reporting on fentanyl overdoses and seizures in the past six years.

(U//FOUO) The FBI assumes fentanyl's high toxicity and availability are attractive to threat actors seeking nonconventional materials for a CW attack. The FBI also assumes extremists or criminals remain interested in launching chemical attacks. The confidence level in this intelligence bulletin could increase if there were additional reporting from the USIC, law enforcement, or FBI sources on suspicious activity or threat actor interest in fentanyl as a CW.

UNCLASSIFIED//FOR OFFICIAL USE ONLY

(U) Source Summary Statement

(U//FOUO) Reporting in this intelligence bulletin was derived primarily from FBI reporting and publicly available US government (USG) information, including DEA, CDC, and open source publications from May 2011 through September 2017. The USG information was critical in the FBI's assessments of fentanyl's availability and routes of acquisition. DEA and CDC reporting provided context on fentanyl's toxicity and efficacy as a chemical weapon. The USG-sourced information is deemed highly reliable, as these sources sustain an obligated interest in the subject matter. The open source reporting provided further insight and corroborating information on fentanyl's availability and uses as a CW. The reporting in this intelligence bulletin was current as of 10 May 2018.

^a (U) See Appendix A: Expressions of Likelihood.

^b (U//FOUO) The term "extremists" includes international terrorists, homegrown violent extremists, domestic terrorists, and lone offenders.

^c (U) See Appendix B: Confidence in Assessments and Judgments Based on a Body of Information.

(U//FOUO) Fentanyl Very Likely a Viable Option for an Extremist or Criminal Chemical Weapon Attack

(U//FOUO) The FBI assesses fentanyl is very likely a viable option for a CW attack by extremists or criminals because of its availability and toxicological properties. The impact and effectiveness of such an attack depends on factors including the fentanyl derivative used, method of dissemination, and target. Fentanyl itself, without any modification, will cause casualties and ill-effects. Because of its physical and toxicological properties, fentanyl can easily be used to contaminate food or water, causing casualties and inspiring fear and panic. Additionally, fentanyl can be aerosolized^d to maximize target selection. Previous use of fentanyl derivatives by a state actor against a large group exemplifies for extremists or criminals its viability as a CW.

- (U) According to the DEA, as of June 2017, as little as two to three milligrams of fentanyl would induce respiratory depression, respiratory arrest, and possibly death.¹ Carfentanil, a fentanyl derivative commonly used in large animal tranquilizers, is a synthetic opioid 10,000 times more potent than morphine and 100 times more potent than fentanyl, though the lethal dosage range for humans is unknown.²
- (U) According to CDC information, as of August 2017, fentanyl could be aerosolized or introduced into food or water as a contaminant. Potential exposure routes of greatest concern included inhalation; mucous membrane contact; ingestion; or injection, as by a needle stick. Skin contact was also a potential exposure route, though it would not likely lead to overdose unless large volumes of highly concentrated powder were encountered over an extended period.³ According to CDC information, as of November 2017, the

UNCLASSIFIED//FOR OFFICIAL USE ONLY

(U) Characteristics of Fentanyl

UNCLASSIFIED



(U) A Potentially Lethal Dose of Fentanyl Compared to the Size of Penny

(U//FOUO) Fentanyl, a synthetic and short-acting opioid analgesic with legitimate medical uses to manage acute and chronic pain, is responsible for an epidemic of fatal overdoses in the United States since 2013. The drug is between 50 and 100 times more potent than morphine and 30 to 50 times more potent than heroin, and potentially lethal even at very low doses. Fentanyl and its related compounds come in different forms—including powder, blotter paper, tablets, and sprays—and can be disseminated by various methods. Naloxone is an antidote to the effects of Fentanyl.

(U) Online Publication; DEA; “Fentanyl: A Briefing Guide for First Responders”; June 2017; https://www.dea.gov/druginfo/Fentanyl_BriefingGuideForFirstResponders_June2017.pdf; accessed 5 July 2018; Source is the Drug Enforcement Administration.

^d (U) Aerosolization is the process of converting a substance into particles small and light enough to be carried in the air, requiring additional expertise.

UNCLASSIFIED//FOR OFFICIAL USE ONLY

physiological effects of fentanyl exposure could occur within minutes, but the largely depended on the quantity and concentration of the opioid and the type of exposure.^{e,4}

- (U) According to open source reporting, as of September 2017, the CDC National Center for Health Statistics estimated drug overdoses killed 64,070 persons in the United States in 2016, an increase of approximately 22 percent from 52,898 persons in 2015. Of those drug overdoses, fentanyl use caused 20,145 deaths, a rise of 540 percent since 2013.⁵
- (U//FOUO) According to the DEA, as of July 2016, individuals could purchase fentanyl and fentanyl precursors directly from Chinese laboratories through chemical brokers, overtly-operated Web sites, or anonymous dark net markets or in person.⁶ According to the FBI, in May 2017 federal authorities arrested members of a drug trafficking organization in Chambersburg, Pennsylvania, with a half kilogram of pure fentanyl.⁷
- (U) In October 2002 a gas composed of fentanyl derivatives was used to incapacitate Chechen separatists. The separatist had taken more than 800 persons hostage in a Moscow theater. Russian Special Forces released this chemical agent through the ventilation system in the theater to neutralize the Chechen separatists, but more than 120 hostages were killed in the process, according to open source reporting.⁸

(U) Perspective

(U//FOUO) Fentanyl is potentially lethal at very low doses and comes in many different forms. This opioid can be disseminated to cause death intentionally through various exposure routes, including aerosolization and food or water contamination. The effects of a fentanyl attack depend on many factors, including the fentanyl derivative used, the method of dissemination, and the target. In addition to the Russian Government, the Syrian regime demonstrated fentanyl's lethal effects on targeted victims. In August 2014 Syrian Government forces used a poisonous gas against civilians in the city of Abrin, killing three and injuring 45. Unidentified physicians stated the victims showed signs of fentanyl poisoning, and the same substance was believed to have been used against civilians in the city of Jawbar 10 days earlier, according to open source reporting.

(U//FOUO) The direct consequences of a fentanyl attack include casualties, fear and panic, loss of confidence in critical infrastructure security, and costs associated with decontamination and medical treatments. A successful fentanyl attack targeting a public transportation or food venue could prompt the public to start avoiding transportation and food infrastructure, resulting in significant economic losses. Law enforcement, public health workers, and first responders face a high risk of accidental exposure to fentanyl during their response and investigative activities placing them in potential danger.^f

^e (U) See Appendix C for details regarding the effects of short term exposure to fentanyl.

^f (U//FOUO) Fentanyl can be handled safely with proper training and personal protective equipment. Please see Appendix D for universal fentanyl safety recommendations for first responders coordinated by the White House National Security Council.

UNCLASSIFIED//FOR OFFICIAL USE ONLY

(U//FOUO) This intelligence bulletin generally agrees with and builds upon analytical judgements of an existing body of intelligence on this topic, including the 9 September 2011 FBI intelligence assessment “(U//FOUO) *Controlled Pharmaceutical Drugs Benzodiazepine and Fentanyl: Potential for Use in Terrorist Attacks in the United States.*” This intelligence bulletin concurs with assessments made there that extremists and criminals can acquire fentanyl in the United States. This intelligence bulletin provides additional information on the domestic availability of fentanyl, including how extremists could acquire fentanyl in the United States based on recent USG reporting on fentanyl related deaths and seizures.

(U) Analysis of Alternatives

(U//FOUO) The FBI considered alternative hypotheses that extremists would not be able to acquire or use fentanyl in the United States but could create no such reasonable scenario. Drug trafficking organizations and drug sellers have proven fentanyl can be acquired with relative ease despite the awareness of federal, state, and local law enforcement and an increase in interdictions and seizures of fentanyl as highlighted above. The FBI will reconsider potential alternatives if any changes occur in the laws governing the availability of fentanyl and decreased reporting regarding the shipment, smuggling, or use of fentanyl in the United States.

(U) Outlook

(U//FOUO) The FBI assesses fentanyl use as a CW, by either extremist or criminals, is a low probability, high impact event. Its viability is likely to persist for extremists or criminals interested in causing casualties through a non-conventional CW attack. Additionally, the FBI has no viable reporting indicating planning by extremists or criminals to use fentanyl as a CW. The following indicators, if detected, could indicate a growing interest in fentanyl use as a weapon: increased mentions of fentanyl in terrorist literature or on extremist forums or online communities; evidence of specific attack plans or dissemination equipment, such as sprayers, found in combination with fentanyl during drug raids; extremist or terrorist leadership-directed efforts to use fentanyl as a CW; recruitment or attempted recruitment of fentanyl traffickers by known terrorist actors or groups; and queries about the efficacy of fentanyl against humans by suspected threat actors.

(U) Intelligence Requirements

(U) FBI National Standing Collection Requirements

- (U//FOUO) WW-WMDC-WMD-SR-0507-17
- (U//FOUO) WW-WMDC-WMD-SR-0528-17

(U) This External Intelligence Note was prepared by the Weapons of Mass Destruction Directorate Chemical and Biological Intelligence Unit/Chemical Fusion Cell of the FBI. Comments and queries may be addressed to the Weapons of Mass Destruction Directorate CBIU Unit Chief at 1-202-324-2057.

(U) Appendix A: Expressions of Likelihood

(U) Phrases such as “the FBI judges” and “the FBI assesses,” and terms such as “likely” and “probably” convey analytical judgments and assessments. The chart below approximates how expressions of likelihood and probability correlate with percentages of chance. Only terms of likelihood should appear in FBI products; the chart includes terms of probability strictly for comparison, as they sometimes appear in reporting of other government agencies. Furthermore, the FBI does not arrive at judgments through statistical analysis; and will not use terms of probability to convey uncertainty in external FBI intelligence products.

UNCLASSIFIED

<i>Terms of Likelihood</i>	Almost No Chance	Very Unlikely	Unlikely	Roughly Even Chance	Likely	Very Likely	Almost Certain(ly)
<i>Terms of Probability</i>	Remote	Highly Improbable	Improbable (Improbably)	Roughly Even Odds	Probable (Probably)	Highly Probable	Nearly Certain
	1-5%	5-20%	20-45%	45-55%	55-80%	80-95%	95-99%

(U) Appendix B: Confidence in Assessments and Judgments Based on a Body of Information

(U) Confidence levels reflect the quality and quantity of the source information supporting a judgment. Consequently, the FBI ascribes high, medium, or low levels of confidence to assessments, as follows:

(U) **High confidence** generally indicates the FBI's judgments are based on high quality information from multiple sources. High confidence in a judgment does not imply the assessment is a fact or a certainty; such judgments might be wrong. While additional reporting and information sources may change analytical judgments, such changes are most likely to be refinements and not substantial in nature.

(U) **Medium confidence** generally means the information is credibly sourced and plausible but not of sufficient quality or corroborated sufficiently to warrant a higher level of confidence. Additional reporting or information sources have the potential to increase the FBI's confidence levels or substantively change analytical judgments.

(U) **Low confidence** generally means the information's credibility or plausibility is uncertain, the information is too fragmented or poorly corroborated to make solid analytic inferences, or the reliability of the sources is questionable. Absent additional reporting or information sources, analytical judgments should be considered preliminary in nature.

(U) Appendix C: The Effects of Short Term Exposure of Fentanyl and the Effects Based on Absorption Type[§]

(U) Short term exposure to fentanyl by ingestion, inhalation, or dermal contact may cause the following physiological effects:

- (U) Contracted or Pinpoint Pupils
- (U) Reduced Level of Consciousness
- (U) Respiratory Depression
- (U) Hypoxia (Reduced Blood Oxygen Content)
- (U) Acid Accumulation in the Blood
- (U) Low Blood Pressure
- (U) Slow Heart Rate
- (U) Shock
- (U) Fluid Accumulation in the Lungs
- (U) Intestinal Obstruction due to Slowing of Muscle Function
- (U) Lethargy
- (U) Coma
- (U) Death

(U) Note: Absorption through the skin has similar effects to those of both ingestion and inhalation but with additional factors. The absorption into the skin may increase depending on the condition of the skin and the presence of skin penetrating enhancers. Additionally, the absorption through the skin may lead to whole-body toxicity.

(U) Note: Short term exposure to fentanyl, defined as eight hours or less, can result in delayed respiratory depression and respiratory arrest. If fentanyl is administered intravenously, the effects can include stiffness of the chest muscles causing interference with normal breathing. Additional symptoms include increased blood pressure and muscle stiffness and spasms.

[§] (U) Web site; Centers for Disease Control and Prevention; FENTANYL: Incapacitating Agent; posted 12 May 2011, last updated 19 May 2017; https://www.cdc.gov/niosh/ershdb/emergencyresponsecard_29750022.html; accessed on 23 May 2017; Source is the Centers for Disease Control and Prevention Web site.

(U) Appendix D: White House-National Security Council Fentanyl Safety Recommendations for First Responders

UNCLASSIFIED

FENTANYL[†]

SAFETY RECOMMENDATIONS FOR FIRST RESPONDERS


† For the purposes of this document, fentanyl, related substances, and synthetic opioids (herein after referred to as fentanyl[†]) includes fentanyl analogues (e.g., acetylfentanyl, acrylfentanyl, carfentanil, furanylfentanyl), novel synthetic opioids (e.g., U-47700), and other drugs that may be laced with these substances.

- ▶ **The abuse of drugs containing fentanyl[†] is killing Americans. Misinformation and inconsistent recommendations regarding fentanyl[†] have resulted in confusion in the first responder community.**
- ▶ You as a first responder (law enforcement, fire, rescue, and emergency medical services (EMS) personnel) are increasingly likely to encounter fentanyl[†] in your daily activities (e.g., responding to overdose calls, conducting traffic stops, arrests, and searches).
- ▶ This document provides scientific, evidence-based recommendations to protect yourself from exposure.

WHAT YOU NEED TO KNOW

- ▶ Fentanyl[†] can be present in a variety of forms (e.g., powder, tablets, capsules, solutions, and rocks).
- ▶ Inhalation of airborne powder is MOST LIKELY to lead to harmful effects, but is less likely to occur than skin contact.
- ▶ Incidental skin contact may occur during daily activities but is not expected to lead to harmful effects if the contaminated skin is promptly washed off with water.
- ▶ Personal Protective Equipment (PPE) is effective in protecting you from exposure.
- ▶ Slow breathing or no breathing, drowsiness or unresponsiveness, and constricted or pinpoint pupils are the specific signs consistent with fentanyl[†] intoxication.
- ▶ Naloxone is an effective medication that rapidly reverses the effects of fentanyl[†].

<p style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; color: #0070C0;">Actions to take . . .</p> <p style="color: #0070C0; font-weight: bold;">To protect yourself from exposure</p> <ul style="list-style-type: none"> ▶ Wear gloves when the presence of fentanyl[†] is suspected. ▶ AVOID actions that may cause powder to become airborne. ▶ Use a properly-fitted, NIOSH-approved respirator ("mask"), wear eye protection, and minimize skin contact when responding to a situation where small amounts of suspected fentanyl[†] are visible and may become airborne. ▶ Follow your department guidelines if the scene involves large amounts of suspected fentanyl[†] (e.g., distribution/storage facility, pill milling operation, clandestine lab, gross contamination, spill or release). 	<p style="color: #0070C0; font-weight: bold;">When exposure occurs</p> <ul style="list-style-type: none"> ▶ Prevent further contamination and notify other first responders and dispatch. ▶ Do not touch your eyes, mouth, nose or any skin after touching any potentially contaminated surface. ▶ Wash skin thoroughly with cool water, and soap if available. Do NOT use hand sanitizers as they may enhance absorption. ▶ Wash your hands thoroughly after the incident and before eating, drinking, smoking, or using the restroom. ▶ If you suspect your clothing, shoes, and PPE may be contaminated, follow your department guidelines for decontamination. 	<p style="color: #0070C0; font-weight: bold;">If you or other first responders exhibit</p> <ul style="list-style-type: none"> - Slow Breathing or No Breathing - Drowsiness or Unresponsiveness - Constricted or Pinpoint Pupils <ul style="list-style-type: none"> ▶ Move away from the source of exposure and call EMS. ▶ Administer naloxone according to your department protocols. Multiple doses may be required. ▶ If naloxone is not available, rescue breathing can be a lifesaving measure until EMS arrives. Use standard basic life support safety precautions (e.g., pocket mask, gloves) to address the exposure risk. ▶ If needed, initiate CPR until EMS arrives.
---	--	---



Collaborative Support From:

- American College of Emergency Physicians
- International Association of Chiefs of Police
- National Association of Counties
- National Governor's Association
- American College of Medical Toxicologists
- International Association of Fire Chiefs
- National Association of County and City Health Officials
- National HIDTA Directors Association
- American Industrial Hygiene Association
- International Association of Fire Fighters
- National Narcotic Officers' Associations' Coalition
- Association of State and Territorial Health Officials
- Major Cities Chiefs Association
- National Sheriff's Association
- National Volunteer Fire Council
- Association of State Criminal Investigative Agencies
- Major County Sheriffs of America
- National Association of Emergency Medical Technicians
- Police Executive Research Forum
- National Alliance of State Drug Enforcement Agencies
- National Association of EMS Physicians
- Fraternal Order of Police
- National Association of State EMS Officials

<https://www.whitehouse.gov/ondcp/key-issues/fentanyl>

(U) Endnotes

¹ (U) Online Publication; Drug Enforcement Administration; “Fentanyl: A Briefing Guide for First Responders”; June 2017; https://www.dea.gov/druginfo/Fentanyl_BriefingGuideForFirstResponders_June2017.pdf; accessed on 19 October 2017; Source is the DEA.

² (U) Online News Article; Drug Enforcement Administration; “DEA Issues Carfentanil Warning to Police and Public”; 22 September 2016; <https://www.dea.gov/divisions/hq/2016/hq092216.shtml>; accessed on 19 October 2017; Source is the DEA.

³ (U) Web site; Centers for Disease Control and Prevention; “Fentanyl: Preventing Occupational Exposure to Emergency Responders”; last updated 30 August 2017; <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>; accessed on 6 July 2018; Source is the Centers for Disease Control and Prevention Web site.

⁴ (U) Web site; Centers for Disease Control and Prevention; “FENTANYL: Incapacitating Agent”; posted 12 May 2011, last updated 19 May 2017; https://www.cdc.gov/niosh/ersbdb/emergencyresponsecard_29750022.html; accessed on 23 May 2018; Source is the Centers for Disease Control and Prevention Web site.

⁵ (U) Online News Article; National Addiction Hotline; “Fentanyl and Synthetic Opioid Overdoses Deaths Doubled in 2016”; 5 September 2017; <http://www.nationaladdictionhotline.com/fentanyl-and-synthetic-opioid-overdose-deaths-doubled-in-2016/>; accessed on 4 October 2017; Source is a Web site providing information and assistance to those affected by drug addiction and alcoholism.

⁶ (U) Online Report; DEA Intelligence Brief; Counterfeit Prescription Pills Containing Fentanyls: A Global Threat; July 2016; http://content.govdelivery.com/attachments/USDOJDEA/2016/07/22/file_attachments/590360/fentanyl%2Bpills%2Breport.pdf; accessed on 24 May 2017; Source is the Drug Enforcement Administration

⁷ (U//FOUO) FBI; Situational Information Report; 26 May 2017; May 2017; “(U//FOUO) Large Scale Fentanyl Pill/Counterfeit Oxycodone”; UNCLASSIFIED//FOR OFFICIAL USE ONLY; UNCLASSIFIED//FOR OFFICIAL USE ONLY; Source is an FBI agent who participated in the arrest of subjects and seizure of drugs.

⁸ (U) Online News Article; The Daily Caller News Foundation; “Russian SpecOps Used To Gas People With The Same Drug Americans Can’t Stop Shooting Into Their Veins”; 16 May 2017; <http://dailycaller.com/2017/05/16/russian-specops-used-to-gas-people-with-the-same-drug-americans-cant-stop-shooting-into-their-veins/>; accessed on 24 May 2017; Source is an online news publisher.