Deadly High-purity Fentanyl from China is Entering the U.S. through E-commerce Channels
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The growth in U.S. e-commerce imports from China is bringing unprecedented opportunities for cross-border trade, but is also coinciding with a flow of highly potent and deadly synthetic opioid imports. This illicit trade relies on legitimate e-commerce distribution channels, with shipments in small quantities that can be difficult to detect. The fentanyl epidemic is regarded as a significant national security threat, and the issue is being raised in U.S.-China trade negotiations.

E-commerce and logistics channels are used for illicit synthetic opioid imports from China

- Fentanyl and its analogues, which are synthetic opioids originally developed for severe pain, are openly available on the internet through the public and dark webs, where buyers and sellers transact sales anonymously.
- The illicit trade follows the standard e-commerce model of small-scale shipments and B2C and B2B distribution channels. The trade is SME-focused, with small-scale Chinese suppliers primarily exporting to individuals and small independent U.S. criminal networks.
- China was the source of 97 percent of inbound shipments of high-purity fentanyl during 2016 and 2017¹ (fentanyl is also transshipped through Mexico, but in less pure formulations, which are smuggled across the Southwest border, mostly by large transnational drug cartels).
- Crypto currencies such as Bitcoin are the preferred payment method, as these make the transactions easier, with anonymity, instant transfers, acceptance, and conversion to currency.
- The illicit drugs are imported primarily through clandestine shipments via the U.S. Postal Service (USPS), and to a lesser degree via express consignment operators (ECOs), FedEx, UPS, and DHL.

Fentanyl sourced from China is highly pure and exported in small quantities

The growth of the U.S. synthetic opioid epidemic can be tracked by looking at U.S. Customs and Border Patrol (CBP) seizures, which have expanded dramatically since 2015 (figure 1). Although it has been a high priority to interdict fentanyl since 2015, when U.S. overdoses and deaths started to climb rapidly, there has been no “substantive curtailment” of fentanyl flows as of the end of 2018. According to the DEA, fentanyl is highly toxic and the most lethal category of opioids (50 times more powerful than heroin and 100 times stronger than morphine), and killed more Americans than any other illegal drug in 2018.

Fentanyl is inexpensive to produce and is valued for its high potency, requiring less than one milligram for a single use, but can be deadly with as little as 2 milligrams. Given the high purity of Chinese fentanyl, most illicit imports are less than 700 grams (1.5 lbs.) per shipment. After importation, these small batches of high-purity powder are often mixed with heroin (or other illicit drugs, including cocaine and methamphetamine) or pressed into pills, including counterfeit narcotics (e.g. OxyContin, Percocet).


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Surging e-commerce parcel/package imports make detection of fentanyl and its analogues challenging

Global e-commerce growth is creating a “tsunami” of international parcel/package trade, which is straining global customs authorities and allowing for increased trade in illicit products. The surge in U.S. small package imports is challenging the CBP and USPS capacity to monitor, identify, and interdict illegal shipments. By value, U.S. imports from China of low-value goods (primarily e-commerce, $2,000 or less,) has increased substantially in recent years, to $3.6 billion in 2018 (figure 2).

E-commerce is also driving enormous package volume growth, including significant volumes from China. In FY 2013, the USPS handled 150 million imported international parcels, but by FY 2016, it had grown to 275 million. In calendar year 2017, the USPS handled an estimated 475 million international imported packages. ECO package volumes also increased, from 52 million packages in 2013 to 66 million in 2016. Moreover, over half of the volume arrived at one facility, the JFK airport in New York.

Counter narcotic measures and U.S.-China cooperation have been slow and insufficient

In October 2018, the Synthetics Trafficking and Overdose Prevention (STOP) Act became law, which requires the USPS to obtain advanced electronic data (AED) on all package imports from China at the end of 2018. AED includes buyer and seller information and package contents and is already collected by ECOs. AED is provided to the CBP to help identify high-risk shipments. However, as of April 2019, the USPS is reportedly only collecting AED for 76 percent of Chinese mail shipments, and the data is often poor. In addition, illicit shipments are often purposely mislabeled and sent through multiple freight forwarders, and transshipped through third-countries, including Europe, to evade detection.

The fentanyl epidemic is a priority for U.S. Trade Representative Robert Lighthizer, who stated that he wants a Chinese commitment to curb fentanyl flows in any final U.S.-China trade agreement. In December 2018, China promised to put fentanyl and related chemicals on its controlled substance list and crack down on online drug networks including tighter screening of outbound parcels at the border. However, analysts question the commitment given China’s weak regulatory environment and widely dispersed chemical and pharmaceutical industry with many thousands of producers. In June 2019, the U.S. Senate, as part of the 2020 Defense bill, passed bi-partisan legislation that would impose “heavy sanctions” on Chinese firms that fail to stop fentanyl imports and increase funding for interdiction programs.


2 Senate Committee on Homeland Security and Government Affairs, “Combatting the Opioid Crisis,” 2018

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