

Emerging trends in the availability of novel synthetic opioids on cryptomarkets, 2021-2026

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Introduction: Novel synthetic opioids (NSOs) are increasingly shaping illicit opioid markets internationally. Following fentanyl analogues, newer opioid classes including nitazenes and orphines have emerged, raising concerns due to their high potency and risk of harm. This study examined trends and characteristics of these NSOs on cryptomarkets, using fentanyl as a comparator for changes in availability.

Methods: Monthly data on drug listings from English-language cryptomarkets (n=42) were collected between June 2021 and January 2026. Regular expression search strings identified NSO-related terms within listings. Analyses examined temporal trends in NSO listings, availability for shipping to Australia or worldwide, and region of origin.

Results: Nitazenes had the highest overall percentage of listings (0.13% of all drug listings); other classes of NSOs had a combined percentage of 0.02% over the 4.5 year study period. Nitazene listings surpassed fentanyl listings in 2022, peaking at 0.24% of drug listings in December 2022. The proportion of nitazene listings declined in 2024 as that of fentanyl and orphine analogues increased. From mid-2025, fentanyl, nitazene and orphine listings declined, while SR-17018 listings increased. The proportion of other NSOs (e.g. U-47700) and fentanyl analogue listings remained relatively low. Most NSO listings (65%) were available for shipment to Australia. NSOs primarily originated from North America (35%) and Asia (32%), followed by Europe (7%) and Oceania (4%).

Discussion: Findings highlight the resilience and adaptability of synthetic opioid markets, with new classes emerging and shifting over short periods. This includes orphines, which were available for shipment to Australia despite not yet being detected domestically, reinforcing the capacity for cryptomarkets to identify emerging drugs of concern.

Implications: The emergence of nitazenes and orphines suggests that regulatory controls may reshape rather than suppress synthetic opioid markets. Findings highlight the importance of proactive harm reduction approaches to NSOs, alongside ongoing scanning for emerging compounds internationally to support local detection capacity and risk communication.

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