

Study reveals alarming levels of drug residue on US currency

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A new study led by Thomas Jefferson University researchers has found that American currency carries much more than germs on its surface.

The study used a new method of analysis to examine one-dollar bills collected from 13 cities across the U.S. Fentanyl, a potent opioid, was detected on 63% of the bills, shedding light on the widespread presence of this dangerous substance in everyday transactions.

The work is [published](#) in the *Journal of Analytical Toxicology*.

Matthew P. Hewes, a 2023 graduate from Jefferson with an MS in Forensic Toxicology, was the first author of the study, and in addition to fentanyl, he observed that cocaine and methamphetamine were even more prevalent, found on virtually all bills in significant amounts.

Despite the concerning findings, the risk of someone experiencing toxicological or pharmacological effects from handling contaminated currency is low for the general population says Alex J. Krotulski, Ph.D., senior author of the study and forensic toxicology researcher. However, the study found that regions with higher fentanyl use had higher rates of contaminated bills. Dr. Krotulski believes this insight suggests that analyzing currency could serve as a [valuable tool](#) for tracking drug trends on a regional and national scale, providing timely information to public health organizations and law enforcement agencies.

Dr. Krotulski envisions this research as a potential early warning system for addressing the continued increase in drug overdose rates and a valuable resource for public health planning and drug scheduling efforts.

"Currently, most of the data we get about [drug](#) trends comes from police seizures, and that data is sometimes backlogged for nine or even 12 months, meaning we don't know what's going on for almost a year," Dr. Krotulski explains. "This is an alternate path to insights that we might not otherwise get in a timely fashion."

More information: Matthew P Hewes et al, Determination of fentanyl contamination on United States paper currency by LC–QQQ–MS, *Journal of Analytical Toxicology* (2024). [DOI: 10.1093/jat/bkae010](https://doi.org/10.1093/jat/bkae010)

Provided by Thomas Jefferson University

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