Emergence of Local Anesthetics in the Los Angeles Illicit Fentanyl Supply

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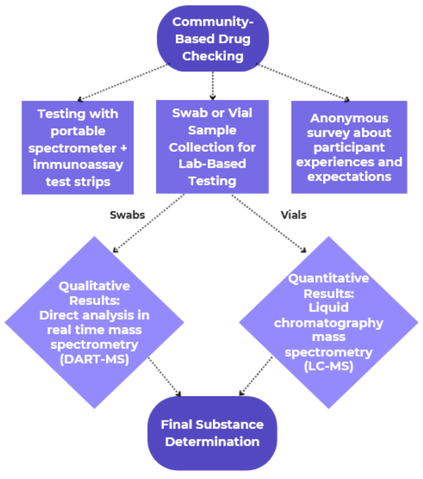
INTRODUCTION

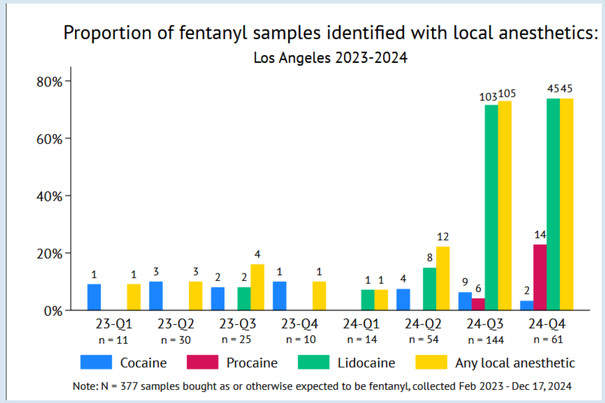
- Community-based drug checking programs offer real-time drug supply monitoring using chemistry techniques. This data describes the emergence of local anesthetics in the Los Angeles fentanyl supply from one such program.
- Local anesthetics have been described as an adulterant in cocaine, with its use to mimic cocaine's anesthetic properties. The presence of local anesthetics has not been detected at-scale in fentanyl.
- By describing the emergence of local anesthetics in the Los Angeles fentanyl supply, public health programs can prepare for the potential concerning adverse health effects of the new inclusion of local anesthetics in the illicit fentanyl supply.

METHODS

- Data were routinely collected at drug checking sites around LA County
- Residue swabs and vials were collected for final substance determination completed by the National Institute of Standards and Technology
- Spectra were compared to a library of over 1300 common drugs, cuts, and bulking agents

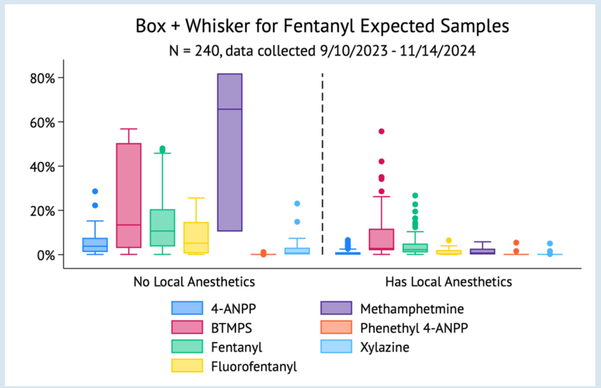


RESULTS



N=377 samples expected to be fentanyl were tested, with n=350 (92.8%) samples containing fentanyl. Among confirmed fentanyl samples, n=164 (46.9%) samples also contained any local anesthetic

Samples containing local anesthetics had statistically significant variation in the co-detection of BTMPS (p<.001), fluorofentanyl (p<.001), and xylazine (p<.001), as well as several common fentanyl precursors, metabolites, and bulking agents (e.g., 4-ANPP, mannitol, etc.).



A subset of expected fentanyl samples (n=240) was also quantitatively tested using LC-MS with a 12- substance panel.

Pooled t-tests were utilized to compare differences in concentration of each substance by local anesthetic inclusion. When comparing expected fentanyl samples containing no local anesthetics to those with any local anesthetic, there were statistically significant lower concentrations of BTMPS (μ=24.2%-7.96%, p <.001), fentanyl (μ=14.5%-3.88%, p <.001), fluorofentanyl (μ=7.65%-1.12%, p <.001), methamphetamine (μ=52.7%-1.72%, p <.001), and xylazine (μ=2.92%-0.27%., p <.001).

CONCLUSION

- While the reason for the addition of local anesthetics in fentanyl is unknown, it is plausible this signals a shift in manufacturing.
- Although limited quantitative data was collected, expected fentanyl samples often contained cocaine, lidocaine, or both, that far exceeded the amount of fentanyl present.
- Results may include cross contamination from polysubstance use, e.g., fentanyl and cocaine.
- This analysis is exploratory in nature. Future studies are needed to understand the presence of local anesthetics in illicitly manufactured fentanyl and the potential health effects they pose.

AUTHORS & DISCLOSURES

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All authors have nothing to disclose

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