

The Crisis Within the Crisis: Fentanyl Abuse and COVID-19

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Introduction

Although overdose deaths began to plateau or even decrease in recent years, the COVID-19 pandemic appears to be reversing these trends. Reports of drug overdose during the pandemic have been on the rise, especially those related to illicit synthetic opioids and heroin, while preventive medical services and drug testing have decreased since the introduction of stay-at-home measures.

To better understand how the drug epidemic is interacting with the pandemic, we investigated changes in urine drug testing (UDT) results for fentanyl, alone and in combination with other drugs, after implementation of stay-at-home measures in the United States during the COVID-19 pandemic.

Methods

UDT Analysis

- De-identified results from all medMATCH® specimens with clinician-provided prescribed drug information performed
 - January 1, 2019-March 14, 2020 (baseline); or
 - March, 15-May 16, 2020 (“during COVID-19”).
- Exclusion criteria: age not recorded or <18; abnormal specimen validity testing results with no positivity.
- Not all specimens were tested for all drug classes; ordering patterns vary among ordering clinicians.
- medMATCH reports indicate whether the prescribed drug(s) specified by the ordering provider, or other drugs, are detected in a specimen. Positivity for non-prescribed drugs was defined as presence of a positive result for non-prescribed or illicit drugs on UDT.

Specimen Testing

UDT included either presumptive immunoassay screening tests with confirmation of positive results by definitive quantitative liquid chromatography-mass spectrometry (LC-MS/MS) or direct screening by definitive quantitative LC-MS/MS. LC-MS/MS methods were validated using National Institute of Standards and Technology (NIST)-traceable reference materials.

Results

Specimens

Because of the shorter time frame and decreased UDT, fewer tests were done during the COVID-19 pandemic (n=48,938) than during the baseline (n=823,824) period (Figure 1). See Figure 2 for sex and age distributions in each period.

UDT Results

- Clinical drug monitoring declined rapidly during the COVID-19 period (Figure 1).
- Positivity for non-prescribed fentanyl increased by 35% (p<0.01) compared to baseline (Figure 2).
- Combinations of non-prescribed fentanyl in patients positive for other drugs increased: by 89% for amphetamines (p<0.01); 48% for benzodiazepines (p<0.01); 34% for cocaine (p<0.01); 39% for opiates (p<0.01); and 4% for heroin (Figure 3).

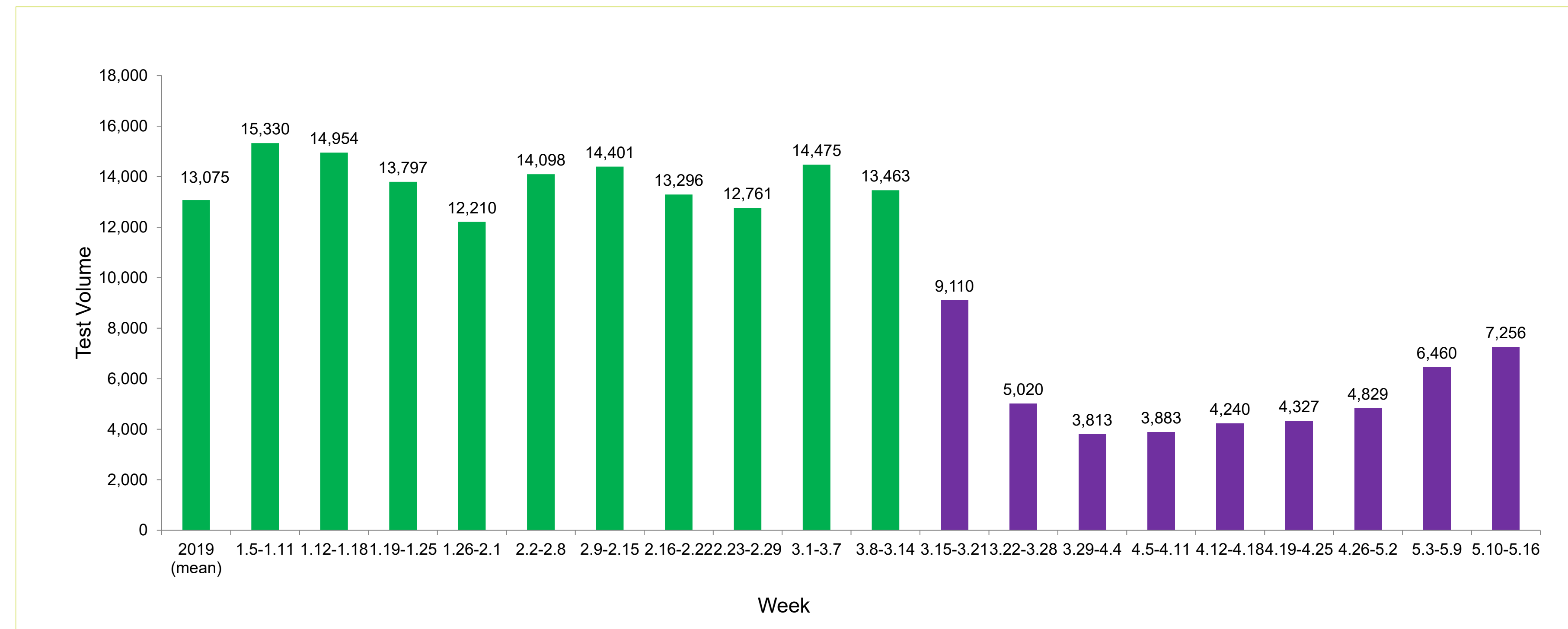


Figure 1. Weekly volume of medMATCH tests with prescription drug(s), 2019-May 2020. Green bars indicate baseline “before COVID-19” period; purple bars indicate “during COVID-19” period.

Results (continued)

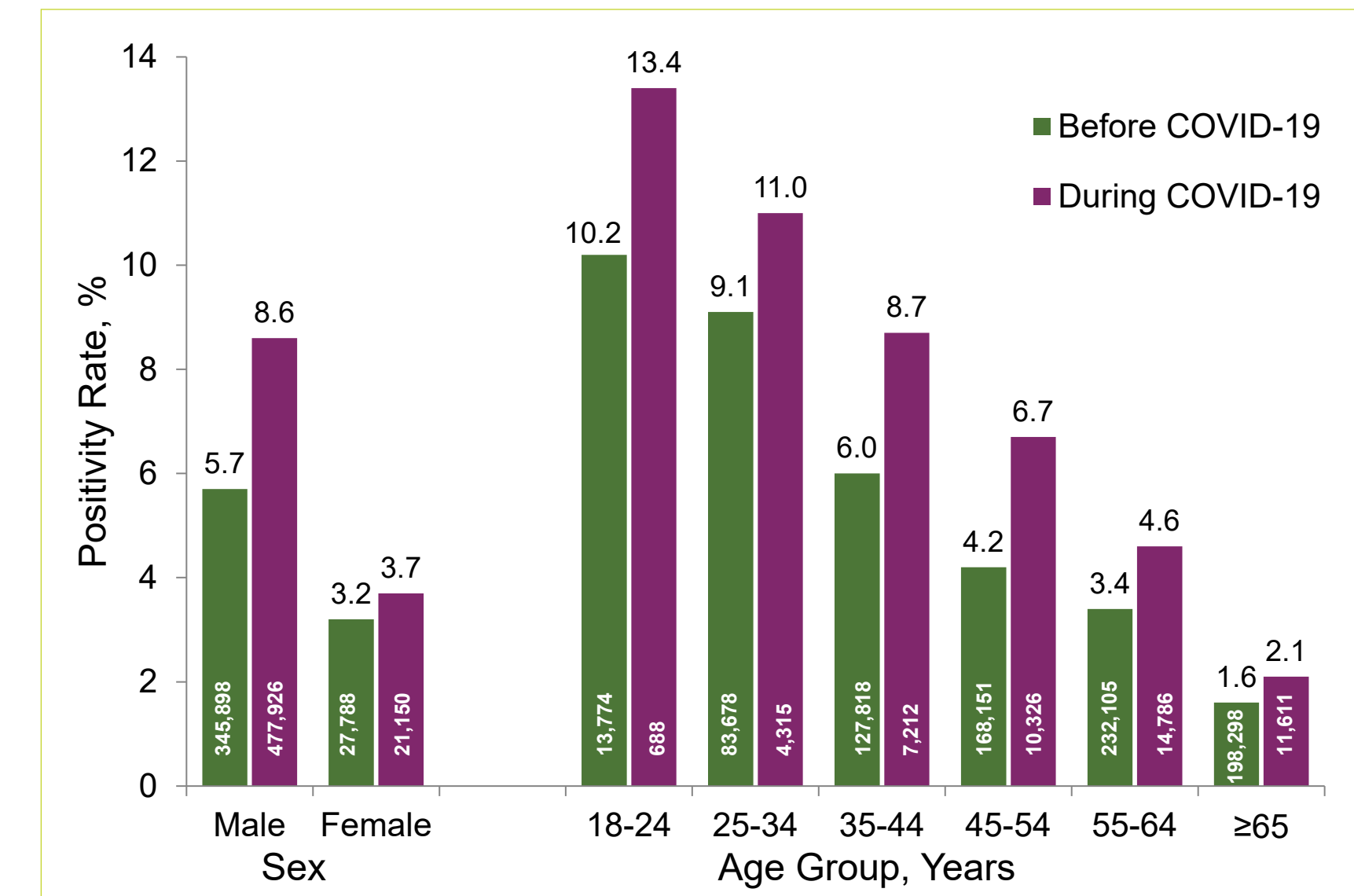


Figure 2. Non-prescribed fentanyl positivity by sex and age. Women accounted for a higher proportion of specimens during the baseline (58%) and pandemic (57%) periods. White numbers superimposed on bars indicate the sample size (n).

Results (continued)

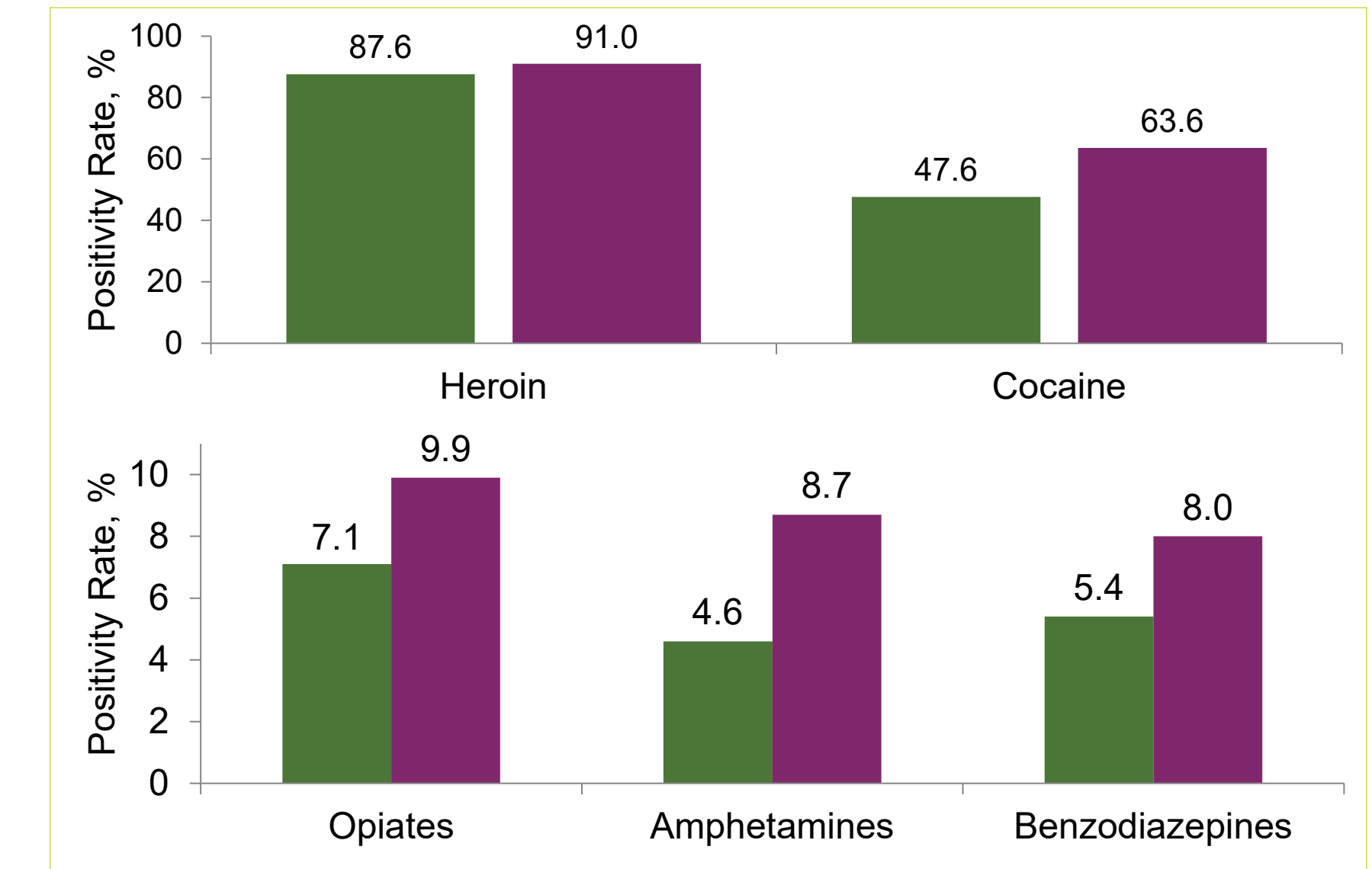


Figure 3. Non-prescribed fentanyl positivity in specimens positive for other drugs. Green bars indicate baseline (before COVID-19) period; purple bars indicate “during COVID-19” period.

Conclusions

- Our findings indicate that not only has drug testing decreased since the start of the pandemic, but non-prescribed use of fentanyl, 1 of the drugs most responsible for the overdose epidemic, has increased greatly.
- During this crisis, clinicians need to re-establish opioid abuse risk management strategies including drug testing, which is the only objective measure of what drugs or substances a patient is taking.
- Tracking national laboratory data can help yield early signals to our country’s re-emerging drug abuse problem.

Disclosures

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