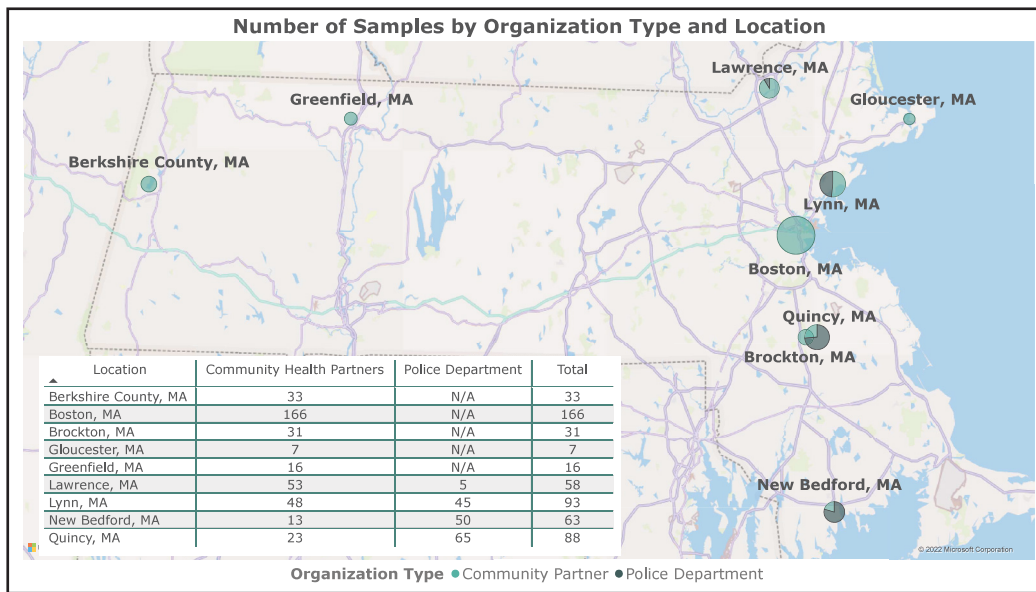




Massachusetts Drug Supply Data Stream (MADDS) Gloucester Report 2021

Drug Supply Update: Gloucester, MA

7 samples tested from Gloucester and sent for advanced testing in 2021.



Gloucester joined as a MADDS site in 2022 but contributed samples as part of the responsive drug checking program, which provides on-demand drug checking to communities with time-sensitive drug checking needs.

From January to December 2021, 708 drug samples were tested by MADDS, 555 (78.4%) of which were from Massachusetts and had complete on-site and off-site laboratory testing results available for this report. In Gloucester, 7 drug samples were tested, with all sent for complete, advanced testing. The main drug compounds detected in samples from Gloucester were fentanyl (n=3), clonazepam (n=2), and acetylfentanyl (n=2). This differed from the state as a whole, where clonazepam was much less prevalent and cocaine much more prevalent. Fentanyl synthesis precursors 4-ANPP (n=2) and despropionyl-4-fluorofentanyl (n=1) were found in Gloucester in fentanyl-containing samples. These two compounds may indicate poorly synthesized and purified fentanyl, which could result in a weaker fentanyl supply. The presence of caffeine (n=1) and xylazine (n=1), a veterinary sedative, were two active cuts in heroin/fentanyl samples. The most frequently detected inactive components included lactose (n=3) and calcium phosphate (n=3). 4 of the 7 samples submitted for testing were pills; all 4 were counterfeit benzodiazepines. Additional data regarding the substances involved during adverse events are available upon request.

Primary chemical contents for all 7 samples sent for complete advanced testing from Gloucester are shown in Figure 1.

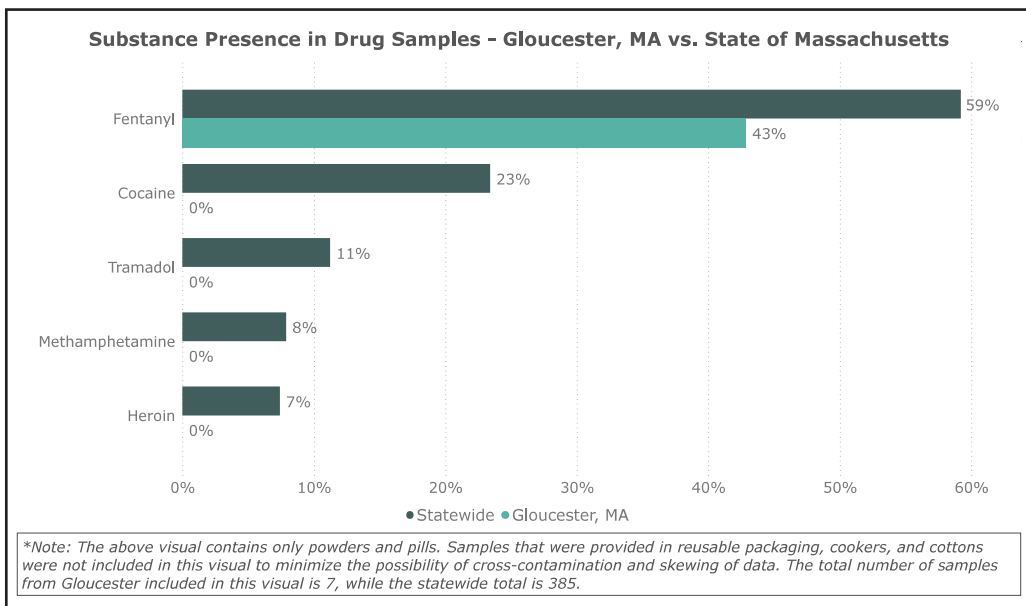


Figure 1

Components of the Drug Supply

The street drug supply is unpredictable, and drugs may contain more components than what is expected. In addition to the primary drug or drugs, additives, known as cuts, may be added. Which cuts are used and the ratios in which they are used vary by drug and may affect the use experience. As can be seen in Figure 2, most samples tested by MADDs in 2021 contained some kind of cut.

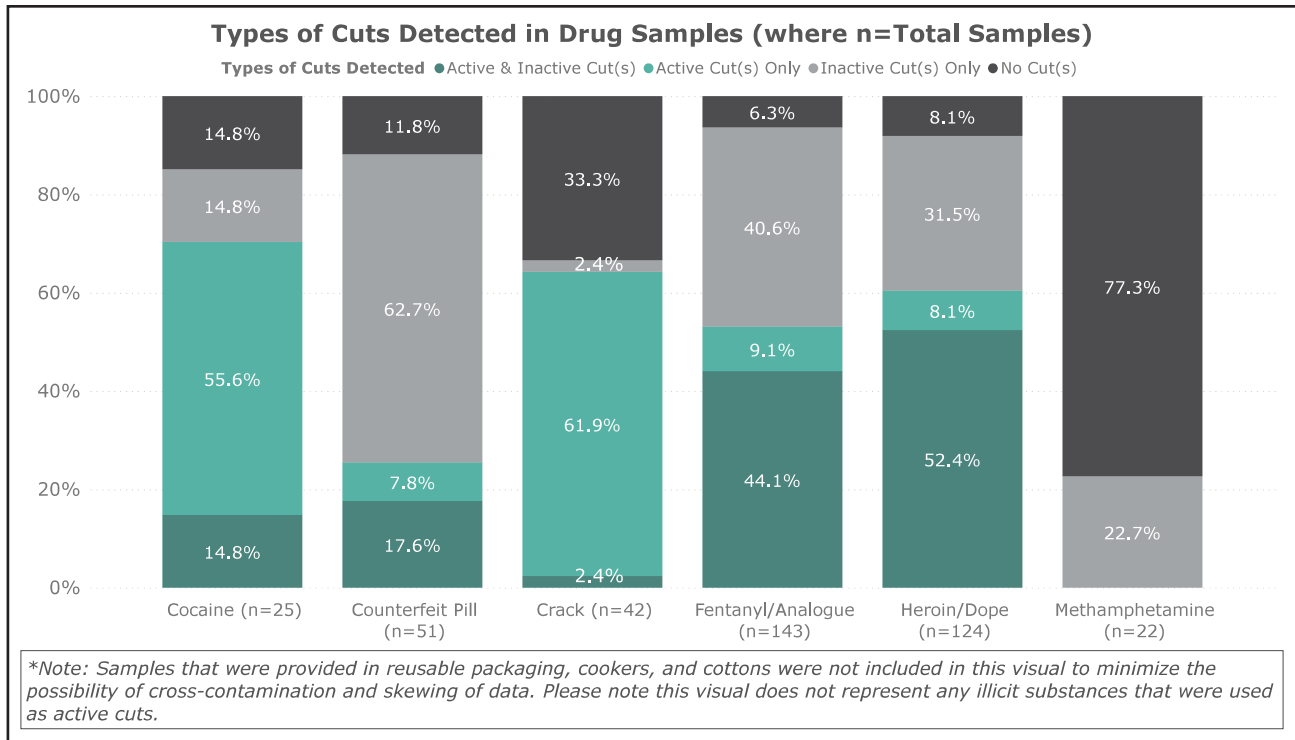


Figure 2

Active Substances

Any component of a drug that affects the use experience is an active substance. The substance could be what a drug is intended to be or sold as, an additive that was cut into a drug, or any substance that is present as a result of cross-contamination. Figure 3 shows all active substances that were detected in MADDs samples in 2021. The pie chart shows that 4-fluorofentanyl was the most frequently detected fentanyl analogue in 2021.

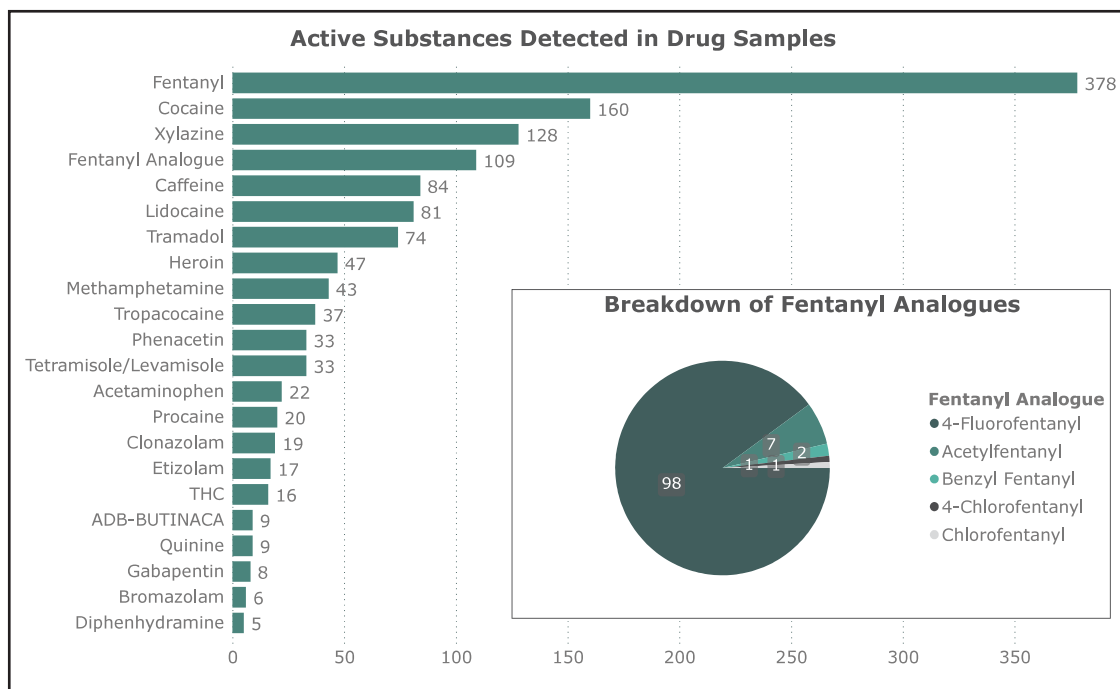


Figure 3

Active Cuts

Substances added to drugs that affect the use experience but are not the intended drug or what a drug is sold as are called active cuts. These additives may intensify, diminish, lengthen, or shorten the effect of a drug. Figure 4 breaks down the most common active cuts detected in MADDs samples in 2021. Fentanyl as an active cut is reported separately, in Figure 5.

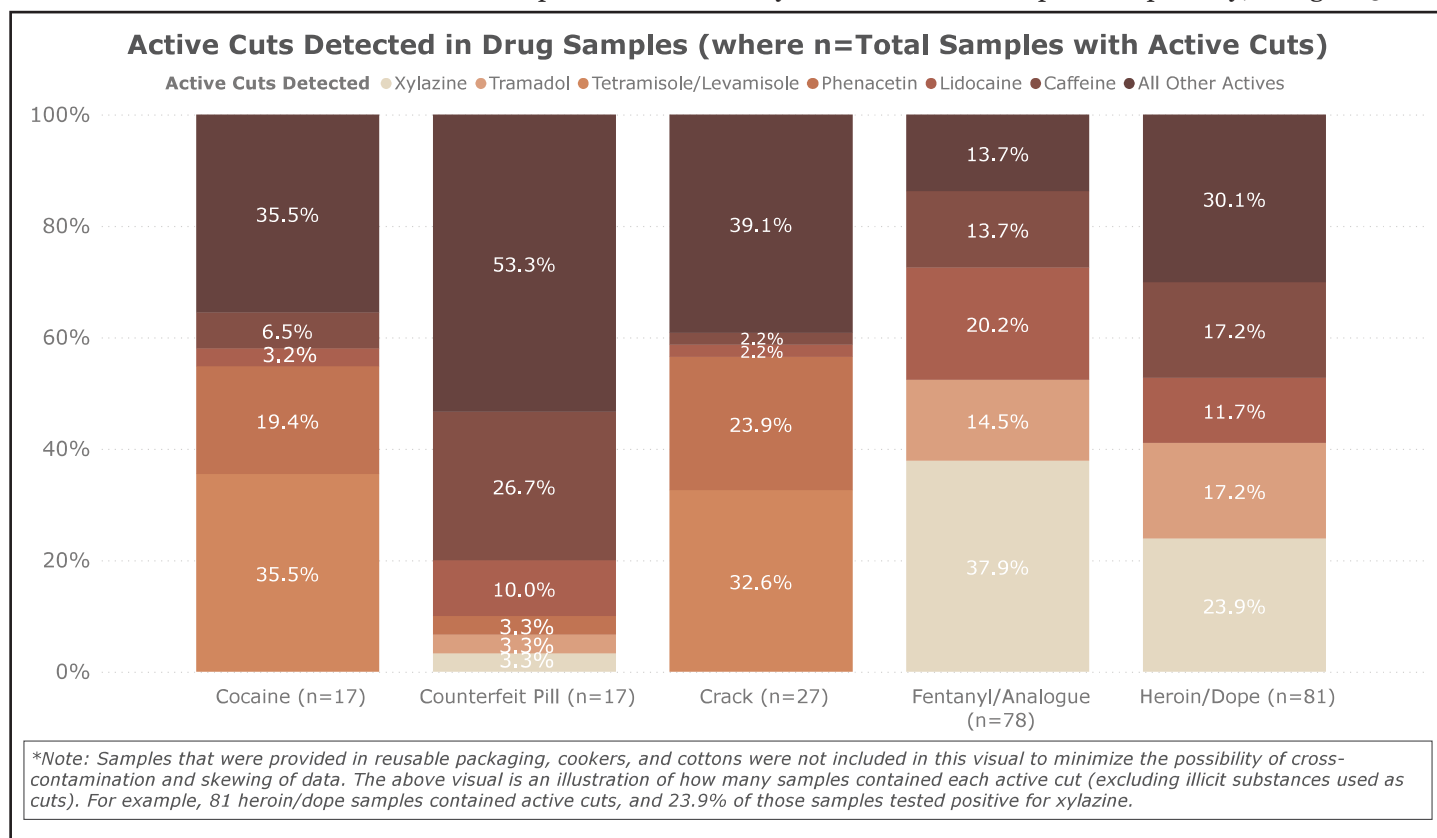


Figure 4

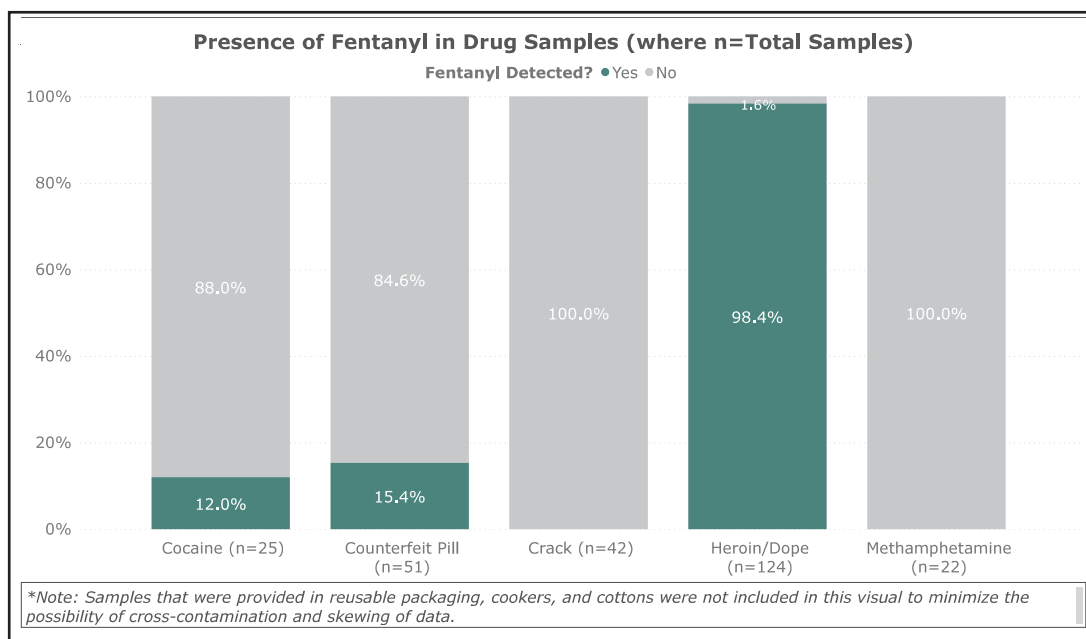


Figure 5

Active cut: Fentanyl

Fentanyl and its analogues remain the most common active cuts in the drug supply in Massachusetts. Figure 5 shows the presence of fentanyl in other samples tested by MADDs.

The combination of opioids with stimulants increases the risk for opioid overdose and other health concerns. As fentanyl and other opioids have been detected in many other drugs, including stimulants and counterfeit pills, access to naloxone and education around naloxone use is extremely important, even for those who do not use opioids.

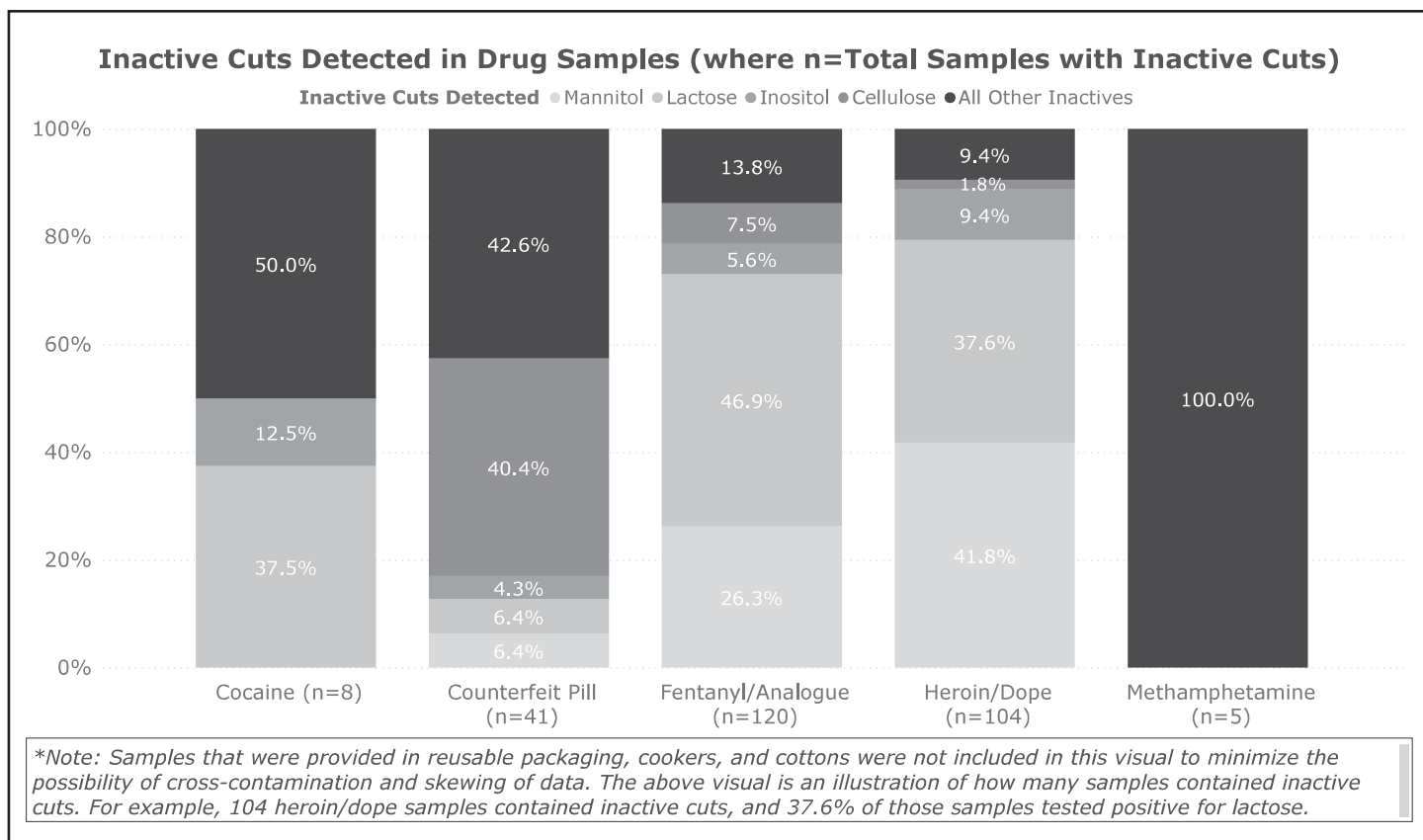


Figure 6

Inactive Cuts

Substances that do not affect the use experience are called inactive cuts. These may be added to bulk up the amount of a drug and dilute a drug's concentration. Effects of drugs with inactive cuts may therefore be less intense than the same amount of a more concentrated version of the drug.

Although inactive cuts are less likely to have serious adverse health effects than active cuts, they may still present some risk. Figure 6 shows the most common inactive cuts detected by MADDs in drug samples from 2021.

Thank you to our partners in

Berkshire County

Boston

Brockton

Fall River

Gloucester

Greenfield

Lawrence

Lynn

New Bedford

Northampton

Quincy

for their important work and their support of this project.

For more information on MADDs or drug checking in
Massachusetts, [click here](#) or scan below.



MADDs is a state-funded collaboration between Brandeis University researchers, the Massachusetts Department of Public Health, various town police departments, and local harm reduction agencies. Contact us at maddsbrandeis@gmail.com.