Fentanyl Testing to Prevent Overdose

Information for Healthcare Providers and People Who Use Drugs

▪ What is fentanyl?

Pharmaceutical fentanyl is a powerful, synthetic opioid medication that is approved for the treatment of severe pain. Since approximately 2013, there has been a sharp, nationwide increase in overdose deaths involving illicitly manufactured fentanyl which has contaminated heroin and other drug supplies.[1] In 2017, there were 677 confirmed fentanyl-involved overdose deaths in Connecticut, or 65% of the 1,038 opioid overdose deaths in the state.[2] Connecticut Accidental Drug Related Deaths data revealed that the number of fentanyl-involved overdose deaths in Connecticut increased 40% from 2016 to 2017 (483 in 2016 and 677 in 2017). [2]

▪ What are fentanyl test strips (FTS) and how are they used?

Fentanyl test strips ('FTS') are a form of inexpensive drug testing technology that was originally developed for urinalysis, but which have been shown to be effective at detecting the presence of fentanyl and fentanyl-analogs in drug samples prior to ingestion.

In order to use the strips, testers dissolve a small amount of substance in water, and then dip the test strip into the liquid for 15 seconds. Because the test strips are highly sensitive, a minimal amount of drug residue is sufficient to obtain a result. The test strip is then set on a flat surface until results appear, typically within 5 minutes. One line indicates fentanyl is present in the sample; two lines indicate a negative result.

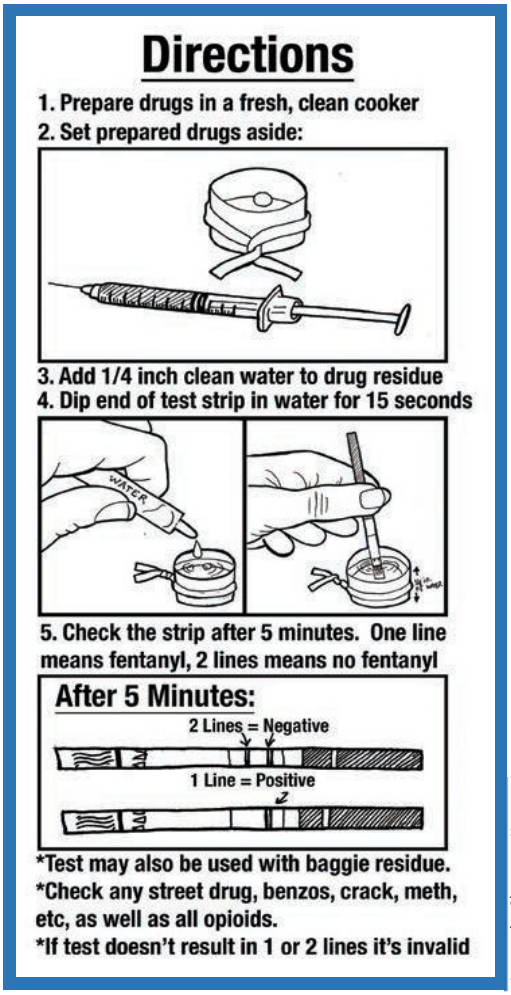

Image by Shannon Knox

[1] For more information, see National Center for Health Statistics, CDC WONDER: https://wonder.cdc.gov/
[2] CONNECTICUT OPEN DATA. Accidental Drug Related Deaths 2012-2017: https://data.ct.gov/

▪ Are FTS accurate and reliable?

A 2018 study jointly conducted by researchers at Brown University, Boston Medical Center, and Johns Hopkins University in collaboration with law enforcement agencies[3] sought to validate the efficacy of FTS for use in detecting fentanyl in drug samples. The study found that the test strips were accurate at detecting fentanyl when it was present in samples of street drugs provided by law enforcement, and unlikely to produce false negative results.

FTS have some known limitations. They do not measure the quantity or potency of fentanyl present in a drug sample. Because FTS have an extremely low detection threshold, they may detect incidental contamination of a drug sample – such as would be caused by different drugs being packaged in the same area – that does not represent a clinically significant quantity of fentanyl. There is also emerging evidence that FTS may be cross-reactive with methamphetamine and that when methamphetamine drug samples are tested for fentanyl contamination, the sample should be diluted in a greater amount of water (about half a cup) to produce accurate results (More information here: tinyurl.com/fentanyltesting).

▪ What is known about how FTS support safety for people who use drugs?

FTS are a reliable, common-sense means of providing people at risk of fentanyl exposure with more information that may increase their safety. Because FTS access is new, scientific evidence is only just beginning to emerge. An evaluation of FTS use in San Francisco[4] found that they promote increased fentanyl awareness and lead people to take safety precautions to prevent overdose if fentanyl is detected. A study involving a community-based FTS distribution program in North Carolina[5] found that 81% of those with access to FTS routinely tested their drugs before use. Those with a positive test result were five times more likely to change their drug use behavior to reduce the risk of overdose. In a Rhode Island study[6] of young adults who reported using heroin, cocaine, or illicitly obtained prescription pills, "receiving a positive [fentanyl] result was significantly associated with reporting a positive change in overdose risk behavior."

▪ How does the Connecticut Department of Public Health (CT DPH) support access to FTS?

As of January, 2019, FTS are made available through the CT DPH HIV Prevention Program. Questions regarding the distribution of FTS in Connecticut should be directed to:

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What Else Can People Who Use Drugs Do to Prevent Opioid Overdose?

(Visit tinyurl.com/drugfreect)

Connect with a local syringe services programs (SSPs), which can offer information, support, and prevention tools in a friendly, respectful non-judgmental manner. (tinyurl.com/sspsct)

Learn to anticipate and recognize fentanyl. In addition to using FTS, fentanyl may have a different taste, color, or produce a different sensation than heroin or other drugs.[7]

Always have naloxone available and ensure other people who are likely to be nearby know where it is and how to use it.

Avoid using alone and take turns using when using with other people so there is someone to give first aid if someone overdoses.

Sample only a small amount when uncertain about new drug supplies.

Know the symptoms of overdose and how to provide first aid. If someone overdoses, give them naloxone, call 911 immediately, and provide rescue breathing until they can breathe on their own.

Consider treatment with buprenorphine or methadone. Besides reducing or eliminating the need to use other opioids like heroin, these medications protect against opioid overdose.

[3] Johns Hopkins Bloomberg School of Public Health. Fentanyl Overdose Reduction Checking Analysis (FORECAST) Study. February 6, 2018. Online: https://americanhealth.jhu.edu/sites/default/files/inline-files/Fentanyl_Executive_Summary_032018.pdf
[4] Harm Reduction Coalition. Fentanyl Test Strip Pilot: San Francisco 2017-2018. Online: https://harmreduction.org/issue-area/overdose-prevention-issue-area/fentanyl-test-strip-pilot/
[5] Nicholas C. Peiper, Sarah Duhart Clarke , Louise B. Vincent, Dan Ciccarone , Alex H. Kral , Jon E. Zibbell. Fentanyl test strips as an opioid overdose prevention strategy: Findings from a syringe services program in the Southeastern United States. Int J Drug Policy. Sep 28, 2018.
[6] Krieger MS, Goedel WC, Buxton JA, et. al. (2018). Use of rapid fentanyl test strips among young adults who use drugs. Int J Drug Policy, In Press Oct. 2018.
[7] Ciccarone D, Ondocsin J, Mars SG. (2017). Heroin uncertainties: Exploring users' perceptions of fentanyl-adulterated and -substituted 'heroin.' Int J Drug Policy, 46: 146-155.

Factsheet courtesy of California Department of Public Health, Office of AIDS