LEGISLATIVE ANALYSIS AND PUBLIC POLICY ASSOCIATION

LAPPA

Fentanyl Test Strips

MAY 2021

INTRODUCTION

"Drug checking" is a form of harm reduction in which illicit drugs or illegally obtained prescription pills are chemically analyzed to determine the composition of the substance or the presence of an adulterant. While drug checking programs are more readily available in parts of Europe and Canada, the inconsistency and recent changes in the American illicit drug supply have led to an increased interest in drug checking in the United States. One form of drug checking is the distribution and use of fentanyl test strips (FTS), which are disposable, single-use tests that can detect the presence of fentanyl or fentanyl analogs in a substance.

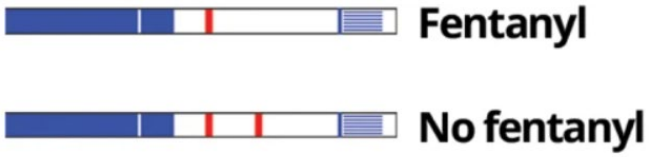
Fentanyl is increasingly being found in the illicit drug supply across the United States, where it is often added to or sometimes replaces other opioids such as heroin. Fentanyl has been found as an additive in stimulants like cocaine. Moreover, fentanyl is often pressed into counterfeit pills and sold as prescription medications (*e.g.*, oxycodone or Xanax) to people who may believe that they are buying authentic pharmaceutical drugs. The effect of fentanyl is 50 times stronger than the effect of heroin. The unintended use of fentanyl, especially by people who have not built up a tolerance for opioids, has led to a spike in drug overdose deaths around the country. In Massachusetts, for example, in 2019, 93 percent of fatal overdoses in the Commonwealth involved fentanyl.

In an effort to help curb the spike in drug overdose deaths largely driven by fentanyl and fentanyl analogs, the U.S. Centers for Disease Control and Prevention and the U.S. Substance Abuse and Mental Health Services Administration announced, on April 7, 2021, that federal funding can now be used to purchase FTS. The hope is that people will use FTS to determine if their drugs have been adulterated with fentanyl and take steps to reduce their risk of overdose, such as choosing to use slowly, use less, or use with others around.

This fact sheet sets forth how FTS work as a drug checking tool, their harm reduction benefits, and the current challenges surrounding their legality.

FENTANYL TEST STRIP TECHNOLOGY

FTS use the same technology as an at-home pregnancy test and were originally developed to detect the presence of fentanyl in urine. FTS are now often used off-label to detect the presence of fentanyl in drug samples diluted in water prior to consumption. The majority of FTS on the market cost one dollar per strip and are 96-100 percent accurate in detecting the presence of fentanyl. The strips can detect at least 10 fentanyl analogs.



While FTS are a cheap, fast, and easy-to-use drug checking tool, there are some limitations to this method. First, although FTS are highly accurate when used properly, user error can result in inaccurate or uninterpretable results. Second, there is emerging evidence to suggest that FTS may be cross-reactive with certain levels of methamphetamine and diphenhydramine, returning false positives for fentanyl when the sample is not sufficiently diluted. Third, FTS do not measure the quantity or potency of fentanyl or fentanyl analogs present in a drug sample. Finally, people using FTS may falsely interpret a negative test result as a clear assurance that their drugs do not

contain fentanyl. Even if the test returns a negative result, the sample may nonetheless contain a fentanyl analog not detected by the FTS or contain fentanyl at a lower concentration than can be detected. Carfentanyl, for instance, is often missed by FTS because of the very low concentration of this analog in the illicit drug supply. Additionally, a negative result does not mean that the sample is completely safe to consume, as it may contain other non-fentanyl adulterants of concern. Before FTS are distributed to community members, harm reduction organizations should provide education on how to properly use the tests and interpret the results.

FENTANYL TEST STRIPS AS A FORM OF HARM REDUCTION

Proponents of FTS support their distribution and use as a method of harm reduction. Many harm reduction programs report that FTS empower community members to make informed choices regarding their drug use and help to prevent accidental overdoses. Additionally, distributing FTS through harm reduction programs or interactions with law enforcement provides an opportunity to engage community members in healthcare services, treatment, and recovery. Every interaction with harm reduction and recovery advocates offers a possible connection with treatment, health care, and other social services, such as housing.

In the past few years, several studies have investigated the efficacy of FTS and whether they cause behavioral changes in the individuals who use them. In a 2018 study entitled, the "Fentanyl Overdose REduction Checking Analysis STudy (FORECAST)," researchers at the Johns Hopkins Bloomberg School of Public Health and Rhode Island Hospital sought to gauge whether people who use drugs and other stakeholders (*e.g.*, harm reduction organizations) would be interested in using drug checking technologies, including FTS. Researchers conducted interviews with 335 people who use drugs in Baltimore, Boston, and Providence. When asked about their drug use, 256 respondents believed they had consumed fentanyl at least once, and 85 percent of those individuals stated that they wished they had known fentanyl was in the substance before they consumed it. Of all respondents, 85 percent desired to know about the presence of fentanyl before using drugs, and 89 percent agreed that drug checking would make them feel better about protecting themselves from an overdose. Additionally, 70 percent of respondents reported that knowing that their drugs contained fentanyl would lead them to modify their behavior. When researchers asked service providers, such as harm reduction organizations, about drug checking, they supported the idea, asserting that it would be an additional way to engage with people who use drugs and would present an opportunity to provide education and connect with various services, including syringe services programs and medical treatment. Moreover, service providers liked the idea of using FTS, specifically, due to their ease of use and distribution so that individuals could use the strips on their own.

In a 2019 study, researchers at Brown University's School of Public Health trained individuals who use drugs to test their drug sample or drug residue with an FTS before consumption. When the participants were interviewed a month later, most who used FTS expressed positive opinions regarding the utility and simplicity of the tests. Participants also expressed that they appreciated being able to use FTS at home or in private rather than having to take their drugs somewhere to be tested. Being able to use FTS in private allowed people to avoid feeling judged and resolved fears about the legal ramifications of their drug use. Additionally, upon receiving a positive FTS result, many participants stated that they were motivated to engage in harm reduction practices, including using a smaller dose, having naloxone nearby, using the drug with someone else around, or choosing not to use the drug at all.

In 2019, RTI International, a research institute, led and published a study on FTS. One hundred and twenty-five people who used drugs completed an online survey about their most recent FTS use. The survey indicated that 81 percent of participants used FTS prior to consuming their drugs and, out of those who did, 43 percent reported a change in drug use behavior, and 77 percent indicated increased feeling of safety from experiencing an overdose by using FTS. Using a smaller dose of the drug than usual was the most commonly reported change in drug use behavior (32 percent) followed by performing a tester shot, which entails injecting a small amount of a drug sample to assess its potency before deciding whether to inject the remainder of the dose (17 percent), snorting instead of injecting (10 percent), and pushing the plunger more

slowly while the needle is still in the vein to gradually assess the effect of the drug (9 percent).

While more studies are needed to fully understand the impact of FTS in changing behavior and preventing overdose, early studies suggest that FTS may be a good addition to current evidence-based overdose prevention and harm reduction efforts.

LEGAL CHALLENGES CONCERNING THE USE OF FTS

One of the main obstacles to getting FTS into the hands of those who need them most are state laws concerning the use and possession of drug paraphernalia. In most states, drug paraphernalia is defined as "testing equipment used, intended for use, or fashioned specifically for use in identifying, or in analyzing the strength, effectiveness or purity of controlled substances," or a minor variant of this language. Possession or use of drug paraphernalia is often criminalized. Although these laws are not generally enforced with regard to the use or possession of FTS, the risk of criminal penalties may deter people and organizations that might otherwise be willing and able to distribute FTS as part of harm reduction services.

Currently, 32 states have drug paraphernalia laws that include controlled substances testing equipment.[1] However, three of those states – North Carolina, North Dakota, and Vermont[2] – have other laws that specifically allow the use of FTS by harm reduction programs. In North Dakota, syringe exchange programs are permitted, pursuant to the newly enacted law, to provide "supplies," which include test strips, to program participants and, further, provides that they are not considered drug paraphernalia under state law. Vermont law allows fees collected from drug manufacturers to be used for the purchase and distribution of FTS. Rhode Island amended their Good Samaritan Law for overdose prevention to explicitly permit the possession, use, and distribution of FTS to prevent overdoses.[3] Additionally, 10 states (Arizona, Delaware, Kansas, Maine, Massachusetts, Minnesota, Nevada, New Mexico, West Virginia, and Wisconsin[4]) have bills pending in their state legislatures that would exclude FTS from the definition of "drug paraphernalia" or that would otherwise allow the possession and use of FTS. Colorado, Maryland, Virginia, and the District of Columbia[5] specifically exclude FTS or testing kits generally from the definition of "drug paraphernalia," while Nebraska, New York, South Carolina, and Wyoming[6] do not include testing equipment in the definition. Finally, Alaska does not have a definition for "drug paraphernalia." It is important to note that Federal funds cannot be used to lobby to change laws that prohibit FTS because it is defined as drug paraphernalia.

Simply because a jurisdiction includes testing equipment in its definition of "drug paraphernalia" does

[1] ALA. CODE § 13A-12-260 (2021); ARK. CODE ANN. § 5-64-101 (West 2021); CAL. HEALTH & SAFETY § 11014.5 (West 2021); CONN. GEN. STAT. ANN. § 21a-240 (West 2021); FLA. STAT. ANN. § 893.145 (West 2021); GA. CODE ANN. § 16-13-1 (West 2021) ("drug related objects"); HAW. REV. STAT. ANN. § 329-1 (West 2021); IDAHO CODE ANN. § 37-2701 (West 2021); 710 ILL. COMP. STAT. ANN. 600/2 (West 2021); IND. CODE ANN. §§ 35-48-4-8.3 and -8.5 (West 2021); IOWA CODE ANN. § 124.414 (West 2021); KY. REV. STATE. ANN. § 218A.500 (West 2021); LA. STAT. ANN. § 40:1021 (2021); MICH. COMP. LAWS ANN. § 333.7451 (West 2021): MISS. CODE ANN. § 41-29-105 (West 2021); MO. ANN. STAT. § 195.010 (West 2021); MONT. CODE ANN. § 45-10-101 (West 2021); N.H. REV. STAT. ANN. § 318-B:1 (2021); N.J. STAT. ANN. § 2C:36-1 (West 2021); N.C. GEN. STAT. ANN. § 90-113.21 (West 2021); N.D. CENT. CODE ANN. § 19-03.4-01 (West 2021); OHIO REV. CODE ANN. § 2925.14 (West 2021); OKLA. STAT. ANN. tit. 63 § 2-101 (West 2021); OR. REV. STAT. ANN. § 475.525 (West 2021); 35 PA. STAT. AND CONS. STAT. ANN. § 780-102 (West 2021); R.I. GEN. LAWS ANN. § 21-28.5-1 (West 2021); S.D. CODIFIED LAWS § 22-42A-1 (2021); TENN. CODE ANN. §§ 39-17-402 and -425 (West 2021); TEX. HEALTH & SAFETY § 481.002 (West 2021); UTAH CODE ANN. § 58-37A-3 (West 2021); VT. STAT. ANN. tit. 18 § 4475 (West 2021); and WASH. REV. CODE ANN. § 69.50.102 (West 2021).

[2] See N.C. GEN. STAT. ANN. § 90-113.22 (West 2021), N.D. CENT. CODE ANN. § 23-01-44 (West 2021) and VT. STAT. ANN. tit. 33 §§ 2004 and 2004a (West 2021).

[3] 21 R.I. GEN. LAWS ANN. § 21-28.9-3.1 (West 2021).

[4] S.B. 1486, 2021 55th Leg., First Reg. Sess., (Ariz. 2021); S.B. 76, 151st Gen. Assemb., Reg. Sess. (Del. 2021); H.B. 2277, 2021-2022 Legis. Sess., Reg. Sess. (Kan. 2021); H.P. 732, 130th Leg., Reg. Sess. (Me. 2021); H.B. 2125, 192nd Gen. Ct., Reg. Sess. (Mass. 2021); S.B. 990, 192nd Gen. Ct., Reg. Sess. (Mass. 2021); H.F. 883, 92nd Leg., Reg. Sess. (Minn. 2021); H.F. 928, 92nd Leg., Reg. Sess. (Minn. 2021); S.F. 1142, 92nd Leg., Reg. Sess. (Minn. 2021); S.F. 1724, 92nd Leg., Reg. Sess. (Minn. 2021); A.B. 345, 81st Leg., Reg. Sess. (Nev. 2021); H.B. 17, 55th Leg., First Sess. (N.M. 2021); S.B. 13, 55th Leg., First Sess. (N.M. 2021); S.B. 363, 55th Leg., First Sess. (N.M. 2021); S.B. 264, 85th Leg., 1st Sess. (W. Va. 2021); A.B. 68, 2021-2022 Leg., Reg. Sess. (Wis. 2021).

[5] COLO. REV. STAT. ANN. § 18-18-426 (West 2021); D.C. CODE ANN. §§ 48-1101 and -1103 (West 2021); MD. CODE ANN. CRIM. LAW § 5-101 and HEALTH-GEN. § 24-908; and VA. CODE ANN. §§ 18.2-265.1 and 54.1-3466 (West 2021).

[6] NEB. REV. STAT. ANN. § 28-439 (West 2021); N.Y. GEN. BUS. § 850 (McKinney 2021); S.C. CODE ANN. § 44-53-110 (2021); and WYO. STAT. ANN. § 35-7-1002 (West 2021).

not necessarily mean that harm reduction organizations and others are prohibited from distributing or using FTS. For example, Massachusetts law includes testing equipment in its definition, but the Police Assisted Addiction and Recovery Initiative (P.A.A.R.I.) in Massachusetts initiated a three-month pilot program in 2020 where it partnered with 11 police departments across the Commonwealth to distribute FTS kits to individuals who were at risk of an overdose. Each test kit contained three FTS, a brochure outlining how to use the strips, information regarding naloxone, and information on how to contact both the Massachusetts Substance Use Helpline and a P.A.A.R.I. recovery coach. In December 2020, P.A.A.R.I., in partnership with Brandeis University, received a grant to continue to distribute the fentanyl test kits.

Other states that have instituted FTS distribution programs, despite having a drug paraphernalia law that includes testing equipment, include California, Connecticut, New Jersey, Ohio, Texas, Utah, and Washington. Additionally, Maine recently began a program that allows police departments to distribute FTS. Currently, Maine's drug paraphernalia law includes testing equipment; however, they are one of the 10 states with a bill pending that would change that.

According to an article published in the American Journal of Public Health (AJPH), evaluations of harm reduction programs that provide FTS to participants "demonstrate that [those who inject drugs] are both willing and able to use knowledge gained from FTSs to reduce overdose risk."

CONCLUSION

FTS are a useful tool in the fight against overdoses and can lead to changes in an individual's drug use as well as provide an opportunity to engage individuals in recovery, extend life-saving interventions, and offer social service supports.

RESOURCES

Boden, Sarah. "Fentanyl Test Strips Could Save Lives, But They're Illegal in Pennsylvania." *90.5 WESA*, August 13, 2019. https://www.wesa.fm/science-health-tech/2019-08-13/fentanyl-test-strips-could-save-lives-but-theyre-illegal-in-pennsylvania.

Campo-Flores, Arian. "Fentanyl's New Foe: A Quick Test Strip that can Prevent Overdoses." *Wall Street Journal*, January 2, 2019. https://www.wsj.com/articles/fentanyls-new-foe-a-quick-test-strip-that-can-prevent-overdoses-11546252200.

Centers for Disease Control and Prevention. "Federal Grantees May Now Use Funds to Purchase Fentanyl Test Strips." April 7, 2021. https://www.cdc.gov/media/releases/2021/p0407-Fentanyl-Test-Strips.html.

Columbus Public Health. "Fentanyl Exposure." https://www.columbus.gov/Templates/Detail.aspx?id=2147505536.

Conde, Ximena. "Parents and Camden County Officials Hope Free Fentanyl Test Strips will Reduce Overdose Deaths." *WHYY*, February 25, 2020. https://whyy.org/articles/parents-and-camden-county-officials-hope-free-fentanyl-test-strips-will-reduce-overdose-deaths/.

Connecticut Department of Public Health. "Fentanyl Testing to Prevent Overdose: Information for Healthcare Providers and People Who Use Drugs." https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/AIDS--Chronic-Diseases/Prevention/DPH_FentanylTestStrips.pdf.

DanceSafe. "How to Test Your Drugs for Fentanyl." Last modified Fall 2020. https://dancesafe.org/wp-content/uploads/2020/10/DS-fentanly-instruction-2020.pdf.

Davis, Corey, Derek Carr, and Elizabeth Samuels. "Paraphernalia Laws, Criminalizing Possession and Distribution of Items Used to Consume Illicit Drugs, and Injection-Related Harm." *American Journal of Public Health*, 109, no. 11 (September 2019): e1-e4. https://www.researchgate.net/publication/335940120_Paraphernalia_Laws_Criminalizing_Possession_and_Distribution_of_Items_Used_to_Consume_Illicit_Drugs_and_Injection-Related_Harm.

Goldman, Jacqueline E., et al. "Perspectives on Rapid Fentanyl Test Strips as a Harm Reduction Practice Among Young Adults Who Use Drugs: A Qualitative Study." *Harm Reduction Journal* 16, no. 3 (2019). https://harmreductionjournal.biomedcentral.com/track/pdf/10.1186/s12954-018-0276-0.pdf.

Green, Traci C., et al. "An Assessment of the Limits of Detection, Sensitivity and Specificity of Three Devices for Public Health-based Drug Checking of Fentanyl in Street-acquired Samples." *International Journal of Drug Policy* 77 (March 2020). https://www.sciencedirect.com/science/article/pii/S0955395920300025?via%3Dihub.

Guilfoil, John. "P.A.A.R.I. Announces Fentanyl Test Strip Pilot Project." *PAARI: The Police Assisted Addiction and Recovery Initiative*, April 3, 2020. https://paariusa.org/2020/04/03/p-a-a-r-i-announces-fentanyl-test-strip-pilot-project/.

RESOURCES CONTINUED

Lieberman, Amy. "Removing Legal Barriers to Drug Checking Can Help Reduce Drug-Related Harm." *The Network for Public Health*, April 8, 2020. https://www.networkforphl.org/news-insights/removing-legal-barriers-to-drug-testing-can-help-reduce-drug-related-harm/.

Mars, Sarah G., Jeff Ondocsin, and Daniel Ciccarone. "Toots, Tastes and Tester shots: User Accounts of Drug Sampling Methods for gauging Heroin Potency." *Harm Reduction Journal* 15, no. 26 (2018). https://harmreductionjournal.biomedcentral.com/articles/10.1186/s12954-018-0232-z#citeas.

National Harm Reduction Coalition. "Fentanyl Test Strip Pilot." Last modified October 5, 2020. https://harmreduction.org/issues/fentanyl/fentanyl-test-strip-pilot/.

National Harm Reduction Coalition. "Fentanyl Use and Overdose Prevention Tips." Last modified September 8, 2020. https://harmreduction.org/issues/fentanyl/fentanyl-use-overdose-prevention-tips/.

Peiper, Nicholas C., et al. "Fentanyl Test Strips as an Opioid Overdose Prevention Strategy: Findings from a Syringe Services Program in the Southeastern United States." *International Journal of Drug Policy* 63 (2019): 122-128. https://www.sciencedirect.com/science/article/pii/S0955395918302135.

Schreiber, Evan. "Police Departments to Distribute Fentanyl Test Strips to Fight Overdose." *KATU*, March 16, 2021. https://katu.com/news/recover-northwest/police-departments-to-distribute-fentanyl-test-strips-to-fight-overdose.

Sherman, Susan G., et al. "Fentanyl Overdose Reduction Checking Analysis Study." *Johns Hopkins Bloomberg School of Public Health*, February 6, 2018. https://www.btnx.com/files/Johns_Hopkins_Fentanyl_Executive_Summary.pdf.

Utah Department of Health. "Fentanyl Test Strip Pilot Project." Published 2020. https://ptc.health.utah.gov/wp-content/uploads/2020/12/FTS-Report-Q1-2020-Final.pdf.

Washington State Department of Health. "Fentanyl Test Strip Project." https://www.doh.wa.gov/YouandYourFamily/DrugUserHealth/OverdoseandNaloxone/FentanylTestStrip

ABOUT LEGISLATIVE ANALYSIS AND PUBLIC POLICY ASSOCIATION

The Legislative Analysis and Public Policy Association (LAPPA) is a 501(c)(3) nonprofit organization whose mission is to conduct legal and legislative research and analysis and draft legislation on effective law and policy in the areas of public safety and health, substance use disorders, and the criminal justice system.

LAPPA produces up to the minute comparative analyses, publications, educational brochures, and other tools ranging from podcasts to model laws and policies that can be used by national, state, and local criminal justice and substance use disorder practitioners who want the latest comprehensive information on law and policy. Examples of topics on which LAPPA has assisted stakeholders include naloxone laws, law enforcement/community engagement, alternatives to incarceration for those with substance use disorders, medication assisted treatment in correctional settings, and the involuntary commitment and guardianship of individuals with alcohol or substance use disorders.

For more information about LAPPA, please visit: https://legislativeanalysis.org/.