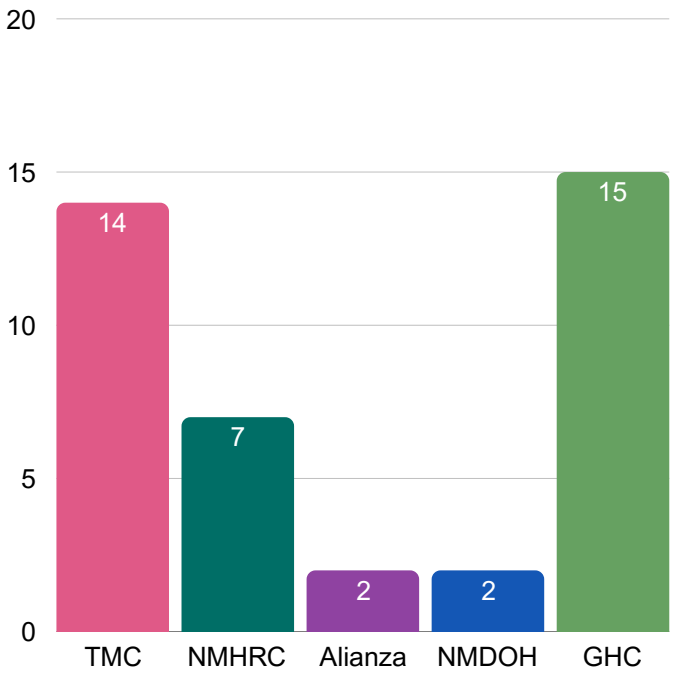
NMHealth

Harm Reduction Section

Adulterant Checking Program Monthly Snapshot

NMHarmReduction.org

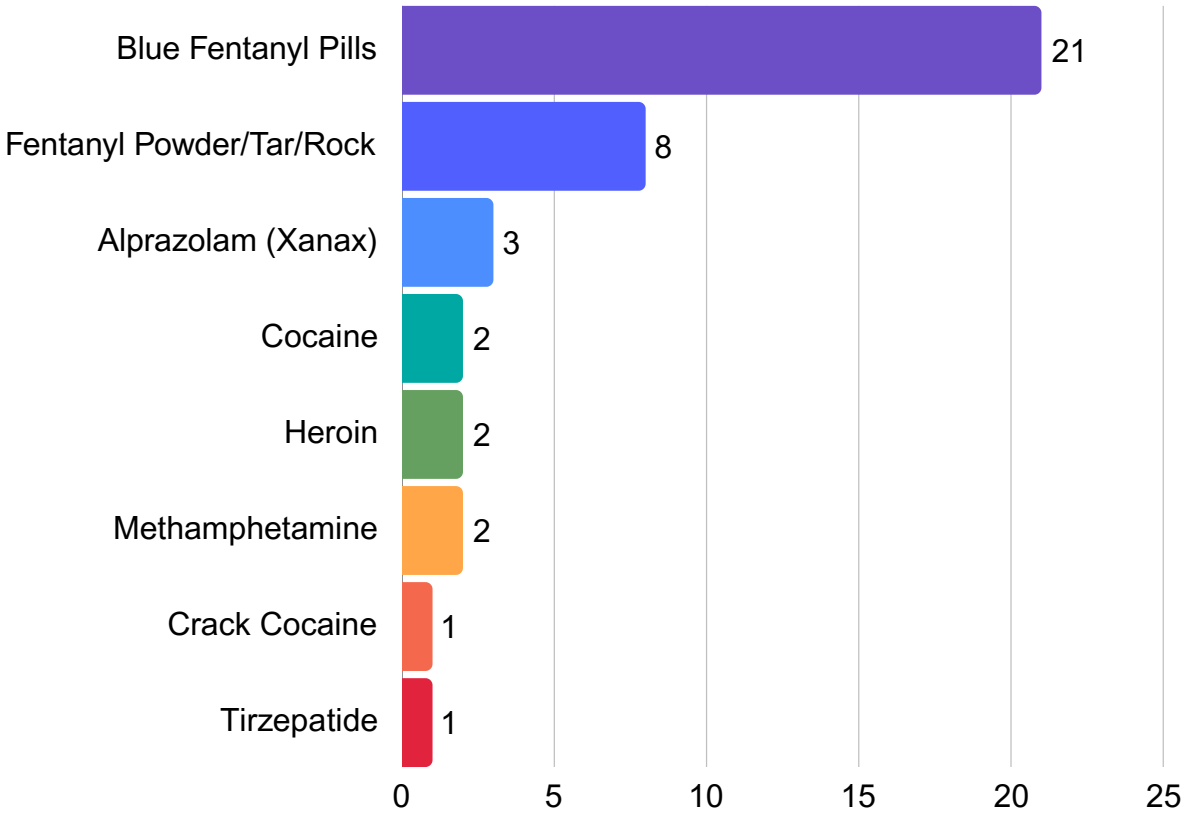
February 2025



In February 2025, a total of **40 substances** were submitted at five sites throughout New Mexico. **25 samples** were tested at Point-of-Care (POC) at four sites, while **15 samples** from the Gallup Health Cooperative were lab only. **34 total samples** were sent for confirmatory testing at the University of North Carolina Chapel Hill's Street Drug Analysis Lab.

- The Mountain Center, Española
- NM Harm Reduction Collaborative, ABQ
- Alianza of New Mexico, Roswell
- NMDOH Southwest Region, Las Cruces
- Gallup Health Cooperative, Gallup (Lab Only)

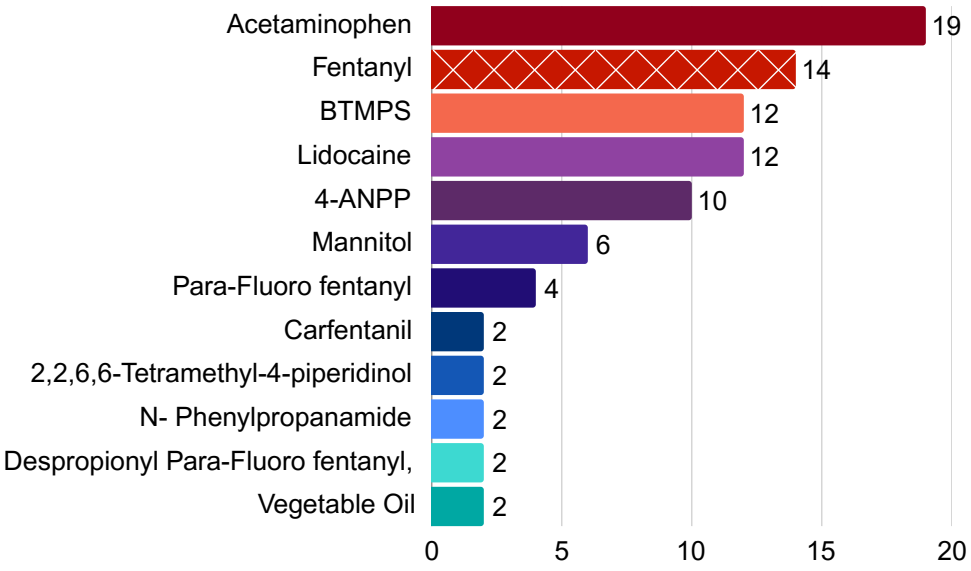
Samples by Type (Expected Substance)



Sample type is determined by what the individual bringing the sample believes they purchased or received it as. Substances are tested using Fourier-transform infrared spectroscopy (FTIR) machines. It uses a laser and infrared light to scan and identify the different "ingredients" in a sample. It can identify well known drugs, common cuts, and other substances. It can give a rough estimate of the amount of each substance.

The following results show the various substances detected in 40 samples collected by the five Adulterant Checking Program sites through the New Mexico Department of Health. The contents of the samples are not mutually exclusive and there may be variations from sample to sample. The expected drug, or what it was sold to the individual as, is demarked with an ╳. A glossary of terms can be found at the end of the document.

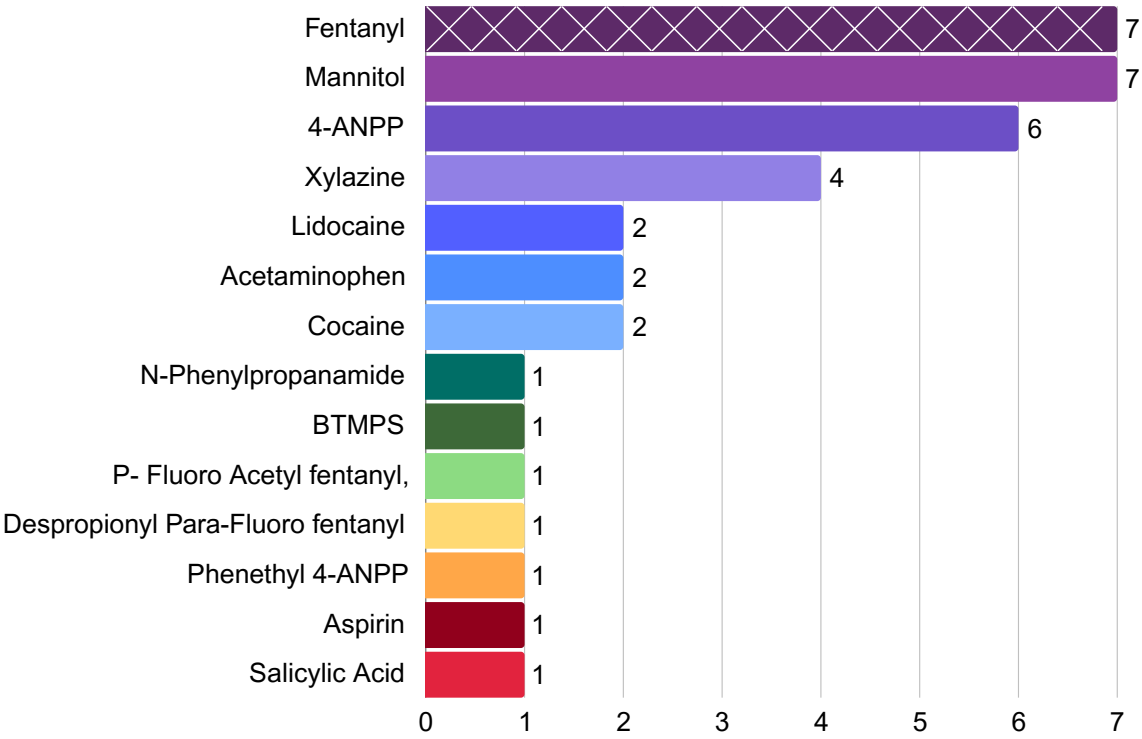
Graph 1: Counterfeit M30 Fentanyl Pills “Blues” (n=21)



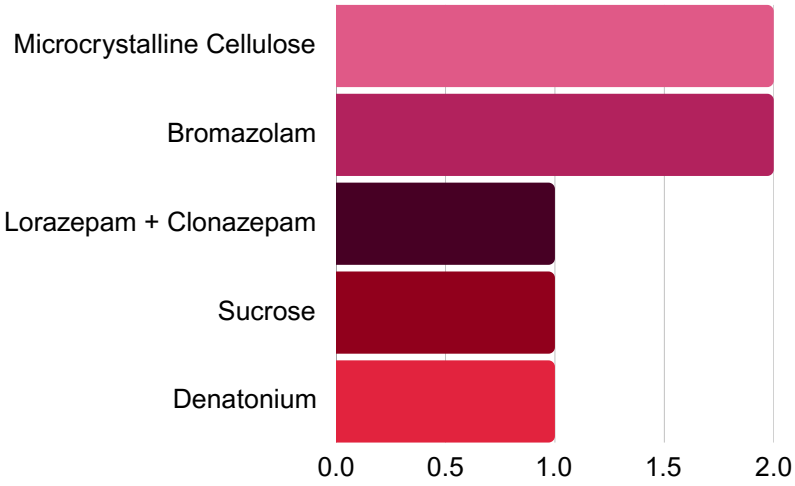
The results of **Graph 1** shows that of the 21 different pill samples expected to be fentanyl, only 14 of them contained fentanyl. 15 samples were lab only tests (lab only identifies pharmacological ingredients) that likely contained mannitol. 2 pills contained no fentanyl or fentanyl analogues.

Graph 2: Fentanyl Powder/Rock/Tar Formulations (n=8)

The results from **Graph 2** show that of the 8 samples submitted that were fentanyl powder, rock, tar, or other formulations, 7 contained fentanyl. The amount of fentanyl present in each sample can vary. There were 14 different substances found in the samples.

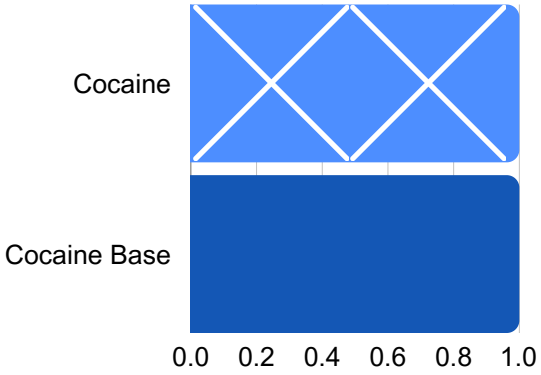


Graph 3: Alprazolam (Xanax) (n=3)



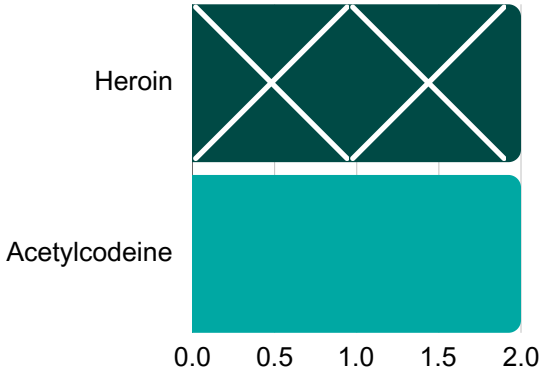
In the three samples submitted that were expected to be alprazolam (Xanax), **Graph 3** shows that the samples did not contain any alprazolam. 2 samples contained bromazolam, an illegally manufactured benzodiazepine. 1 additional sample contained a mixture of lorazepam and clonazepam, two other benzodiazepines.

Graph 4: Cocaine (n=2)



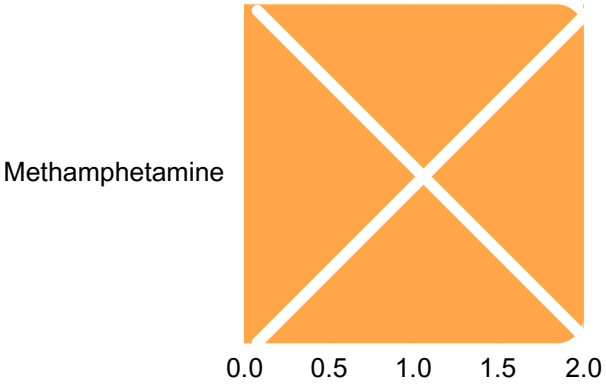
Of the 2 samples of cocaine that were submitted, **Graph 4** shows that one sample tested as cocaine while the other tested as cocaine base. Cocaine base is most likely crack cocaine that has been ground into powder. Both showed a negative result on the fentanyl test strip.

Graph 5: Heroin (n=2)



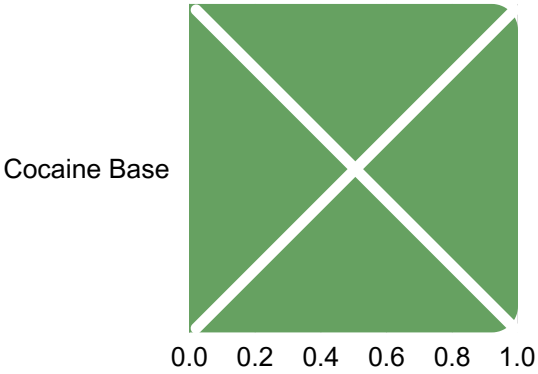
Graph 5 shows the results for 2 submitted samples expected to be heroin. Both samples contained heroin and acetylcodeine, a metabolite of heroin left over from the manufacturing process.

Graph 6: Methamphetamine (n=2)



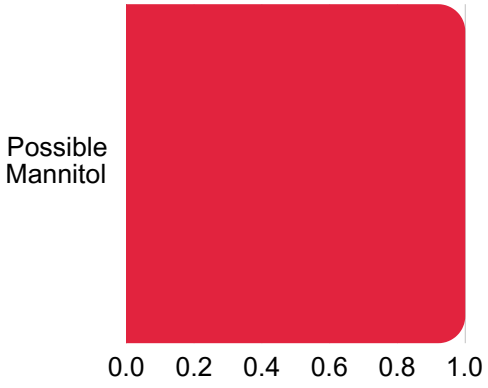
The results of **Graph 6** display that in the 2 samples of expected to be methamphetamine, the only substance detected was methamphetamine. The fentanyl test strips were also negative.

Graph 7: Crack Cocaine (n=1)



The results of **Graph 7** display that in the 1 sample of crack cocaine, the only substance that was detected was cocaine base. The fentanyl test strip was negative.

Graph 8: Tirzepatide (n=1)



Graph 8 was a sample where the expected drug was tirzepatide, a medication used to treat type 2 diabetes or for weight loss. The FTIR detected the sample as possible mannitol, however, the lab has not been able to identify tirzepatide. The substance remains unknown, possibly a polymer.

***Samples are collected and analyzed by trained technicians with the Adulterant Checking Pilot Programs. Samples are tested with FTIR spectroscopy and test strip technologies at the Point-of-Care and sent for complimentary GCMS spectrometry testing at the University of North Carolina Chapel Hill's Street Drug Analysis Lab. Please contact Phillip Fiuty, Adulterant Checking Program Technical Advisor with NM Health, with further questions. Email: phil.fiuty@doh.nm.gov, Phone: (646) 581-0525.

Glossary of Words, Drugs and Chemicals

Adulterants, Cuts, and "Laced": These words are often used interchangeably when talking about drugs, though in reality, they each mean very different things. This often creates confusion and obscures the true nature of illicit drug manufacturing and the supply chain while simultaneously implying malicious intent that further obfuscates the realities of illicit drug sales and use at the "street", or individual level.

Unlike the common perception of a desire for profit, an "*Adulterant*" is a pharmacologically active substance usually added during the manufacturing of an illicit drug or immediately after to enhance or to mimic the drug's effects or to facilitate administration of the drug. They can also include artifacts from the manufacturing process, such as precursors that have not been properly washed out that may have pharmacological effects of their own. An adulterant may increase the risk of adverse side effects, including overdose, and other drug interactions.

Examples of adulterants identified in NM include other illicit drugs (fentanyl, carfentanil); other licit drugs or chemicals (quinine, caffeine, dextromethorphan, phenacetin, BTMPS, acetamiprid, diphenhydramine, benzocaine, procaine, aspirin, tramadol, medetomidine, xylazine, levamisole); illicit drugs from cross-contamination during the manufacture, sale, or from shared storage (methamphetamine and cocaine found in fentanyl samples); precursors, intermediaries, and other leftovers from the manufacturing process (4-ANPP, despropionyl, N-phenylpropanamide, methylecoginine, acetylcodeine, 6-monoacetylmorphine, N-propionyl norfentanyl); and others added to facilitate administration (acetaminophen and metamizole which have similar melting and boiling points as fentanyl and may help when "smoking" it by protecting the fentanyl from burning during the vaporization).

"Cut", or *"cutting agents"*, also known as *"dilutants"*, are inert and often easily available and inexpensive substances used to add bulk, or make a drug easier to measure, distribute, and use, otherwise known as an "excipient." It is extremely difficult to measure some synthetic licit and illicit drugs that are pharmacologically active in minute amounts and divide them accurately into non-lethal doses.

For example, it is much easier and safer to turn a gram of fentanyl into 500 doses by dissolving it into a measured amount of water, mixing in the other cutting agents and adulterants, and then dividing the mixture into 500 equal parts. This is similar to adding a teaspoon of vanilla extract in a cake recipe. It's much easier to dissolve the vanilla into your batter than to serve your cake with a side of vanilla extract and attempt to sprinkle just the right amount onto each slice of cake. And just like trying to guess the amount of the individual ingredients in a slice of cake, cutting agents can add uncertainty as to the actual dose of a drug that is being ingested. Examples of cutting agents identified in NM include mannitol, inositol, microcrystalline cellulose, flour/corn flour, sucrose, and denatonium.

The definition of *"Lace"*, or *"Laced"* is to put a small amount of a substance such as alcohol, a drug, or even poison into food or drink for someone else to consume, usually with bad intent. "Getting roofied" is slang for when someone puts Rohypnol, a sedative and common date-rape drug, into someone else's drink. GHB is another drug that sometimes is used this way.

Counterfeit pills that may contain fentanyl are not “laced with fentanyl” (see below), though there are unfortunate cases where someone, often a young or inexperienced drug user, was taken advantage of by someone who sold them counterfeit pills and told them they were legitimate prescription pills. Although these situations involved deception it does not mean that the “dealers” are intentionally lacing the pills with fentanyl. The fake pills are manufactured that way.

Another common misuse of “laced” is the assumption that “dealers” are “lacing” methamphetamine and cocaine with fentanyl presumably to make them “more addictive”, yet no one asks themselves why these drugs that for over a century were considered some of the most addictive substances in the world are suddenly not addictive enough so that sellers need to add something like another drug that might kill their customers, while at the same time being told that the “new meth” and cocaine are more pure and more dangerous than ever?

It seems strange that something could be simultaneously pure while also being laced with fentanyl, yet this is the way that most people, including those that sell and use drugs, have been conditioned to think and talk about drugs. This way of thinking is summed up nicely in a research article published in 2016 in Forensic Science International entitled “The Cutting of Cocaine and Heroin: A Critical Review”, the first paragraph of “Section 1, Context.”

“*The wider public has the perception that drugs are deliberately and frequently cut using substances potentially harmful for health, such as household cleaning products, brick dust, strychnine or ground glass [1–3]. It is worth noting that such perception is spread both among consumers (who are largely ignorant of the actual content of their samples) and even street dealers [4–8]. This perception may arise because of the main argument put forward to justify cutting. Indeed, cutting is usually explained by the seller's desire to increase its profits. This would be performed by adding to the illicit drug any substance that looks like it and/or would have the same effect, with no possibilities for the buyer to notice the addition, and that may be harmful [9]. However, the dealer sells commodity and relies on repeat customers, sometimes interacting with the same people. Thus, he should be seen as a businessman: poisoning customers does not make good business sense regarding income supply or reputation [3]. Furthermore, some dealers even say being concerned by their customers’ health [5,10,11]. This is why presence of harmful substances in illicit drugs may only occur if dealers or suppliers were ignorant or inexperienced (i.e. that they would try cutting drugs by themselves, with available substances, therefore taking the risk to create toxic mixtures), if they wanted to kill the maximum number of people or had a desire for revenge. But these scenarios are not considered as “normal” cutting approaches [1,12].”*

Very few samples of stimulants that also contained fentanyl have been identified by drug checking programs nationally, and none in NM. Most of the samples positive for fentanyl are attributed to dealer mix-ups or cross contamination rather than intentional mixing pre-sale, including the stories that have made national news about overdoses among people who thought they were doing cocaine.

**Julian Broséus, Natacha Gentile, Pierre Esseiva, The cutting of cocaine and heroin: A critical review, Forensic Science International, Volume 262, 2016, Pages 73-83, ISSN 0379-0738, https://doi.org/10.1016/j.forsciint.2016.02.033. (https://www.sciencedirect.com/science/article/pii/S037907381630055X)

This study Prevalence of fentanyl in methamphetamine and cocaine samples collected by community-based drug checking services - ScienceDirect, which included samples of methamphetamine and cocaine collected in NM, examines the pervasive “fentanyl in everything” myth. Ironically, fentanyl samples have been frequently found to contain both cocaine and methamphetamine among the other adulterants identified. This report from CFSRE Sentinel_Snapshot_-_Qualitative_Analysis_Final.pdf shows that the fentanyl is entering the country already adulterated/contaminated with the range of adulterants that we are reporting locally. Using the cooking analogy above, it seems as though the cooks are not washing their dishes between baking their cakes.

Counterfeit M30 Blue Pills, known as “blues” or “the blues”: Once again, there is confusion created using the words “cut” or “laced” which often leads people to believe that ordinary prescription drugs are somehow being adulterated with fentanyl. Counterfeit pills are not cut or laced with anything nor do they contain crushed medications mixed with fentanyl, but rather they are counterfeit pills that are made to look like common prescription pills, such as the fake M30’s that often contain fentanyl and look like a 30 mg oxycodone pill, fake blue or white Adderall pills that contain methamphetamine, and fake alprazolam (“Xanax”) pills that contain illicitly manufactured bromazolam (benzodiazepine). Very few, if any, of the people that we serve with the Harm Reduction Program think that these are real oxycodone pills and know that they are likely to contain fentanyl. Fentanyl Test Strips are one tool that can help minimize the risks of an illicit and unregulated drug supply.

4-ANPP: Is used in the synthesis of pharmaceuticals and is a precursor to fentanyl, often left behind from the synthesis and inadequate “washing”, or purification, of the final product. 4-ANPP is not known to have any psychoactive effects, but many precursors, intermediaries, and metabolites commonly found with illicitly manufactured substances do have psychopharmacological effects of their own and may contribute to an overdose and other adverse effects.

Acetylcodeine: A metabolite of heroin left over from the manufacturing process. Codeine naturally occurring in opium turns into acetylcodeine from the process of turning morphine into heroin.

Acetaminophen: An NSAID (“Tylenol”) commonly found with fentanyl in the USA as a bulking agent and “excipient” (an inactive substance that serves as the “vehicle” for a drug), likely due to both its availability and having some similar chemical properties to fentanyl, including both a high “melting point” and a high “boiling point.” These properties help to facilitate the vaporizing of fentanyl for inhalation without burning, commonly known as “smoking” fentanyl.

Aspirin: A common NSAID, household pain reliever.

Bromazolam: An illicitly manufactured benzodiazepine not approved for use in humans. It is more potent than alprazolam (“Xanax”) and its effects are described as more euphoric and longer lasting.

BTMPS: An industrial plastics additive that provides UV light protection and is also used in boat sealants, scented candles and air fresheners. BTMPS has become a commonly found (cont.)

adulterant in fentanyl, but the reason is poorly understood. Also known by its chemical name **bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate**, individuals using fentanyl that contains BTMPS have reported a harsh taste, coughing, vomiting, and blurry vision after use, and have described an odor similar to fish, bug spray, or chlorine.

2,2,6,6-tetramethyl-4-piperidinol: A research chemical with no medical or household uses, and is likely a cheaper alternative to the BTMPS, though, again, the reason for it remains unclear.

Carfentanil: A potent analogue of fentanyl known to be much stronger and have a significantly longer half-life than fentanyl. Because Carfentanil has a slightly different molecular structure than fentanyl, and can be present in such small quantities, it often may not be detectable with the fentanyl test strips. It's re-emergence nationally in 2024 is primarily categorized as being in "trace abundance", meaning that it is often the smallest component of a sample, unlike in 2017 and 2018 when it was associated with a high number of fatal overdoses.

Clonazepam and Lorazepam: Are both benzodiazepines. Clonazepam (Klonopin) is commonly used to treat seizures and anxiety disorders. Lorazepam (Ativan) is used to treat insomnia, anxiety and seizures. Both are also used to help with alcohol withdrawal.

Denatonium: Is the most bitter compound in the world and is commonly added to toxic substances such as antifreeze, wiper fluid, products containing methanol, and many other household cleaning and hygiene products to deter humans and animals from consuming them. Its medical use includes treatments for asthma and allergies because it binds to the "bitter" receptors which causes the relaxation of the smooth muscles (in the lungs) and bronchial tubes, relieving the restriction and help to restore normal breathing. It has been identified in a small number of samples containing bromazolam from NM and elsewhere.

Despropionyl Para-Fluorofentanyl: A precursor for the synthesis of para-fluorofentanyl as well as an impurity in the final product.

Lidocaine: A common numbing agent that may cause vein damage and collapse when injected intravenously, with accompanying wounds like those caused by xylazine. Lidocaine is also known to cause "false positive" test results with the xylazine test strips.

Mannitol: A type of sugar alcohol commonly used as a sweetener, a supplement, and a medication. It has very low "hygroscopicity" which means it does not absorb water from the air and is used as a coating for hard candies, gum, and counterfeit pills. Mannitol is commonly sold at smoke shops and used as a cutting, or bulking agent for cocaine, heroin, powdered methamphetamine, and fentanyl, and as an excipient when manufacturing counterfeit pills.

Microcrystalline Cellulose: A fine, white powder derived from plant matter that is commonly used in food, supplements, pharmaceuticals, and cosmetics. In pharmaceuticals it is used as an (cont.)

excipient, and it easily presses into hard tablets that can also quickly dissolve. Some common medications that contain microcrystalline cellulose are alprazolam (Xanax), hydrocodone, oxycodone, tramadol, and dextroamphetamine (Adderall), and it is frequently used for the manufacturing of counterfeit pills.

N-phenylpropanamide: Or NPAA, is a leftover impurity from the synthesis of fentanyl.

N-Propionyl norfentanyl: Is known to be a common precursor used in fentanyl synthesis. It is easily available online as an analytical reference standard that is similar to other known opioids, though its chemical structure is easily manipulated and can be used to manufacture many fentanyl analogues. The DEA added it to the "Special Surveillance List" in 2023.

P-Fluoro Acetyl fentanyl: A less potent isomer of fentanyl that appears as a reference standard, precursor, or impurity.

Para-Fluoro fentanyl: A fentanyl analogue made with different precursor chemicals and known to sometimes be more potent than fentanyl, even appearing at times as the primary substance in a sample.

Phenethyl 4-ANPP: A precursor to fentanyl available as a reference standard. Its presence is attributed to different synthesis methods, likely due to restrictions on other common precursors.

Salicylic Acid: A chemical compound used in cosmetics and medicine. It is both a precursor and metabolite of aspirin.

Sucrose: Composed of naturally occurring glucose and fructose, which when refined produces sucrose, or "white sugar."

Tirzepatide: (Mounjaro) A glucagon-like peptide often referred to as a GLP-1 receptor agonist used to treat type 2 diabetes and for weight loss. The sample provided was purchased from an online compounding pharmacy during the Mounjaro shortage and the person reported that they did not believe that it contained any active medication. The results from the FTIR at the POC were poor matches for "flour" or mannitol, and the lab has been unable to positively identify the sample using three different types of mass spectrometers. Buying medications and illicit drugs online is another kind of risk, and the drug checking community has been building libraries of hormones and other medications commonly sought from online pharmacies and the dark web as more people seek medications there that they are unable to access through legitimate sources.

Vegetable Oil: Vegetable oil is commonly used as a coating in the manufacture of counterfeit pills.

Xylazine, also known as "Tranc": A potent sedative used in veterinary medicine that is sometimes added to fentanyl to enhance and extend its effects. Repeated use sometimes leads to serious wounds that are difficult to heal.

Resources

NMPathways.org

Medications for Opioid Use Disorder (MOUD) are available through the New Mexico Department of Health (NMDOH) at Public Health Offices (PHO) throughout the state for *free* or *low-cost.*

Medications have shown to:

- Manage Withdrawal
- Reduce Cravings
- Support long-term recovery

For more information or to find a provider: visit **NMPathways.org** or call **1-833-796-8773**

NMHarmReduction.org

- Order naloxone (Narcan) directly to you at no-cost
- Learn about harm reduction and overdose prevention

NMHIVGuide.org

- Locate a PHO or community partner closest to you for services such as:
  - Harm reduction education and safer use supplies
  - Naloxone and overdose prevention
  - STD/STI prevention, testing, or treatment
  - HIV prevention, testing, or treatment

*Additional harm reduction and overdose prevention materials are available for download on **NMHarmReduction.org***

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