SOMETHING FOR THE PAIN

EPISODE 25: Surveying Substance Use Disorder: Fentanyl

(45 mins)

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[cue guitar music]

[Sam Steffen]

This is *Something for the Pain*, a podcast produced by Project ECHO Idaho, made for Idaho's healthcare professionals working to prevent, treat, and facilitate recovery from opioid and substance use disorders throughout the Gem State. I'm your host, Sam Steffen.

[theme song]

Today we're continuing our theme of 'Surveying Substance Use Disorders' and are going to be talking about Fentanyl. This episode features a presentation by Cathy Oliphant, Co-Chair of Pharmacy Practice and Administrative Sciences, Idaho State University, Pocatello, titled "Fentanyl." This lecture was recorded on May 26, 2022 as a part of ECHO Idaho's Opioids, Pain and Substance Use Disorders series. Here to introduce today's presenter is ECHO Idaho's former Director, Lachelle Smith.

[Lachelle Smith]

Welcome to ECHO Idaho, Opioids, Pain and Substance Use Disorders. I am Lachelle Smith, very pleased to facilitate today. Today our talk is brought to us by Cathy Oliphant on 'Fentanyl' so we'll give the floor to Cathy…

[Cathy Oliphant]

Thanks, Lachelle. So I am Cathy Oliphant and I am a pharmacist and professor at ISU College of Pharmacy. I'm going to talk about fentanyl today. We're going to look at the basics of fentanyl, describe the impact of illicitly manufactured fentanyl on the opioid crisis and we will discuss some harm-reduction strategies that could reduce fentanyl overdoses.

So I wanted to start with this: so the first ever National Fentanyl Awareness Day was just a couple weeks ago, on May 10, and it was sort of initiated by groups of parents who had lost loved ones to the opioid epidemic. And they kind of said the date was purposely set during Mental Health Awareness Month to really increase the awareness about self-medication at a time that counterfeit pills have really just bombarded the drug market. And the goal was to reach the most vulnerable demographic, and based on that the CDC also ran a fentanyl campaign, developed a bunch of resources to really help further explain the dangers of fentanyl, ways to protect yourself, and to really just increase awareness and education. So I think this will become a yearly thing, so you can look for it again next year—unfortunately, right?

So Fentanyl—what is it? So it is a synthetic opioid that is a mu-receptor agonist. It is a schedule-2 controlled substance. Fentanyl, we'll talk about some of its analogues that fall out of that schedule-2, and there are a lot of different preparations—so, intravenous, intramuscular, you know, which can be

used post-operatively for acute severe pain in hospitals. And there are a lot of other preparations: the transdermal patch; we'll talk about that some more. Duragesic may be a name that some of you are familiar with? I don't think that brand-name is available, it's all, I believe, generic trans-dermal patches now, but some people may be familiar with that name. And then there are a lot of trans-mucoso-preparations, and there is a lot of risk with these, and we'll talk more about these later. But we have Actiq, which is kind of that lozenge, or lollipop, preparation; Fentora which is a buccal tab; Lazanda is an intra-nasal spray and Subsys is a sub-lingual spray, and we'll talk more about those and how to use them appropriately, and such.

So fentanyl is used to treat acute, severe and chronic pain, and as we talk about some of these different preparations, we'll talk about how they are approved and need to be used appropriately. So, fentanyl: we've talked about it being a synthetic opioid which is fifty times more potent than heroin and a hundred times more potent than morphine as an analgesic. And so we'll talk a little bit later that we know it's going to be a contributor to fatal and non-fatal overdoses and we'll talk initially about the pharmaceutical preparation of fentanyl and then we'll move into the illicitly manufactured fentanyl. Some of these analogues can be up to ten thousand times more potent than morphine, so car-fentanyl is one that we'll talk about. That's why it's really important that we have these discussions and hopefully everybody can go talk to several other individuals and really get this message out on fentanyl.

So if we look at the pharmaco-kinetics of fentanyl—and I know that not all of you guys out there are in the medical world, but some of this is really important about how we use these preparations. And so we're talking about pharmaceutically to be truly legally used fentanyl here. It's interesting with all these different preparations the pharmacokinetic profile of many of these products varies, and so you have to really use caution if you're converting from one formulation to another or even from one other opioid to fentanyl because it is so potent. And we're going to talk about how highly lipophilic it is and reading a lot of things and just understanding the pharmacokinetics and such, I believe that this is the biggest reason that it contributes to so many fatal overdoses. So it has very rapid entry into the CNS due to its lipophilicity,

[Sam Steffen]

For listeners who may not be familiar with this term, lipophilicity refers to a substance's ability to combine with or be stored in fat. CNS is an abbreviation for the central nervous system.

[Cathy Oliphant]

so it has a very rapid onset and a short duration of effects, so it's sort of like quick-in/ quick-out, but that can change based on the dosage and how long somebody's been consistently using fentanyl. Cause what it will do, it will rapidly cross into the CNS and then it will also then distribute into other highly lipophilic tissues. But if they have enough fentanyl on-board, it can stay in the CNS longer. So that makes the window of opportunity for a successful intervention in an overdose pretty short. Whereas we kind of talk about heroin overdoses may not be lethal for maybe 20-30 minutes; it's highly lipid as well but it gets converted into morphine, right? And morphine is much less lipid, so it stays in the CNS longer. You know, where fentanyl can produce a life-threatening overdose situation with respiratory depression within minutes, and anecdotal reports from bystanders of synthetic fentanyl overdoses say they can see the onset of some respiratory depression within seconds.

And so there's been some lab studies done, and they look at the interval between the first injection and the first kind of significant reduction in O2 concentration in the brain, and for fentanyl it's twice as fast as for oxycodone or morphine, and then the rate of onset for fentanyl to depress at volume was approximately 3-9 times faster than heroine or morphine. So if you look at it that way, it's very, very potent.

So onset of action is dependent on the formulation. IV is immediate. Intramuscular, it's within about 7-ish minutes. Now, the transdermal patch, we'll talk more about it because the way it distributes the medication, you don't get immediate effect; you can start seeing some effect within about six hours but the maximal effect can take much, much longer than that. Transmucoso-preparations, so these are immediately released, between five and 15 minutes for the onset of action. The duration varies on the preparation, the trans-dermal, it stays on for 72 hours but you get prolonged effects; and then for the trans-mucosal, the respiratory effect can be much greater than the analgesic effect. And it's interesting because the half-life is kind of not consistent with the duration and so it can be effected by various factors because it undergoes this multi-part distribution and how it effects different tissues and exerts its effects.

So a little bit more on pharmacokinetics: the absorption is very dependent on the formulation. If we look at some trans-mucosal formulations, so the buccal tablet and the lozenge both get up to about 50% absorbed in the buccal mucosa…

[Sam Steffen]

If you're not familiar with this term, the buccal mucosa refers to the inner lining of the cheeks.

[Cathy Oliphant]

and then the rest is absorbed from the GI tract from the fentanyl that gets swallowed in saliva, based on it being in the mouth cavity. It's primarily excreted via urine as inactive metabolites. So based on that, you really don't have to dose-adjust in renal impairment, however there is some recommendations that you may consider starting at a lower dose in patients with renal impairment.

So it carries a slew of boxed-warnings, not surprisingly, if you think about how potent and rapid its effects are: so life-threatening respiratory depression. Patients should be monitored very closely during use, especially during initiation or dosage increases. The use of those trans-mucosal products which are the immediate-release products, you know, they have contraindications, so they are not to be used in the management of acute or post-op pain or in opioid non-tolerant patients due to the significant potential for respiratory depression that can be fatal. The trans-dermal products are contraindicated for use in non-opioid tolerant patients, and again it's due to the risk of this fatal respiratory depression.

It is metabolized through the P450 system, primarily the 3A4 and so use with either inhibitors or inducers can affect fentanyl concentrations. So if you use it with the 3A4 inhibitor, the fentanyl concentrations can increase, maybe to levels that could induce respiratory depression, coma and/or death. And if you stop an agent that's an inducer, the fentanyl concentrations can actually increase to high, right? So, if you induce, you're dropping, and if you take away that inducer, that's what can happen if you stop those agents. Concomitant use with other CNS and respiratory-depressing acting medications can certainly increase that risk of fatal respiratory depression. Prolonged use of opioids

during pregnancy we know can result in Neonatal Withdrawal Syndrome, and Naloxone should always be recommended due to its potent respiratory depression effects.

Changing formulations, converting oral opioids to the transdermal patch of fentanyl, you really have to be careful about how you do these conversions and always dose-adjust downwards, because fentanyl is so potent, and then you can slowly titrate upwards if you do need more analgesic effect. And then there is a REMS program for these transmucosal immediate release formulations.

The REMS is the Risk-Evaluation and Mitigation Strategy program, it's an FDA-required program designed to pretty much inform risk-benefit decisions when choosing these products. And it's to ensure appropriate use of these transmucosal immediate release fentanyl products, cause we just talked about how rapid their absorption is that can lead to really potent and fatal respiratory depression. And so these products again are the Actiq, the Fentora, the Lazanda and Subsys and so these are either the lingual sprays, the buccal tablets and such. And what's kind of important if you haven't prescribed these: both prescribers and pharmacies as well as wholesalers must be enrolled and certified in these trans-mucosal immediate-release fentanyl products—the REMS program—to prescribe, receive and dispense, these products. So if any of these—the prescribers or pharmacies—are not enrolled, the patient cannot receive these products. And we've kind of talked about why, right? There's definitely risk for accidental exposure, misuse, abuse, addiction and overdose with these agents.

So let's talk about transdermal fentanyl: like I said, this was Duragesic patch, and it should not be used in non-opioid-tolerant patients, really. So pharmacists as well as providers really have to do due diligence, that it should only be used in patients with chronic pain who have been taking 60 or more mgs per day of oral morphine or equivalent, and that's to ensure that there's tolerance. Even trans-dermal fentanyl can have some pretty significant adverse effects. So again, pharmacokinetics can vary among patients but steady-state after initiating therapy occurs by day six which would be two-sequential 72-hour patch applications. Each time you put it on, it takes anywhere from 20-72 hours ish to reach maximum concentration. And the big thing is is even after you remove the patch, the analgesic effects continue for at least 24 hours because there's a trans-dermal matrix that the fentanyl is in, and that's placed on your skin and it will kind of distribute out from the patch into the skin which is the depot layer. So your stratum-corneum and the epidermis layers act as that depot which the fentanyl is then slowly released from the dermis layers through various blood vessels into the body at a pretty consistent rate after the initial 12-24 hours of patch application. And so it's a pretty interesting product. You keep it on for 72 hours and like I said once you take it off, there's still some drug left in the skin that can be distributed for pain control. The big thing is is that patients wearing these patches should not expose that area of skin to extremes of temperature, so they shouldn't be using a heating pad, using electric blankets, taking hot baths, saunas, as heat can increase the absorption and there are case reports of fentanyl respiratory depression and overdoses based on this.

The patches come in many different strengths: so say the 12, it's actually a 12.5 micro-gram per hour dosage delivery meant to last 72 hours, and it's recommended that you know based on whatever dose of their chronic medication that they may be converted to, you know, from maybe an oral to a trans-dermal patch, that you start at a lower concentration. And I saw some recommendations that patients receiving oral morphine equivalents of 60-130 ish be started on that 12 microgram/hr patch. You may have to give as-needed medication until you can get to the appropriate level.

Patch disposal is really important. The FDA and DEA actually recommends that fentanyl patches be flushed in the toilet. I did some research on that; there's only a few things that are really recommended, right? And it's because about 50% of the medication in each patch is left at the end of that 72-hour dosing interval. And so if people are kind of like dumpster-diving, garbage digging, they can actually get hold of a decent amount of that drug, right? And people have been known to extract it, and fatal drug overdoses have occurred. Pets, kids have gotten into it and have been harmed. So unless they can do a mail-back type thing or there are drug-takeback programs…but really these should be disposed of readily after being removed from the patient. So you just kind of pull off the patch, fold it in half so the sticky-side is together and patients should flush that immediately, or if there are other disposal methods they can do that, but tossing it in the garbage is really not a good idea.

So other adverse effects associated with fentanyl, very similar to other opioids: you know, analgesia, sedation, nausea, vomiting, itching. Obviously the respiratory depression. Fentanyl, though, is less hypotensive than many of our other opioids due to the lack of histamine release. It also can cause serotonin syndrome because it has these 5 hydroxy-triptomine 1A agonist properties, so it should be used with caution with other agents, other seratonergic medications, SSRIs, SNRIs, just some examples, as well as precautions with other CNS depressing agents.

Most common drug-testing panels do not test for fentanyl, and so you have to request a different panel or a specific test from what I've seen, some of our testing that we see in the hospital. So most of them do not test for the synthetic opioid, so providers need to be aware of that, that just because it's not seen on there, it doesn't mean that the patient didn't have fentanyl. And after you order a fentanyl-specific test, how long does it stick around? So a person could test positive for fentanyl on a urine test for 24-72 hours post their last use of it. And then there are a number of other ways to detect fentanyl: so blood, would be up to 12 hours; saliva for 24-72 hours; and hair actually you could find fentanyl up to 90 days post their last-dose. And so fentanyl does have metabolites, nor-fentanyl being a big one, and they can be detected as well in urine.

It's kind of interesting, right, as we move into the illicit use of fentanyl, it being such a big agent that is put into counterfeit pills as well as mixed with many other agents, that we don't have a standard screening for this, and there's a lot being called for if you look through the internet on some of the controversies, that it's not considered part of the Federal Five of being tested.

[Sam Steffen]

The 'Federal Five' Cathy's referring to here are the five main drugs that are tested for in a standard federal or employer urine drug screen: Amphetamines; Cocaine; Marijuana; Opiates; and Phencyclidine or (PCP).

[Todd Palmer]

Cathy, there are some analogues that might be missed with a test…

[Sam Steffen]

Speaking here is Dr. Todd Palmer, Family Medicine Physician, Addiction Medicine Physician and Geriatrician at Full Circle Health in Boise. He's also a panelist for ECHO Idaho's Opioids, Pain and Substance Use Disorders series.

[Todd Palmer]

And, you know, there's Point-of-Care fentanyl tests which they're trying to get out in the hands of users. In some states they're considered drug paraphernalia and people can get in trouble. I'm not actually sure what the laws are in Idaho regarding that.

[Cathy Oliphant]

They're illegal, unfortunately, yeah, those point-of-care-tests.

[Todd Palmer]

But there are definitely point-of-care tests that you can have in your office as well, but again they can miss analogues, so you can't really completely rule out fentanyl use with them.

[Cathy Oliphant]

Exactly, that's a really good point. So we can talk about illicitly manufactured fentanyl primarily imported from China and Mexico, and then it's mixed with other substances. And we've talked a lot about the various substances that are illicitly obtained out in the community. Anywhere from marijuana to heroine, any of our other opioids that are illicitly produced out there for counterfeit in ADHD medications, so pretty significant the big scope that fentanyl is available in. And the big thing is, who knows how much is in these products, right? And kind of like Todd was just talking about, these point of care tests that can help users identify if there's fentanyl in the products that they've obtained illicitly. You know, it's white, and so it can be mixed in to so many of these and there's DEA agents and other high-level labs that can't even tell just from looking at a tablet if fentanyl is mixed into it. And I even saw where like experienced heroin users can't tell—maybe the rush isn't as quick if it's mixed in with heroin, but otherwise they can't tell either. So very rapid respiratory depression and potentially death can occur.

So Todd kind of alluded to some of our analogues, and there's a whole slew of analogues, so what they've done is they've placed different functional group substitutions onto the fentanyl parent's compound, and it alters the pharmacokinetic and pharmacologic effects of these, making them more potent than fentanyl. Car-fentanyl—a very very small amount can lead to rapid death. So car-fentanyl is 100 times more potent than fentanyl, 10,000x more potent than morphine.

The illicit fentanyl formulations: powder for injections, smoking, inhalation, being mixed into tablets, mixed with other substances—heroin, cocaine, marijuana, other opioids, benzos, ADHD medications—you name it—it's been mixed. And I keep seeing a lot of statements, basically if you obtained something illicitly, right? You did not get it from a pharmacist or a true pharmaceutical grade wholesaler, you should probably suspect that fentanyl is mixed into whatever you are buying. Fentanyl is cheap, and so they can use it to cut in and use less of these other products which makes it really dangerous and unknowingly to a lot of individuals.

So this just kind of describes overdose deaths in 2020. Almost 93,000 persons died from drug overdoses. And if we look at 2021, provisional data from the CDC shows that almost 108,000 people died from drug overdoses in 2021. Fentanyl was over 71,000 of those deaths. The year before, in 2020 it was almost 58,000. And you can see increases in psychostimulants which is meth, cocaine. Those death numbers have increased because the fentanyl is being mixed with a lot of those other substances and so you're

seeing increased deaths based on these co-mixed illicitly-obtained formulations of medications. Quite a substantial increase in the number of individuals who have died in the last year—two years, actually—during the pandemic.

So I thought this was interesting: that both older individuals, Medicare aged and up were dying at increased rates because they were unable to pay for some of these medications so they turned to illicit ways to get medications, as well as teenagers. Over the past couple years, drug use has not increased tremendously. A lot of people are talking about like the potency of the medications, likely due to fentanyl being in a lot of these other illicitly-obtained medications. With teenagers, their fentanyl related deaths have almost doubled during the pandemic. If you look in 2010, there were 2.4 deaths per 100,000; and in 2020 it was almost double that, 4.57, and then there was another increase during the first six weeks of 2021. And so a lot of calling out for more education in this age-group. They're more likely to obtain pills, or things that aren't going to be injected, because they're less likely to inject. And so getting the word out that fentanyl is in these counterfeit pills is really important.

So this is what Todd was talking about: fentanyl test strips. And you know it is truly a harm-reduction strategy. So what, these test strips are about $1.00 per test strip, and we did mention they are illegal in Idaho, so they are considered drug paraphernalia. Idaho is not the only state in the country…there's quite a few states where it is considered drug paraphernalia and illegal, but more and more states are moving to allow fentanyl test strips to be legal. So like I said, they're pretty inexpensive, about a dollar, and the user can actually take a little bit of whatever substance they're going to use, and add it to water and then they dip the fentanyl test strip into it. They should lie that strip, then, onto a flat surface and within minutes—I think up to five minutes—if one red stripe appears, there's fentanyl; if there's two, fentanyl wasn't seen in there. Now, it doesn't tell you how much fentanyl is in there, and they are actually pretty sensitive—they're a pretty good use at least to know if fentanyl's in it, but like I said, if it's positive, it doesn't tell you how much, and then it can let the user know well, there's fentanyl in here, so they could choose not to use whatever substance they've bought or make sure they have Naloxone on-hand, and hopefully to let somebody know that there is fentanyl in that, and likely an overdose situation may occur very rapidly.

music

[Lachelle Smith]

Randy, do you want to unmute and remind us who you are?

[Randi Pedersen]

Yeah—hi, everybody. My name is Randi Pederson, I'm with the Department of Health and Welfare, and I do a lot of work in harm reduction, I'm the Syringe Exchange Program Manager of the State. And, yeah, just wanted to clarify, you guys are exactly right that the use of off-label use of fentanyl test strips by the harm reduction community is considered paraphernalia under Idaho's Paraphernalia Law, and it falls under a category that doesn't allow folks to test for the purity of drugs prior to sale or consumption. But I think we've had a lot of questions and confusion among providers in the recovery community because these fentanyl test strips are certainly FDA approved to detect fentanyl in urine and can be used by clinicians, law enforcement, they're used by recovery centers, safe and sober housing—it's just the off-

label use by the harm reduction community and people who use drugs that is illegal and considered paraphernalia.

[Cathy Oliphant]

Which is unfortunate, right? Because it can definitely—I mean, harm reduction can save a life, right? If they know what they're using contains fentanyl, and like I said, most substances out there nowadays that are illicitly obtained have fentanyl in it, so.

[Randi Pedersen]

Yeah, you're exactly right, Cathy, it's unfortunate. And I think we're all hopeful that there will be some sort of change here in the law that would allow for this really important overdose prevention tool to be legal in Idaho.

[Amy Jeppesen]

This is Amy, Randi, can I ask a question?

[Sam Steffen]

Speaking here is Amy Jeppesen, LCSW, ACADC, social worker at Trivium Life Services in Boise and panelist for ECHO Idaho's Opioids, Pain and Substance Use Disorders series.

[Amy Jeppesen]

As a provider in the community, we all talk about these fentanyl strips, that they would be really good, but there doesn't seem to be any movement on it. I know I've heard from legislators and some sort of old-fashioned law-enforcement folks statements like, you know, "If we allow that, we're just encouraging people to use drugs." Is there any movement from DHW or the Office of Drug Policy to push some legislation to allow these to be used as a harm reduction strategy in Idaho?

[Randi Pedersen]

Yeah, so the Department has tried to do a lot of education to encourage this legislative change. We don't really have much power other than to educate. And honestly our biggest barrier so far has been county prosecutors just concerned about anything that would limit their ability to prosecute somebody. So it's definitely a group that we need to do some more education and engagement with.

[Lachelle Smith]

Are individuals facing paraphernalia charges if found with fentanyl test strips, in practice?

[Randi Pedersen]

I have not heard that. I think honestly, pragmatically, like if an individual who is using drugs has fentanyl test strips on them, they probably have all kinds of other paraphernalia, right? Including substances that are illicit. So I think it is probably the least of some people's worries, but we have not heard any prosecution that is strictly based on finding these fentanyl test-strips on somebody.

[Todd Palmer]

Hey, Cathy, just a couple of comments—I was just listening to the ASAM conference, the American Society of Addiction Medicine, they had a talk on fentanyl and they had ER docs from New Jersey and Philadelphia and it was really astonishing what they were saying. They were saying, like, this is all they're seeing now. They're just seeing fentanyl. They're saying the days of heroin and the days of opiates from poppy plants and Afghanistan, like, those are behind us. This is what they're seeing now is fentanyl. And 2 mg of fentanyl is a lethal dose. And there was one source they showed I think it was from the DEA, where 42% of pills that were confiscated had at least 2 mgs of fentanyl. So it's incredibly dangerous. And you almost can't even look at this as like an overdose, it almost seems like it's a poisoning. You know, these people are taking these pills and they get poisoned. So it's so dangerous, and there's such a need for the test strips.

[Cathy Oliphant]

I agree. I mean it's scary. I read something out of Chicago that over 90% of opioid-related overdose deaths in Cook County, which is where Chicago is, involved fentanyl last year, so kind of like what you're saying, Todd. And that's why so many statements were like, if you are obtaining things illicitly, you've got to assume that fentanyl is in there, and it's very dangerous, right? So using has become much more dangerous due to the potential of fentanyl being in it.

[Amy Jeppesen]

And I would concur with what you're saying, because I think sometimes I think there's a tendency to think well, people are using fentanyl, they know that fentanyl is in there, but what we're seeing right now as a provider for substance use counseling is that it's getting laced into everything, including marijuana, you know for adolescents. People started lacing it with fentanyl to get them addicted to opiates and heroin and so a lot of times people have no idea that there is fentanyl and then all of a sudden they have overdosed. Because a lot of times there's not, there's no safety formula for how much fentanyl you're adding to the batch and just like when you make cookies and you get that piece that's not quite stirred up, you know, boom—you're…so if you can test it before that it may save your life. Do we condone continuing to do/use drugs? No, but it's the same thing as like when we started medication assisted treatment, right? Using Suboxone and Methadone—are we condoning? No, but it's providing a safe way so that people aren't losing their lives so that when they're ready they can get help.

[Derek Hayton]

And one thing to bear in mind, not saying that we shouldn't do this with fentanyl test strips, but…

[Sam Steffen]

Speaking here is Derek Hayton, Family Medicine and Addiction Medicine physician at Raise the Bottom, Boise. Dr. Hayton is also a panelist for ECHO Idaho's Counseling Techniques for Substance Use Disorders series.

[Derek Hayton]

If you're in a healthcare setting, so in a doctor's office, a hospital something like that, if you buy these fentanyl test strips they're not CLIA waived, so you're kinda rolling the dice a little bit, because technically you shouldn't do them…I mean, according to the regulations you can't do them in the office because they're only approved for forensic use. There's only one fentanyl point-in-care test that's

approved, it's called SEFRIA and it's like a whole point-of-care cup, and it's very expensive, that's why it's not widely used. That's why neither of the hospitals in Boise have a fentanyl point-in-care test. I'm not saying that we shouldn't do it in the clinic, but just know that technically you're kind of breaking a regulation with the lab.

[Lachelle Smith]

Dr. McCarren, are you able to unmute and share some of your insights and experience?

[Megan McCarren]

I can do my best…

[Sam Steffen]

Speaking here is Dr. Megan McCarren, Internal Medicine Physician at St. Alphonsus Health System in Boise, and regular participant at ECHO Idaho.

[Megan McCarren]

One thing that I'm pretty careful of telling my patients about regarding the fentanyl strips is that it's the opposite of a pregnancy test. For all the women out there, we all know that two lines is positive for pregnancy, but in fentanyl, one line is positive, so it's the opposite, so it can be confusing, especially if you're used to taking pregnancy tests.

[Todd Palmer]

And then again, just to remind people that you can miss analogues with the tests, so you're not completely out of the woods if you have a negative fentanyl test strip test.

[Randi Pedersen]

Just wanted to highlight, too, with the fentanyl test strips, there are different ways to test substances, and then different volumes of water you want to add depending on what the substance is, so, for example, you need to dilute down methamphetamine more, otherwise you'll get a false positive. So some kind of tips and tricks like that for patients, you can certainly get from the Idaho Harm Reduction Project or other exchanges across the state that can share out more information or resources for people.

[Lachelle Smith]

What other questions? What are you seeing in clinic? What do you got? Nari, I see you.

[Nari Hsiu]

Yeah I was just going to add a couple of things.

[Sam Steffen]

Speaking here is Nari Hsiu, psychiatrist at the Boise VA Medical Center and former panelist for ECHO Idaho's Counseling Techniques for Substance Use Disorders series.

[Nari Hsiu]

So what I have noticed is that mostly fentanyl is what's available. And you've probably heard of like, the 'dirty thirties' or the 'pressed blue tabs' so getting a good sense as to what like what people are using is helpful in terms of like powder versus tablets. The other thing about the pressed blue pills is when people are using them or they're just—I've heard of "chipping"—like they will take a bite off of them and take it orally, the potency really ranges in just that tablet. So there's a lot of variation, which can be very odd. And so they don't really know exactly what they're going to be getting. I often see people who are using methamphetamines get very sleepy after they use meth, and so I ask them how they react or what happens after they use meth? And it comes up by that that they may have gotten like a bad source or a bad cut of it, but often times is actually cut with fentanyl and that's why they get sleepy. So even if someone is using just like really any illicit substance, especially a stimulant where you know they should be getting more energetic, getting that sympathomimetic effect from it, asking about like how their reaction is…because often times people don't know that fentanyl is really pervasive in the substances out there, so kind of informing them of that, too.

And then also when you are doing like urine drug testing, making sure that you are having that conversation with your patients, like, you know, "You told me you were using methamphetamines or using whatever other stimulants, or benzo, but it came back also with fentanyl, it came back with a bunch of other substances…" and so just being really clear with people about what you're finding on their urine drug testing is really helpful and informative for people because then they can go back and they're like, "Oh my gosh, that dealer that I got it from gave me something that I wasn't expecting, I'm going to go talk to them!" And you know, hopefully it's another reason for them to not want to go back to using and to be really, really cautious, but just kind of thinking about ways to make sure that your patients are aware and not re-engaging in those behaviors if they can help it.

[Lachelle Smith]

Awesome. Thank you. Alright, Cathy, pick her back up!

[Cathy Oliphant]

Okay, so, naloxone use? Yes, you should have naloxone on-hand. Does it work with fentanyl? Yes. There's a lot of data out there though of kind of going back and forth, do you need more naloxone to reverse a fentanyl overdose? There's some data to suggest yes, and other data says no, you don't need it. So I tried to dig through a lot of things and saw that the average number of naloxone administrations—some places I saw it was listed as a fentanyl overdose, some it was just opioid, which obviously could be fentanyl—ranged from 2-4 doses, so either 4-8 mgs. In some cases more were necessary. And some of it gets reported out as IV-equivalent, so you have to look at that. So it does appear that for a lot of cases there may be more fentanyl that's needed. I actually did look at a couple studies out there that thought the such high lipophilicity of fentanyl made it harder potentially for naloxone to work as efficiently and the fact that it might bind to different areas on the mu-receptor—so it may, but there's other reports that it can be reversed. But some of it's going to be how much, obviously, fentanyl—right?—we don't know because like many have said, that it's sort of random, we don't know how much fentanyl we're getting in anything. So the Narcan nasal spray is 4 mg, the Klaxxado, which is the new nasal spray, is 8 mgs, and then there's a new injectable kind of taking over, form Evzio, but it's a 5 mg so it's an IM type-sub-Q injection, so a little bit more potent than the Klaxxado.

[Brenda Hoyt]

I just have a quick question, this is Brenda Hoyt. I'm a nurse practitioner at Raise the Bottom and also an ECHO panelist. How available is the 8 mg?

[Cathy Oliphant]

The Klaxxado? I believe, just recently became available. Pretty sure, Randi, right?—we still use Narcan?

[Randi Pedersen]

Yeah, so, Department of Health and Welfare contracts with the Idaho Harm Reduction Project to offer naloxone distribution to organizations across the state and they offer Narcan, Klaxxado and injectable naloxone, so three formulations.

[Cathy Oliphant]

And then there's a question about are you more likely to precipitate more of a problematic acute opioid withdrawal syndrome with higher naloxone doses? And again, that's kind of out for debate as well because you can see pretty significant opioid withdrawal syndromes with lower doses of naloxone, too. But—yes, people should have naloxone if they're using, but realize that the two doses right?, that we always talk about having on hand may not be enough, so always calling for emergency medical services is really key.

But definitely fentanyl is more dangerous, more potent, and very rapid in its effects including fatal respiratory depression. It's a synthetic short-acting opioid; it's true use is for severe acute and chronic pain; we know that illicitly manufactured fentanyl is very prevalent and has been linked to the big increases in overdose deaths over the past several years. I mean, it's been out for I think I saw like, since the late 70s but much more so that kind of third wave which I think was around 2013. And then harm reduction strategies with those fentanyl test strips and naloxone can help save lives.

music

[Sam Steffen]

That again was Cathy Oliphant, PharmD, Co-Chair of Pharmacy Practice and Administrative Sciences, Idaho State University, Pocatello presenting "Fentanyl." That lecture was recorded live on May 26, 2022 as a part of ECHO Idaho's Opioids, Pain and Substance Use Disorders series.

If you'd like to watch the Zoom recording of that presentation, that video is currently available on the ECHO Idaho YouTube channel, which you can access through our website. The Powerpoint slide deck as well as information about how to contact some of the organizations and services mentioned in that talk, are available in our podcast show notes, on our podcast webpage: www.uidaho.edu/echo-podcast

Banjo music

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[Fade out banjo music]

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[cue guitar strum and guitar theme w/ lyrics in background]

We here at ECHO also want to hear your feedback. We welcome your questions, comments and suggestions and invite you to email us at echoidaho@uidaho.edu. And don't forget to subscribe to Something for the Pain using your podcast app. And if you have a moment, write us a review!

[bring up theme song lyrics and chorus until first "echo Idaho", then drop volume and continue playing]

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The contributing voices on today's episode were those of: [Lachelle Smith, Cathy Oliphant, Todd Palmer, Randi Pedersen, Amy Jeppesen, Megan McCarren, Derek Hayton, Nari Hsiu, and Brenda Hoyt].

We'd also like to thank all of our listeners, without whom none of this would be possible. Without you, we'd just be talking to ourselves.

[Continue to theme chorus, fade]