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# OPIOIDS AND PAIN IN HIV MEDICINE

Joanna Starrels, MD, MS

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## Opioids and Pain in HIV Medicine

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- [Jim] Welcome to Physicians' Research Network. I'm Jim Braun, the course director of the monthly meetings of PRN in New York City. Since our beginning in 1990, PRN has been committed to enhancing the skills of our members in the diagnosis, management, and prevention of HIV disease, as well as its coinfections and complications. We hope this recording of Joanna Starrels presentation, "Opioids and Pain Management in HIV Medicine" will be helpful to you in your daily practice, and invite you to join us in New York City for our live meetings in the future. PRN is not-for-profit organization dedicated to peer support and education for physicians, nurse practitioners, and physician assistants. And membership is open to all interested clinicians nationwide at our website, PRN.org. And now allow me to introduce Joanna Starrels, Associate Professor of Medicine in the Division of General Internal Medicine at the Albert Einstein College of Medicine and Montefiore Medical Center in the Bronx, New York City.

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- [Joanna] It's great to be here. Thank you. In this talk we're going to first talk about the burden of chronic pain in HIV care. Give you some epidemiology of opioid use and overdose, which is rapidly evolving. We'll talk about what to do when you're considering either starting or continuing opioids for a patient with chronic pain. We'll talk about some risk mitigation strategies for patients who are prescribed to opioids. And then we'll talk briefly about identifying and treating opioid use disorder in patients with chronic pain.

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Chronic pain is exceedingly prevalent as you all know. 20 to 35 percent of adults in the general public report having chronic pain. And I'm talking about pain that's lasted for at least three months. It is higher in patients who have HIV. Some estimates are 30 to 45 percent in people with early HIV disease and in older cohorts. That is from years ago. Over 90 percent in advanced HIV living with chronic pain.

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Now chronic pain is multifactorial in our patients with HIV. It can be from the infection itself, for example distal sensory polyneuropathy. It can be from the antiretroviral therapy. It can be from opportunistic infections like zoster. It can be from treatment of OI's, for example INH. But increasingly it is mostly from non-HIV related causes, such as injury, arthritis- these conditions of aging that cause chronic pain in the general population.

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Now we all know about soaring drug overdose death in the United States. But I'm going to show you some things that you might not quite realize. This graph I like because it begins in the 1970s. And so we can really see the stark, really drastic increase in overdose deaths that we've been seeing in the past two decades. This is a death rate per 100,000 people. And that little blip in the 1970s was the black tar heroin epidemic of the 70s, which barely registers as an epidemic. That is the crack cocaine epidemic of

the 80s and early 90s. And this is largely driven by opioids, has been prescription opioids and more recently is largely driven by illicit opioids. In 2016 there are more than 64,000 Americans who died of drug overdose. To give you some more perspective on that, that's 50 percent more than the number who died in 1995 of HIV/AIDS- the peak of the epidemic.

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Now what drove this epidemic initially is largely opioid prescribing and for patients with chronic pain. And this graph shows the trends starting in the mid-1990s, which was when long acting opioids like Oxycontin were- were made available and were really heavily marketed as having a low abuse potential, which we later learned was not accurate. And you can see that at that time oxycodone, morphine, hydrocodone, hydromorphone- all of these opioids were gaining increasing popularity and use mostly for chronic pain.

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And what we've seen more recently is really a crackdown on opioid prescribing for chronic pain in response to this epidemic that we've seen. And we're learning that decreasing prescribing is necessary but not sufficient. And I'm going to talk a little bit more about that. This slide is from Tennessee, and of course I don't expect you to be able to see this but what I want to point out are a few things; that during this time period of 2011 to 2017, the state of Tennessee along with other states in the country saw a reduced prescribing of opioids or reduced supply of prescription opioids, reduced prescription opioid misuse on several measures but an increasing number of opioid related deaths. So we have not solved the problem.

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And part of or most of the reason why we haven't solved the problem is because this problem has changed. So if you look at this green line on top, that's the overdose death rate also per 100,000 person-persons for any opioid. And below we have a broken out by type of opioid. The bluish line is heroin which was low and then started to shoot up in 2010. The purplish line are most of the opioids that we prescribe like oxycodone, hydrocodone, and you can see that while it was increasing very markedly it has slowed down since 2010. We've seen a plateau of deaths related to prescription opioids. And now we're seeing heroin and this purple line which is fentanyl- illicit fentanyl and it's derivatives like carfentanyl. So take a look at that orange line which was pretty flat and then in 2015 really shoots up and now I'm going to show you 2016. It's now blue. So this is just adding on 2016 data and fentanyl related deaths increased 500 percent from 2015 to 2016. Huge, huge problem. Why is this happening? It's mostly illicit fentanyl and coming from other countries. And it is highly, highly potent. So fentanyl is about 50 times more potent than heroin. And so people who think they know what they're getting and buy a bag of heroin oftentimes are getting pure fentanyl or an adulterated product that has both. And it ends up killing them. So it's really- it's really drastic. And, you know, I think as providers we need to be telling all of our patients about fentanyl and making them aware that the heroin today is not what the heroin was a couple of years ago.

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When- so our next section is about when you're considering prescribing opioids- continuing them or starting them. So HIV care is a bit unique. We have a high prevalence of chronic pain in HIV care as I mentioned. We have high use of prescribed opioids. We have high opioid misuse in some cohorts. We have high comorbid substance abuse and mental health disorders. And we have had slow adoption of practices for judicious opioid prescribing, like urine drug testing. And part of that is because we have risks of losing patients from care that are a little bit different from the risks of losing patients for care in other settings.

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We did a qualitative study of HIV providers a few years ago and we found that these guideline recommended strategies for judicious opioid prescribing sometimes conflicted with the provider's goals for HIV care. For example there was a belief that lenient opioid prescribing can actually improve HIV outcomes. I'm going to read you a couple of quotes: "By prescribing opiates, you may be increasing your chances of having patients remain in your care, so that they could benefit from actually having their HIV treated." Another provider asked: "Is it more harmful overall for somebody to be misusing opiates, if in fact while they're misusing them they remain engaged in HIV care and have their viral load undetectable? Or is it more harmful to terminate their opioid prescription because of fear of misuse, but that ends up resulting in the person having uncontrolled viral loads." So you can see this tension which some of you may be familiar with.

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So the question remains does opioid prescribing improve HIV outcomes? And I don't know the answer to that. We know that illicit opioid use is associated with poor HIV outcomes- both retention, adherence, and viral suppression. But there are very limited data about prescription opioid use. The data that do exists suggests that prescription opioid use can actually help retain patients in care, but is not associated with an improvement in viral load; that's very limited data so far. And I actually have a study ongoing to examine this exact thing; we're looking at the association between opioid use and HIV outcomes. So there should be more information soon.

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In 2016 the CDC released an opioid prescribing guideline for the treatment of chronic pain aimed at primary care doctors and nurse practitioners- other providers. They have their recommendations into three different sections. The first is when you're initiating or continuing opioids for chronic pain and they had three high headline recommendations. The first is the non-pharmacologic and non-opioid treatments are preferred for chronic pain. We're going to talk a bit more about that. The second is that when you're considering opioids for a patient with chronic pain, you should always establish functional treatment goals, so that we have some benchmark to know if the medications are helping the patient. Functional treatment goals like carrying groceries up the stairs or getting back to work or something that is somewhat of an objective measure of benefit. And we should be discussing the risks and benefits of opioids with all the patients, as well as a patient and provider responsibility is to make sure that they are used as safely as possible.

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Chronic pain is complex. We all know that it doesn't just fall out of the sky. It really exists in this vortex, if you will, where chronic pain leads to poor sleep, can increase anxiety, depression, opioid use, sometimes other substance use, disability, and all of these factors really can add to each other and be debilitating for patients. It also provides treatment opportunities. So not only can we address the patients' pain but we can address their sleep and their depression and these other things that really combine to debilitate them.

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Not sure how well this is showing, but the CDC recommendation is to use a multi-modal approach to chronic pain. So no longer are we going to rely solely on opioids. We're going to make sure that we're giving our patients a well-rounded approach to their chronic pain, which might include medications, opioids, and non-opioids, physical treatments like PT, integrative therapies, acupuncture, massage, tai chi. Those are very evidence-based for chronic pain and unfortunately sometimes not available for our patients. Lifestyle changes like exercise, movement, psychological support, sometimes interventional treatment, like surgery, nerve blocks. And so we have to be thinking about all of these approaches to chronic pain.

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The next section of the CDC guideline addresses opioid prescribing and discontinuation. And the recommendations are these. First, start with immediate release, not long acting formulations. And that's because in the opioid naïve patients, starting them on a long acting opioid is associated with an increased mortality. So you're starting somebody new; start them on a short acting opioid. Prescribe the lowest effective dose, and we're going to talk more about that. For acute pain, no more than three to seven day supply. And in New York State, actually there is a regulation that we cannot prescribe more than seven days' supply for acute pain. And when you are prescribing opioids to patients longitudinally, you need to regularly reassess them and what you're assessing are the risks and benefits of continued therapy for that patient at that time. And if at any time the risks seem to exceed the benefits, then that's when it's time to discuss a taper or- and by taper I mean a dose reduction or discontinuation.

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Okay. What does this mean- the lowest effective dose? I'm going to talk about MMEs, which are morphine milligram equivalents. That's the milligrams of morphine that a patient takes in a day or the equivalent dose of another medication. For example 90 MMEs is 90 milligrams of morphine, or 65 milligrams of oxycodone. The New York City Department of Health has a really helpful app. Here it is- it's called OpioidCalc app to help you calculate the MMEs that your patient is prescribed. Now the CDC says to avoid or carefully justify increasing a patient's dose to beyond 90 MMEs per day. Importantly, it does not say to taper all patients who are at a dose that's higher than 90 down to 90. Remember, the recommendation to taper is based on the risks and the benefits, not on the absolute dose, although many payers, agencies have really misinterpreted and misapplied the CDC guideline in considering that is a hard cutoff for all patients.

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And it's also important to note about the threshold that it's arbitrary. So this is where it comes from. There have been a couple of studies that show, as the dose increases of opioids and that's the line, the x-axis here. The risk of overdose death also increases. It looks pretty linear, right? So the highest risk category here are the patients who are on over 100 MMEs per day who have a sevenfold increased risk of overdose death. Whether the threshold for our high dose is 90 or 100 or 120 or 60, it is pretty arbitrary and I think that's important to keep in mind.

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Now the decision to taper should be based on the risks and benefits, right? So what are the risks and benefits that we should be assessing? The risks include a range of adverse effects: constipation, falls, sedation, etc., opioid use disorder, or addiction, and overdose. And we know from the literature several risk factors for developing these very serious negative consequences of overdose and opioid use disorder. The number one most consistent risk factor is having a personal history of a substance use problem. So if you're considering prescribing opioids for somebody or you are prescribing opioids for them, make sure that we're asking everybody about their risk, about their history of substance use problems.

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Anxiety, depression, PTSD also increase risk. Benzodiazepine or other sedative use is also very important, particularly for overdose, because of the synergistic effects on respiratory depression and CNS depression of opioids and benzodiazepines. The- it's very important to try to avoid, or at least minimize prescribing of opioids and benzodiazepines.

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Patients who have a younger age also have increased risk in most studies. And importantly a family history of substance use disorder, because it's largely genetic, also environmental increases somebody's risk for developing opioid use problems on prescription opioids. So family history of substance use is not something we usually ask about, right? We asked about cancer, diabetes. But if you're considering prescribing opioids for a patient we should know that because you might find that your patient doesn't drink at all but you might not know that the reason they don't drink at all is because they have a lot of alcohol use disorder in their family.

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A written treatment agreement is one way to make sure they you've discussed all the risks of opioids with a patient, for example it might say if I drink alcohol or use drugs while taking my medicine I may enjoy myself or overdose. I will keep my pain medicine in a safe place and away from children and others in my home. This is very important to talk about. And I will not take more than prescribed.

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OK. The other side of this equation are the benefits. And what I hope that you'll walk away with is that we should be asking patients more than, "Does it help?" or "Does your pain score decreasing from an 8

to a 7," which doesn't have a lot of meaning to us. What we really care about is function. So are they able to do something now that they couldn't do before. And if it helps them do their physical therapy or do, fulfill a social role that's important to them, then that's an important benefit.

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How do we do that? Ask about their activities and limitations. I learned so much about my patients when I started asking them, "What's a typical day like for you?" A lot of patients who have really severe chronic pain are not doing much, and they're often sitting on the couch all day or spending hours in bed. And if you don't ask that, they're not going to tell you because there's a lot of shame involved in that. Ask, "Are there things that you can't do anymore because of pain?" And clarify the specific effects of opioids. So if somebody says, "It helps me," how does it help? If it helps them sleep, that's not really what we're going for. We want it to improve functional benefit. And you can consider using a standardized scale to assess the improvement in function. The three-item PEG I love because it's three items and it's easy to administer in primary care, and it asks over the past week on average what was the severity of your pain- one to ten; how much did your pain interfere with your enjoyment of life and with your general activity. So it's three questions; it's easy; it's validated; and it gets it both pain and function.

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So we talked about tapering decisions based on this risk and benefit ratio. Why do we taper our patients? One is high risks. For example, if somebody has a non-fatal overdose event then that's a time when we're going to be strongly considering tapering them. If they have low benefit, "I've been on these medications for 10 years and my pain is still terrible. In fact it's worse than it was before and my function is poor." That is a reason to reduce or sometimes discontinue abuse. Patient wants to taper. This is happening increasingly. And there is emerging evidence, although it's limited, that most people who voluntarily taper do not have worsened pain or function. Sometimes it's better but it hasn't been shown to be worse. So I find this encouraging. This is for voluntary taper. So this is for, you know, patient is ready to do it and engaged in it.

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How do we taper? There are three main components and the key is patient engagement. So patients are scared to reduce their opioids oftentimes. So ask them, "What concerns you most?" And try to address those concerns. Motivational interviewing has a lot of great tools for us to have these conversations and to help us identify some ambivalence, because almost always patients are ambivalent, even the ones who are very, very attached to their opioids and very worried about reducing it. They also have negative consequences and would rather not have to go through this increasing rigmarole of getting their medications every month etc. And there are opportunities for shared decision making about the tapering plan. So after the decision has been made, though we need to reduce the opioid medications, there are usually options: "Should we reduce the short acting first? Should we reduce the long acting first? How much? Today or next week or next month?" etc. So looking for those shared decision making opportunities is great. Also we can ramp up or add non-opioid treatments- pharmacologic or non-pharmacologic. Everyone wants to know, "How fast do I reduce the dose?" And there is no magic. There

is no science behind this. So if you look at the guidelines you might see 10 percent per week is a good place to start or 10 percent per month. And I would say that the rate depends on the risk and the benefit, mostly the risk to the patient. For me, I think often 10 percent per month is reasonable, although some of the guidelines recommend 10 percent per week.

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What is the taper look like? Very, very rarely does it look like this, where we're taking somebody who is on a high dose and stopping it. Right? That's going to precipitate severe withdrawal symptoms. And the only reason why you would do that is if there is diversion, so you don't think the patient's actually taking the medication that you're prescribing, or if they're about to enter treatment for opioid use disorder. And I mean about to enter in. This yellow line indicates a steady reduction. So that's "We're going to go 10 percent every month and then we'll get you from 200, which is a very high dose down to a more reasonable dose." But that almost never happens. Usually it looks more like this blue line, where this month we can decrease a little bit. Next month we can't. Sometimes there are pauses that can last anywhere between three months and years. So often the reduction is slow and unsteady. And sometimes you need to readjust. So sometimes you might go down to a dose that is really not tolerable for the patient and then going up a little bit. And I think that's still a success if the patients reduce their dose from 200 to 120. That's- that's great.

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So these can be difficult conversations to have with patients and I have some tips. One is, it's not a confrontation. So I hear a lot of our trainees saying, "Oh patient had cocaine in the urine; I need to go confront them about it." No, you're not confronting them, right? You're starting the conversation and trying to gain information about their cocaine use in that example. Remain calm. Listen to your patients, right? Validate their experience of pain, their suffering, and validating their experience of pain can go a long way. The patient walks into the room talking about the opioids. I try to talk about the pain first and that can help with the report. Focus on behaviors and data, not character. So we want to avoid stigmatizing language, like addict. Talk from your perspective. I found that very helpful. So, if, you know, if a patient really doesn't think that they need to taper their opioids, they say, you know, "I'm not abusing them." "You don't trust me." I find it helpful, rather than to get into an argument or, you know, a conversation about that, just to say this is where I'm coming from. "I'm concerned that these medications are doing you more harm than good." Or, "I'm really concerned about the risk of these medications for you." Sometimes they use the third person voice. So not like you run away without giving me urine but, you know, I want you to know that when my patients leave without giving me urine that I've requested it raises my concerns and makes me worry that there's something going on that could increase the risk that I'm not aware of. Don't argue with your patients. This is all very general advice. But what I do is really state and restate my own position. I hear you but I'm really concerned and I can't responsibly continue prescribing these medications and just sometimes state and restate. And of course, insist on respectful communication. So if patient is angry or you're concerned about your safety, of course leave the room if necessary. Sometimes I've brought a third party into the room if I'm anticipating a difficult conversation around opioids, like a colleague or a social worker or administrator.



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OK. The last category of the CDC recommendations are about risk mitigation. So how do we assess the risks and address the harms of opioid use? Their first recommendation here is to evaluate and mitigate the harms. We're going to talk about that a bit, and consider naloxone. Naloxone is available in all the New York City- most of the New York City pharmacies via standing order from the Health Department. So the patients do not need a prescription to get it. There are also kits that are available from the Health Department that we can give away for free. And it's really, really critical given particularly the fentanyl epidemic that we're dealing with now that we get it out there. So patients who are on a high dose of opioids or patients who use heroin or use any illicit opioids really try to give them all naloxone. And it's also an opportunity to discuss overdose and to talk about this fentanyl epidemic with patients. The prescription monitoring program or in New York, I-STOP, we all use it. It's mandated. It's also CDC recommended. Urine drug tests- we're going to talk about a little bit more. The CDC recommends doing it at the beginning of starting a patient or deciding to continue a patient on opioids and then at least annually. Avoiding concurrent benzodiazepines and then offer or arranging for medication assisted treatment for opioid use disorder for example, buprenorphine or methadone. Gonna talk about a couple of these more.

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Urine drug test interpretation. Many of us use urine drug testing to some extent, and we did a survey a few years ago of our internal medicine residents, 100 of them; we asked them, "How confident are you in your ability to interpret urine drug test results." And they were pretty confident; 56 percent of them were confident that they knew how to interpret the results. But of those who were confident, 73 percent of them failed a knowledge quiz. We asked them seven questions and asked them to interpret the drug test results. So this is not because our residents are not outstanding. They are. But it's because urine drug testing is so much more complicated than it seems. You get a result; it's positive negative; it seems very easy to interpret but it's a bit more complicated than that.

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There are two types of urine drug tests. The first is enzyme-based immunoassays. It's basically an ELISA. It works on by antibody binding. And that's the UTOX, or urine drug screen that most of us have accessible to us. It's cheap. It's pretty quick. And the results are qualitative, meaning it's either positive or negative. And that's best based on a threshold concentration. So if there's enough binding above that threshold then it's a positive result. And if there is not, then it's a negative result, which means that negative does not always mean negative; does not mean no opioids present, right? It means the threshold was not achieved. Importantly the opiate screen on these immunoassays is designed to detect naturally occurring opiates- that's morphine and codeine. It has limit depending on the test; it has some sensitivity but not perfect sensitivity for a semisynthetic opioids, like hydrocodone and oxycodone, and it will not ever detect the synthetic opioids like fentanyl, methadone, buprenorphine, meperidine. So we have to understand these limits that opiates negative does not mean there are no opioids in the urine. And it's this type of test is prone to false negatives and false positives. The good news is that we have confirmatory tests which use gas or liquid chromatography and mass spec. They are more expensive. They are usually sent out to a specialty lab. You might get your results in a week or two, right? So some

limited utility there. The result is quantitative. You'll get a concentration in nanograms per deciliter. And the opioid panels report much more specifically which opioids are present. So if you want to distinguish, if you want to know, is it oxycodone, hydrocodone, morphine, heroin, then you need to do this special confirmatory test- the GCMS test. They are highly sensitive and highly specific.

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There are a couple of pitfalls with the screening tests I talked about the threshold problem. And there can be incomplete cross reactivity of the substance you want to detect with that assay, which is the issue I talked about. If you're trying to detect oxycodone, make sure your screen has an oxycodone specific screen because it may not turn the opiate screen positive. And if there's ever any question, so patients' report or prescribe medications is not matching what the results are showing, I encourage you to not jump to conclusions based on this test but first to order a confirmatory test. There are also false positives with these immunoassay screens and those are just a few examples that I provide here. For example, the opiates assay can be turned positive from quinolone use, which I saw recently. So it's important to know some causes of these false positive results. And again if there's a question you can send it for the confirmatory tests, because a positive from quinolone use on the screen would not be positive on the GCMS test.

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When or if you start using these GCMS confirmatory tests, you have another pitfall, which is that the opioids metabolize to each other. So this makes it more complicated, perhaps to interpret. For example, patients prescribed to hydrocodone, you will likely, and can expect to see hydromorphone in their urine. The reverse is not true; if they're prescribed hydromorphone, you should not see hydrocodone in their urine. I want to point out the heroin pathway. Heroin metabolizes very quickly into morphine. So in all likelihood, what you will see on a screen indicating recent heroin use is morphine. But sometimes early on, there is 6-monoacetylmorphine, which you can detect in the GCMS test and that is pathognomonic for heroin.

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We're going to talk briefly about identifying and treating opioid use disorder in patients who are prescribed opioids. First, how common is opioid use disorder or addiction in the chronic pain population on long term opioids? We don't really know. The various cohorts have pin down a range of about 8 to 12 percent for opioid use disorder. Opioid misuse is a larger barrel of people and that means there are behaviors where they're using the medication in ways that are other than as intended. An even larger cohort of patients have concerning behaviors, like urine drug tests that showed some illicit drug use. And so my main point here is that a sizable but not overwhelming portion of patients probably have opioid use disorder.

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And it's not always easy to discern. The DSM-5 is very different from the DSM-4 in diagnosis of opioid use disorder. So remember we used to have abuse and dependence? We don't have drug abuse and dependence anymore. What we have is use disorder: mild, moderate, and severe. And that diagnosis is

made by using this checklist of 11 items, and you check off how many the patient has, and you add them up and if they have two to three, they have a mild use disorder. This is true for any substance. Four to five- it's moderate, or more than five, it's severe. The one exception is that if patients are prescribed opioids or benzodiazepines, but in this case opioids, and are taking it under our medical supervision, they're allowed to have tolerance and they're allowed to have withdrawal and those do not go towards their count. So in order to have a mild use disorder they need to have two or three other of these criteria, which if you read through them, many do. Many have taken opioids for longer than they intended. Many have had unsuccessful efforts to cut down. But this is the way we're going to diagnose opioid use disorder.

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Now, there are several treatments for opioid use disorder. The two that I'm going to talk about are methadone and buprenorphine. I'm not going to focus on Naltrexone today, which is another medication assisted treatment because it doesn't- doesn't see- it's newer. But it doesn't seem to have the same utility for patients who have chronic pain, because it is an opioid antagonist.

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So methadone- everybody has heard of it. Hopefully you've all heard of buprenorphine, too. Methadone is a full opioid agonist so it works just like oxycodone or heroin. I'll talk about that a little bit more in a minute. Buprenorphine is different because it's a partial opioid agonist. The affinities for the mu opioid receptor are different. And what I want to point out there is that buprenorphine is a very high affinity for the mu opioid receptor. So if there's buprenorphine on board and the patient takes another opioid, it's going to be unlikely to knock off that buprenorphine, which makes it safer. The absorption is different. Buprenorphine is sublingual. Comes in a tab or a film. And they both have a half-life of about 24 hours.

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Now this is to show you what I mean by partial opioid agonist with buprenorphine. So along the x-axis we have the dose- log dose of the opioid, and on the y-axis we have the opioid effect. And first look at that line that says full agonist, so that's methadone, heroin, oxycodone- any of those. The more opioid that's supplied, the greater the opioid effect. And as you get in the higher reaches, that's where you have the respiratory depression and risk of overdose. Buprenorphine is different because, after a certain point, giving more buprenorphine does not increase that opioid effect. So it's what we call the stealing effect, which makes it much safer and much less likely to cause an overdose when taken alone. When taken with benzodiazepines, it can still contribute to an overdose.

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And the key difference between methadone and buprenorphine right now is the treatment delivery. So patients who go- who started methadone for opioid use disorder are required to do so within the context of opioid treatment program or a methadone program. It's highly regulated and they go usually every day when they're doing well; they can cut down to several days per week. But they need to go every day and it's part of a larger treatment program where there are counseling and other services

available onsite as well. Buprenorphine can be prescribed in your primary care doctors' office or other practitioner. So until recently it was only physicians who could prescribe buprenorphine but within the past year now, NPs and PAs can also prescribe buprenorphine. You do need to complete a special waiver training, which is eight hours for physicians and 24 hours for NPs or PAs. And then you can get your waiver to prescribe buprenorphine. You don't have to have onsite counseling. You have to have the ability to refer for counseling. And it's less regulated, and it allows patients to fill their prescriptions, just like they fill any other prescription. So they go to the pharmacy. They get a month's supply. You can even prescribe refills. And so it really normalizes the treatment of opiate use disorder, similar to how we treat other chronic illnesses. And I really encourage you all, if you are not waived to prescribe buprenorphine, to strongly consider it. It is the most rewarding thing that I do as a primary care doctor, because I really see people feeling better and doing very well.

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OK. So some take home points. Chronic pain in HIV care is common and complex but there are many targets for treatment. Prescription opioid use and opioid use disorder continue to be challenging and clinical issues to address. I encourage you to use tools, such as urine drug testing and tapering, but to be cautious and patient centered about it. To identify and treat opioid use disorder and to counsel patients about overdose, now please talk to everybody about illicit fentanyl and to consider dispensing naloxone.

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That's it. I'm happy to take questions.

[Video End]