

Safer Opioid Prescribing for Pain In Adolescents & Young Adults in Outpatient Settings

Transcript

Moderator: Welcome to “Safer Opioid Prescribing for Pain in Adolescents and Young Adults in Outpatient Settings.” This activity will be presented by Dr. Scott Hadland, and Dr. Sarah Bagley of Boston University School of Medicine, and Boston Medical Center. Neither faculty member has any relevant commercial relationships to disclose. This activity is presented in partnership with the City of Framingham Department of Health.

As a result of this activity, participants will be better able to explain the epidemiology of pain, and opioid-related harm in the US with a focus on adolescents and young adults, describe treatment of acute and chronic pain according to evidence-based guidelines, and prescribe opioids in a manner that reduces the likelihood of risk for long-term opioid use and addiction, and summarize evidence-based screening and treatment for youth with opioid use disorder. Now, let's discuss our first case.

Scott Hadland, MD: Our first case is a 14-year-old, female adolescent with a known history of generalized anxiety disorder. She presents to your primary care clinic with severe dental pain, and she's tried extra-strength acetaminophen with some relief, but the pain continues to worsen. Some key questions that are raised by this case: First of all, how prevalent is pain among young people? Second, how effective are non-opioid medications for acute pain? And third, if opioids are prescribed, what considerations are there?

The pendulum has really swung in how we manage acute pain. In the early 2000s, we really talked about pain as being the fifth vital sign and felt that it always should be treated. Then, the pendulum swung in the complete opposite direction, as we began to recognize that there was an opioid overdose crisis, at least initially related to the over-prescribing of opioids, and we really moved towards stopping prescribing opioids in a lot of settings, or at least decreasing the extent to which we prescribe them.

What I really want to convince you of is that opioids should still be prescribed, but we should do so thoughtfully, and that the pendulum really should be somewhere in the middle. It's important for all practitioners who work with children to understand that pain is prevalent. This is a slide that shows us just how prevalent it is. On the left side of the figure are children between the ages of zero and 16 years with commercial health insurance. And on the right, children of ages zero to 16 years with Medicaid or public health insurance.

And we see different bars representing different conditions for which there might be pain. And what you see is that pain is highly prevalent among kids, affecting almost as many as one in ten children with various types of health conditions. For those that are interested, the green bar

here, which represents other conditions includes things such as arthritis, abdominal pain, migraine headaches, and other conditions.

There are a few general principles in acute pain management. First of all, it's important to remember that reducing distress and anxiety can in turn reduce the pain experience by young people, and thus, nonpharmacologic interventions are often effective. Even before moving to a medication, remember to consider multimodal treatment, relaxation techniques, distraction, heat or cold stimulation, or physical therapy for muscular strain. Then, if pain is mild to moderate, you can consider initiation of non-opioid analgesics, such as acetaminophen, or ibuprofen. And, if pain is severe, or unresponsive to non-opioid analgesics, initiate an opioid using best practices, which we will discuss.

Here, we present some of the data on non-opioid analgesics, and their use in acute pain. First of all, it's important to note that randomized clinical trial data from adults, demonstrates that ibuprofen and acetaminophen, when given together as a one-time dose, provides equivalent pain control to oxycodone of 5-milligrams, or hydrocodone of 5-milligrams, each with acetaminophen at a usual dosage in an ER setting. For children and adolescents, randomized clinical trials demonstrate that ibuprofen, given at a dose of 10-milligrams per kilogram, provides equivalent post-operative pain control to oral morphine after orthopedic surgery in a sample of five- to 17-year-olds in one study, and after tonsillectomy for younger children under the age of ten years.

And the American Academy of Pediatric Dentistry recommends that nonsteroidal anti-inflammatory drugs, such as ibuprofen, are first line for mild to moderate pain after dental procedures. The take-home point here is that you can often maximize pain control in acute pain situations using ibuprofen and acetaminophen dosed appropriately. If you do decide to prescribe an opioid, there are a few considerations.

First of all, opioids have numerous adverse effects in children and adolescents, and these occur more commonly than with non-opioid medications, such as acetaminophen, or ibuprofen. Adverse effects are least common for oxycodone and appear to be most common for morphine and codeine. Some adverse effects that you might consider include nausea, occurring in about 10 to 20 percent of individuals, vomiting occurring in fewer than 10 percent; headache, occurring in about 10 percent; drowsiness, occurring in about 30 to 55 percent; dizziness, occurring in about 10 percent, and rash, occurring in anywhere from 5 to 20 percent.

And, it's important to remember that the American Academy of Pediatrics, and as we'll discuss, the US Food and Drug Administration, really recommend against using codeine, because of numerous reports of life-threatening, or fatal respiratory depression. The FDA has weighed in with several contraindications and warnings that apply to use of opioids in children and adolescents.

First, for children under 12 years of age, the FDA has issued a contraindication, which is the strongest possible warning from the FDA. They really state that you should not use codeine or tramadol in this age group, because of the risk of serious breathing problems, and death. For adolescents of age 12 to 18 years, there is also a contraindication for the use of tramadol for postoperative pain management after removal of the tonsils, and/or the adenoids. And, there is a warning from the FDA about use of codeine or tramadol for pain management in patients with obesity, obstructive sleep apnea, or severe lung disease, again, because of the risk of respiratory compromise.

Here in Massachusetts, we have additional regulations that affect the prescribing of opioids. First of all, first-time opioid prescriptions are capped at a maximum of seven days. And this limit applies to every prescription if the individual is under 18 years of age. Also, parents of minors need to be notified about opioid prescriptions. Second, patients may partially fill prescriptions. What this means is that if you, as a practitioner prescribe, for example, seven days of an opioid, but a family presents to the pharmacy, and only wants three days of an opioid, they can choose to fill their prescription to a smaller amount. This happens at the pharmacy, and the pharmacist is required to notify you, as the prescriber.

Finally, here in Massachusetts, extended-release, long-acting formulations for opioids require a written pain management plan. Anyone receiving a first-time extended-release, or a long-acting formulation, should undergo assessment of risk factors prior to prescribing. We'll discuss some of these risk factors shortly, but briefly, these risk factors include having another substance use disorder, unaddressed mental health problems, like depression, anxiety, or attention deficit hyperactivity disorder, or ADHD, and having a family history of addiction.

There are some important safety tips that you should communicate to parents, or other caregivers, who are overseeing adolescents who receive opioids. First of all, caregivers should track medications, and keep a written inventory of all the pills in the cabinet at a given point in time and count those pills. Second, medication should be locked up. Third, parents should talk to their children's friends' parents about medications and have an open conversation about the potential risk.

Finally, unused and expired medication should be disposed of. This is critically important, because data suggests that for the majority of adolescents who use prescription opioids non-medically, the source for those prescriptions was an old prescription from a friend, or a family member. When there are young children in the home, there are additional safety considerations. Each year, 59,000 young children are seen in the emergency department, because they got into medicine. One- and two-year-olds make up the majority of emergency department visits for medicine poisoning.

It just takes a minute for an unintentional ingestion. Parents often say that they only turned their back on their child for a minute. Remember that children are often climbing, and curious,

so medicine should be put up and away, out of sight, and out of reach. Visitors' purses, bags, and coats should also be out of sight, and out of reach, since children can get into them.

Finally, beware of packaging. Child resistant packaging is not always child proof. Here are some take-home points if you're going to prescribe an opioid. Best practices for opioid prescribing for youth include, first of all, conducting an assessment of risk factors. Find out if the young person has another substance use disorder, unaddressed mental health problems that could put them at risk for a substance use disorder, or a family history of addiction.

Second, check the prescription drug monitoring program in your state to find out if that patient has received prescriptions elsewhere. Then, when you go to prescribe an opioid, use the lowest effective dose of a short-acting formulation. Offer a short course, typically three days, or fewer, is sufficient, and laws in many states, including here in Massachusetts, limit that first-time opioid prescription to seven days.

Next, notify parents of minors, and review safe storage, as we've discussed. And finally, recall that in many states, including here in Massachusetts, partial fills are allowable at the pharmacy. A full discussion of chronic pain management is beyond the scope of this training, but we do want to provide some simple guidance here for your consideration. First of all, there's a well-known CDC guideline on chronic pain management that came out in 2016 that does not apply to pediatric populations under 18 years. Youth-specific data is lacking on opioid pharmacokinetics, pharmacodynamics, safety, and for the youngest children, clinical effectiveness.

The American Pain Society, and other professional organizations recommend involvement of a pediatric pain specialist before prescribing opioids for pediatric chronic pain. Here we list some recommendations for management of chronic pain that might involve opioids. First of all, avoid opioids in the vast majority of chronic non-cancer pain problems in children and adolescents, such as abdominal pain, headache, and pervasive musculoskeletal pain among the most common sources of chronic pain, since the evidence of safety and efficacy is lacking.

Second, opioids are indicated for a small number of persistent painful conditions, including those with clear pathophysiology, and when an end point to usage may be defined. Some examples here include longer-term pain associated with a surgical procedure, trauma, such as that from burns, and major reconstructive surgery. Third, opioids may be indicated for some chronic pain conditions, when there is clear pathophysiology, and no definable end point.

And, as before, when prescribing for acute pain, in these situations, you should limit the total dispensed, and educate parents about dosing, administration, storage, and disposal to minimize risks of diversion, or accidental ingestion. Fifth, and finally, consult or refer to a pediatric pain specialist when chronic pain problems in children and adolescents are complicated, or persistent.

Now, let's conclude case one. The patient weighs 65 kilograms. So, you give her a dose of 600-milligrams of ibuprofen. She last took acetaminophen at a dose of 500-milligrams five hours prior to coming to your clinic, so you provide her another dose of 650-milligrams, which corresponds to two regular-strength tablets. After 45 minutes, she still reports that she's in 7 out of 10 pain. So, you decide to offer her oxycodone for pain management.

Drawing on some of the principles that we've discussed here, you conduct a careful history, including a psychosocial history, and family history. You learn that she has smoked marijuana previously, but does not use it regularly, and never used other substances. Her anxiety is controlled on Fluoxetine, and she is followed by her primary care physician, and a therapist. Her history is otherwise unremarkable.

Prior to prescribing an opioid, you review the prescription monitoring program, and determine that she has not received any past year prescriptions for opioids, or other controlled substances. You provide her with a single oral dose of oxycodone, 5-milligrams in the clinic, which in addition to the other medications she has received, reduces her pain to 3 out of 10.

You prescribe her a three-day course of oxycodone, 5-milligrams, which is equal to 12 tablets, and call her mother to discuss safe medication storage, and arrange for immediate dental follow-up. To build on case one, when you discuss the opioid prescription with the patient's mother, she becomes concerned, because she has heard that opioids can be addictive. What do you need to know before considering writing a prescription for an opioid?

Sarah Bagley, MD: The continuation of this case raises the following key questions: First, how has the opioid crisis affected youth? Second, what are the criteria for diagnosis of addiction in youth? Third, what are the risk factors for substance use disorder? What is the risk that a young person will engage in long-term use of opioids after an initial prescription? Fourth, what kind of screening should you do before prescribing an opioid? And finally, how do you screen for substance use disorder?

It is well-documented in both the medical literature, and the lay press, that overdose deaths have significantly increased in the United States since 1999. In 2017, in fact, there were eight drug-related deaths per hour. Given the rising drug-related deaths, it begs the question what has been driving these deaths? And we know that opioids are primarily responsible. The most commonly misused prescription opioids include oxycodone, hydrocodone, methadone, morphine, and hydromorphone.

And although they were initially responsible for the emergence of the opioid overdose crisis, in recent years, we've seen a transition to first heroin driving the crisis, and then most recently fentanyl. Fentanyl is now implicated in a majority of overdose deaths in many settings. It is highly potent. The kind of fentanyl that is driving these deaths is not prescribed fentanyl but is manufactured illicitly overseas. Oftentimes, when we think about who has been affected by

the opioid crisis, we do not picture teens. However, they have been affected by increasing overdose deaths.

Between 1999 and 2016, overdose deaths rose among 15- to 19-year-olds. There was a 95 percent increase in prescription opioid-involved deaths, a 405 percent increase in heroin-involved deaths, and nearly a 3,000 percent increase in synthetic opioid involved deaths. In addition to these deaths, national data also tell us that two and three individuals, who are in opioid treatment report first use before the age of 25, and one in three report first use before the age of 18. When high school students are asked about past-year use of opioids other than heroin, one in 29 respond, "Yes."

But now, let's talk about what addiction is, and risk factors for substance use disorder among youth. How does one diagnose an opioid use disorder? Let us go over the criteria. There are 11. Opioid use occurring over 12 months with two or more of the following: Tolerance, withdrawal, craving, taking the drug in larger amounts, or over a longer period than was intended, a persistent desire to cut down, or unsuccessful efforts to cut down on drug use, excess time spending in activities to obtain, use, or recover from substance use, failure to fulfill major role obligations at work, school, or home, continued use despite having persistent, or recurrent social, or interpersonal problems, social, occupational, or recreational activities are given up as a result of the substance use, recurrent use in situations in which it is physically hazardous, and continued use, despite knowledge of having a persistent, or recurrent physical, or psychological problem.

If a person meets two to three of these criteria, they have a mild opioid use disorder. Four to five of these criteria, you have a moderate opioid use disorder, or six or more of the criteria, an individual would be diagnosed with a severe opioid use disorder. It's important to note that just meeting the criteria of tolerance and withdrawal is not sufficient to diagnose someone with a mild opioid use disorder, because, for example, if someone was prescribed chronic opioids for a chronic pain condition, he or she would likely develop tolerance and withdrawal, but may not actually have an addiction, which is really characterized by cravings, compulsion, and loss of control.

When we think about youth who may have an opioid use disorder, it's important to remember that this is a developmental condition. Brain development continues until the mid-twenties. What does that mean practically speaking? That the reward system is developed, but the planning centers continue to develop. That means that the development is not yet complete, and youth are at risk. Substance use during this critical time may permanently alter processes. Practically speaking, it means that we see youth who often seem to have their foot on the gas pedal, seeking rewards, but have a really hard time putting the brake on understanding the consequences of their actions.

What are some of the risk factors that make a youth particularly vulnerable to developing a substance use disorder? Age of first substantive exposure, family history, other substance use

disorder, psychiatric diagnosis. For opioid use disorder, specifically, exposure to a prescription opioid, parent, siblings, and peers who use substances. There are other risk factors, but we are going to go over the bolded risk factors, because they are most relevant to development of an opioid use disorder, among youth.

Age of first use of alcohol or drugs has consistently been shown to be a risk factor for development of substance use disorder later on in life. This graph shows the results of a nationally representative study. On the Y-axis is prevalence of lifetime diagnosis of substance use disorder, and on the X-axis is age of first alcohol use. I first want to draw your attention to the blue line, which is just looking at the total cohort. What you see is that the earlier on that a person had alcohol, that person was then more likely to develop a substance use disorder later on in life.

When they then stratified that total cohort into those who had a positive family history of substance use disorder, and those with a negative family history of substance use disorder, the results were consistent. Age of first use was associated with a lifetime substance use disorder. In other studies, the likelihood of developing a substance use disorder is almost eight times as likely in those who have a first-degree relative who also have a substance use disorder.

The final risk factor to consider is exposure to an opioid prescription. In one retrospective cohort study of youth receiving an opioid prescription from a dental clinician using private health insurance claims, authors found that nearly 7 percent received another opioid prescription 90 to 365 days later. And most importantly, that nearly 6 percent had a healthcare visit related to opioid use disorder within 365 days.

Now, I'm going to talk about how to screen for substance use in primary care settings. The screening to brief intervention, or STBI is one validated option that can be used. In Part A providers ask, "In the past year, how many times have you used tobacco, alcohol, marijuana?" with the options never, once or twice, monthly, or at least weekly? If the answer is never, stop. Otherwise, providers can ask about other substances, including prescription drugs that were not prescribed, illegal drugs, inhalants, and herbs, or synthetic drugs.

Once the provider is done, he or she can either ask the craft questions, or conduct a brief intervention. Both of these options will be discussed in the following slides. Of note, this tool is available on the National Institute on Drug Abuse's website, where providers can find additional resources. The STBI is a useful tool, because even before asking the craft questions, or conducting a brief intervention, based on the frequency of responses, providers will have an idea of the severity of use. This is shown in this slide.

For patients who respond that they have never used substances or have used once to twice in the last year, this is associated with not having a substance use disorder. For those who endorse monthly use, this is associated with mild to moderate substance use disorder. And weekly or more use is associated with severe substance use disorder. For patients who do

endorse using substances, providers can follow up with the craft questions, which are shown in this slide.

The responses to these questions are “yes,” or “no,” and include, “Have you ever ridden in a car driven by someone, including yourself, who was high, or had been using alcohol, or drugs?” “Do you ever use alcohol or drugs to relax, feel better about yourself, or fit in?” “Do you ever use alcohol or drugs while you are by yourself, or alone?” “Do you ever forget things you did while using alcohol or drugs?” “Do your family or friends ever tell you, you should cut down on your drinking or drug use?” “Have you ever gotten into trouble while you were using alcohol or drugs?”

After completing the craft questions, the score – one point for each yes – is tallied. In addition to screening for substance use, the craft is also helpful, both because more information is collected about how substance use is impacting a patient’s life, and because the frequency of use is correlated to substance use disorder. This chart shows that the craft score is associated with DSM5 substance use disorder diagnosis.

In this study of adolescents recruited from a primary care setting, 64 percent who had a craft score of 2 had a substance use disorder; 79 percent with a score of 3 had a substance use disorder; 92 percent with a score of 4 had a substance use disorder, and 100 percent of those with a score of 5 or 6 had a substance use disorder.

For some youth, a brief intervention may be sufficient. You may want to use these talking points for brief counseling. You can review the screening results. For each yes response, you can ask, “Can you tell me more about that?” You can make a recommendation not to use. As your doctor, my recommendation is not to use any alcohol, marijuana, or other drug, because they can harm your developing brain, interfere with learning and memory, and put you in embarrassing, or dangerous situations.

You can provide riding and driving risk counseling. For example, motor vehicle crashes are the leading cause of death for young people. I give all my patients the Contract for Life. “Please take it home, and discuss it with your parents, or guardians to create a plan for safe rides home.” You can also elicit more self-motivational statements, such as people who aren’t using drugs yet. If someone asks you why you don’t drink, or use drugs, what would you say? For youth who may be using drugs or alcohol, you can ask, “What would be some of the benefits of not using?”

And finally, you can reinforce self-efficacy. “I believe you have what it takes to keep alcohol and drugs from getting in the way of achieving your goals.” You can also give patients a Contract for Life. The Contract for Life is an agreement between youth and a parent, or guardian that the youth will not drive with anyone who has used drugs or alcohol. Some youth are going to require a formal assessment for a substance use disorder.

In Massachusetts, we recommend going to the website helplinemass.org, or calling the helpline number. There are resources available to refer patients to developmentally appropriate programs. For youth who are outside of Massachusetts, there's also the SAMHSA treatment locator. You can enter an address, and a radius within which treatment would be reasonable, and receive a list of possible treatment programs.

Scott Hadland, MD: Now, let's discuss a second case. You're in urgent care, where an 18-year-old male presents seeking help for opioid use disorder. One year ago, he was prescribed oxycodone after surgery for appendicitis, and after his prescription ran out, he purchased more from a friend before transitioning to heroin, and fentanyl use approximately four months ago. He's wondering what his treatment options are. What do you tell him? There's a large treatment gap for opioid use disorder.

If you take 100 youth from across the country, and ask the question, "How many actually received treatment?" The answer is only 11, and if you ask the question, "How many received standard of care treatment that includes evidence-based pharmacotherapy?" The answer is only three. So, what does standard of care treatment for opioid use disorder look like? In its most basic form, it consists of two parts, including medication, and behavioral therapy.

Many treatment programs layer on numerous other support services to help support youth and families, as well. Approved medications for opioid use disorder include buprenorphine, a partial opioid agonist, naltrexone, an opioid antagonist, and methadone, a full opioid agonist. These medications are recommended by the American Academy of Pediatrics, because randomized clinical trials showed that they result in fewer relapses, fewer cravings for opioids, and longer retention in addiction treatment.

Among modalities commonly used for behavioral therapy, there's motivational enhancement, cognitive behavioral therapy, and contingency management, among other approaches. Unfortunately, at this time, due to a lack of evidence, the best modality is not known, and a combination may, in fact, work best. Behavioral therapy is a critical component of treatment, since dual diagnoses are really the rule, and not the exception, when it comes to treating opioid use disorder. Many youth also struggle with concurrent depression, anxiety, ADHD, or other behavioral health concerns.

Let's dive a little deeper on these three medications, starting with buprenorphine. Buprenorphine is a partial opioid agonist, and it's FDA approved for age 16 and up, although some practitioners do use it off-label for younger years. Buprenorphine works by reducing withdrawal and cravings, because it's a partial opioid agonist, acting on the mu opioid receptor. And it's available as a daily dose, as a film or tablet, a monthly dose, as a long-acting injection, or a semiannual dose, as an implant.

Buprenorphine can be provided by primary care clinicians, but only after obtaining a drug enforcement agency waiver. The second medication, naltrexone, is an opioid antagonist, and it's FDA approved for ages 18 and up. Again, it is sometimes used off-label for younger ages.

Naltrexone reduces cravings only, and even then, may not be as effective as buprenorphine, or methadone in doing so, and in fact, used incorrectly, can precipitate withdrawal. Naltrexone is available as a daily dose in the form of a tablet, or a monthly dose when given as a long-acting injection. Naltrexone can be provided by a primary care clinician with no special training required.

A third medication, methadone, is a full opioid agonist. Access to methadone is extremely limited for youth under the age of 18, and this is because of federal guidelines that restrict its use. Methadone reduces withdrawal and cravings by acting on the mu opioid receptor as a full agonist and is available only as a daily dose in the United States. It can only be administered in person at a qualified methadone center.

Now that we've discussed the three FDA-approved medications for treating opioid use disorder, it's worth spending a little bit of time talking about the additional training that's required for providers in order to be able to prescribe buprenorphine. Buprenorphine is available as a sublingual tablet, a sublingual film, an implant, and a long-acting injectable.

What's unique about the United States context is that clinicians need to obtain a special DEA, or Drug Enforcement Agency waiver in order to become a buprenorphine prescriber for any of these formulations. In order to complete a buprenorphine waiver training, you can go to the website listed here, www.pcssnow.org. And if there isn't a training near you, request one.

There are also a number of online options available for people interested in pursuing this training online. Once you receive your training, you can even get a coach through the program to support you in your ongoing work, as you prescribe buprenorphine to young people with opioid use disorder. And we've also listed some other websites here that may be helpful to you in your practice.

So, what's the rationale for using opioid agonists, like buprenorphine or methadone in the treatment of opioid use disorder? When a young person uses heroin or pills off the street, those are typically short-acting opioids. They cause an initial rise in opioid levels in the bloodstream, and in physiologic affect. However, that quickly wears off, and the young person has to use almost immediately again to try to catch the high that they previously attained.

As time goes on, and tolerance develops, it becomes harder and harder to reach doses where a high is obtained, and at the same time, withdrawal symptoms, and cravings start to emerge, when levels of opioids in the blood become low enough. The end result of this process is that for young people who use opioids off the street, they typically rebound between this feeling of

high, if they're even able to attain it, and times of withdrawal and cravings with very few times in between where they feel normal.

So, the rationale for opioid agonists, like buprenorphine or methadone is the following: First, in a clinical setting, we wait until the young person hasn't used opioids for some time, and thus the levels of heroin, or short-acting pills in their bloodstream dips down, and they start to experience withdrawal symptoms. Then, as clinicians, we can carefully dose buprenorphine or methadone in a range where the young person feels normal again. Dosed appropriately, they don't experience the high of opioids that they may have felt before, and they don't experience withdrawal, or cravings. Therefore, they're more able to engage in behavioral health, and other services that you can provide.

The rationale for naltrexone as a treatment for opioid use disorder is a little bit different. Mu opioid receptors are highly concentrated in parts of the brain that underlie the reward pathway, including the ventral tegmental area, and the nucleus accumbens. Opioids activate the reward pathway by binding in both of these regions. So, the rationale for naltrexone as a treatment for opioid use disorder is that it blocks the high from taking opioids by binding to those receptors, and not allowing other opioids to bind.

Additionally, naltrexone may reduce cravings in some patients, because parts of the brain that underlie cravings involve transmission of endogenous opioids. That's why naltrexone is used for alcohol use disorder, and other conditions that include cravings. Sometimes the question is raised, though, should youth even receive medications? And the American Academy of Pediatrics has weighed in, and said, "Yes. Adolescents and young adults with opioid use disorder should receive access to medications, including buprenorphine, naltrexone, and methadone, when available."

Unfortunately, very few young people receive medication as part of their treatment for opioid use disorder. In a large insurance claims database study of adolescents and young adults with opioid use disorder, only a minority of young people receive medications. This figure shows young people with opioid use disorder grouped by age. The height of each bar represents the percent of young people who after being diagnosed with opioid use disorder, received treatment.

As you can see, the majority of young people identified as having an opioid use disorder, do not receive some treatment. However, the part of each bar that is comprised of behavioral health services, only, is very large. The part of the bar that corresponds to youth receiving opioid use disorder medications, like those we just discussed, is very small. And in fact, among youth in this study under the age of 18, only 5 percent, or about 1 in 20 received an opioid use disorder medication as part of their treatment.

Over the age of 18, receipt of medication was much more common, but still relatively infrequent with only 25 percent receiving an opioid use disorder medication, or only approximately one in four. This next figure from the same study, shows that when young

people receive medications as part of their treatment for opioid use disorder, they're more likely to be retained in treatment. In this figure, the X-axis represents the time that individual is in treatment for opioid use disorder. The Y-axis represents people who are still retained in care at any given point in time. The red line represents youth who received only behavioral health services, and the blue line represents youth who received medication as part of their treatment.

As you can see, at all points in time, youth who receive medication as part of their treatment were less likely to drop out of care. This next table demonstrates some of the numbers that underlie the figure that we just saw. Youth with opioid use disorder who received behavioral health only in this study typically were retained in care for only 67 days. Youth who received buprenorphine typically stayed in care for 123 days. Those receiving naltrexone typically stayed in care for 150 days, and those receiving methadone typically stayed in care for 324 days.

At all points in time, youth who received buprenorphine were 42 percent less likely to drop out of treatment. Those who received naltrexone were 46 percent less likely to drop of treatment, and those who receive methadone were 68 less likely to drop out of treatment. These results are particularly striking, because as you'll recall, methadone is very difficult for individuals under the age of 18 to access. Regardless, these findings demonstrate to us that youth who receive any medication, are significantly more likely to remain in treatment than youth who receive behavioral health services only.

As we talk about treatment for opioid use disorder, it's also important to remember that we need to educate patients, and families about naloxone. Naloxone is recommended by the US Surgeon General. It's an overdose reversal agent that acts as an opioid antagonist. I should be clear that this is different from naltrexone, which we just spoke about as a long-term treatment for opioid addiction. Naloxone is now available in an easy nasal spray, shown here at the right, and at a higher dose of 4-milligrams.

People who administer naloxone may still need multiple administrations to reduce an overdose in the setting of fentanyl. Naloxone is given out free from many health departments and can also be prescribed by clinicians. And in most settings is covered by insurance.

Back to our case. You diagnosed the young man with a severe opioid use disorder. You used this as an opportunity to talk to him about his options for treatment, including access to medications like buprenorphine, naltrexone, and methadone, as well as behavioral health services. He decides that he wants to proceed with treatment with buprenorphine to help manage his withdrawal and cravings, which have been quite profound.

Now, here's where our case could go in two different directions. First, and ideally, you're able to prescribe buprenorphine in your own practice, because you've obtained a drug enforcement agency waiver to do so. In the event that neither you, nor your colleagues in your practice are able to prescribe buprenorphine, or if behavioral health services are not available, here's where

you would consider an outside referral. You should consider partnering with treatment programs in your community to understand the extent to which they offer developmentally appropriate care, and evidence-based care that allows for use of medications as part of treatment for opioid use disorder.

Last, you offer this young man naloxone. You do so with a prescription that he's able to fill, and you talk to him about how to use it. Ideally, if he were to have presented with family, friends, or other loved ones, you would also talk to them about how to reverse an overdose, should one occur. One additional topic that we think is important to cover is the language that we use to describe addiction, and people who experience addiction in order to minimize the stigma associated with the words that we choose.

And it's critical that clinicians who work with young people, or really any person with a substance use disorder, use first-person, clinically accurate language at all times. What that means is that although in the common press you'll see words commonly, like "junkie," "druggie," or "addict," what we really need to be doing is using first-person, clinically accurate language, such as "person with addiction," or "person with substance use disorder."

Even the terms "substance abuser," or "substance abuse," which are still commonly used by many practitioners, are associated with stigma. In fact, a carefully conducted, randomized trial in which clinicians who work with patients with substance use disorder were given two scenarios regarding a patient that were exactly the same with the sole difference being that in one scenario, the patient was described as an individual who is a substance abuser, and in the other scenario, the term "substance abuser" was replaced by "person with a substance use disorder."

What was found in this study is that clinicians treat patients described as a "substance abuser," differently. They're more likely to choose punitive courses of action to work with that patient, rather than supporting them in a clinically appropriate way. So, my recommendation to you is whenever possible, avoid using the term substance abuse in your clinical documentation, or when you're talking with patients, families, or colleagues about substance use disorder.

Instead, use the terms "substance use," "substance misuse," or if the individual has a substance use disorder, use that term. Sometimes patients and clinicians will use the term "clean." We prefer not to use this term, and instead use the term "in recovery," or "sober," as some patients will prefer. And the reason that we avoid using the word "clean" is that the opposite of the word "clean" is "dirty," and this implies a negative connotation for patients. Some clinicians will refer to treatment with buprenorphine, or methadone as being "replacement therapy." We prefer to call this "treatment," or "medications for opioid use disorder," or "pharmacotherapy."

The reason that we try to avoid these terms is that it feeds into a common narrative that treatment with buprenorphine or methadone is simply quote/unquote "replacing one addiction

with another.” Since we know that addiction is a complex process in which an individual not only uses substances, but has significant life problems as a result of using substances, we know that treating someone with buprenorphine or methadone, actually, improves those life problems and is not simply trading one addiction for another.

Lastly, all pediatric practitioners should be on the lookout for this term. And that is infants that are born exposed to opioids are quote/unquote “born addicted.” This is clinically inaccurate language, because again, we’ve discussed that addiction, which implies substance use disorder, is really use, or voluntary use of a substance that’s associated with life problems. Since infants are unable to engage in complicated changes as a result of substance use, we simply can’t accurately ascribe the term “addiction” to them, and more importantly, this term when applied to infants is highly stigmatizing to patients and families.

Moderator: Thank you for participating in “Safer Opioid Prescribing for Pain in Adolescents and Young Adults in Outpatient Settings.” To recap what you’ve learned in this activity, most acute pain in pediatric patients can be managed with non-opioid approaches. Opioids can and still should be prescribed for severe pain in children, and adolescents, but care should be taken. Opioid overdose deaths, driven by synthetic opioids, have significantly increased among youth. And youth with opioid use disorder should be offered evidence-based treatment, including medications, such as buprenorphine, and naltrexone.

To receive credit for this activity, you’ll need to take a post-test, and pass with a score of 70 percent or greater, and complete an evaluation. Upon completion, you’ll be able to print your certificate.