Key:

H = Hanna Ortiz

R = Dr. Redfield

H: Dr. Redfield, thank you for having us. Why don't you begin with describing different categories of opioids and stating how they are all part of the opioid epidemic?

R: Well, there is a series of opioids. First, there's prescription opioids that we have. Probably the most typical prototype with that would be oxycodone or Percocet. Then there's heroin, right, and then there's synthetic opioids that we see, and which is really the challenge we have now like with fentanyl. These are the key classes of opioids. One of the biggest drivers of the opioid crisis we have today is actually prescription opioids. It's hard to believe that almost 10 million people in our nation have admitted to misusing prescription opioids, so those really were sort of the entry, if you will, opioid to the current crisis. It went from prescription opioids to heroin to synthetic opioids with fentanyl.

H: Now, drug-use disorder has been around for a long time. What is different about this current issue, and how did it all start?

R: Clearly, this current crisis that we're dealing with really started with the expanded misuse of prescription opioids. As I mentioned, almost 10 million people over the age of 12 have admitted in 2018 to misusing opioids. That's a lot of people. That's about 3.7 percent of our population. I think it's important for your viewers to recognize clearly what addiction is. It's a medical condition. It's actually a chronic medical condition. It's actually a chronic relapsing medical condition. It's not a moral failing. There's still a lot of misunderstanding, you know, and not recognizing addiction for what it is, but clearly the prescription use of opioids in the form of codeine or Percocet, oxycodone, it turns out that about two to six percent of people that get a single prescription for an opioid actually end up becoming addicted to opioids so that if you got a prescription for a wisdom-tooth extraction, or you sprained an ankle, or you had a surgery, and the doctor wrote you a prescription, a number of those individuals ended up unwittingly then becoming addicted to opioids. I think the use of prescription opioids became a really significant problem in the late '90s. We have examples of some pharmacies that are in towns of less than 3,000 people that dispense more than 20 million tablets. There also was a challenge in the medical profession where there became a very serious perspective on pain. It went so far as to have what we call the fifth vital sign. So, you

take your pulse, your temperature, respiratory and blood pressure. The medical community actually developed a fifth vital sign, which they called your pain score, and so everybody was very focused on pain scores, and actually it got to the point that even reimbursement got linked to whether or not hospitals were appropriately treating pain. So I do think our own profession has to take some responsibility, the medical profession that is, healthcare professionals, for not I think recognizing to the degree that we now know that these prescribed opioids are actually very addictive in their nature, and really we should be looking at the use of opioids as the last choice for pain control as unfortunately for some time I think all too often it was the first.

H: If we look at the current trends, would we see an increase or a decrease of misuse among next generations?

R: We have made some progress. It looks like we're going to be about around 4 percent decline from the year, so it is important. It's one of the first times we've actually seen a decline, but we're still looking at over 67,000 overdose deaths, which is huge. You know, probably 130 people in our country overdose per day and die. The other thing that's important to realize though when you ask about what's happening, there are some states that have really decreased their overdose deaths from opioids. There's other states that have increased, and we have mapped it out very carefully. We have a document that the CDC can share that shows you exactly what's happened over the last 2 years, but the thing that's more alarming to me is that we now have 12 states in our nation where the leading cause of overdose death is no longer opioids, no longer heroin, no longer fentanyl. It's methamphetamine, and the problem with methamphetamine is that we don't have medical countermeasures like we do for opioids. We've developed some really good medical countermeasures and treatment, medical replacement therapy for opioid, whether it's methadone or for overdose death naloxone. Well, when it comes to methamphetamine, we really don't have any advanced medical countermeasures other than behavioral counseling and trying to get people to change their use of these products, but recently now we have 12 states where if you look at overdose deaths overall, the leading cause is methamphetamine. So, when we talk about drug-use disorder, we're talking about more than opioids. You know, the focus of the initial effort by the president and secretaries are to focus on opioids. It's recognized to expand that in the sense that it's really the broader drug-use disorder epidemic that we're having in our nation.

H: So, it seems like both heroin and methamphetamine made their comeback from the '70s and '90s. Are there any other illegal drugs linked to the current crisis?

R: Obviously, the opioid epidemic now is really complicated by the importation of fentanyl, which is a very deadly drug, but it's also changed in the methamphetamines. You know, prior, methamphetamines were largely locally made. You've probably heard stories about meth houses, and some house blows up in a suburban area that everyone thinks is, you know, apple pie and just normal, and the house blows up, and they find out that it's been a big meth lab. Well, today most of the methamphetamines are actually not made in our country anymore. They're coming into our country, imported obviously illegally, but the challenge is they're also much more potent, and as a consequence now there's a greater fatality associated with them. The other reality is that methamphetamines are actually also being contaminated with fentanyl, and of course we didn't talk about cocaine, but the cocaine deaths are going up substantially too, and the reason for that is that cocaine is also cut with fentanyl. So very significant, I do think that the drug use disorder right now is the public-health crisis of our time. You know, as CDC director being trained in infectious disease, I thought when I became CDC director I'd be obviously confronting infectious epidemics, and I come here, and I realized the real epidemic of our time is actually drug use disorder.

H: Can science predict who will become addicted to prescription medications? Also, what does it say about interrelationships between types of addiction?

R: We don't know the predictors. You know, as I said, there have been studies to show that two to six percent of people after a prescription from opioids will become addicted. There was a recent study which suggested the addiction rate was less. I think a lot of progress has been made in educating healthcare professionals about the risks of addiction. I think also the American public is becoming more aware. I think most people weren't aware that if their teenage son or daughter had their wisdom teeth out and they were given, you know, codeine or Percocet that that potentially could be a problem, you know, and the interrelationship between addiction, whether it's nicotine addiction ... You know, does nicotine addiction impact future addiction? I'm obviously concerned, but right now we don't have the science. We don't really know what predicts, who predicts, you know, who will become addicted, who won't become addicted. I do think there are some things in general that put individuals at risk. The greater isolation that individuals have, people look for different ways to get personal satisfaction.

H: What is the CDC doing to help combat the opioid epidemic?

R: The CDC's role is really more to provide guidelines to healthcare providers to make them aware and obviously communication to the American public to realize that narcotics have risks, and we should be maybe first looking at alternatives to pain control than reaching immediately to a prescription for narcotics. We've done a lot also on what we call the Prescription Drug Monitoring Program. There's now a pretty good prescription drug monitoring program that can track to see if individuals are getting the same prescriptions and duplicate prescriptions and not filling them, and that's working across state lines.

We've seen a marked reduction in duplicate prescriptions as a consequence of that. So that's really been where we've been focused, in obviously the surveillance and understanding the trends of overdose death and what's happening in what areas. We've also developed in a relevance to the group that you're sharing this with as we also have a Rapid Deployment Force now, that we work in cooperation with law enforcement. So if they're going to close down a pill mill, we have teams now that are ready to go in and augment the public-health workforce there so that we can try to negate negative consequences from shifting that demand so rapidly and see if we can get those individuals into treatment. I mean, we still have a long way to go. I mean, if you look at the data today, we as a nation have about 58 opioid prescriptions for every 100 people. That's a lot. You know, now some of those are duplicate, but it's significant, and how to begin to shift that acute pain control to alternatives and then work really hard with people that do have chronic pain. We have one to three million people that are chronically dependent on opioids for pain. How do we begin to ensure their pain control but gradually look to see if there's alternatives that will control their pain outside of opioids?

H: And what about naloxone?

R: The one area that we've tried to make an impact is the expanded use of naloxone. We would like to see that every time a high-dose opioid prescription is fulfilled that a co-prescription for naloxone goes with it. That process has started. I will say that I was hoping to see greater progress. Last year, it turns out that we got one naloxone for every 70 prescriptions for opioids, and what I would like to get is 70 prescriptions of naloxone for every 70 prescriptions because naloxone is lifesaving. We recommend that, you know, individuals that have opioid dependency obviously carry it. We recommend that family members have access to it. Obviously, I'm sure law enforcement now is carrying, you know, naloxone for their job. It's important. One of the challenges with it is

that we still struggle with people not embracing drug use disorder as a medical condition. You'd be surprised how many families it's impacted, but when you go to talk about it, nobody talks about it. There's still a lot of stigma around drug use disorder. That stigma does negatively impact individuals getting access to naloxone, which is something we're trying to confront. We don't think stigma has a role in public health. We need to get people to be more open about the realities of having drug use disorder and a medical condition. I think that we have a long way to go there.

H: So, with the concerns regarding opioids, are there any alternative ways to manage chronic pain?

R: I think this is one of the most important things. Again, I'm a physician by training, internal medicine, infectious disease. I think this is more important, and we're working hard to try to provide guidance to physicians that opioid use should kind of be the last choice for someone that comes in with acute pain. They're in the end and look at alternatives to managing that pain, you know, nonsteroidal analgesics, things like you know of like Motrin. Individuals with chronic pain, it gets a little more complicated because these are individuals now that have been opioid-dependent for multiple years, and I always want to stress our guidelines were never intended to take away pain control for people. Some people have criticized us for our guidelines, and we've always said that the use of these products to control chronic pain are between the individual and their physician or their healthcare provider, but that said, we need to embrace the alternatives, massage therapy or acupuncture. Even the simple thing of giving somebody a nonsteroidal or some of the over-counter medicines, sometimes that's a problem because it's not covered in their insurance plan, and so people would rather have the narcotic that is even if they don't want the narcotic. So, I think a lot of those efforts are moving forward in a very positive way to really push for alternatives. There's also a lot of research now going on, and I'm sure when you talk to NIH, but of looking at several things, they're looking at ways to co-administer another product with a narcotic. That then changes the risk of dependency, and those products are being developed, and there's also other products that are being developed now that control pain but don't have any effect. All it does is get rid of your pain. It doesn't make you feel euphoric. It doesn't make you feel ... It just makes you not have pain, so I do think science ... And this is one of the reasons I'm a big optimist, that the epidemic will be controlled because I think science will figure out the predictors of addiction that you asked me before, but science will also figure out the common pathways to how the brain becomes addicted and develop therapeutics that can block the ability for that addiction to occur or reverse that addiction. I really think science will get those tools. Our job though at CDC is to put into action the tools we currently have, and that's why we focus on trying to increase

the awareness of where the drug-use-disorder issues are today because it is a changing target. As I mentioned, even in my nearly 2 years here at CDC, I'm watching the emergence of the fourth wave. You know, we didn't have 12 states where the leading cause was now methamphetamines when I came in here. So, I can see the methamphetamine epidemic now is starting to really gain ground as we're getting better control of the opioid epidemic, and then the cocaine fatalities are going up substantially because the fentanyl is getting cut. So, we've got to really look from a comprehensive perspective of how do we confront the overall drug-use disorder because it will just start shifting where the target is.

H: And what about behavioral treatments for those who need it?

R: A lot of people that use drugs chronically end up using them because they're self-medicating. You know, they may have a mood-swing disorder, and they self-medicate, so I do think augmenting mental health services is critical. I think the current initiative that the president has, the secretary, to expand access to treatment, really, really important. I mean, the amount of new treatment opportunities there are for people particularly with opioid disorders is really huge, and as I mentioned to you, treatment, you know, recovery can be the rule, not the exception. The challenge we're going to have is developing effective programs for methamphetamine addiction. That's going to be more complicated.

H: So, despite all those scary numbers you've mentioned throughout our interview, you remain hopeful for an end in sight?

R: You know, I don't have any doubt about it. I remind people that, you know, my professional career started in the early '80s, and as a young doctor I became the doctor of Walter Reed that took care of all the young men and women that had HIV infection, and these were people in the prime of their life, and no matter what I did, most of them died, 21, 22, 25, 30. You know, it looked like this was ... What could you do? You know, at that time, there was really no meaningful treatment for chronic-viral diseases. Now fast forward. Where are we today? You know, you can live a near-natural lifetime. Science has figured most of it out. We now even know how to not only make someone so they're no longer progressing in their illness. We can control their virus. We can make it so they can't transmit to each other, and then we can also, those people that are vulnerable to HIV, we can allow them access to medicine to keep them, so even if they are intimately exposed, they're not going to get affected. So the power of science is

huge, and, you know, this crisis is no more hopeless than many of us could have felt in 1981, '82, '83, '85, 1990, even 1995, but, you know, we saw the power of science starting to unravel the complexity of HIV and then develop what we would call therapeutic targets, and then the industry developed medications for those therapeutic targets. So now we have well over 30 medications, you know, and so the same thing is going to happen here. Science is going to figure out what the key mechanisms are for addiction, and, you know, one of the things that excites me is I suspect unlike infectious disease where you have to develop maybe a drug or a countermeasure for each different pathogen, I suspect there's very common pathways between cocaine addiction, heroin addiction, methamphetamine addiction, alcohol addiction, nicotine addiction, gambling addiction, sex addiction. So, there will be a way to begin to modify and recognize that addiction in all its forms is a medical condition, which we will successfully develop medical countermeasures that allow people to have successful treatment for their medical conditions. I don't doubt it at all, and I think it will come faster than many people see, but we need to invest in the science. That said, we need to invest clearly in the application of the tools we have today, and that's obviously the role that CDC has. That's the role that SAMHSA has. We're in there trying to make sure the individuals today can not get into addiction. So, we're working hard to try to prevent new people from becoming addicted, therefore our education, and then those individuals that do have addiction, we're trying to help begin to educate providers to see how they can link them into care.

H: My last question is, is there anything else our audience needs to know?

R: Well, I think the first thing I'd like judges to know is that I'd reinforce that this is a medical condition. It's chronic relapsing medical condition. It's not a moral failing. To be honest just to be straightforward, one of my six children almost died from contaminated cocaine, and I owe a lot to the justice department because the jurisdiction that he was in decided if he went into a recovery program that he would have a different legal path than if he didn't go into a recovery program. Now I think he chose to go into recovery program on his own, but let me tell you there's a lot of people that the options of going into a recovery program rather than necessarily ride into the judicial system alone without the recovery program, so I'm a big advocate to try to get judges to realize recovery is possible, and we're trying to help individuals recover from a medical condition, not a moral decision. So, the more that they can begin to see this as the medical condition that it is, they have a critical role in helping give people that teachable moment when they may or may not choose to seek care. It's not easy to seek care when you have this medical condition. I'm reminded in the HIV efforts that we have today to bring an end to the HIV epidemic in our nation. One of the key pillars is for us to make

sure there's availability of evidence-based prevention methods to those that are vulnerable for HIV, and those include pre-exposure prophylaxis. Those are medicines that you can take that will prevent you from acquiring HIV even if you're intimately exposed, but one of the other evidence-based areas that work is safe-syringe programs, and I was not a big advocate of safe-syringe programs a decade ago, but I saw the data, and they really do prevent HIV epidemics like we saw in Scott County and hepatitis-C epidemics, but the other things they do and the thing that I think is most important to me personally is, if you go into a safe-syringe program because you're vulnerable to HIV, you're three to five times more likely to go for treatment for your addiction. I say that all because there's no doubt that one of the big teachable moments for individuals that are struggling with addiction will be the judges, depending on how they see that, and I would like them to know ... and you'll talk more with SAMHSA, but clearly the investment in quality treatment programs now has really happened with the president's effort to expand this, and SAMHSA has got the lead on it. You know, if you had asked me 10 years ago when there's no quality programs, you know, or very few and they weren't available in most jurisdictions, so, you know, the judges are handcuffed, but I would like them to reach out, and I know the government has a list of the quality programs and where they are and where they're expanded to build that partnership with the treatment side in their jurisdictions because I do think it's one of the most important things you can do, is to take somebody that has a medical condition and facilitate their ability to get treatment for their medical condition, and I said the first step is for people to believe in their hearts that it is a medical condition, and I can tell you there's absolutely no question. That's what it is. It's a treatable medical condition. The challenge is, it's a relapsing condition, a disease, so occasionally it relapses, and I always tell people, "If you have cancer, we try to treat your medical condition. If you relapse and get metastatic disease, we don't blame you. You had a medical condition." Reality is drug addiction is a relapsing medical condition. We've got to, you know, be prepared for that and embrace individuals until they can eventually go into long-term recovery.