[MUSIC PLAYING]

KEVIN KRAEMER: The conference organizers very nicely gave me this title, but I would say, it's an epidemic. It's not emerging-- it's here. It's a problem.

And so the outline of the talk today is, I'm going to talk very briefly really about some trends in opioid prescribing, and opioid harms. And it's going to be brief, because it's hard to read the newspaper, look at the news on TV, to look at the web without actually getting lots of news about the opioid problem in the country right now.

We'll then talk a little bit about safe opioid prescribing guidelines and practices, and specifically, I'll be focusing on the CDC guidelines, which were released early this year, that you should all be familiar with. And then we'll talk a little bit about referral and treatment for opioid use disorders.

And so, in the US, about 11% of US adults report chronic pain. It's a big problem. Through the '80s and '90s, there was a group of advocates, and specialty organizations that were really making the news that chronic pain is vastly under-treated in this country. And that was true.

There was lot of advocates, getting pain added as the fifth vital sign. And through the '90s, a lot of guidelines came out really pushing for more aggressive treatment of chronic pain with opioids. In 2001, the JCAHO came out with the pain management mandate, which required that pain be recognized, assessed, documented, and treated. And we've seen a four-fold increase in opioid prescriptions over the last couple of decades.

In 2014, about 10 million individuals in the United States report using prescription opioid non-medically. That means, not for a medical problem, or for the feeling that they get, or because they're addicted.

Other research has shown that the prevalence of opioid use disorders-- mean an actual DSM 5 diagnosis-- might occur in maybe as high as 26% in primary care patients receiving opioid for chronic non-cancer pain. So it's a big problem.

Sort of look at this graphically, this depicts the rise in opioid prescriptions over time. And if you could look at the blue bars, from 1991 to a couple of years ago, the number of prescriptions, opioid prescriptions, went from 76 million, in 1991, to 219 million in 2010, then dropping a little bit the last couple of years. And you can see similar rises in hydrocodone and oxycodone.

This depicts the age-adjusted rates of death related to prescription opioids, and heroin drug poisoning in the United States from 2000 to 2014. You can see a marked rise in deaths per 100,000 population from prescription opioids. And then, it's kind of flat for heroin, but then a big rise in heroin the last several years.

And so there has been a number of theories about why this is happening. One is that with the reformulation of Oxycontin, lots of people were coming off and turning to heroin. Or else the other thought is that physicians have gotten the idea, and other prescribers, the idea that perhaps prescription opioids are not the best thing to do. Might be cutting patients off.

Patients are then turning to street heroin. And actually, this is from a review article in the*New England Journal of Medicine* last January, and basically the authors gave evidence that about 70% of heroin users started their opioid use with prescription opioids.

We break this down a little bit-- this shows opioid overdoses driving an increase in drug doses overall. This shows the total number of deaths from any opioid, broken down by natural and semi-synthetic opioids-- oxycodone, hydrocoeone, then heroin. And then we see a similar increase in fentanyl and tramadol. And then methadone overdoses have actually been going down over time, as methadone is used less often.

It's important to note that the total number of deaths in 2014 from opioids was about 18,893. And actually a couple of years earlier, it actually surpassed motor vehicle accidents as a cause of death in the United States.

Other significant geographic variation in drug poisoning and opioid deaths-- and you can see here, the dark states have the highest rates, greater than 15 deaths per 100,000. You can see where Pennsylvania is. And I know there's a number of people here from states as far away as Florida, Kansas, and Colorado-- you can take a look to see where your state is.

Bordering Pennsylvania-- we have West Virginia and Ohio are pretty high, as well as some of the far west states. So in Pennsylvania in 2014, there were a total of 2,500 opioid-related overdoses, and in 2015, 3,500. If you look specifically at Allegheny County, the county we're in right now, in 2015, there were 422 drug overdose deaths.

And this just shows that, first of all, if you add up these percentages, you can see there's a lot of poly-pharmacy with these deaths. But we also see, in this blue bar, a big rise in heroin deaths, as well as fentanyl. Fentanyl is often used, mixed in with the heroin. And you know, fentanyl is quite a bit more potent than heroin.

You can see in Allegheny County, some of the prescription drugs-- like hydrocodone, and oxycodone-- are less often the cause of deaths.

But anyway, I hope I convinced you it's a big problem, both nationally and locally. David Hixton, the Western Pennsylvania US attorney, has made recommendations. And I should say, a lot of organizations-- UPMC, University of Pittsburgh, state organizations, the federal government-- are all doing lots of things regarding this problem.

For Western Pennsylvania, the US attorney recommended, number one, to develop a comprehensive public awareness and education plan to reduce overdose deaths. Number two, to assure access to and promote regional hotline dedicated overdose prevention. Number three, to develop and implement an overdose prevention program for incarcerated populations. Number four, relative to this group, promote physician and provider education and intervention programs.

Regarding treatment, they recommended to increase the number of drug and alcohol assessments and referrals to medication-assisted treatment, such as with naltrexone, methadone buprenorphine, for people who are incarcerated or on probation to promote efforts to increase the availability of naloxone in the community as a safe antidote. And then finally, to utilize our epidemiological overdose data on an ongoing basis, to identify and target interventions to reduce overdoses and overall drug abuse.

And so really, for today's session, kind of focusing on efforts targeted at prescribers.

So we're going to move on to some safe opioid prescribing guidelines. So how many of you have read the CDC guideline? OK, if you haven't read it yet, I would encourage you to do so. It was published in *JAMA* last spring. It was also in the Medical Mortality and Morbidity Weekly Report.

And it was a big project. The target patient population was patients with chronic pain greater than three months, excluding those with cancer, or in palliative care and end-of-life context. The target prescribers were primary care clinicians. The process was a pretty comprehensive and really quite exhaustive literature review, and also review with stakeholders.

The stakeholders that reviewed the guidelines were numerous. It included hundreds of experts and practitioners, federal agencies, more than 150 professional and advocacy organizations, patient and provider groups, federal advisory committee, peer reviewers, and they had over for 4,000 public comments on the guidelines. And they did revisions.

They came out with 12 recommendations in three key areas. The three key areas are determining when to initiate or continue opioids for chronic pain. Opioid selection, dosage, duration, followup, and discontinuation, and assessing risk, and addressing harms of opioid use. And I'll go through each of these a little bit.

And so recommendation number one was non-pharmacologic therapy, and non-opioid pharmacologic therapy are preferred for chronic pain. Related to that, clinicians should consider opioid therapy only if expected the benefits for both pain and function are anticipated to outweigh the risk for the patient. And if opioids are used, they should be used in combination with non-pharmacological therapy, and non-opioid pharmacological therapy.

And by those last bullets they mean things like physical therapy, cognitive behavioral therapy, massage, yoga, For non-opioid drugs, you know, certainly things like acetaminophen, non-steroidal anti-inflammatory agents, anti-depressants, and other modulating agents.

Really, this recommendation was based on the fact that when they looked through the literature, they could find no high-quality, randomized controlled trials, indicating efficacy of chronic opioid therapy for chronic non-cancer pain. The data were not there.

Now, absence of evidence does not necessarily mean evidence of absence. And so some people have commented on this guideline in that regard. And so opioids do have a role, and these guidelines don't say, don't use opioids. They say, if you do use them, use them with other things. And then all the other guidelines have to do with how to do it in a safe and rational way to minimize harms.

Recommendation two was, before starting opioid therapy for chronic pain, clinician should establish treatment goals with all patients, establish realistic goals for pain and function, should consider how therapy will be discontinued if the benefits do not outweigh risk. And clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risk.

Now, this seems like a no-brainer, and something that we should all be doing, that does make common sense, but this doesn't always happen. And sometimes I think the default is to simply write a prescription without going through the benefits and risks, you know, potential harms with the patient.

Recommendation three was, before starting, and periodically during opioid therapy, clinicians should discuss with patients the known risk and realistic benefits of opioid therapy, and patient and clinician responsibilities for managing therapy. Again, kind of a common sense recommendation to have a nice discussion with the patient so that they can know what to expect.

A lot of the data that do exist for chronic opioids, for chronic non-cancer pain, indicate that maybe at best, you might be seeing a 20% to 30% decrease in pain. And patients should know that-- I mean, they shouldn't have the expectation that their pain is going to be magically taken away with the prescription. That other things are required to help them.

So moving on to opioid selection, dosage, duration, follow-up and discontinuation, recommendation four was, when starting opioid therapy for chronic pain, clinicians should prescribe immediate release opioids instead of extended release, and long-acting opioids. And again, I think this makes a lot of sense-- when you're first starting somebody on therapy, you have to get a sense for what might be effective. And going right to a extended release is not the way to go.

Now, when these guidelines came out, some pain specialists argued about this, saying that they have enough knowledge to be able to start somebody right on an extended release or long-term opioid. I think that's typically in the context for somebody who has already been on an opioid. Certainly I think in the primary care setting, starting with immediate release is the way to go.

Recommendation five, when opioids are started, clinicians should prescribe the lowest effective dose. Makes sense. Clinicians should use caution when prescribing opioids at any dosage to carefully assess evidence of individual benefits and risk, when increasing dosage to 50 morphine milligram equivalents are more per day, and should avoid increasing dosage to 90 or more per day. Or carefully justify the decision to titrate up.

This is based on data showing that the harms are greatly increased as we get to these higher doses. And typically, when we get up to over than 90, 100 morphine milliequivalents per day, the risk for overdose death goes up several fold.

And this just gives you an example. Terry, can you [INAUDIBLE]? This is just an example showing what 90 morphine milliequivalents is, for several different types of opioids. And see for oxycodone, it's 60, for fentanyl patch, 37.5 micrograms per hour. For oxymorphone, 30, and for hydromorphone, 22:5.

So you've got to watch your doses.

Number six-- long-term overuse often begins with treatment of acute pain. And so the suggestion is, when you're treating for acute pain, to try to limit the initial prescription for three days. And they say that most people don't need more than three days. And that more than seven days will rarely be needed.

Opioids certainly have a role for acute pain. OK, now the recommendation for three and seven days, they pulled out of the air a little bit. [CHUCKLES] And these guidelines weren't intended for acute pain, but they put this guideline in there and recommendation simply because they know that many people get started with opioids with that initial event-- whether it's an injury, or an operation, or a dental procedure. And giving somebody 60 oxycodone after a dental procedure is really not the way to go.

And so, if you do use opioids for acute pain, the idea is to think of three to seven days, and then to reassess the patient soon to see how they're doing, and make a decision on whether they require a second prescription.

Recommendation seven-- clinicians should evaluate benefits and harms one to four weeks after the initial start of opioids. And then, once they're on continued therapy, to basically reassess them every three months. And if the benefits do not outweigh the harms of continued use, then to consider tapering or stopping.

Again, I think a common sense recommendation-- but if you think back upon your own practice, and I think about my own practice myself, sometimes we do put people on opioids, and basically just write the refill without re-assessing how well it's helping the patient, or whether there have been harms to the patient. And so reassessment is important.

Recommendation eight-- before starting, and periodically during continuation of therapy, evaluate risk factors for opioid-related harms. And these risk factors are things like-- if there are risk factors, to employ strategies to mitigate possible harms-- including considering giving naloxone, when factors at increased risk for opioid overdose, such as a history of overdose, history of substance use disorder, higher doses, or concurrent benzodiazepine use are also present.

And so mitigation strategies include things like doing a careful risk assessment when you're first thinking about prescribing, using opioid contracts-- which I'm not going to really talk about much more today-- doing urine testing-- which I'll get to in a moment-- and then giving a prescription for naloxone, particularly for patients who you believe are at higher risk for overdose.

And so this is just an example of an opioid risk assessment tool called the opioid risk tool-- ORT-- there's a few other ones that are present. This might be a little hard for you to see, but basically it assesses family history of substance abuse, personal history of substance abuse, age, with age between 16 and 45 being the higher risk for aberrant behavior, history preadolescent sexual abuse for the women, and then psychological disease history.

And the scores are different. And added up, they differ a little bit by gender. A total risk score of zero to three is considered low risk, four to seven moderate risk, and high risk is greater than eight. And studies that have been done on this tool-- if you're low risk, you have about a 5% risk of displaying aberrant opioid use in the ensuing 12 months. If you're high risk, that goes way up-- about 91% displayed some aberrant risk of use behavior of opioids.

Naloxone is important-- it's been found in a number of community-based studies that making naloxone freely available both to the patients, to their families, to their friends, lead to markedly reduced overdose deaths. Can be available in nasal spray, injectable naloxone. Not shown here is an auto injector that's not present, that actually has a little digital voice that guides you through the administration.

This is very busy-- and this is mostly targeted for people in Allegheny County. And so in May of 2015, Allegheny County health director, Karen Hacker, actually issued a blanket, countywide, standing prescription to all the pharmacies for naloxone. And so basically patients, their families, friends can just go in and get the prescription-- get those without a prescription from a doctor. It's already there.

These are the pharmacies in Allegheny County that have it usually on stock, but pretty much all pharmacies can get naloxone and order it, if needed. Naloxone in Allegheny County is also available at Prevention Point, Pittsburgh, and they actually have a clinic every Sunday at noon to 3:00, where people can pick up naloxone.

For those of you that practice in Pennsylvania, there's also been a blanket, statewide prescription for naloxone from the state health director for Medicaid patients.

Recommendation number nine in the CDC guideline-- clinicians should review the patient's history of controlled substance prescriptions, using a state prescription drug monitoring program to determine if they're already receiving opioids, or other drugs from other prescribers. And clinicians should review the PDMP when initially considering starting opioids. And then they say here, and then periodically, ranging from every prescription to every three months.

You can take that with a grain of salt. Some patients might require frequent checks. Others, you might be confident enough that you don't need to check that frequently with them.

So in Pennsylvania, the PDMP became active just in August. I think we were the 48th state to enact. I think right now there's only one that hasn't done it yet-- I think that's Missouri. This is the web site. Everybody in Pennsylvania here that prescribes should already be enrolled in this, and you should be checking it.

And it collects information about controlled substances to dispense to patients within the state, schedules two, three, four, and five. And you need to check it periodically. I've used it quite a bit, and I think it's an extraordinary useful tool, and it's really been helpful.

Can sometimes lead to difficult patient conversations, but it's a nice tool. Does it work? Just pay attention to New York and Tennessee here.

But in New York, after they enacted the PDMP in 2012, and the following year they saw a 75% decrease in patients that were receiving opioid prescriptions from multiple providers. In Tennessee, same thing, they saw about a 36% decrease in prescriptions from multiple providers after the PDMP was implemented. And so we'll see what we see in Pennsylvania maybe next year.

Recommendation 10-- when prescribing opioids for chronic pain, clinician should use urine testing before starting opioid therapy initially. And this is really, I think, mostly when you're considering starting chronic opioid therapy. And consider urine drug testing at least annually to assess for prescribed medications, as well as for other prescription drugs and illicit drugs.

You know, this has been something that people have been doing for a long time. If you are doing urine drug testing, it's really important for you to really find out the limitations of whatever urine drug test method that you're using. So you need to talk to your lab.

If you do get a positive result, I think it's pretty good to talk to the lab again, to basically validate what's been found, before you go to the patient and make any changes in their therapy.

Number 11-- clinicians should avoid prescribing opioid pain medication to benzos concurrently, whenever possible. There's good data to support this. This graph shows, again, overdose deaths per 100,000 on the y-axis, and opioid dose and morphine milligram equivalents on the x-axis. The blue is those that are also on concurrent benzodiazepine therapy.

And you see at each dose, the risk of overdose death goes up, markedly.

And then finally, this is the last recommendation from the CDC-- clinicians should offer or arrange evidence-based treatment, usually medication assisted therapy, with methadone buprenorphine in combination with behavioral therapies for patients who start to develop criteria for an opioid use disorder. And I'll go over that in a moment.

So for those of you that practice in UPMC, and for those of you that don't practice in UPMC, but many health systems are coming up with a strategy. They recognize that opioids are a huge problem in their patients, and in the community. And for UPMC, there's actually a system-wide steering committee for pain medicine, and I think there's a few members of that committee in this room. And they've come up with four main points.

One is to improve opioid care, and prescription prescribing to get providers to follow safe opioid prescribing methods. And there was this best practices requirements for all PCPs, and so I think about as of the end of May in this year, I think about 1,600 UPMC providers took a two-hour online training called SCOPE, which stands for safe and competent opioid prescribing education.

There's also an initiative within UPMC called the 90-90 initiative-- for selected primary care and specialty provider providers. And 90-90 refers to patients who are receiving more than 90 morphine milligram equivalence per day for greater than 90 days.

And what they've done is they've identified the people that are sort of in the top tier of providers with 90-90 patients, and then giving those practices extra support in terms of safe opioid prescribing guidelines and testing.

Now, you know, I have patients in this sort of 90-90 class, and things like that. And you will have patients like that, but if you sort of follow the overall guidelines, you can protect prevent them from having any harms.

They're also looking to expand multidisciplinary pain services, comprehensive pain clinics, better access to physical medicine and physical therapy. They want to disseminate something called the Pain Resource Nurse Program for inpatience, as well as deploy the HCAHPS pain tool kit, which was developed at UPMC passive, and has been shown to improve pain control in patients.

Another UPMC initiative-- and for those, how many of you use EpicCare? So EpicCare is an electronic health record. And so we're going to be there creating a chronic pain synopsis screen, which will basically be a single location in the electronic health record where a clinician can basically review everything having to do with the chronic pain care for a patient. Include flow sheets, pain scores over time, risk assessment tools, urine drug screen results, opioid and benzo prescriptions, radiologic results, as well as outcomes of referrals to comprehensive pain management PMRT-- orthopedic surgery, psychiatry, et cetera.

And so be a place where we can try to ensure that patients are receiving very comprehensive care, and not just opioids for their chronic pain.

All right, I'm going to move on to treatment for opioid use disorders. And like I mentioned at the very beginning, a certain subset of patients on chronic opioid therapy for chronic non-cancer cancer pain, will develop an actual opioid use disorder.

Now DSM 5 changed criteria a little bit a couple of years ago. And I'll just sort of go through these quickly. In that, the criteria are within the past 12 months, taking opioids in larger amounts for longer than intended, wanting to cut down or quit but not being able to do so, spending a lot of time obtaining the opioid, craving or a strong desire to use, repeatedly unable to carry out major obligations, such as work, school at home, continued use, despite persistent or recurring social or interpersonal problems caused by or made worse by the substance, stopping or reducing important social, occupational, or recreational activities due to the opioid, recurrent use in physically hazardous situations-- such as driving, working with equipment, getting up on ladders-- consistent use of opioids, despite acknowledgment of persistent or recurrent physical or psychological difficulties, tolerance-- as defined as either a need for markedly increased amounts to achieve intoxication or desired effect, or markedly diminished effect of continued use of the same amount. And then finally, withdrawal manifesting as the symptoms after stopping use.

Now, these are meant to apply to either, say, illicit opioid use such as heroin, but also to prescription opioids. And some of you might notice that if we have somebody on prescription opioids, we're expecting things to happen, like these last two, in terms of tolerance, or withdrawal if we were to decrease the dose, or stop. And so some groups, such as the American Society of Addiction Medicine, and pain societies, have come up with some alternative criteria for opioid use disorders, and patients who are receiving prescription opioids.

And those include impaired control over use or compulsive use. And examples of that might be the patient who is losing their script, reporting theft, perhaps because they ran through their opioids much faster than they were supposed to, calls for early renewals, or even withdrawal observed when they come in for a clinic appointment with you. Second, continued use despite harm-- so for those who have declining function due to opioids, intoxication, non-fatal overdose, and still wanting to continue it, despite these bad things that have happened, might be an indicator.

And then I think maybe the one that we see the most, is preoccupation with use, or craving. And this is the patient who basically says, opioids are the only intervention that they desire-- that they do not want anything else, any cognitive behavioral therapy, physical therapy, other medications. They're really focused on the opioids. That might also be indicated by a recurrent request to increase the dose, in the absence of any actually objective finding that their medical condition has worsened.

And so treatment for opioid use disorders-- if you identify somebody who you have on chronic opioids, you think that they have an opioid use disorder, there's a number of things that can be happening. I imagine that all of you have your own referral patterns to a specialist. And these include things like behavioral and psychosocial therapy, medication-assisted therapies-- with several drugs that I'll go over on the next slide-- and then mutual support groups like Narcotics Anonymous.

So there's really not a lot of scientific evidence for the mutual support groups, like Narcotics Anonymous, but I think we still think that it's a good thing to encourage people to do. For the first two bullets, behavioral, psychosocial and medications as a therapy, there's actually a fair amount of good quality scientific evidence that these are effective programs for opioid use disorders.

And probably the best, and most evidence-based, is medication-assisted therapy. Probably produces the greatest retention in treatment, and greatest reduction in mortality and other harms.

So medication-assisted therapy might include say somebody who you want to be opioid abstinent-- maybe this is somebody that has a more mild opioid disorder, for example-- naltrexone is a drug that can be used. Naltrexone we often also use for cocaine and alcohol problems.

Naltrexone is an opioid antagonist, it prevents opioid intoxication and physiologic dependence. Common doses are 50 milligrams daily, orally, or else there's also a depo formulation, which is 380 milligrams intramuscularly, once a month.

Opioid maintenance therapy is one that you're probably more familiar with, and the classic one is methadone, which has been used for decades. And the mechanism that it's long-acting full agonist of the mu opioid receptor, The dosing is variable, but people typically require at least 30 milligrams a day, sometimes much, much higher. And the restrictions in the US that you have to be a licensed addiction provider in order to do it.

Buprenorphine, also known as Suboxone-- which a few of you indicated you have the waiver for-- is a partial opioid agonist, usually administered sublingually. A pregnant women will only get a pill of buprenorphine and not the naloxone. There's also been a six month depo implant that has been approved by the FDA just this year, that I don't think is in wide use, yet.

This dosing is variable, and its restrictions are that it can be administered in an office-based primary care setting, but you do have to get a DEA waiver in order to do it. And there's restrictions-- and usually, the first year that you have the waiver, you can do about 35 patients max. And after that, up to 100. And then if you have special certifications after that, you can even go higher than that-- up to 275 patients.

Now, there is a great hope that when buprenorphine came out earlier in the century, that it would go into widespread use. And it has been increasing over the past decade, certainly. But still, we're falling short.

If you want to get a DA waiver to prescribe buprenorphine in your practices, it requires an eight-hour training that can be done entirely online, entirely in person-- like being in a seminar-- or some sort of mixed format, between online and all that. And here's just some links of different places that you can go to get the training if you're interested.

Now in terms of a reality check, even though medication-assisted therapy results in the best treatment retention and long-term outcomes, it's growth has been slow. About 40% of US counties do not have a single buprenorphine authorized provider. And most people that are authorized to prescribe buprenorphine, often treat few or no patients.

And so even in our practice at the University, we have several of our buprenorphine waivered individuals have never given a single prescription. And just in regards to overall treatment for opioid use disorders, in the Pennsylvania Medicaid population, a couple of years ago, less than 50% of patients with an opioid use disorder initiated treatment, and 33% remained engaged after 30 days. And so you can see, there's lots of room for improvement with treating this stuff.

And that's the same, really, overall. But fortunately, some help is on the way. So just this year, the state of Pennsylvania put a significant chunk of money towards establishing the opioid use disorder centers of excellence. And these were just sort of announced really just in the recent past one to two months. And so there's currently 45 centers of excellence have been funded by the state to provide medication-assisted therapy for Medicaid patients, only, at this point. And 20 of those centers will start this month, and another 25 will start in January.

And each center of excellence is mandated, or charged, to deploy community-based management team. There will be peer navigators and specialists who will basically encourage patients to come in after they've been discharged to the hospital, from emergency departments, from prison, from other primary care sites who do not have a center of excellence, and try to bring individuals in who have an opioid use disorder, to these centers of excellence for medication-assisted therapy.

There has to be face-to-face contact within one business day of referral. So that's a big change-- and so a lot of you that practice, you know that one of the biggest hang-ups when you're referring people to treatment is the delay. It might not happen the next day, or the next week, or the next month-- and that's an opportunity for the person to start using again, even if they've already gone through detox. And so within one business day is a big improvement.

And then they have to initiate medication assisted therapy for 300 or more patients within that first 12 months. And so if you multiply that 300 by the 45 centers, you get an additional 13,500 of Medicaid patients in this state on medication-assisted therapy hopefully this next year. Now, will they achieve that? We're not sure. But we'll see.

If you want more information about this program, you can find it at this link at the bottom of the slide.

The first round of centers funded are shown here on the map. In Allegheny County, one and two are Tadiso Incorporated and the Gateway Rehab Center-- they're both licensed drug and alcohol centers, and so they'll provide methadone, buprenorphine and naltrexone. Round two was funded just-- these will start in January. And in Allegheny County, these include McGee Women's Hospital for pregnant women, at the pregnancy recovery center. Our clinic, at UPMC Presby Montefiore. West Penn Allegheny Health System, and then [INAUDIBLE] will also be providing stuff.

And so if you look at these maps, you can see those large areas that are uncovered. And if any of you in this room sort of practice in some of these rural areas, there is, within this program, a lot of telemedicine support and things like that. And so there is going to be a lot of outreach to rural areas.

And so what you, over the next coming months, as these programs develop-- and really, the money just came through-- you'll be hearing a lot about how to refer patients to these programs.

And so finally, a word about words, and the change in the language of addiction. And so I think we've often sort of, through our training and practice, have used words like junkie, and addict, and shooter, and dirty-- about people who have opioid use disorders. And you know, I think that really contributes negatively to the care that they receive.

And then for those of you that work in training sessions, for your medical students and residents who hear those terms, but also that verse, I think, affects the way that they look at these patients. And the patients need help.

And so suggestions might be to use person with substance use disorder, or a person with opioid use disorder instead of saying drug abuser or addict. To say, in recovery, rather than being clean after a period of time, I guess, of being dirty. And so try to change the words you use.

And actually, the White House Office of National Drug Control Policy has issued guidelines regarding language. And you can find on this slide. In fact, just in last week's *JAMA,* Michael Botticelli, the drug czar with the White House office, wrote an article about the use of language.

So just if you take home points-- opioid prescriptions and harms have increased markedly in the past two or more decades. And I think you probably have all experienced this and seen it. Adherence to safe opiate prescribing guidelines, such as those advocated by the CDC, have the potential to decrease opioid harms and effectively treat pain. And treatment for opioid use disorders is effective and will become more accessible, hopefully, as a lot of these programs get rolled out.

Here's a few references, which will be available to you in your materials. And I'm happy to take any questions.