Treatment and Prevention of Opioid Use Disorder: Overview

In this webinar presented on **April 3, 2018**, Dr. Dennis McCarty of the OHSU-PSU School of Public Health at Oregon Health & Science University provided an overview on the treatment and prevention of opioid use disorder (OUD) in the U.S. This 90-minute webinar covered:

- Historical federal initiatives that provided treatment for OUD
- Opioid agonist and opioid antagonist therapies
- Access to pharmacotherapy
- The chronic nature of OUD
- Rates of return to use
- Approaches to preventing OUD
- The role of overdose education and naloxone distribution

The webinar included a Q&A session with participants. Question posed and Dr. McCarty's responses follow.

Q & A Summary

Q1: Can you comment on the mood effects that we see in certain Vivitrol clients?

Q2: Are there any challenges with funding for medication-assisted treatment?

Q3: Can you clarify what happens if you inject buprenorphine?

Q4: Drug courts prefer methadone over Suboxone since it's much better monitored. Suboxone is less preferred. Do you see this preference for methadone over Suboxone?

Q5: This is a question regarding your [Dennis McCarty's] pie-chart on the use of medication-assisted treatment. Does this represent the U.S. only, and how does it compare to worldwide views of MAT?

Q6: Are there factors why opioid use disorder treatment centers use or don't use the treatment medications?

Q7: Has anyone looked at adolescent prevalence [of opioid use disorder]?

Q8: I have individuals [that] I'm working with that are in recovery from opioid addiction [that] have chronic pain. What can be done to help these patients manage their pain without relapsing?

Q9: Can you comment on the rate of relapse for someone after MAT vs. someone non-MAT?

Q10: Which method of medication is the strongest? Methadone or Suboxone? And what's the difference between the two?

Q11: Are there any studies identifying negative effects of long-term use of buprenorphine?

Q12: Will mental health outpatient clinics be able to provide these mediations?

Q13: Is there a standard for applying treatment services with MAT, or can MAT be provided without treatment services such as outpatient or intensive outpatient?

Q14: Given the opioid epidemic taking place in any area, why shouldn't we be using SBIRT (Screening, Brief Intervention, Referral to Treatment) in our emergency rooms and primary care units to deal with this problem?

Q15: What has been found in research so far, and what are your thoughts [on what is] important when implementing buprenorphine treatment programs to improve retention?

Q16: Should addiction be treated just like other chronic illnesses or just like other chronic mental illnesses?

Q17: How would you suggest monitoring medication-assisted treatment used, if not through counselling? MAT has street value and has [a] history of being diverted. What are your thoughts about this from a public health perspective?

Q18: What are your thoughts about using technology to help treat substance use disorders in conjunction with MAT and counselling?

Q19: How can we best destigmatize addiction?

Q20: Is it [heroin overdose] more likely to happen by nasal or intravenous use?

Q21: What is your opinion of potential reform of methadone regulations?

Q22: I want to touch on the concern of individuals remaining in treatment. [Will] a patient that suffers from chronic pain [and has] burned bridges for treatment via other avenues return to the streets, if not for MAT providing addiction treatment services with the secondary side benefit of pain management? Harm reduction is key.

Q23: I noticed that there were a number of participants who indicated that they work at organizations that don't offer any medication-assisted treatment. What are some tested ways to make that bridge? Maybe overcome resistance to use of MAT in a treatment organization?

FAQ

Q – Questions (from webinar chat box)
DM – Dennis McCarty (webinar speaker)

Q1: Can you comment on the mood effects that we see in certain Vivitrol clients?

DM: It's not my area of expertise. There are concerns that extended-release naltrexone blocks opioid receptors and therefore, some patients report a lack of positive feelings [and/or] a lack of enjoyment, but others say that's not a problem. So again, I think it's going to be important to provide patient choice. Look at all of the options available for patients. And at this moment in time, if you're not on an opiate agonist, you should be on an opioid antagonist.

Q2: Are there any challenges with funding for medication-assisted treatment?

DM: The challenges are who pays for it. If you're indigent, there is no money available unless the state [or local authorities] has made specific appropriations for medication to cover care for indigents. Medicaid has become the primary payer. Medicaid programs in most states have buprenorphine and methadone on their formularies. However, most Medicaid patients these days are in managed care programs, and each of the care managers have their own formulary. Often, they do not cover buprenorphine and methadone or extended-release naltrexone. Extended-release naltrexone is the least affordable. It costs $1600 at the retail price, and there are programs to facilitate access to it, but it can be expensive. That's the quick summary.

Q3: Can you clarify what happens if you inject buprenorphine?

DM: There are two formulations for buprenorphine under the brand names Subutex and Suboxone. Suboxone has a four-to-one ratio of buprenorphine to naloxone. It's designed to be absorbed under the tongue and in that case, the naloxone is deactivated. If you inject Suboxone, you crush it, get it into a liquid, and naloxone is supposed to precipitate opiate withdrawal.

You can use Subutex, which is just buprenorphine. You could inject that without any adverse effect. I know that there are anecdotes of patients overcoming the abuse deterrent formulations, but I think it's more uncommon than common.

Q4: Drug courts prefer methadone over Suboxone since it's much better monitored. Suboxone is less preferred. Do you see this preference for methadone over Suboxone?

DM: Drug courts have not embraced medication for the most part. Under President Obama, the Office of National Drug Control Policy established regulations that said if you're receiving federal money for a drug court, you must provide access to these medications, and we've seen slow adoption within the drug courts. The value of buprenorphine is that it should be easier to obtain than methadone. Methadone is limited to about 2,000 opioid treatment programs. In large cities, that's not a problem but in rural communities, you're not going to find a methadone program, so that's where buprenorphine would be probably a preferred medication. If the courts prefer the structure of an opioid treatment program, many OTPs now offer all three medications.

Q5: This is a question regarding your [Dennis McCarty's] pie-chart on the use of medication-assisted treatment. Does this represent the U.S. only, and how does it compare to worldwide views of MAT?

DM: Yes, it's specific for the U.S. It's based on the annual census of substance abuse programs in the U.S. Opioid use disorder is much less of a problem worldwide than it is in the U.S. Patients can receive methadone either through clinics, like in the U.S. Or in some countries, it's available as prescribed by the general practitioners. Canada probably has the most progressive policies. British Columbia is leading the world, quite frankly, in aggressive use of opioid agonist therapy. Currently, in British Columbia, there's an initiative to increase the number of patients in primary care with opioid use disorders who are on medication from 50% to 90%. That's a number that far surpasses any efforts in the U.S., so we could be more aggressive. We could also offer a greater range of medications of agonists, and that may be necessary in order to get more effective care for patients who have been non-responsive to methadone or buprenorphine.

Q6: Are there factors why opioid use disorder treatment centers use or don't use the treatment medications?

DM: Yes, I think some of the reasons why they're not using medications are because many of them have no linkage with a primary care prescriber. They may not have a physician on staff. They may not have adequate training of staff to understand and to promote the use of medication. There is certainly a bias against the use of agonist therapy – a historical bias. I think that when you look at the data, you're much better off prescribing buprenorphine or dispensing methadone. The death rates are much lower among patients on an opioid antagonist therapy when compared to patients who are on abstinence-only therapy, (drug-free therapy without the support of medication). Despite resistance to the use of medication, it is the thing to do in the 21st Century.

Q7: Has anyone looked at adolescent prevalence [of opioid use disorder]?

DM: Off the top of my head, I don't have an answer to that. We could look at the national survey on drug use and health. There would be a breakout in that of 12 to 18 and 18 to 25 or so. I think there are concerns that the access to opioids has increased abuse within adolescents, and the Clinical Trials Network has done a study showing that buprenorphine is an effective medication with adolescents.

Q8: I have individuals [that] I'm working with that are in recovery from opioid addiction [that] have chronic pain. What can be done to help these patients manage their pain without relapsing?

DM: I'm not a physician so I'm probably not qualified to speak on that particular issue. Oregon, for example, has now prioritized non-opioid therapies. The Medicaid plan now prohibits medication prescriptions greater than 90 milligrams and so, there are sort of policy strategies that we can use to provide alternatives to opioids. Whether that would work for these particular patients is a matter of trial and error.

Q9: Can you comment on the rate of relapse for someone after MAT vs someone non-MAT?

DM: I'd like to use the term return to use rather than relapse. Relapse has a sort of negative connotation. Return to use is the nature of this chronic disorder. If you're not on agonist therapy, the probability of returning to use is elevated. It may not require lifetime agonist therapy. Some patients remain on agonist therapy for their lifetime. Others find that as their life stabilizes, they can, in fact, go through [the] withdrawal process and no longer have a return to use, but there's always a risk of return to use. I was at a meeting in Canada, and a woman spoke about her son who's been in recovery for 10 years. He had injured himself, was given

opioids, and was now struggling again with his opioid use disorder. So, there's a risk of return to use no matter how long you've been abstinent.

Q10: Which method of medication is the strongest? Methadone or Suboxone? And what's the difference between the two?

DM: Methadone is a full opioid agonist. It's easy to overdose on methadone. Buprenorphine is a partial opiate agonist. It's going to depress respiration much less. And so, from a basic pharmacokinetics perspective, methadone is stronger, whereas buprenorphine is safer.

Q11: Are there any studies identifying negative effects of long-term use of buprenorphine?

DM: I'm just going through my thoughts about what studies have been done. The challenge is that it's difficult to do long-term outcome studies, and I'm just thinking through what I know. I think the best study is the Prescription Opiate Addiction Treatment Study (POATS). At 40 months follow-up, a third of the patients were opioid-free, another third were on agonist therapy and not using other opioids, and about a third were still abusing opioids. So, I think that's pretty good prognosis given the historical rates of return to use.

Q12: Will mental health outpatient clinics be able to provide these mediations?

DM: If they're licensed medical facilities, their physicians, nurse practitioners, or physician assistants could prescribe buprenorphine. Methadone can only be used in opioid treatment programs, and the federal regulations on opioid treatment programs make becoming an opioid treatment program relatively difficult.

Q13: Is there a standard for applying treatment services with MAT or can MAT be provided without treatment services such as outpatient or intensive outpatient?

DM: Clearly, the recommendation is to provide pharmacotherapy to support recovery along with counseling or other recovery programs. Ultimately, it's a patient level decision. What does your patient need? Some patients are stabilized relatively quickly, and actually prefer not to come in repeatedly for counseling, and it's probably better to have them do that and be stable than it is to have forced them off of medication because they're not coming into counseling. Unfortunately, those are rules that some health payers have implemented. If you're not also getting counseling, we will no longer provide your medication for you. I think again, it's another sign of the stigma against opioid use disorders.

We would never take a diabetic patient's insulin away because they ate cake. Why should we take medication away if it's helping somebody, and they have a slip? We should treat this like we treat other chronic disorders.

Q14: Given the opioid epidemic taking place in any area, why shouldn't we be using SBIRT (Screening, Brief Intervention, Referral to Treatment) in our emergency rooms and primary care units to deal with this problem?

DM: Screening, brief intervention, and referral to treatment is not an effective treatment for opioid use disorder. Studies in emergency departments and primary care settings find that screening and brief intervention does not impact most drug use disorders. It seems to be effective with alcohol use disorders, but probably for those who have less severe disorders. What is now developing is interest in using screening and brief intervention for problematic use of opioids in order to prevent escalation into opioid use disorder. The research is just beginning, so we'll have to see if that becomes an effective intervention for preventing the development of opioid use disorder.

Q15: What has been found in research so far, and what are your thoughts [on what is] important when implementing buprenorphine treatment programs to improve retention?

DM: Regarding treatment programs, do you mean primary care, or do you mean specialty addictions treatment? The answer is going to be different. The specialty addiction treatment programs can be effective; can use buprenorphine and extended-release naltrexone pretty effectively if they have a physician who supports the use of medication, if they train staff to be supportive of use of medication, if they adjust their workflows so as not to delay access to the medication. If you're talking to patients, you should start talking to them on day one about what medications might be useful to support their recovery. You [should] also talk to the family because the family needs to support the use of medication. We've just completed a study in the Medication Research Partnership. It was published last year in the Journal of Studies on Alcohol and Drugs. We found substantial improvement in access to medication. At the beginning of this study, it was about 10 percent. Three years after we worked with programs using NIATx type interventions, over 35% of the patients with an alcohol or an opioid use disorder were successfully inducted onto medication. For primary care settings, the workflow issues are more complicated. It's a busy environment. Vermont's Hub-and-Spoke model [and] Massachusetts's Nurse Practitioner Manager Model seem to be the most effective approaches to managing buprenorphine use in medical settings, and so that's where I would look for guidance to begin with.

Q16: Should addiction be treated just like other chronic illnesses or just like other chronic mental illnesses?

DM: For many people, problems with alcohol and other drugs are chronic disorders. They should be part of the primary carer's assessment. When you come into primary care settings, what's your full health history? What's your history of alcohol use? What's your history of opioid use? And then the physician can say "Dennis, your drinking is up a little bit. It's going to be affecting your health." The physician can be making persistent interventions. I'd prefer to talk about Screening, Persistent Intervention, and Treatment as needed, or I call it the SPIT Model as opposed to SBIRT, but there are not many people doing that.

Tom McClellan has a nice paper[2] from a couple of years ago outlining the Chronic Care Model for opioid use. For drug and alcohol use disorders, we should track that down and share it with the audience.

Q17: How would you suggest monitoring medication-assisted treatment used if not through counselling? MAT has street value and has [a] history of being diverted. What are your thoughts about this from a public health perspective?

DM: It's better to have more access to the medication than less access. The street diversion occurs [because] it's primarily used to prevent withdrawal. It's not being used for euphoric effects so from a public health perspective, I'm less concerned about widespread access to buprenorphine. Should it be done in collaboration with a counselling program? Absolutely. But not everyone is going to tolerate those kinds of requirements, and then – that's my only caveat – we should be open to alternative models and alternative approaches to care. We need to find the care that works the best for the patient.

Q18: What are your thoughts about using technology to help treat substance use disorders in conjunction with MAT and counselling?

DM: Absolutely. The Food and Drug Administration has approved its first digital therapeutic. It's a program of CBT that was tested within the Clinical Trials Network and it now has FDA approval. It shows that the internet technology [or] the web-based technology can be effective, can support recovery, and absolutely should be more available.

Q19: How can we best destigmatize addiction?

DM: If we had an answer to that question, everything would be easy. I think integrating addictions treatment into primary care could go a long way to help. It's now a specialty care sector, primarily. You know, the stereotype of addiction treatment is that you're going to spend 30 days at the lake. You're going to come back sober. You're going to live your life happily ever after. We know that for some people that model works but that's no longer the model of care that is available in the 21st Century. I think we need to integrate more with primary care. We need to be willing to use medication to support recovery. We need to look at patient-centered care. What is the care that's most effective for this particular patient? Each of us has a different path to recovery.

Q20: Is heroin overdose more likely to happen by nasal or intravenous use?

DM: Well, clearly, intravenous use is much riskier. That's where the risk of overdose is elevated.

Q21: What is your opinion of potential reform of methadone regulations?

DM: I think that's unlikely. Methadone is the most highly regulated form of medication available. Historically, it's been regulated as a free-standing, independent clinic that is always located in the best parts of town. There's a lot of stigma attached to them.

I think there could be more effective models of care than the typical methadone treatment center, but I don't think we're going to do away with them because they are effective for some patients. I think the alternatives are of greater access to buprenorphine; and if you're building a system of care in the 21st Century, I would certainly build on buprenorphine and other agonist therapies. Take a look at what British Columbia is doing. It's interesting to see their work.

Q22: I want to touch on the concern of individuals remaining in treatment. Will a patient that suffers from chronic pain [and has] burned bridges for treatment via other avenues will return to the streets if not for MAT providing addiction treatment services with the secondary side benefit of pain management. Harm reduction is key.

DM: Yes, that's absolutely true. Certainly, not every patient is going to have the same recovery. Some patients are going to be chronic patients. Others will recover spontaneously. They'll make a decision not to use anymore. We cannot yet explain what's the different between those two patients. Some of it may be genetics; some of it may be brain development. These are the challenges for the next cadre of researchers.

Q23: I noticed that there were a number of participants who indicated that they work at organizations that don't offer any medication-assisted treatment. What are some tested

ways to make that bridge? Maybe overcome resistance to use of MAT in a treatment organization?

DM: Well, again, it starts with leadership. Leadership has to say we support this. Leadership, in the study we did with the Medication Research Partnership program, told us that they're losing patients because they don't offer medication. They wanted to begin using medication. In some cases, they had to replace their medical director. Other cases, they brought in training. Alkermes (the company that makes extended-release naltrexone) representatives are glad to provide training to support the programs that want to begin using extended-release naltrexone. The NIATx approach to improving organizational change. Test the change. Test it small. Use rapid-cycle testing to make changes in your workflow that improves access. If they don't improve care, go on to some other. Those are the kinds of strategies that I have seen work effectively over the past 18 years now.

The NIATx website provides a ton of resources on improving care in specialty addiction treatment programs. It's being generalized to other settings as well, and there's a whole section that was developed under the Medication Research Partnership on the use of medications. So, there's lots of good detail there.

Resources and References

1. ATTC Network: Taking Action to Address Opioid Misuse
2. McLellan, A. T., Starrels, J. L., Tai, B., Gordon, A. J., Brown, R., Ghitza, U., … McNeely, J. (2014). Can Substance Use Disorders be Managed Using the Chronic Care Model? Review and Recommendations from a NIDA Consensus Group. *Public Health Reviews*, *35*(2), http://www.journalindex.net/visit.php?j=6676.
3. NIATx: Buprenorphine Implementation Toolkit