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CLINICAL PRACTICE GUIDELINES FOR THE TREATMENT OF ALCOHOL USE DISORDER

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Clinical Practice Guidelines for the Treatment of Alcohol Use Disorder
[video transcript]

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Dr Andreas Lazaris is a board certified family medicine physician and HIV specialist. He is a graduate of the Warren Alpert Medical School at Brown University, completed his residency training at Mount Sinai downtown residency in urban Family Medicine in New York City, and completed his fellowship training in the New York City homeless health care fellowship through Montefiore Einstein, Dr Lazaris works as a primary care provider and assistant Medical Director for primary care, Janian Medical Care, a homeless health care organization in New York City, at Janian, and he provides full spectrum primary care for patients with histories of chronic, unsheltered homelessness as an on site physician in a permanent supportive housing site and in a safe haven. Dr Lazaris holds a position as a clinical assistant professor in the Montefiore Einstein Department of Family and Social medicine, and serves as a core faculty member in the New York City homeless health care fellowship. So thank you so much for being with us today, and I'll hand things over to you.

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Thank you so much. Are folks able to hear

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me? Yes? Okay, wonderful. Well, thank you again for having me and for the introduction. I am happy to be back. This talk was given last year, and I was asked very graciously by some folks at DHS and at CEI to return, so I am thankful to be a part of this and to work with you all today. So again, the discussion today is called clinical practice guidelines for the treatment of alcohol use disorder, with a specific emphasis on provision of care for folks who are experiencing homelessness, shelter or unsheltered, and kind of geared toward providers who are seeing patients in these types of settings. So I also do not have any financial disclosures as a presenter today. So our learning objectives today for our talk are to diagnose alcohol use disorder, to discuss pharmacotherapy for alcohol use disorder and to describe a harm reduction approach to the treatment of alcohol use disorder, and we'll talk a little bit about some of the nuances between use and use disorders and how that applies to a lot of our patients and particular treatment options and treatment decision making. So again, just brief information that Anna mentioned. I have completed all of my medical training in New York City after medical school, which I completed in Rhode Island. And so I'm a family medicine provider with specific treatment, sorry, training in HIV care and the HIV specialist at the American Academy of HIV specialists, and worked in residency at a Mount Sinai Hospital and a federally qualified health center. And I completed my fellowship in the New York City homeless healthcare fellowship through Montefiore Einstein, where I worked, actually as a fellow at Janey medical care. And I worked, which is a homeless healthcare organization in New York City, and I had a clinic in

downtown Brooklyn at a supportive housing site, and in East Elmhurst Queens at a safe haven. And since graduating the fellowship, I continue to work in those sites and continue to work with the same patients and kind of an expanding pool of patients at both of those sites. So all of my experience in practicing medicine has been in you know, urban settings with under or uninsured patients, many of whom are experiencing homelessness and various living with various kind of relationships to different substances, including alcohol. So again, you know the places where I find myself are a permanent supportive housing site and a safe haven. So on the left of the screen is the permanent supportive housing site that I work in in downtown Brooklyn, which has about 500 full time residents, 300 of whom were formally experiencing homelessness, and 300 of whom are pot eligible patients to be seen on site. So here we have primary care available four days per week out of five. I'm there two days a week, and we are situated amongst the case management and kind of supervisory staff at the building through the Center for Urban Community Services. And these are permanent apartments for patients and for clients. So this is kind of the kind of end of the housing journey for many people, where they have their own single residency apartment. The Safe Haven on the right is in East Elmhurst queens. It's the tiny building at the bottom right of the screen. This is a photo I took on the way to work one day, and it is across the street from Elmhurst Hospital. And this has roughly 70 clients who live in the building. And this is more of a transitional setting for for folks who live in the building. Oftentimes it's the space between unsheltered street homelessness and permanent housing, which can take many different forms. Clients are usually housed with three other roommates in a room, and are also able to access primary care one day a week on site, directly where they access their case management services. And so this particular space, which is relevant to the discussion we're having today, has also a high number of patients who I see who are undocumented and uninsured, and many of whom are living with alcohol use disorders and seeking treatment for those and so this is a piece that we'll we'll talk about today in terms of how that affects some some treatment decisions that can be made, and then quickly, just to kind of situate ourselves within how we're even thinking about the experience of homelessness, I've offered a few examples so the experience of homelessness can refer to unsheltered or street homelessness. It can refer to staying in a car or a camper. It can refer to staying in a stabilization bed, which is typically even kind of a lower threshold, lower barrier option than a shelter, even where often housing organizations will rent a or case management social service organizations will rent a certain number of rooms from a landlord to provide very low threshold housing options for individuals with, typically without case management options on site, being doubled up in shared living situations like we might see in the photo on the right, on the bottom right, and sometimes even staying in permanent supportive housing. And I say this because my own experience has shown me that folks, even if they are they have permanent housing accessible to them. Oftentimes, communities outside will draw them, you know, away from their supportive housing, and often, can be similarly prone to some of the challenges that patients who are experiencing street homelessness can experience because that's where they're spending most of their time. So moving to some of the diagnostic criteria for what we're talking about today, how

do we define alcohol use disorders? And so I specify here use versus use disorder, because any number any person, can have a varied relationship with alcohol, and it can be something that does or does not meet use disorder criteria, but a relationship and a use nonetheless, and these can be folks for whom treatments and other management options might still be appropriate, even if they don't necessarily fall into categories defined by our use disorder criteria. So on the right, you'll see the DSM four and DSM five criteria, which is kind of our manual or handbook that helps us to make certain diagnoses, mental health, psychiatric and substance related diagnoses. And so you'll see on the right is the blue column is the DSM five, which is the most up to date. And you'll see that we define alcohol use disorder by 11 different criteria, and a patient who meets any two does meet a criteria for an alcohol use disorder, and then the gradations of which depend on how many more criteria are met. Mild disorder being two to three criteria, moderate, four to five, and severe, six or more. Now on the left you'll see the prior version, which is a DSM four, which discussed alcohol use disorder as alcohol abuse or alcohol dependence. And so I think you know this is this also serves to show that there has been a shift away from the notion of alcohol abuse as a diagnosis and into more inclusive language and hopefully less stigmatizing language of of use disorders. So this is kind of where we'll be we'll be situated today. Just a little bit of information about how things look nationwide. This is kind of the most recent. These are the most recent data from the National Survey on Drug Use and Health from SAMHSA. And so these are 2023, results. And this shows the percentage of, or the number of people living with a past year substance use disorder. And this can be a new diagnosis, a diagnosis that has been had held for many, many years. And you'll see alcohol use disorder is the number one held substance use disorder in 2023 for past year substance use disorders. On the right, you'll see a Venn diagram, which really looks at any drug substance use disorder as well or drug use disorder as well as alcohol use disorders, and how these kind of intermingle with one another. And so the top, which is the red, you'll see 44% of people with substance use disorder diagnosed have an alcohol use disorder. And then almost 16% of people have an alcohol use disorder and a drug use disorder. And then in blue, you'll see that 56% of people have a drug use disorder, of substance use total substance use disorder diagnoses. And so you. Is to say there is a significant overlap in terms of our alcohol use disorders and other substance use disorders, which can further increase increase risk for many of our patients, and offer a lot of opportunities for intervention and discussion with our patients. Now, because this is very recent. We are 16 days into the new year, and we already have a 2025, report from the US Surgeon General, stating that there is a significant risk between alcohol use of any kind and multiple different cancers. And so these are just a few kind of screen caps from from the report that some folks may have seen that essentially shows that consuming alcohol increases the risk of developing at least seven different types of cancers, and that roughly 750,000 cancer cases were attributable to alcohol consumption in 2020 and so this is, I think, particularly relevant to our our talk today, both for the you know, obvious Reason of increased risk of cancer, but also thinking about the stages with which we might encounter many of our patients experiencing homelessness, who have missed many opportunities for cancer screenings, and oftentimes will

be seen and for diagnosis rather than screening of certain types of cancer, because many of the screening windows have been have been passed, and things that could have become cancers have become cancerous. And so we're thinking about kind of the the additive effects of lack of access to care, the experiences of homelessness and the experiences of substance use and alcohol use that can kind of compound risk for many of our already vulnerable patients. And as far as alcohol use disorder and people who are experiencing homelessness, a global meta analysis done in multiple countries across the world showed that alcohol use amongst people experiencing homelessness ranged anywhere from 8% to 60% of the population surveyed, and generally was substantially higher than overall global prevalence of alcohol use disorder amongst amongst all populations. Now the next two pieces of data are actually from the report of people experiencing homelessness who were deceased in the year 2023 in New York City, which shows that alcohol use was one of the top five causes of death for people experiencing homelessness in New York City. And then further on the right, you'll see that amongst unsheltered dissidents, we see that this is in the top four reasons for causes of death for people experiencing homelessness, unsheltered homelessness in 2023 in New York City. And so we see that this is a very significant risk factor for our patients, and ultimately can contribute to morbidity and mortality, and creates a great, you know, an opportunity for us to kind of focus on this as something that that we can screen for and assist with as clinicians. And then finally, thinking about what are some of the reasons that people who are experiencing homelessness have identified so these data come from qualitative studies, wherein individuals experiencing homelessness who use alcohol were interviewed and describe their reasons and some of the motivations that they have. And so one is coping with the stress and the isolation of homelessness. Another is the pervasiveness of alcohol and social communities, it can be a very useful tool for building community, building friendship celebration, and maintaining interactions with folks avoiding withdrawal alcohol withdrawal and some of its sequelae, so people know that having access to alcohol can help avoid some of the dangers of stopping alcohol abruptly and the exacerbation of existing mental health diagnoses by other factors in their lives. So people have cited that the experience of homelessness has caused some of their existing mental health diagnoses to be exacerbated, and alcohol can be a helpful tool for some of them, and then thinking a little bit about what harms this intensifies. What harms homelessness intensifies. So a lack of money to purchase a reliable supply of alcohol can actually lead to increased non beverage alcohol consumption. This can be things like hand sanitizer rubbing alcohol, things that have other ingredients and additives in them that may not be safe for human consumption, and also increases the risk of high intensity binge drinking, and subsequently, which we talked about prior having a lack of money also leads to lack of access, which can lead to abrupt withdrawal, which can lead to some of the sequela of alcohol withdrawal. And also the lack of housing or a safe place to stay contributes to higher rates of public intoxication, which can lead to injury, violence between people, theft and subsequent criminalization while being while being outside. Now how are we doing as far as treatment is concerned? And the answer is not very well. So for the same survey, the National Survey on Drug Use and Health, we actually. Found

that less than half a percent of people greater than 12 years old received medication assisted treatment for alcohol use of any kind in the past year, and less than 2% received medication assisted treatment in the past year for diagnosed alcohol use disorder. And so these are extremely low values nationwide, which is again, less than half for alcohol use of any kind, and less than 2% for out diagnosed alcohol use disorders. And globally, we're seeing we're doing possibly a little bit better, but about 17% is a pooled estimate in terms of treatment for alcohol use disorder of any kind, be that mental health treatment or actually medication related treatment. And what we also see is in people experiencing homelessness who have enrolled in substance use treatment programs for alcohol, we find dropout rates between 67 to 98% and of the program surveyed in this study, which I cite, not a single program was completed by more than a third of clients. And so these show us that that as far as treating is concerned, there does, there does remain a lot of room for us to kind of increase our own knowledge and our own offerings to our patients. So let's move in to the management of alcohol use disorder. So again, we talked a little bit about the difference between a mild, moderate to severe disorder based on the criteria which I cite again here, and the treatment, the recommended treatment options differ between between severity. So for mild disorder, the first line treatment is psychosocial intervention, which includes counseling groups and trials haven't really determined the efficacy of medication for mild alcohol use disorder. But this is not to say that medications cannot be effective for mild alcohol use disorder and in moderate to severe disorders, the first line treatment is medication treatment, as well as the psychosocial intervention. And so we will be focusing now on the medication. So the medications are as follows. There are three FDA approved medications for alcohol use disorders and a handful of non FDA approved off label medicines which have been shown to be effective, of which we'll focus only on two today. And so this is just a general summary slide. We'll go into each of these individually. But as far as our FDA approved medications, we have naltrexone, acamprosate and disulfiram, and the graphic on the right is not by any means intended for anybody to memorize the pathways of how these work, but essentially to make the distinction that these medicines that are FDA approved for alcohol use disorder work in different ways. And we'll talk about each of these individually and how how they work. So while we do this, we'll talk about two cases, which we'll introduce here, and we'll revisit at the end, once we have discussed our medications. So the first clinical case takes place at the safe haven. It takes place with a 30 year old male with a history of traumatic brain injury after being struck by a train, he received a right hemicraniactomy For an evacuation of a temporal hematoma, the pooling of blood in 2022 an elective right cranioplasty at the same site in 2023 and multiple spinal fractures, a seizure disorder secondary to the trauma and severe alcohol use disorder. This patient, patient's history is that he moved from outside of the US and was living on the street for several months prior to the accident. He left a nursing home against medical advice, and continued to live on the street where he was encouraged to enter the safe haven by his outreach teams. In the setting of medical history and complications, the only medication that this patient was on when he arrived the safe haven was Keppra, which is an anti epileptic medication, 500 milligrams, twice a day. Now the clinical scenario was that his alcohol

use interfered dramatically with his ability to take his anti epileptic medications. He had recurrent seizures in the setting of the missed doses, secondary to intoxication, which were then complicated by withdrawal seizures in the setting of limited access to money. He had a recurrent emergency department visits for witness seizures in the setting of the intoxication. And so that's our first case. Our second presents a patient, kind of at a different portion of a different aspect of the of the spectrum. This is a case in permanent supportive housing, and it's a 59 year old male with a history of bipolar disorder, severe alcohol use disorder, self harm and suicide attempts by alcohol intake and past physical and verbal aggression in the setting of his use per him, he says, I know alcohol abuse caused me to be homeless. He lived on the street for one year before entering a 30 day inpatient program where he was started on medications for alcohol use disorder, and he was then transferred to the safe haven from a from the program and now living independently in supportive housing. So we'll revisit both of these cases and kind of discuss what, what of our, of our interventions that we'll be talking about today

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were useful. So.

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So we will dive into the medications now. And the first is naltrexone. And you'll see here there are two different medications shown here, which we will talk about. So Naltrexone is primarily in opioid receptor antagonist. And so you'll see on the far right a very kind of a simplified graphic, which shows the opioid receptor, and naltrexone essentially blocking all activity on this receptor. The notion is that downstream, it alters the dopamine release that follows alcohol consumption, which essentially affects cravings and the euphoria that's brought on by alcohol use. And so the idea is that alcohol use is ultimately less rewarding and the urge to drink decreases, and that is shown in this more complicated graphic here on the bottom right, in that downstream, there are some dopamine related effects which are modulated by the by the mechanism of naltrexone. So again, this medication does have two formulations, and it has a formulation of an it has an oral formulation and it has a long acting injectable formulation. And a relevant piece of information here is that, because it does act on the opioid receptor, this medication is also FDA approved for opioid use disorder, but not as often used in the age of in the age of fentanyl. And so we will talk about why this is important. So initiating naltrexone, a very, very important piece here is that a patient does not have to be abstinent from alcohol to initiate naltrexone, and either the long acting injectable or the oral medication can be initiated. So as far as the oral is concerned, typically, we begin at 50 milligrams per day. Some people begin at 25 milligrams per day by cutting a tablet in half, and increase to 50 milligrams when it's tolerated. We'll talk about some of the expected effects. And the usual dose is 50 milligrams, but some trials have used up to 100 and that can be done as quickly as within one week. Now the long acting injectable actually comes in one dose, and that is a dose, an intramuscular injection of 380, milligrams every four weeks to the gluteal area. So you'll see here on the top, this is an intramuscular injection which

passes through all the layers of the skin into the muscle. And on the bottom right, you'll see that this is our location of where we inject it into the gluteal muscle, where the star is

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now

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the piece of opioids is relevant here to the contraindications. The major contraindication for Naltrexone is active use of opioids prescribed or not, because these can create precipitated opioid withdrawal. So as we said, this is a medicine that acts directly on the opioid receptor. Is a strong affinity can kick off an existing opioid and then create opioid withdrawal in that it does not offer any opioid antagonism, but it simply blocks the receptor. So this applies also to patients taking medication for opioid use disorder or pain management, which includes buprenorphine and methadone. Another piece is related to hepatology, that it is contraindicated for patients with acute hepatitis hepatic failure, and if looking at the FDA insert and also on up to date liver enzymes greater than three to five times the upper limit of normal but I have placed a question mark there, because we will come back to this. Expected side effects are nausea, sometimes headache and dizziness, which can subside with continued use.

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This applies both to the

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oral option and to the injectable option, and the injectable option can sometimes also cause fatigue and decreased appetite. Anecdotally, I have found that patients who do have some of the nausea, nausea effects with P O medicines, oftentimes can avoid that by by taking them on acting injectable, because it does bypass some of the metabolic pathways. So quick check in here. Do you have to stop drinking before initiating naltrexone? And two, does naltrexone make you sick when you drink? So the answer to the first is no, and two, the answer is no. So these are relevant as we come up on one of our medications here today, but these are questions that often come up when we discuss these medications with our patients. So the question of monitoring liver enzymes is a good one. And so this comes from PCSS, which is a clinician substance use consultation entity, which essentially pooled a significant number of studies and trials regarding naltrexone to assess the impact on liver function. And I will read this, which in the recommendation is, and this is all the way back from 2014 is that it is not necessary to obtain baseline liver function tests prior to instituting naltrexone therapy, either or injectable, because it may limit the opportunity to provide treatment to those in need at a time of need. And so having patients return after doing labs can be a. And can delay effective treatment. So the argument here, and, and, of course, this is, you know, clinician dependent and comfort dependent, is that pre screening with liver with liver tests, is not always necessary if it delays

treatment. However, being obviously aware of a patient's overall liver status, if they're, you know, experiencing liver failure or acute hepatitis as well.

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Now,

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a very useful piece of information about Naltrexone is that there is a method that has been coined, the Sinclair method, which essentially is a PRN as needed in naltrexone. And so this was found back in 2001 to be effective, and essentially the Sinclair method is that you can use naltrexone as needed, only on days when alcohol use is anticipated and found to be effective, usually an hour or two prior to anticipated consumption. So this was done in patients with mild to moderate alcohol use disorder, and it actually showed reductions in number of days of binge drinking, the frequency of binge drinking episodes in a week, and the number of drinks consumed, and the intensity of the cravings. And then it even shown that they sustain these patterns six months after treatment, and overall supported this targeted dosing approach for patients on an as needed basis. And so this can be a really important piece of information for patients who are considering starting a treatment and don't necessarily want to be on a medicine every day, but can be on a medicine as needed. So just to summarize, there are two options for naltrexone, an oral, 50 to 100 milligrams per day, an intramuscular, 380 milligrams per month. Benefits does not require abstinence once daily dosing, which can be helpful for a lot of patients, evidence that the oral can be used as needed, and it's the only option with an injectable which can be useful. So definitely, certain things to consider patients who are using opioids. This may not be this is not the best medication for them. Patients using buprenorphine or methadone, strong consideration and patients with advanced liver disease or acute hepatitis. And so these are all reasons to consider alternative medications than naltrexone. So now we move to acaprosin, which is our one of our other FDA approved medicines. Its mechanism is somewhat uncertain, but it is known to interact with the NMDA and the GABA receptors, which you see here on the right. A 1995 study showed that it decreases subclinical withdrawal symptoms, so some of the symptoms of withdrawal that make people want to drink alcohol, a 2014 study supported that, and essentially the notion was that reduced withdrawal symptoms that motivate quelling of those symptoms through alcohol use, reduce the craving for relief. Now there is only one formulation of a camper, save which is an oral medicine, which is taken three times a day, and again, no long acting injectable available as naltrexone, is the only of the of the three, the one piece that is different, different than naltrexone, is that a patient should have achieved absence from alcohol in an ideal setting, because this is where most of our studies were done in patients who have obtained, achieved absence from alcohol, oftentimes after a period of medically managed withdrawal. The important piece also is that this medication needs to be renally dosed. And so in patients with differing renal function, the dose differs, but typically in a patient with otherwise normal renal function, these patients are prescribed 666,

milligrams, three times a day, which is two tablets of 333, milligrams, three times a day, which ultimately amounts to six total tablets in a day. As renal function worsens, that dose gets halved, so one tablet three times a day, and under 30 million liters per minute of a creatinine clearance use is contraindicated. Now aside from this, the only other contraindication is an allergy to a campus side effects include gastrointestinal symptoms similar to naltrexone, and oftentimes people can experience some diarrhea. Now, a quick check in same questions, does do you have to stop drinking before initiating Campos aid? Yes, ideally it's FDA approved to initiate after abstinence, and it hasn't been proven to be effective if drinking at a time of initiation. Does a camper saint, make you sick when you drink? No. And if a patient does start drinking, they don't have to stop taking it if they do drink. So considering a camper saint, another summary, again, one option as far as formulation is concerned, and that's an oral and the dose depends on renal function, higher, higher renal better renal function. 666, milligrams and lower renal function. 333, benefits are you can use it in advanced liver disease, acute hepatitis and liver failure. It can be used for patients taking opioids or agonist therapy, and it doesn't make you sick when you drink. So patients you know patient profiles to consider, right? Patients with reduced renal function will require changes in dose, patients who can take a three time a day medicine as well as two tablets at every dosing. This is a strong consideration, because this might not be an appropriate option for certain folks who aren't able to keep up with that regimen. The fact that alcohol abstinence is recommended before initiation can be very, very challenging for many of our patients, and it can be used in patients taking or using opioids or agonist therapies. So a couple of kind of patient profiles to consider when you're making these decisions. And then finally, disulfiram, our third FDA approved medication. Some folks may know this medication as Antabuse. The mechanism of this medication is that it blocks the oxidation of alcohol at a stage called the acetaldehyde stage, which you'll see here in the bottom right, which essentially creates an increase in acetaldehyde in the blood, and then that can create uncomfortable symptoms, which include headaches, shortness of breath, nausea, sweating, weakness, blurred vision, and can make people feel very, very unwell. And the idea here is that it's negative reinforcement that if I drink, while taking this medicine, certain things will happen. I'll feel a certain way, therefore I will not drink. Its formulation is a daily medicine, a daily tablet and again, no long acting. Injectable formulation available now I wanted to focus a little bit on this, because, as you may have ascertained, this can be seen as a punitive medication and can be experienced as a punitive medication. It's a mechanism that whose objective kind of relies on negative feedback and negative reinforcement. It involves unpleasant psychological effects, and it's often perceived as the prototype pharmacotherapy for alcohol use disorder. So there's a very nice study that was done that essentially looked at how people perceive alcohol use disorder treatment relative to disulfiram. And so people stated that this was really unacceptable among people who didn't want to stop all alcohol use, and people were not enthusiastic about the side effects. They said that they use their knowledge of the side effects to inform their comparisons to other medications. So assuming that possibly naltrexone works the same way, or a camperate works the same way, and the conclusion was essentially that patients often can think that any

medication for alcohol use disorder will make them sick, like disulfiram. And so this is an important piece, as we do these check ins, which is why these two questions are here, because this comes up for patients very often. So again, do you have to stop drinking before initiating disulfiram? Yes. Does it make you sick when you drink? Yes. So who do we consider this in it is, again, this is a medication that's daily, 250, to 500 milligrams, and for one to once daily, and then can increase to a maintenance range of up to 500 or it can decrease, depending on side effects, to 125, the benefits, it's once daily dosing. It can be useful for patients who's complete goals. Abstinence can be useful for patients using opioids, and there is some off label use evidence for cocaine use of varying strengths, considerations, it makes people sick when they drink, and often up to two weeks after the last dose, people who do not want complete abstinence may not be the right medication for them, and there is evidence to suggest that it can worsen symptoms of psychosis, and it can also exacerbate coronary artery disease and congestive heart failure. So one piece that I would just want to mention is that this is a medicine that I, I seldom prescribe, but prescribe in situations where patients have requested it, where they've said, I've tried this medication and it really, really helps me, because I need, I need some reinforcement. And so a small handful of folks have have received this and have reported success with it. But as of recently, it has actually been very difficult to get from a pharmacy because its uptake is very low, so I do have a patient requesting it now, so we're working with a couple different pharmacies to see if we can, we can access it for them. Now, our last piece about medication is our off label options, and the two we'll talk about today are Gabapentin and Topiramate. So Gabapentin is a medication that many of us are probably familiar with for a variety of reasons. It's FDA approved for seizures and post herpetic pain, so its mechanism influences the GABA and glutamate activity, which is all to say that it reduces some cravings that are cued by alcohols and it. Reduces sleep and mood disturbances that are often caused by withdrawal symptoms. It is a medication that you can start with at 300 milligrams once a day, and the target dose for alcohol use disorder is 600 milligrams three times a day. Side effects include dizziness, somnolence, gait disturbance, which can happen in some folks, and essentially, our trials as they relate to alcohol demonstrate that it really is effective, mostly in reducing the percent of heavy drinking days, and it's more effective in maintaining abstinence when initiated in patients who are experiencing withdrawal, because it does offer some kind of immediate relief of some withdrawal related symptoms, including sleep and mood disturbances and some of the anxieties related with alcohol use withdrawal. So considerations here are the Gabapentin also does have to be renally dose. It can be used in any level of renal function or dysfunction, but it does have to be changed depending on renal function. It can be used in hepatic impairment, also requiring dose adjustment. It can be used in patients with opioid use disorders. Can be useful for folks who also have neuropathic pain, who also have seizure disorders and also have anxiety, and you can combine it with other medications. And so I have many patients who are using both naltrexone or Vivitrol and Gabapentin as well for some of the symptoms that they experience on a day to day basis, which in create cravings for them. And the last medicine we'll talk about is Topiramate, also known as Topamax. It's an FDA approved med for epilepsy and

migraines, and again, similarly, influences GABA and glutamate activity. Topiramate has been shown to decrease dopamine after the release after alcohol use, which reduces that rewarding and reinforcing potential of alcohol use, and again, minimizes those withdrawal symptoms and reduces cravings. It's usually a once a day medicine, as opposed to gabapentin, which we which we will titrate up often to three times a day, and starts at 25 and can go to a maximum dose of 300 milligrams per day, depending on the desired effects. Similarly, it can cause fatigue, drowsiness, can cause some paresthesias or numbness, for tingling in the hands and feet, and sometimes some cognitive fog. So our trial showed that it's superior to placebo on a lot of different measures, which is time to first relapse or re initiation of drinking, duration of absence from alcohol, and also reduction in the weeks of heavy drinking. So things to consider. It does not require abstinence. It can be used in hepatic impairment in patients with opioid use disorder. There is good evidence for treatment of stimulant use disorders, including cocaine. And it can also be useful for patients prone to withdraw seizures or an untreated seizure disorder, given that it is FDA approved primarily for epilepsy.

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And so

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this anecdotally, this is a medication that I have used in a patient who is experiencing alcohol use disorder and also migraines. So now we move on to some practical considerations in the shelter and in some of our settings. So long acting injectable Naltrexone is a medicine that has to be injected, but who gives it in our settings, and what are the nuances of administration? So most often shelters do not have nursing staff, and so providers, in my case, me, have to reconstitute and administer the medication themselves. So you'll see on the bottom right, this is just a printout from the manufacturer. We have two bottles here, a and b1. Was a powder, which is the medication, and one is the dilutant, which is the liquid. And those have to be mixed in specific proportions, shaken and administered. The medication requires refrigeration, and before administration has to be left out for 45 minutes. So it's a lot of things to keep track of before administering the medication. And so thinking about what resources you have and what your bandwidth is as a provider to do these so what happens if a patient doesn't doesn't present? So you leave the medication after 45 minutes, you haven't put it together yet you haven't reconstituted it, you can put it back in the fridge. It can't stay out for more than seven days on unreconstituted. However, if it has been put together, if the two, the two, if the powder and the Dione have been mixed and the patient does not present, it cannot be put back in the fridge as a reconstitution and has to be discarded. So these are all important considerations for a medicine that can otherwise be very effective. It is effective and it is expensive. So the cost of Vivitrol is roughly 1500 to $2,000 per dose. And as I mentioned before, in the safe haven, we are working with many patients who are uninsured, I put here first Vivitrol together, which is the patient assistance program through the manufacturer, which I have very recently been

successful in getting three patients enrolled. And this enrolls guarantees patients who are unable to pay for Vivitrol, who do not have kind of.

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General Insurance

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to it guarantees them a monthly dose for at least six months, at which point it can be renewed. And this just requires some proof of of income or lack thereof. And it's fairly easy to have patients be enrolled in you can order your medicines and supplies through your supply budget. I order naltrexone 50 milligrams to our to our clinic that we have it in our cabinet can provide to patients, patients with living with HIV, who are undocumented or uninsured, can apply for the AIDS drug Assistant Program, ADAP and in New York and Vivitrol is on the Adapt formulary. You can utilize the Health and Hospitals chemical dependency program I'm most familiar with the one at Elmhurst Hospital, which is effectively an intensive outpatient program where patients can get connected to medicine, psychiatric care, group therapy and individual therapy for a host of substance use disorders. And New York City Health and Hospitals Express care, which is a virtual medical and behavioral and behavioral urgent care, which has no out of pocket cost to DHS clients. And so links are provided here. You can also get manufacturer samples from the manufacturer, and you can utilize coupons through good RX or site or program funds. So one thing that our site has done is we have a kind of a pool of funds to cover medications for patients, and we have created an account with a nearby pharmacy that both utilizes good RX coupons and charges to our site account in order to cover the cost of medications for some of our patients. Now an important piece here is thinking about you, the formulation of the medication, right, oral versus im for people experiencing homelessness, this here is an injection site reaction, which is rare, but happens. And patients might have varied experiences, long acting injectable medicines. Oftentimes, our patients have had experiences with psychiatric medications. I can think of one particular patient who you patient who was given intramuscular antipsychotics as conditions of his hospital discharge, and often associates intramuscular medications with coercion by medical staff and and therefore intramuscular injections were not really a viable option for him. People have varied tolerance for possible reactions, so it's very normal to have a small lump at the injection site, which usually resolves over two to four weeks. But a patient of mine in particular had a negative response to multiple penicillin injections in his home country with a history of rheumatic fever, and really is not interested in kind of possibly reliving some of those experiences. And for some people, taking on oral medicine every day might be empowering. It's the decision to make a take a medication every day, and you have the power to decide to continue or not. You should consider, obviously, medication storage options. Do you have a refrigerator? Do patients have spaces to hold their medicines? Are there people who can assist with medication monitoring or assistance for people who might benefit, or

maybe those medications can be stored in a pill organizer and administered. So what do you have on site that can be helpful to your clients?

43:12
Now,

43:14
another large part of this is psychosocial interventions and prevention. So talk a little bit about groups and social supports, and so many folks are familiar with 12 step programs, including alcohol Alcoholics Anonymous and other culturally and linguistically specific groups. I've had patients who we've connected to, a Polish language aa group, a Spanish language aa group, LGBTQ specific aa groups, for folks who are not really interested in pursuing 12 step programs, and I have many patients who anecdotally state that these were not positive experiences for them, and they're looking for something else, thinking about non 12 step programs, like smart recovery. And we've included some links in a handout that we'll provide at the end, individual therapy or counseling, where those are available, oftentimes in the community or with on site social work staff, intensive outpatient programs, like I mentioned, the chemical dependency program, and there are a number of other kind of high quality, intensive outpatient programs in the community, where people can go daily and return to where they stay. Programs requiring admission right long term stay, programs where folks can stay for 1428, days, experience kind of medically monitored withdrawal, and then be connected with on site resources at the inpatient stays, and then on site groups at safe haven shelters or supportive housing. So our safe haven, we are lucky to have a harm reduction specialist on site, and so many of our patients living with substance use disorders are paired with those harm reduction specialists. And can offer, can receive kind of tailored support, in addition to the medical care. And then one piece that I think can be overlooked is nutrition and supplementation. So as folks kind of drink more heavily, oftentimes food and nutrition can become secondary. So. And so alcohol use and the accompanying poor diet can actually cause malabsorption of nutrients and disturbances of electrolytes. And so here's a table which kind of shows some of the more more commonly deficient vitamins and nutrients. So what I do is, for all patients, I consider oral thiamine, oral folic acid, Oral B 12 and oral multivitamin. And oftentimes this becomes a door to discuss medications, right? I think I, my experience has been that people are enthusiastic about taking medicines. Oftentimes will feel an effect. They'll feel more energetic, and will kind of think about, you know, how else they can they can continue to improve. And this can really open the door for further discussing other medication options, which can help actually reduce the use. Now there is another piece that will be included in some of the in the slide deck, which is not included in this talk about liver health and but for time purposes. And so for the scope of the talk, we'll move on to harm reduction strategies for alcohol use. And when we'll close out our talk. So when we think about harm reduction, you know, everything that we talked about today is is couched within the the framework of harm reduction, right understanding of patients goals

and tailoring our medication recommendations or offering of options to what their goals are. And the more that we know, the more closely we can meet what our patients are looking for. But what are some things that are not medications, that are not counseling or therapy that we can offer folks? And so we split this up into a couple different slides, but we'll send this out as well. And this comes from the University of Washington, but a couple practical tips, right? Do you drink water? Are you drinking water before you drink? While you're drinking, are you swapping between alcohol and water? Are you counting your drinks? And why do we even recommend this? Oftentimes, for me, I ask folks to kind of keep track of when they feel the best and when they feel the worst. So if somebody's counting their drinks and they say, I felt really great after four beers, but when I had six or seven, I felt awful and X, Y and Z thing happened, then it becomes a good way to really understand kind of what their ideal, ideal situation is, and how we can reduce some of those unwanted effects when we move past kind of the ideal quantity. And so that allows people to kind of keep track of this on their own, to have that discussion, trying to eat, eating food. One for nutrients, obviously. Two, to kind of slow down the pace. Slow down the pace. Give your body other things to absorb and also taking vitamins, which we talked about. The other things to think about are what you're drinking, right, avoiding non beverage alcohol. It may due to circumstances, folks like we said, maybe drinking non beverage alcohol, but the consequences of this can can vary based on what other additives, these, these items that are not designed to be consumed, can have. And so really having that discussion and bringing up some of those, some of the finer points there drinking beer versus malt liquor. So what this really is, is looking at some of the alcohol percentage, right, looking at a quantity, looking at what the percentages and how much a certain quality quantity might affect you based on how much alcohol there is in in the beverage, and really trying to kind of parse that out, with somebody spacing drinks out as this says, keep the buzz going while avoiding the not so good things. So thinking about, what are the things that you like about this, and how can we help you manage, even, you know, a drinking event in a way that maximizes those good pieces and reduces some of the the not so good pieces, and avoiding mixing things right, avoiding mixing other CNS depressants, like benzodiazepines with alcohol, avoiding mixing any opioids with alcohol, things that can generally over sedate you and lead to higher risks when combined with alcohol. And then finally, thinking about, where are you even drinking, right? Are you around people you trust? Are you in a space you trust? Are you near a space you trust? Do you know how to get home? How far are you from home? And thinking about how this, this is a very significant piece for keeping folks safe, right? And then again, you know, the pieces of less is more, and choose not to use, I think are, are relevant in the sense that really having people just kind of keep track of of what, what they're doing and where they feel the best and where they feel the worst, and being able to say, you know, how can we kind of tailor your your experiences to maximize those good things, While also, I think very, very importantly, avoiding withdrawal, right? So how do we have those discussions about avoiding withdrawal, about reducing use, while also keeping people safe from some of the symptoms of withdrawal

and the very dangerous consequences of withdrawal? So one piece as we end that I wanted to mention is that there is this concept.

50:00
Of managed alcohol programs, which are

50:03
they exist in the United States and in Canada and in other countries, which essentially are shelter spaces designed for people with severe alcohol use disorders, which provide shelter meals and often primary care and alcohol administration throughout the day. And this will be included in the slides, but multiple studies have been done that have shown you know, decreased interactions with the criminal legal system, decreased hospitalization, Ed visit, higher rates of maintaining permanent housing, and there are a few in the US, and then multiple in other countries. So at the end here, I kind of wanted to just touch on our two cases. So this is our case of our young man with a seizure disorder and a severe alcohol use disorder that interfered with his ability to take seizure medications. So what did we do? We initiated our client on naltrexone, 50 milligrams and uptight traded to 100 increased his Kep, his anti epileptic medication, from 500 all the way to 1500 with a goal of increasing levels, despite his sporadic adherence and staff assisted with pill packing and daily assistance medication administration. So where are we now? He's been seizure free for four months. He has reconnected with neurology and completed an EEG after multiple years of being disconnected to care, and has also returned to neurosurgery, who signed off on his case and said that, from a neurosurgical perspective, he's safe to move forward.

51:32
Now, our other client living in supportive housing.

51:35
This was a client, and the case was designed to kind of showcase, you know, a person who's kind of reached the level of permanent supportive housing and is managing even just with with oral medications, and so this patient has progressed to the point where he is now using just PR and naltrexone for cravings about once a month, and has had maintained abstinence from alcohol as he's desired for about a year. But the clinical scenario is that he's experiencing an ongoing lung cancer workup. He has vocal cord leukoplakia and had multiple ear nose and throat procedures and biopsies, and is pending an open inguinal hernia surgery. And so I say this to say that a patient who is otherwise kind of maintaining a level of independence and kind of perceived stability still has factors that can be disruptive. And this is some this is a person to kind of continue supporting, continue offering medications, and continue offering the support that he might need, and escalating therapy if needed, given given his circumstances. So the last slide I know I'm running out of time is to take a unified approach, right? Understand that patients have

varying relationships with alcohol, understanding that it can serve a meaningful purpose for people's lives, tailoring your approach to patients goals. Is it that they want to be absent and that they want to reduce use? They want fewer hangovers? They want to save their money, offer medications where it's appropriate, and pay my until storage requirements, adherence issues or or things that complicated? Hearings for patients, offer behavioral interventions, harm reduction, education, and don't forget about vitamins and the liver. And then finally, celebrate your patients, right? Celebrate your patients, celebrate your relationship. Any change toward their goals, no matter how small, it, should be honored and should be celebrated together. So thank you, and I hope we have some time for questions.

53:23
Thank you. Thank you so much for such an incredible talk. We do have a few questions which I want to try to get through as many as possible. So bear with us. The first one is from Elizabeth. She wants to know if any comparative efficacy data on Sinclair versus daily

53:42
Po, hi. So not that I know of of off the top of my head in terms of like, within one study, is there? Is there a comparison? You know, we can I present a kind of two, two separate data points. So I can't speak necessarily to a head to head comparison, but we do see, based on even the Sinclair study from 2001 that we do have, you know, extended benefits, even past, you know, the study, the study markers. So six months after people have, you know, maintained some of their desired goals. And so we can kind of take these in in aggregate, but I am not. I don't have off the top of my head, kind of a direct head to head comparison within one study.

54:28
Thank you for answering that. The next question is from Jill. She says, they say, Can the natrox and injection be given on the same day as kavanuva injection for HIV treatment, or should they be separated by a certain number of days? That's a great question. So generally speaking, so always, you know, checking interactions between HIV medicines and other medicines using our Liverpool app, which I hope folks are using. But generally speaking.

54:59
So injections can be given the same day. You know, I would not give them in the same site. I would alternate injection sites. But generally speaking, those can be given the same day. We just want to make sure that the medications themselves don't interact with each other, but they can be given the same day. And it really is a sorry to interrupt. This is a patient comfort question, right? Does the patient want to receive two injections on the same day? Because these can be taxing experiences, physically and sometimes emotionally for people, and so thinking about that subjective experience on the patient's end.

55:36
The next question is from Maxine, how long should patients take the supplements for?

55:44
That's a great question. So I'm assuming this question is about vitamin supplements. I really have patients take them for as long as they're drinking heavily. So I have patients who maintained or reduced their use significantly and have maintained sobriety, who we eventually stop giving thiamine supplements for because they're now, you know, eating three meals a day, and they're reduced, they've reduced their alcohol use pretty significantly, and are able to stop them. So I'd say, in the in the safe haven setting, you know, I'm kind of indefinitely continuing them, because I we're often experiencing lots of fluctuations in alcohol use with lots of heavy drinking. In the supportive housing site, I've had folks who we eventually, you know, we have a discussion, and we stop the supplementation. If they're they're drinking, patterns have changed.

56:34
Thank you so much for that. I think we might have time for maybe one or two more. So another question that came up is, is there any cases or reports on how natrox affects affects those with diagnosis of schizophrenia, and for those on medications such as in Vega and concerned that

56:56
is the dopamine pathway effect in a negative way? That is a very good question and a question, and a question that I do not have the answer for, but I can find out, and if I do find something, I can send it

57:07
out. Thank you, Andreas, and I'll ask one more from the chat says, How long can we keep patients on medication, treatment? For AUD,

57:21
my answer is keeping folks on medication for as long as they want to be on it and as long as they find it effective. And so, you know, I think a lot of times, at least in our settings, we

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have medication is a really, really important tool

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on site, because oftentimes the external pieces can be a little bit tougher to navigate. So going to therapy, being involved in outside groups. And so I find that medication is constant is and the relationship between provider and patient is one of the constants. And having medication kind of as a meeting point becomes a space to continue to have those discussions, at least with

somebody. And so we often will continue for as long as we can and as long as the patients find it useful. But so often I have folks who say, I don't really want to do this anymore, or I don't want to be on the injectable anymore. Can I switch formulations? Or I think I've got it under control, and I might not need this. And so really following a patient's lead, giving your recommendation when you think it's clinically appropriate, obviously, and then being able to to let the patient kind of take the wheel.

58:26
Thank you. Thank you so much. We are at time, there were a few questions left, so we'll see if we're able to get back to you guys. But thank you. Thank you once again, Andreas for such an incredible presentation. But thank you everyone so much and have a great afternoon. Thank you so much for having me.

[End Transcript]