Week 2 - Medical & Psychiatric Co-Morbidities (8.10.23)

Thu, Aug 10, 2023 3:15PM 54:23

SUMMARY KEYWORDS

substance use disorder, patients, adhd, treatment, alcohol use disorder, answer, question, treated, disorder, stimulant, chat, talk, presents, tobacco, medications, substance, bipolar disorder, active, people, hepatitis c

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00:00

Alright. It looks like most folks have connected to audio, so I will pass it over to Dr. Carolyn Warner-Greer to introduce herself.

00:14

I will pass it over to Dr. Warner-Greer to introduce yourself and get us started whenever you're ready.

00:22

Okay, hey everybody, my name is Carolyn Warner-Greer. I'm an addiction medicine physician in Fort Wayne, Indiana. We're going to have some slides here to... with some questions that are high yield, I guess, for anyone who is planning on sitting on the boards, as well as answer any questions that you may have from the comorbidities talks about psychiatric or medical comorbidities. So, do we want them to just answer their... answer in the chat and go from there? Okay, sounds good.

00:54

That's usually the easiest - The easiest way to do it. So if you want to put your answers in the chat, I'll be able to call them out.

00:59

That sounds good. Okay. So first one here is: a 45-year-old homeless individual with a severe alcohol use disorder is admitted with symptoms of three months of a fever, night sweats, weight loss, and a cough that's productive of blood-tinged sputum. He's given a mask and multiple labs and a portable chest x-ray are ordered. What would be the next most appropriate intervention? One, to place him in

airborne isolation until the results of the chest x-ray are available, to place a TB skin test or interferon gamma release assay blood draw, to collect sputum acid fast bacilli samples times three, or empirically treat with antibiotics. And we have no music.

We're getting some answers in the chat. We have some C's and A's, mostly A's.

Looks like we're between A and C now. Okay.

So I think a key part of this question is the "most appropriate next item." So, while the A and C are probably something we would do eventually, the most important thing for healthcare worker protection as well is to place the patient in airborne isolation. Obviously, we're thinking that this might be consistent with tuberculosis, being housing insecure, having an alcohol use disorder with these symptoms. It's certainly consistent with multiple infectious disease diagnoses and TB would certainly be one that would be higher prevalence than just your typical population.

So our next one here is: Wernicke's encephalopathy is an acute life-threatening condition that requires emergency treatment with: psychotherapy, thiamine, diazepam or IV fluids?

Looks like we have consensus on B over the chat. On B, definitely.

And that the answer, the correct answer is indeed B. So, Wernicke's encephalopathy- Thiamine is a cofactor in a lot of metabolic pathways in the neurological system. Another way that sometimes this question gets asked is "do we give thiamine before we give glucose?" Which the answer would be yes, because we want to make sure that we don't use up all the findings stores when, with administering glucose. So I think that's probably the the key thing. I think most emergency departments give thiamine to people who are presenting with an alcohol use disorder somewhat empirically.

Okay, so here's one, a third: a 43-year-old patient with severe alcohol use disorder comes to see you

for a routine physical. She has stopped using tobacco products years ago. Which of the following lab abnormalities are most likely to be seen with a CBC? So, A, hemoglobin of 10, white cell count of 15, platelets of 450; or B, hemoglobin of 10, white blood cells- white cell count of 4000, and platelets of 30; C, hemoglobin of 17, white count of six platelets of 30; or D, hemoglobin of 10, white count of four and then platelets of 450.

04:58

And it looks like so far we have consensus on B over the chat. And also as a reminder, if you have any follow up questions or if you need anything repeated, please feel free to let us know either through the chat or by unmuting.

05:13

And then B is correct. Alcohol use disorders associated with a pancytopenia. So, that would obviously see all these things being reduced beyond normal limits. Sometimes tobacco use will mitigate a little bit just because of having hemoconcentration. And so hemoglobin might be elevated, but but she has no tobacco use. So, this is what we would expect to see with severe alcohol use disorder.

05:44

So, we're seeing a 25-year-old female known to our practice with the past medical history significant for severe alcohol use disorder. Her AST is elevated. Her ALT is elevated. The bilirubin and alkaline phos are normal. The most common pre-existing condition in the liver to this patient- for this patient prior to the development of cirrhosis. So, this goes back to that little graph we showed in the medical comorbidities talk of the progression of hepatic pathology leading up to cirrhosis. So, is it: viral hepatitis, fatty liver, cholelithiasis or thrombosis of the portal vein?

06:34

I'm seeing some B's trickling in.

06:53

Yeah, it's B - the answer would be B. So, fatty liver. If you go back to your slides, that shows kind of the progression of the hepatic cells are somewhat compressed by fatty deposits, which turns into cell compression and hardening of the liver and eventually cirrhosis with a small number of those proceeding on to have hepatocellular carcinoma. Okay.

07:25

So, which of the following is a contraindication for the use of disulfiram in the treatment of moderate to severe alcohol use disorder? A, concurrent administration of metronidazole; B, severe thyroid disease; C, concurrent administration of acomprosate; or D, glaucoma?

A's in the chat. Concensus on A.

And that would be correct. Administering Flagyl and disulfiram, I think they both compete with the same enzyme build-up. Let's see here. So, probably a good... when we when we talk to patients about starting them on Antabuse to always remind them of course, be very cognizant of any alcohol use or things that contain alcohol, but then also to be prepared for medicines that that may compete with this enzyme and that would be the use of Flagyl. So, and which is not something people are typically on and maybe treated for diverticulitis or something like that. So.

So, which would be the following safest medication for a patient with severe hepatitis C and/or liver failure?

I see lots of B's in the chat

And that is a good answer. So, so, if we remember from Dr. Restrepo's talk about the the benzodiazepines that are metabolized with just gluconate conjugation, which is fast metabolism and doesn't have an active, doesn't have active metabolites like Valium and librium and stuff. So, the acronym usually is LOT or lorazepam, oxazepam, temazepam. But, uh, Um, if someone's being treated generally we want something that's faster acting. So, Ativan would be probably the choice there. Okay...

What statement is true regarding outpatient parenteral antimicrobial therapy or OPAT, for persons who inject drugs? A, a history of injection drug use is an absolute contraindication to OPAT; B, OPAT may be a safe and effective option for people who inject drugs with a recent injection drug use; C, OPAT's acceptable for people who inject drugs only if they haven't injected a substance for more than six months; or D, OPAT should be avoided for most patients, regardless of their substance use history.

I'm seeing B's in the chat.

10:51

So proud of you guys. So, so B is correct. You know, OPAT is typically used for patients who inject drugs for conditions like bacterial endocarditis, or osteomyelitis. And the gold standard of treatment, again, is long-term parenteral antimicrobial management. While there's a concern, oh, this person, you know, may use an IV cath- catheter or port catheter, PICC line to inject substances, we have to still make sure that we're getting the best treatment for patients. You could ask people to stay in the hospital the whole time, however, that's difficult to get covered and also difficult to get compliance. So, we want to make sure that we don't force our patients into not being able to participate in the recommendation of care because we're making it so difficult for them. They're, you know, I've had patients who have that, usually, if you're being treated for osteomyelitis, or bacterial endocarditis, you have been injecting drugs recently. And you have said, you know, hey, it would be really dangerous of use this and most of them say, hey, you know, I want to get better, I don't want to die. And, you know, injecting fentanyl or whatever it is into a central line could could be fatal. So I think that this is our role as Addiction Medicine providers to educate our colleagues and kind of think what our literature shows us more so what that their stigma, and maybe their past experiences are consistent.

12:32

So here's one renal failure... acute renal failure associated with cocaine use has been reported one of the mechanisms leading to acute renal failure and patients use cocaine is: renal papillary necrosis, a direct toxic effect on the renal tubules, renal artery spasm leading to ischemia, or rhabdomyolysis with myoglobinuria.

13:04

I see D's and some B's as well.

13:09

So, the correct answer is D. Muscle ischemia caused by prolonged vasoconstriction of intravascular arteries are direct damage to the kidney. Also, kidneys can you can develop rhabdo by having volume depletion, hypotension, acidosis, and hypoxemia. So, that can cause ATN along with rhabdo so that the most likely answer is rhabdomyolysis.

13:41

Which of the following is true regarding infective endocarditis in patients with heroin addiction, via IV route as compared to endocarditis without heroin addiction: A- recurrent endocarditis in this population is unlikely. B- the tricuspid valve is affected more often in patients with heroin addiction. C- surgical treatment is less often necessary in patients with heroin addiction, or D- mixed flora of bacteria and fungi is less prevalent in patients with heroin addiction.

14:22

Seeing lots of confident B's in the chat, you can always tell when folks reply really fast, right?

14:29

You guys listened. So definitely tricuspid and pulmonic valve are more likely affected in patients who have endocarditis related to IV drug use. Surgical treatment is more likely to be required in patients versus a spontaneous bacterial endocarditis. Recurrence is very likely, one because of just ongoing behavioral risk factors, and that because we're the etiology of the bacteremia is generally from the community. There's why we know that staph is probably the most likely if you're asked a question that generally it's a mixed flora of bacteria and even fungal infection on these valves.

15:17

Okay, so a 41 year old man has a screening bone density showing a t score on the spine of minus 4.4 and a hip t score of minus 2.8. His past medical history includes type one diabetes, hypothyroidism and chronic back pain due to the multiple compression fractures. He's treated with 60 milligrams of methadone spaced out through the day as well as oxycodone for breakthrough pain. He has a distant history of IV cocaine use and heavy alcohol use and he quit smoking about four months ago. He drinks 32 ounces of coffee daily. His physical exam reveals a thin white male and no apparent distress with a blood pressure of one to two over 76, a heart rate of 116 beats per minute, a weight of 168 pounds, height of 70 inches, mild bilateral gynecomastia, spine slightly tender to palpation, his thyroid is firm and non enlarged, his liver is not enlarged and his testes are without lesions and are small and soft. The rest of the examination was unremarkable. His lab assessment is as follows: his total testosterone is 185 which is level. His sex hormone binding globulin is 80 which is slightly elevated. His FSH is 7.4 which is normal. His LH is 3.8 which is normal. His prolactin is 51 which is elevated. A pituitary tumor is ruled out first. Which of the following would be the best option for treatment?

16:46

Lots of C's and then a B as well.

16:55

Okay, and the answer is C. This is describing again, testosterone deficiency and someone who is treated with chronic opioids. Whereas chronic opioid use we probably wouldn't want to taper his opioid therapy just because it's unlikely that he would either not require it anymore or return to non-prescribed opioid use. Sounds like his level of functioning is improved slightly with- with opioid use. The- the mechanism for this is suppression at the GnRH and the luteinizing hormone pathway. So it's multiple areas of the hypothalamic pituitary tract which just responds to reduction so and then the sex hormone binding globulin will be elevated in response to low testosterone. So mammoplasty maybe, if that really doesn't take care of any problem, the current problem right now.

18:08

So the next one's a 29-year-old female presents to your clinic with a complaint of intermittent right upper quadrant abdominal pain. She admits to a previous history of IV heroin and fentanyl use. She reports that she's celebrated 60 days abstinent this week, prior to the appointment and is currently prescribed 60 milligrams of buprenorphine with Naloxone for medicine treatment. She denies any other medical problems. On physical exam, her liver edge is palpable one centimeter below the right costal margin at the mid-clavicular line. Her lab work demonstrates her ALT is elevated to 212, an AST of 167 with a total bilirubin of one and a hepatitis screen that is positive and a hepatitis B surface antigens negative. Or hepatitis B surface antigen or antibody and antigen negative; and a Hep B core antibody negative. Apart from initiating immunization against Hepatitis B viral infection, which of the following would be the most appropriate next step and evaluation and treatment of this individual? A- immediately start treatment for hep C. B- current infection should be confirmed with a qualitative measurement of a hepatitis C RNA. C -check an Alpha-Fetal protein level, or D- discontinue buprenorphine/Naloxone treatment?

19:22

We have consensus on B over the chat. Okay.

19:29

Okay, so answer A is actually correct here. So a hepatitis C screen that is positive can be positive for lots of things. It can be positive for non- non active hepatitis C... can be positive for hepatitis C that's already been treated before. So these hepatitis C screens which generally are just for that antibody, should be followed up with hepatitis C RNA. Most of the time when we check these, we're going to have it reflects automatically. So you'll get, you'll get a viral load it, it's important to treat hepatitis C, but you want to make sure that they have an active current infection as well as, you know, determined viral subtate...type and maybe even degree of hepatic fibrosis. We certainly want to... wouldn't want to stop bup given that she has been able to achieve abstinence all of a sudden with, hm, with medical treatment for her opiate use disorder. So, so the next, the next best step would be check for hepatitis C genotyping and a quantitative viral load to dictate what antiviral therapy for hep C would be appropriate to use if needed.

20:47

So, the next one is patients with which comorbidity should not be prescribed bupropion for smoking cessation? One- type one diabetes. B, or sorry, B- a myocardial infarction two years ago. C- a major depressive disorder or D- a seizure disorder?

21:20

Seeing some hesitation, we only have one answer and it's D on the chat.

21:28

21:28

Okay, so the correct answer is D. Bupropion is associated with seizures even with a therapeutic dosing level. Therefore, a known seizure disorders a contraindication of bupropion, and so the rest of these are not contraindications. So and this would be the correct answer on a board's review, of course, and definitely in a boards question. However, there's there's some active debate in the world of psychiatry on does bupropion really lower the seizure threshold that much, especially if someone presents with, you know, a nebulous I think I had a seizure one time kind of thing that we don't want to completely remove it it just requires a little bit more investigation and most people if you're taking a psychiatric or even a medical history, you're going to ask about prior seizures and and that kind of thing.

22:20

So next one is a 14-year-old presents to the emergency department after his mother discovered him inhaling gas from the propellants of a can of whipped cream. Chronic use of this particular inhalant is most often associated and whipped cream canisters is most likely to result in the following: One- microcytic anemia, B- inflammatory bronchitis, C- proteinuria or D- sensorimotor polyneuropathy.

22:56

We have D's and B's on the chat. Okay.

23:02

So this one is sensorimotor polyneuropathy. I can tell you this has been on every boards exam I've ever taken in my life. So definitely seen this one down there. So so whipped cream propellants have nitrous oxide. So there's other ways to use nitrous oxide outside of just a propellant. It has direct toxic effects on neurons, including peripheral nerve axons. So what happens is nitrous oxide converts active vitamin B 12 to its inactive form and this results in sensorimotor peripheral neuropathy. Every boards test ever, okay.

23:47

So this one: a 17-year-old gentleman presents to your primary care practice with his mother concerning his increased alcohol use. The patient reports he's been drinking alcohol since he was 13 years old. He reports his alcohol use has increased over the past six months to the point where he's been drinking almost daily. He admits to some cannabis use and non-prescription use of alprazolam. Which of the following psychiatric conditions is least likely to be associated with adolescent substance use: A- oppositional defiant disorder, B- ADHD with appropriate treatment, C- simple phobia, or D- chronic Post Traumatic Stress Disorder.

24:39

We have C's and Ds in the chat.

24:44

So the least likely would be a simple phobia. So we know that chronic PTSD is associated with adolescent substance use. Often felt that substance use maybe self treatment or if there's like a strong family history of SUD which represents all kinds of stressors in an adolescent... in a child's life. ODD is an independent predictor for adolescent substance use. The literature about ADHD does show that untreated ADHD can increase the risk for developing substance use disorders. So this is an important point to be to bring up to parents who decline medical treatment because they don't want their child to be exposed to a stimulant. But to reassure them that actually appropriate treatment for appropriately diagnosed Attention Deficit Disorder actually reduces the risk of substance use disorder. So the the untreated ADHD is associated with it- increased risk, so always share that with patients. Getting appropriate treatment for kids is important.

26:05

So a 70 year old widowed male recovers in the ER from an episode of binge drinking. He reports he's very depressed and has suicidal thoughts. You believe this is due to his intoxicated state. Which is true: One, cocaine could not be responsible for this condition. B- substance induced depression can still be acutely serious. And you should consider inpatient admission. C- best practice would be to measure his breathalyzer and send him home when he's no longer legally intoxicated, or D- an alcohol induced depressive disorder can take over a month of abstinence to resolve.

26:54

I have a question? Are you getting my answers because it's going to some iPhone. And it says it's no longer in the chat. iPhones Champa.

27:09

It looks like you might be sending a message directly to a participant. So right above where you type in your answer, there's a blue box. If you click on that blue box, and then scroll down to meeting group chat that shows him the answer out to him.

27:23

Okay, got it. Thank you. Of course, I don't know how.

27:27

Sorry. No problem. And it looks like we have lots of B's on the chat. Also, just as a reminder, if anybody has any follow up questions or needs anything repeated, please feel free to type that into the chat. As long as it's to the whole chat or directly to me, I can read it out for you.

27:43

So it looks like we have consensus on B.

27:46

And that's the correct answer. So, cocaine is definitely associated with depression. That's one of the ways of talking to patients about your concerns about their stimulant use is not only the act of intoxication, but withdrawal from stimulants can be associated with acute onset of significant depression which can result in suicidal thoughts and self harm. I don't know the best practice even if he wasn't suicidal would be to measure their breathalyzer and send them home when they're no longer intoxicated without initiating treatment. So and while in an alcoholic induced depressive state could could take you know a while to take I don't know necessarily it's always over a month so it's always important when encountering anyone with thoughts of suicide that we do an appropriate screening tool such as a Columbia and act appropriately to make sure that they are safe from harm.

28:52

It looks like we had a follow up question to the previous question which is would treated ADHD limit SUD?

29:02

Okay

29:07

So... so the first one here is that so would would treat it ADHD limit SUD and then the next one is there's an increased risk and then it talks about as the overall risk for ADHD is higher than simple phobia regardless of treatment. Okay, we'll ask the first one here. So yes, treatment for children and adolescents, for appropriately diagnosed ADHD, does reduce the risk of developing a substance use disorder in adulthood. However, kids who... it doesn't mitigate all the risk factors that they have, and we know that there's a higher propensity of ADHD in persons seeking treatment for substance use disorders and older adults as ones without. So, when seeing an adult who presents with symptoms of ADHD, it's probably more likely they actually have ADHD if they also have a substance use disorder than if they do not. I know that's kind of backwards. And that's not the greatest question in the world. I think we just assuming the overall risk for ADHD is higher than simple phobia regardless of treatment, so I hope that answers it. Those... those are the key points I think for that question that we wanted to make sure that treated ADHD reduces the risk, but it doesn't mean it's less likely.

30:45

So this was a 34 year old man is admitted to a residential treatment program under pressure from both his boss and his family. He has a five year history of gradually escalating alcohol use with dailies for the past three years, or at least five to six drinks per day. Frequent absences from work, failure to

carry out his household responsibilities and impulsive behavior, occasionally staying up all night drunk driving extramarital excess. On admission, he complains of persistent depressed mood and loss of interest and enjoyment and family friends at work, middle and terminal insomnia, feeling like a failure, and suicidal ideation which has been increasing in intensity over the past three months as his drinking has escalated further.

31:28

The patient participates in the residential treatment for one month. At the end of the month, during from which he's been abstinent from alcohol, his depression, low interest, low appetite, insomnia, feeling of failure and thoughts about death and suicide are unchanged from when he was admitted. What would be the most appropriate next step in his treatment? A- sertraline, B- Gabapentin, C- valproic acid or D- cognitive behavioral relapse prevention therapy?

32:01

Looks like we have lots of A's and some B's.

32:07

So the answer is A. This is clearly just demonstrating someone who has those persistent vegetative signs of depression despite abstinence from alcohol. One of the sources as and 3000 patients with alcohol use disorder 15 appear to have independent depressive disorder, and 26% had ones that were more like consistent with substance induced depressive disorder. So there's no evidence of mania. So this is probably not a diagnosis of bipolar disorders where valproic acid might be indicated. CBT and Gabapentin are not the most appropriate next step to treat severe depression. And so unless he's had trials of other antidepressants, usually first-line treatment for a major depressive disorder which appears to be coexisting with an alcohol use disorder would be an SSRI. Sertraline is generally well tolerated. Gabapentin does have an indication off label with alcohol use but it's more with mitigating cravings and less with treating actual depression.

33:26

Next one- a 25-year-old with ADHD, Tourette's disease, and an active alcohol use disorder presents for treatment of the alcohol use disorder and ADHD. Given this patient's co-occurring conditions, which of the following medications is the best first-line option for treatment? Sertraline, mixed amphetamine salts, methylphenidate or atomoxetine.

34:00

Lots of confident D's coming into the chat.

34:05

And that is that is correct. So it's kind of clear that this patient has ADHD and not a depressive disorder. So antidepressants have never been shown to be effective treatment for ADHD. While stimulant use disorder... stimulants might be first-line and treatment for ADHD. Maybe there might be some hesitation with an active substance use disorder and that would definitely be the right answer for a test. But also the fact that someone has Tourette's... relative concern that a stimulant would increase a tic disorder severity. So non-stimulant agents are generally the best first-line agent for someone with a motor tic disorder. The other thing is, is there's a lot of evidence that shows that patients who are treated with atomoxetine, even if they didn't have an alcohol use disorder, report reduced craving for alcohol also. So Strattera would probably be your first-line treatment.

So for women entering residential treatment with post traumatic stress disorder and substance use disorder, the treatment intervention with the strongest evidence base is prolonged exposure therapy, seeking safety, individual psychodynamic psychotherapy, or a modified therapeutic community?

We've got some B's and C's pretty split.

So the answer is seeking safety. Seeking safety is an evidence-based, present-focused counseling model to help people attain safety from trauma and SUD. And it has an incredible amount of evidence for treatment of co-occurring chronic PTSD and substance use disorder. So especially for women, so this is widely used in residential treatment programs and outpatient mental health centers. It's manualized. And it's somewhat peer-driven and somewhat facilitator-driven, but it is very efficacious, and I think its use is pretty widespread just about anywhere.

So, which of the following psychiatric disorders contains the greatest risk of a co-occurring substance use disorder: A- major depressive disorder, B- schizophrenia, C- bipolar disorder, or D- panic disorder.

I'm seeing A's, B's and C's on the chat.

This is a good this is a good one too. Again, every board test I've ever taken is had something on this play. So while the answer is C... bipolar disorder is certainly much less present than major depressive disorder or panic disorder. It is... has a... if someone has pre-existing bipolar disorder, it has like a 40% greater risk of a co-occurring substance use disorder.

So sometimes this question gets answered... and gets asked in a different way. Where someone has a substance use disorder, what's the most likely co-occurring mood disorder? In which case would be generalized... generalized anxiety or anxiety. But it's when I think it's what comes first, the psychiatric disorder, developing a substance use disorder. So bipolar disorder generally presents at least used to... generally presents earlier, you know, in the late teens, early young adult, and then is associated with substance use disorder, mostly self-managed medic... medication of symptoms, is typically what what what it seems so...

There's a follow up question in the chat that was asked: Is this excluding tobacco use?

I generally think it is. I think all of these... we don't- we don't do a very good job as addiction medicine specialists of separating tobacco use disorder from all other substance use disorders. And we say... we talk about the most common thing or the one that takes the most lives, and that's always that... the answer then would always be tobacco. So... but I think for test-taking purposes unless they specifically talk about tobacco, it is... it would be assumed that we're not talking about tobacco use disorder. But you're right, that would probably the most, most likely, yeah, even though the association is mainly not necessarily there. So there's... as an addiction medicine provider I... who works in a federally qualified health care system, I tell people over the time, like we can't put people's tobacco history in the social history; it is a medical illness that needs to go in the history of present illness, and there's no EHR that will let me do that they all... they all put tobacco and alcohol in a separate spot. So it's, it's my my cross to bear. So...

Individuals with attention deficit hyperactivity disorder is an increased risk for substance use disorder, and ADHD is found commonly in clinical treatment populations. Which of the following statements regarding the management of co-occuring substance use disorders and ADHD is true? I'll tell you when you see these long stems and these long answers, they... read them very very carefully so, so... The treatment for ADHD should always be delayed until abstinence from substance use has been achieved because use can improve ADHD symptoms. B- The treatment of ADHD is a secondary concern compared to active substance use and is not a relevant clinical issue for outpatient substance use programs. C- ADHD may be diagnosed in patients with active substance use disorders in the appropriate clinical setting using appropriate clinical tools. And D- stimulants should never be prescribed to someone with a substance use disorder.

It looks like we have consensus on C.

40:55

Yes, and that is the correct answer. So we know that if someone has ADHD, they're more likely to have a substance use disorder; if they have a substance use disorder, they're more likely to have ADHD They frequently co-occur, and appropriate treatment for both of them impacts the outcome for both disorders. So while it's challenging to treat both, it's, it's important that they both get appropriately diagnosed with evidence-based screening tools and management. And then we want to... we want to treat ADHD because, you know, a lot of our treatment for substance use disorder is less impactful with untreated ADHD. So there are some... there is some evidence that says you know, you want to kind of wait a little bit but not a long time to diagnose ADHD. When you're, you know, acute treatment of someone who's actively using but there's no evidence that with someone with a known diagnosis of ADHD will make it worse, so... And stimulants certainly are appropriate for someone with a substance use disorder if it's appropriate.

42:10

Okay, so the following substances or medications are associated with known drug-to-drug interactions when combined with anti-psychotic medications: A- smoke tobacco, B- naltrexone, C- vaporized cannabis or THC or D- acamprosate.

42:39

Lots of A's coming through the chat.

42:43

This was hit really hard at the co-occurring psychiatric illnesses at the review course, so A is correct. Anti-psychotics used in the treatment of schizophrenia: they're metabolized by a whole bunch of those enzymes in the CYP 450 category in the liver. Nicotine and caffeine modify those ISO enzymes and can contribute to adverse reactions either most likely to reduce the efficacy of medications as far as mood stability. And then if tobacco or caffeine has abruptly stopped, to increase the potency of a of the current dose. So while it's important to work on tobacco use and caffeine use with people with a thought disorder or treating with anti-psychotics, we also have to be very cognizant of what their current stat- status is with tobacco use and caffeine use because it can dramatically change serum levels and efficacy of anti-psychotics, even if the dose didn't change. So I think the thought is, is that a lot of patients with a- with- who are treated with an anti-psychotic will smoke more because it reduces kind of the slowing down of those medications, because that's not a pleasant side effect of anti-psychotic medication. So tobacco really messes with a lot of medications, and so it's important to understand those interactions and to appropriately evaluate the outcomes of those medications when there's a change in the faculty use.

44:22

So that is all the questions that I think we have prepared for today. Is anyone else have any other questions specifically about... any other best question that you saw that you didn't really understand

the explanation or anything from the two lectures?

44:40

Sorry, for some of us that came in a little bit late because I didn't know where to go search for this zoom. Can we go back to those questions that you guys asked earlier on you then?

44:57

So we actually have recorded this session and it will will be posted in the eLearning Center. So you'll be able to also watch the recap for all the questions that we covered prior to you joining the chat. But if you have any specific ones, we can definitely re-address them.

45:16

So she was that... she was talking about the most... the psychiatric condition and co...co-occurring substances was bipolar. But she was also saying the question can be routed differently that would give generalized anxiety disorder as as the answer... Can you go over that again?

45:41

Yes. So when we when we talk about what thought or mood disorder is most likely to, I guess, predate developing a substance use disorder, that is... that is bipolar disorder by far that they feel like people with bipolar disorder are almost 40% more likely to have a substance use disorder than someone without bipolar disorder. Sometimes on the test, the question will get re-worded as "someone presents with an opiate use disorder, what's the most likely, you know, like, I guess newly diagnosed mood disorder, and then that would generally be generalized anxiety. So knowing that anxiety and bipolar disorder can obviously co-occur, but I think it all goes to the development of people with bipolar disorder are their symptoms... typically, the onset is in teens to early 20s, not later down the road, whereas anxiety might present a little bit different. So...

46:48

When will you use SNRIs, in a substance use disorder patient, you know, with depression?

46:54

So a lot of it is the co-occurring illnesses too. You know, if you have someone who has a substance use disorder, and they also have fibromyalgia, or predominant anxiety then duloxetine is definitely probably... we have more evidence for that. There's a lot of growing evidence for the use of bupropion with stimulant use disorder, combined with naltrexone if you can, but a lot a lot of a lot of patients don't just have stimulant use. They also have an opiate use disorder and you obviously can't use

naltrexone if you're treating with an opioid also, so... So, the bupropion, really increasing those doses, like getting the XL formulation, getting up to about 450, in theory has reduced stimulant use cravings, that kind of thing. So, so those are the two most likely situations so...

47:46

So for the exam, it should always be SSRIs with depression? It could be...

47:51

I think our first-line treatment for depression just in general, you know, major disorders and SSRI. So, and I think if you remember the question, the other options weren't SNRIs they were, you know, anti-epileptic, gabapentin, you know, that kind of thing. So...

48:10

Thank you.

48:11

No problem.

48:13

Well, my question is, for the last session, which I didn't join, how can you find it? I just went through, I couldn't like opt in for this meeting. How can we find it please?

48:23

I am currently in the process of processing the captions for that. So it should be up today. And it will be under the e-Learning Center product where you went to click to join the session. By today, it should flip to watch the video.

48:37

Okay. All right. Thank you.

48:40

One more question. I missed last week...the neurobiology... Would that also be posted?

48:48

Yes. So last week, we covered both neurobiology and stimulants and that whole session with the captions will be posted hopefully by today at the end of the day, and it will be under the e-Learning Center. Thank you.

49:04

Any other questions?

49:05

Honestly I want to say this is very beneficial for you you know, really going through these questions you know, scenarios... very beneficial honestly. So it makes the study easy. I wonder why... you might wonder why is good you know, so that you know takes you know, you understand all the nuances of what you read and you know how to put it together. So you just want to go get it over with because 2500 is a big, big money.

49:39

Thank you. We really went for when preparing for this test. There's... I hope when you take it you will look at it and say oh, yeah, I know what they're getting out for that. Oh, yeah, I know what they're getting for that at that not every question but a lot of them and using the best tool that came with the review course for some people that is honestly... there's a lot... a lot of stuff out there that says, "Oh, we can help you for the ABPM test." But, you know, you can really get led astray sometimes. The ASAM exams, probably the best one to stick with no, no pun intended.

50:14

So for this exam for this ABPM exam, how much in detail do we have to know about hepatitis C and HIV? Regarding their medications? You know, testing, levels, a lot of detail or...or more general?

50:32

Yeah, I think that there's even more as far as epidemiology of infectious diseases associated with substance use disorder, harm reduction, best practices and screening and identifying. But as far as like, say, you know doses of Epclusa and stuff like that, I haven't seen that before. But it's it's more than just diagnosing it's, it's about harm reduction. It's about understanding prevalence and incidence, risk factors. Those are those are all- so- hepatitis C could come up and lots of different sections of that rubric that they say is going to be there and all infections related with active substance use and specifically injection use, so

51:21

I was doing some questions. And I had come across one in which it was something related to giving the medication- to giving them medication before they get exposed to HIV. It was called something really?

Yeah, pre-exposure prophylaxis. Yeah, yes. So I imagine that was talked about in harm reduction. And it's just for your practice, it's a very, it's very important to be well versed in that. So our patients, I think we find out that there's an HIV problem. I'm from Indiana, so if anyone wants to Google Scott County 2015 and find out a tiny little townie, it's our second smallest county in the entire state. And they had 200 cases of HIV diagnosed in like a timespan of six weeks. And it was all from common sharing of syringes and things like that. So PrEP in, I would understand it as a principle. And that it should be something that should be offered to people who have risk factors, not just injection drug use, but any any risk factor for HIV. So post-exposure prophylaxis is different. So that's called PEP. And that is something that, like if someone has an alleged sexual assault may come and they will usually offer them PEP or a needle stick or something like that. So same principle, different- different medications. So to understand what those acronyms are, when they should be offered, and that they're even available, I think has a lot to do with epidemiology and harm reduction.

Thank you.

I don't see any more questions rolling in. We do have three minutes. So this is your chance if you have any things written... holding on to. If not, we will be back next week to talk about other classes of drugs and then behavioral addictions. And again, it's going to be the same- same method to get here, go through the eLearning Center and click on the link and we'll be here. Any other questions before we close out?

Thank you very much.

Yes, will we be able to apply for CMEs for attendance?

Unfortunately, we're not offering CMEs for the office hours, but you do get CMEs for all of the review course. And then you can also claim CMEs for the best if you're registered for that.

53:57

Thank you very much for this informative session.

54:01

Thank you for attending. Dr. Warner-Greer, did you have any closing words that you wanted to share?

54:06

I wish I did. But I don't.

54:11

Thank you very much. Thanks, guys.

54:15

Thank you all so much for attending, and I'll see you next week.