

THE CARLAT REPORT

ADDICTION TREATMENT

A CE/CME Publication

CURRENT COVERAGE OF TOPICS IN ADDICTION MEDICINE

Noah Capurso, MD, MHS

Editor-in-Chief

Volume 10, Issue 5

July/August 2022

www.carlataddictiontreatment.com

IN THIS ISSUE

Focus of the Month:
**Personality Disorders
and Addiction**

Supervised Drug Consumption Sites — 1

Expert Q&A: — 1
**Addiction and Borderline
Personality Disorder**
Ashley Pierson, PhD

Research Updates: — 6
• E-Cigarettes and Relapse
to Cigarette Smoking

• Should Prolonged Abstinence
From Alcohol Be Required
Before Liver Transplant?

• Does Pioglitazone Lead to
Reduced Alcohol Use?

CME Test — 7

Learning Objectives

After reading these articles, you should be able to:

1. Identify which patients might benefit from access to supervised consumption sites.
2. Implement specific therapeutic strategies to help patients with comorbid borderline personality disorder and substance use disorder.
3. Summarize some of the findings in the literature regarding addiction treatment.

Supervised Drug Consumption Sites

Christopher L. Clayton, MD, EdM. PGY-4 psychiatry resident, NYU Grossman School of Medicine, New York, NY. Deepti Anbarasan, MD. Associate Professor in Psychiatry and Neurology, New York University, New York, NY.

Dr. Clayton and Dr. Anbarasan, authors for this educational activity, have no relevant financial relationship(s) with ineligible companies to disclose.

The recent opening of the first US supervised consumption site (SCS) in New York City was big news (Mays JC, Newman A. Nation's first supervised drug-injection sites open in New York. *The New York Times*. November 30, 2021.). But what exactly is an SCS, and can it help patients? In this article, we'll review the purpose of these sites, the evidence behind them, and how to discuss them with your patients.

What is an SCS?

An SCS is a clinical setting with trained medical staff where clients come to use

Highlights From This Issue

Feature article

Supervised consumption sites are an emerging harm reduction approach to lowering overdose deaths, and they may be coming to a city near you.

Q&A

Borderline personality disorder and substance use disorders are highly comorbid, but principles of dialectical behavior therapy can be applied to the treatment of both.

Page 6

Requiring a period of extended sobriety prior to receiving a liver transplant does not improve outcomes in patients with alcohol-associated liver disease.

drugs, most commonly intravenous opioids. Clients bring their own drugs, and the clinic provides sterile injection

Continued on page 4



Addiction and Borderline Personality Disorder

Ashley Pierson, PhD

Assistant Professor of Psychiatry and acting director of DBT services, General Adult Intensive Outpatient Program, Yale University, New Haven, CT.

Dr. Pierson, expert for this educational activity, has no relevant financial relationship(s) with ineligible companies to disclose.

CATR: Please introduce yourself.

Dr. Pierson: I am a clinical psychologist and an assistant professor at Yale University School of Medicine. I serve as the director of dialectical behavior therapy (DBT) services at Yale New Haven Psychiatric Hospital.

CATR: What is a useful way for addiction treatment providers to conceptualize borderline personality disorder (BPD)?

Dr. Pierson: The biosocial model developed by Marsha Linehan can be a useful way to understand BPD. As you can tell from the name, the model includes two components. The first component is the individual's biological predisposition toward high emotional sensitivity. There are three parts to that. First, these feelings in general are experienced very intensely—more intensely than an “average” person. Second, these feelings can be cued easily by seemingly minor stressors. And finally, these feelings often take a long time to return to baseline.



Continued on page 2

EDITORIAL INFORMATION

Publisher: Daniel Carlat, MD

Editor-in-Chief: Noah Capurso, MD, MHS

Deputy Editor: Talia Puzantian, PharmD, BCPP, professor at the Keck Graduate Institute School of Pharmacy in Claremont, CA.

Executive Editor: Janice Jutras

Associate Editor: Ilana Fogelson

Editorial Contributors: Chris Clayton, MD; Deepti Anbarasan, MD

Founding Editor: David A. Frenz, MD, medical director of addiction medicine at HealthEast Care System in St. Paul, MN.

Editorial Board

Bachaar Arnaout, MD, assistant clinical professor of psychiatry at the Yale School of Medicine.

Sandra Gomez-Luna, MD, clinical assistant professor at Yale University. Adult, adolescent, and child psychiatrist in Darien, CT.

Travis M. Lajoie, DO, adjunct assistant professor at the University of Utah School of Medicine and medical director of inpatient psychiatry at the George E. Wahlen Department of Veterans Affairs Medical Center.

Timothy J. Legg, PhD, PsyD, MSN, psychiatric mental health nurse practitioner at Offices of Psychiatry & Counseling Services, Matthew A. Berger, MD, PC, Moosic, PA. Licensed psychologist in private practice, Binghamton, NY.

Ben Oldfield, MD, clinical instructor at Yale University and Chief Medical Officer at Fair Haven Community Health Care. New Haven, CT.

Joshua Sonkiss, MD, president of Sonkiss Medical Consulting, LLC.

Rachel Sprunger, LCSW, senior social worker, SUD team lead, and PTSD/SUD specialist at the Butler VA Healthcare System.

David Stiffler, MD, HS clinical assistant professor and associated program director, Addiction Psychiatry Fellowship, UCSD Department of Psychiatry.

Mikveh Warshaw, NP, psychiatric mental health nurse practitioner, Community Health Center Inc. and faculty member of Center for Key Populations (CKP) Program, Middletown, CT.

Michael Weaver, MD, FASAM, professor and medical director at the Center for Neurobehavioral Research on Addictions at the University of Texas Medical School.

All editorial content is peer reviewed by the editorial board. Dr. Carlat, Dr. Capurso, Dr. Puzantian, Ms. Jutras, Ms. Fogelson, Dr. Arnaout, Dr. Gomez-Luna, Dr. Lajoie, Dr. Legg, Dr. Oldfield, Dr. Sonkiss, Ms. Sprunger, Dr. Stiffler, Ms. Warshaw, and Dr. Weaver, planners for this educational activity, have no relevant financial relationship(s) with ineligible companies to disclose. This CE/CME activity is intended for psychologists, social workers, psychiatrists and other mental health professional with an interest in the diagnosis and treatment of addictive disorders.

Mailing Information

The Carlat Addiction Treatment Report (ISSN 2473-4454) is published bimonthly (Jan, March, May, July, Sept, Nov) by Carlat Publishing, LLC; 8-10 Prince Place, Newburyport, MA 01950. Periodicals Postage Paid at Newburyport, MA and at additional mailing offices.

POSTMASTER: Send address changes to The Carlat Addiction Treatment Report, P.O. Box 626, Newburyport, MA 01950

Expert Interview

Continued from page 1

CATR: That's the "bio" part of the model—what about the "social"?

Dr. Pierson: People with BPD not only have this biologically determined heightened emotional sensitivity, but they may also encounter a greater number of stressors in life than the average person. So we have someone encountering a significant number of stressors, experiencing each one as particularly intense and distressing. And it then takes the person so long to come back down to baseline that they are likely to encounter the next stressor before they've managed to regulate the initial distress. They are living a life of chronic stress and heightened emotional intensity. People with BPD typically don't have the tools to cope with or regulate their intense feelings, and they find themselves inhabiting invalidating environments that don't seem to understand what they are going through. A key part of the model is the transactional relationship between the individual's biological predisposition and their invalidating environment that results in efforts to communicate distress through maladaptive behaviors that are intermittently reinforced by the environment over time.

CATR: What do you mean by an invalidating environment?

Dr. Pierson: Because these patients are living in a state of constant distress, they can seem overly emotional or irrational to others. Friends and loved ones might not understand what they are going through, might not be able to make sense of why they are experiencing so much distress, and with the best of intentions might tell them, "Just snap out of it. What's wrong with you?" Of course, that doesn't help. And so over time, maladaptive ways of coping tend to develop in an effort to manage distress and emotional pain. Examples of maladaptive behaviors commonly associated with BPD include eating disorders, self-harm, suicide, and substance use disorders (SUDs). These behaviors represent efforts to regulate intense emotions in order to make them tolerable. Or they can be attempts at communicating their distress to individuals or to an environment that just doesn't seem to get it. People in the person's life might start to respond with support once the behaviors escalate, and this intermittent reinforcement over time shapes the person's pattern of maladaptive behavior.

CATR: Is there a difference between the biosocial model that you are describing and the biopsychosocial model that many of us are familiar with?

Dr. Pierson: The names sound similar, but these are two different approaches developed to understand two very different clinical entities. The biosocial model is specific to our understanding of emotional dysregulation, and that's why it is particularly useful to apply to BPD. In contrast, the biopsychosocial model is a broader way of understanding how disease affects our patients in general.

CATR: So how does addiction fit into all of this?

Dr. Pierson: Staying with the biosocial model of BPD, substance use can be seen as one of these maladaptive ways of coping. Substance use is an example of an externalizing behavior that can regulate painful emotional states or serve as an escape from intense misery and emotional suffering—at least temporarily. And there are transdiagnostic features across both disorders as well. For example, impulsivity is seen in both disorders, which leads to poor judgment and reckless decision making that can be harmful. So it's not surprising that there is a very high comorbidity between BPD and SUDs. A 2018 review quantifying this relationship showed the high rates of comorbidity and found that alcohol was the most commonly used substance in patients with BPD, followed by cannabis, opioids, and cocaine (Trull TJ et al, *Borderline Personal Disord Emot Dysregul* 2018;5:15). We don't have data about rates of nicotine use.

CATR: What are some of the challenges of treating patients with comorbid BPD and SUD?

Dr. Pierson: People with comorbid BPD and SUD typically struggle a lot more with treatment engagement and retention. Early on, the focus of treatment might simply be, "How do we get this patient to come back to the next appointment?" And of course, there are high rates of suicide attempts and suicide completions in people with BPD and in people with SUD, but it's even higher

Continued on page 3

in the comorbid population (Dimeff L et al. *Dialectical Behavior Therapy in Clinical Practice: Applications Across Disorders and Settings*. 2nd ed. The Guilford Press; 2020). And the severity of symptoms is typically higher in people with comorbid BPD and SUD as well.

CATR: How should we approach treatment with these patients?

Dr. Pierson: The most well-supported and well-researched treatment for BPD is DBT. It's been shown to be highly effective for treating BPD on its own and also with comorbid SUD. Initially, DBT was developed as a treatment for suicidality and emotional dysregulation, then gained popularity as a treatment for BPD, but more recently its principles have been applied to the management of multiple maladaptive behaviors, including substance use. Some research suggests it can be helpful in addiction treatment (Lee NK et al, *Drug Alcohol Rev* 2015;34(6):663–672). There's a lot of overlap between DBT and other established addiction treatment models, such as 12-step programs and motivational interviewing (MI). In fact, an adaptation of DBT has been developed specifically for treating patients with BPD comorbid with SUD (Dimeff et al, 2020). This DBT adaptation for SUD treatment involves the same basic principles and philosophy of DBT, plus the same coping strategies. It also includes a handful of additional coping strategies tailored to targeting addiction.

CATR: What are some DBT principles that can be applied to the treatment of addiction?

Dr. Pierson: One of the key principles of DBT that can be applied to substance use is called “dialectal abstinence.” This idea synthesizes two perspectives on addiction treatment that are simultaneously at play and in tension with one another throughout recovery: On the one hand, you have an insistence on total abstinence, and on the other, you have the reality of ongoing urges to use, cravings, and inevitable relapse during the process of recovery. More specific concrete examples of DBT coping strategies that can be used in targeting addictive behaviors include the skill “urge surfing,” in which the patient observes the experience of an urge to use their preferred substance without reacting to the urge in the moment; psychoeducation about the importance of self-care practices (eg, treating physical illnesses, consistent sleep hygiene, nutrition, and exercise); and “adaptive denial,” in which the patient tells themselves they are actually craving a benign substance such as a mint or ice water when they notice urges to use, instead of acknowledging that they are craving the addictive substance.

CATR: How do you incorporate dialectical abstinence into treatment? And how do you explain it to patients?

Dr. Pierson: I find it's helpful to use a metaphor; I like using a football analogy. The ultimate goal of every play in football is to get all the way down the field for a touchdown—you can think of the touchdown as sobriety. But usually, you're going to get tackled somewhere along the way. Those are setbacks in the course of recovery: cravings, life stressors, returns to use. You're still always moving toward that touchdown, toward sobriety, but a tackle isn't the end of the world. In fact, each one presents an opportunity to re-strategize. You can work with the client to examine what went wrong. You ask, “How can we learn from that? How can we be more effective when the next play starts?”

CATR: What are some aspects you look at when you're examining one of these “tackles”?

Dr. Pierson: I find it helpful to start by looking for “prompting events,” which are the circumstances or situations that initially led to the perfect storm culminating in a return to use. For patients with comorbid BPD and SUD, prompting events often lead to getting trapped in feelings of guilt or shame, patterns of self-blame or self-loathing. These thoughts of self-blame not only might predispose the person to return to use, but also might lead to the person internalizing their return to use as a failure. This is a perfect breeding ground for them to use again. And of course, that creates a vicious cycle.

CATR: Earlier you mentioned that engagement can be a challenging barrier, especially as treatment is getting started. What are some strategies that you employ for patients who are struggling with engagement?

Dr. Pierson: We have to keep in mind that many people with BPD are managing significant daily life stressors and struggling to function. Contingency management (CM) and behavioral shaping are helpful tools. For example, you can have shorter or longer sessions as you're trying to get the person established in treatment, and making frequent attempts to contact the patient in between sessions to encourage engagement or remind them of upcoming appointments can go a long way. I also use techniques rooted in traditional approaches to SUD treatment. For example, I mentioned MI, which is key in that pretreatment/early treatment stage when engagement is being established. MI is so useful to enhance motivation in a patient who might be ambivalent about treatment (*Editor's note: For more about MI, see our Q&A with Dr. Marienfeld in the Carlat Addiction Treatment Report March/April 2021*).

CATR: Can you describe how you use MI for engaging patients in DBT?

Dr. Pierson: Well, treatment has to be for a reason that is meaningful to the client. We are asking patients to trust us, trust the process, and give up the quick, reliable relief that substances provide. There has to be a reason for the

“I find it helpful to be direct, even irreverent, when acknowledging the effect of therapy versus the effect of substance use. I will say, ‘The skills that therapy has to offer are helpful and are better for you over the long run, but they are not going to be the quick fix or give the immediate sense of relief that you get from drugs or alcohol.’”

Ashley Pierson, PhD

Expert Interview

Continued from page 3

patient to put in all this work. I think it's easy to slip into a mindset as a provider where we think about treatment for the sake of treatment, but it all has to connect to something that the person cares about. You need to ask your patients: How is addiction disrupting your quality of life? How is it impeding progress toward important goals? What would you like to accomplish that drugs are getting in the way of? And once these questions are answered, keep treatment about that. In DBT, we call these "Life Worth Living Goals." We usually think of this concept when working with patients who have suicidal ideation, but the concept is equally valid when discussing substance use. Together with the patient, we imagine what life would be like if they could be free of drugs. How might they experience life differently if they could find something fulfilling and meaningful that could replace substance use?

CATR: Does the engagement process differ for patients with comorbid SUD?

Dr. Pierson: Yes and no. MI and defining Life Worth Living Goals are always going to be useful, whether the patient has an SUD or not. One difference, though—and this is something that applies both early on and later in treatment—is the importance of acknowledging that substance use has served a critical function for this person. In some ways, substance use has been adaptive for the patient; it's been a way to survive intense emotional pain and misery in the short term. I've worked with people who describe substances as the only things that have consistently, reliably been there for them in times of need.

CATR: I see why engagement can be such a challenge. Asking someone to give up something like that must make therapy a hard sell.

Dr. Pierson: Keep in mind, though, that patients have a fraught relationship with substance use. That's why they're in treatment, after all. But a part of treatment is going to involve mourning the loss of the relationship with substances. And I find it helpful to be rather direct, even irreverent, when acknowledging the effect of therapy versus the effect of substance use. I will say, "The skills that therapy has to offer are helpful and are better for you over the long run, but they are not going to be the quick fix or give the immediate sense of relief that you get from drugs or alcohol." It's important to empathize as a provider that this is a difficult and painful reality for clients to accept.

CATR: You mentioned CM earlier as a technique for treatment. Can you give some examples of useful contingencies?

Dr. Pierson: CM is really about identifying ways to reinforce desired behaviors and eliminate problematic or undesired behaviors. Sometimes you have to be a little creative. Session length and frequency are two examples of contingencies. You can change session length or frequency in order to reward or discourage certain behaviors, and that includes substance use. But the most meaningful contingencies are individualized. For example, I'm working with an adolescent who loves TikTok. I give her DBT assignments, and she gives me a TikTok video to watch. If she goes a certain amount of time without using substances, I learn that TikTok dance so we can perform it together in our next session. Contingencies can also involve taking something away. Phone coaching between weekly sessions is often a part of DBT, so one contingency might be that a patient cannot call you for phone coaching for 24 hours after using a substance. Using behavioral chain analysis in a therapy session to analyze the function of relapse can also be viewed as an aversive contingency for relapse.

CATR: What advice do you have for non-DBT specialists working with patients who have comorbid BPD and SUD?

Dr. Pierson: We've already discussed the utility of MI and CM, as well as the concepts of dialectical abstinence and defining Life Worth Living Goals. An important concept that we've referred to implicitly throughout this conversation, but not named, is "phenomenological empathy." This involves viewing the situation from the patient's perspective. Given this person's life, their history, their experiences, how does it make total and complete sense that they have developed an addiction? That they are resisting treatment now? That they are not following through with the treatment plan? It can be easy to lose sight of this way of thinking, especially if the treatment is not going well. This practice can be useful clinically, but staying grounded and centered in this kind of empathic stance can help with therapist burnout as well.

CATR: Thank you for your time, Dr. Pierson.



Supervised Drug Consumption Sites

Continued from page 1

equipment. Drugs are typically consumed in cubicles, which provide privacy while allowing staff to monitor for signs of overdose. Should an overdose occur, trained staff members with naloxone at the ready can quickly treat the patient and, if necessary, arrange for transport to the emergency room. An SCS usually includes other services as well, like food and clothing, mental health counseling,

peer specialists, basic medical care, and referral to addiction treatment.

The approach fits within the tradition of harm reduction, a framework that prioritizes the survival and health of patients over complete abstinence (see the *Carlat Addiction Treatment Report* Jan/Feb 2020 for a primer on harm reduction). Various harm reduction services are already available in the

US—needle exchanges and naloxone distribution are notable examples—but until recently, no SCS could open due to a federal law known as "the crack house statute." The legal landscape changed in 2019 when a federal judge ruled that the statute does not apply to these sites, laying the groundwork for the New York City SCS.

Continued on page 5

Supervised Drug Consumption Sites

Continued from page 4

What is the evidence for these sites?

Research (much of which comes from data collected at sanctioned sites in Vancouver, Canada and Sydney, Australia) has consistently shown that an SCS can reduce overdose-related harms, promote safer drug use, and connect clients to addiction treatment and other health services in a cost-effective manner. Furthermore, these sites have not been shown to increase crime or facilitate entry into drug use, and clients as well as surrounding communities view them positively. Here are some key research findings (Kennedy MC et al, *Curr HIV/AIDS Rep* 2017;14(5):161–183; Levenson TW et al, *Am J Prev Med* 2021;61(5):738–749):

Overdose-related morbidity and mortality

- Over a 2.5-year period after it opened, one SCS reported a 26% reduction in overdose deaths in the surrounding area when compared with the rest of the city.
- The opening of another SCS was associated with reductions in overdose-related ambulance activations, both city-wide (45%) and in the surrounding neighborhood (80%).

Drug-related risk behaviors

- Higher frequency of SCS use was associated with reductions in all of the following: needle sharing, needle reuse, outdoor injections, rushed injections, and improper syringe disposal.
- SCS openings did not impact population rates of relapse or initiation into injection drug use.

Access to other health and addiction services

- SCS attendance was associated with increases in all of the following: enrollment in addiction treatment, access to addiction services, and cessation of injection drug use.
- Those referred to medical services by an SCS were more likely to access medical treatment.
- Clients hospitalized with skin infections had shorter lengths of stay if referred by an SCS compared to those who self-presented.

Public drug use and crime

- Neighborhoods surrounding an SCS saw significant declines in both public injections and improper syringe disposal.
- No studies found an association between the presence of an SCS and increases in crime or arrests.

Cost-effectiveness

- Estimates place SCS costs on par with methadone and buprenorphine treatment (Caulkins JP et al, *Addiction* 2019;114(12):2109–2115).
- Simulation studies show a favorable cost-benefit analysis when taking into account the high value of preventing fatal overdoses and HIV or hepatitis infections.

Client satisfaction

- Clients reported that an SCS offers a safe and positive social environment by reducing drug-related harms and facilitating access to treatment (McNeil R and Small W, *Soc Sci Med* 2014;106:151–158).

How to discuss these sites with your patients

While there may not yet be an SCS in your area, one could soon be on the way; proposals for new sites are in the works across the country. The patients most likely to benefit from a referral are those using drugs who are not yet ready to engage in treatment. When introducing the concept of an SCS, frame the discussion in terms of harm reduction, and be sure patients understand that an SCS does not substitute for evidence-based treatment with medication. Here is an example of what you might say: “The safest option for you is to start treatment with a medication like buprenorphine or methadone. But even if you do continue to use drugs, there are ways of using that are safer than others. Taking drugs at an SCS ensures that you have access to sterile supplies, and staff are available if you need immediate medical attention. The staff there can also refer you to addiction treatment when you’re ready.”

It is also worth discussing these sites with your patients who are already engaged in treatment. For one, they

might be able to pass the information on to someone they know who is actively using. But also, should they return to use themselves, doing so at an SCS could be life-saving. You might say: “Using drugs after a period of abstinence can be particularly dangerous since you’ll have less tolerance and you’ll be at higher risk for overdose. If you were to ever use drugs again, it would be safest if that happened at an SCS.”

Whether or not an SCS is available in your area, you can use the discussion of these sites as an opportunity to reinforce key principles of harm reduction and emphasize that these principles can be just as life-saving outside the confines of an SCS. Consider saying something like: “We don’t have an SCS in our area yet, but you can use the same principles to keep you safer when using drugs. For example, using clean needles lowers your risk of getting hepatitis and HIV [refer your patient to a needle exchange program if one is available]. Using when other people are around, even just with someone on the phone, and having naloxone on hand lowers your risk of dying by overdose. Do you have naloxone? If not, I can prescribe it to you now.”

Stay up to date about SCS developments in your area by contacting your state public health department and local harm reduction organizations, such as needle exchange programs. The scientific literature on these sites is growing, and you can learn about the latest evidence via the National Harm Reduction Coalition (www.harmreduction.org). And finally, if any of your patients have used a SCS themselves, use the opportunity to learn from their first-hand experience.

CARLAT VERDICT: An SCS provides a safe and hygienic setting for the consumption of drugs, and sanctioned sites are just starting to open in the US. If a site is available near you, consider referring your patients who are actively using drugs and declining your recommendation for buprenorphine or methadone. But even if your area does not have an SCS, discussing these sites with your patients can reinforce life-saving harm reduction principles.

Research Updates

SMOKING

E-Cigarettes and Relapse to Cigarette Smoking

Noah Capurso, MD. Dr. Capurso, author for this educational activity, has no relevant financial relationship(s) with ineligible companies to disclose.

REVIEW OF: Pierce JP et al, *JAMA Network Open* 2021;4(10):e2128810
STUDY TYPE: Cohort study

Mounting evidence suggests that e-cigarettes are effective for smoking cessation—nearly twice as effective as nicotine replacement therapy (see *CATR* May/ Jun 2020 for a review of a prominent randomized controlled trial). While health authorities in some countries, such as the UK, now recommend e-cigarettes for smoking cessation, US entities like the FDA and the CDC have been far more cautious, arguing that the evidence is still preliminary and that the potential harms of e-cigarettes are not fully understood.

Recently, a large survey of US cigarette smokers added a note of caution to advocacy of e-cigarettes. While most clinical trials have focused on e-cigarettes as smoking cessation aids, in this survey researchers asked a different question: Are e-cigarettes a viable strategy to prevent return to cigarette smoking once someone has quit?

Researchers used data from the US Population Assessment of Tobacco and Health study, a large longitudinal survey of a nationally representative group of cigarette smokers. Participants were surveyed about their cigarette smoking habits at three time points—baseline, follow-up at one year, and follow-up at two years. Researchers examined the participants who had quit cigarette smoking by the time of the first follow-up and determined which strategy they had used to do so: remaining tobacco free, using an e-cigarette, or switching to some other tobacco product. For the purposes of this survey, participants who used e-cigarettes were not counted as tobacco free, a choice made to adhere to USDA definitions (Munajo M, *Nicotine Tob Res* 2019;21(3):267).

Of the 13,604 participants who filled out all three surveys, 9.4% (n = 1228) had quit cigarette smoking between the baseline survey and the first follow-up a year later. Of these recent former cigarette smokers, 62.9% had used a completely tobacco-free strategy, 22.8% had switched to e-cigarettes, 10.5% had switched to cigars, and 9.7% had switched to some other form of tobacco. A handful of patients used multiple forms of tobacco, which is why the percentages add up to more than 100%.

As expected, many of the participants who had quit cigarette smoking at the first follow-up had returned to cigarettes by the second follow-up a year later. However, researchers did find a difference between quit strategies; namely, tobacco-free participants fared better than those who had switched to e-cigarettes or another form of tobacco. The comparative quit rates at the two-year mark were 50.5% for the tobacco-free group, 41.6% for participants who used e-cigarettes, and 40.7% for those who used combustible tobacco products such as cigars, cigarillos, pipes, or hookahs. Overall, the rate of returning to cigarette smoking was 8.5% higher among those who had switched to e-cigarettes or another tobacco product compared to those who stayed tobacco free.

CARLAT TAKE

Take these results with a pinch of salt. Unlike the trials demonstrating the efficacy of e-cigarettes for smoking cessation, this was not a randomized clinical trial and there was no way to verify participant self-reports. Nonetheless, the results suggest that tobacco-free strategies may be more effective in the long term over e-cigarettes. We await a clinical trial testing this hypothesis before drawing definitive conclusions.

ALCOHOL

Should Prolonged Abstinence From Alcohol Be Required Before Liver Transplant?

Sonya Bakshi, MD, and Deepti Anbarasan, MD. Dr. Bakshi and Dr. Anbarasan, authors for this educational activity, have no relevant financial relationship(s) with ineligible companies to disclose.

REVIEW OF: Herrick-Reynolds KM et al, *JAMA Surg* 2021;156(11):1026–1034
STUDY TYPE: Retrospective cohort study

Traditionally, patients with alcohol-related liver disease are told that they have to be sober for at least six months before they can have a liver transplant (LT). The theory is that if patients don't undergo a period of abstinence, they are more likely to relapse after the surgery and damage their recently transplanted liver. The authors of this study wanted to find out if the six-month waiting period is warranted by comparing outcomes between two groups of patients: those who received an LT before six months of sobriety versus those who received one after that period.

Authors retrospectively looked at patients with alcohol-related liver disease who had received LT between October 2012 and November 2020 and divided them into an early LT group (fewer than 180 days of abstinence at the time of transplant) and a standard LT group (greater than 180 days). Outcomes measured included patient survival, early relapse (drinking within 90 days of LT), relapse-free survival, and hazardous relapse-free survival. Hazardous relapse was defined as binge drinking (at least five drinks for men or at least four drinks for women), at-risk drinking (more than 14 drinks per week for men or more than seven drinks per week for women), or frequent drinking (at least four occasions per week).

Of 163 patients total, 88 received early LT and 75 received standard LT. 66% of the patients were male, 34% were female, and 87% were White; gender and race demographics did not differ significantly between the two groups. The two significant demographic differences were that patients who underwent early LT were younger compared to patients in the standard LT group (mean age 49.7 years vs 54.6 years) and had more severe illness (MELD score 35 vs 20). At the time of transplant, the mean number of days abstinence was 66.5 days in the early LT group and 481 days in the standard LT group.

One-year and three-year survival rates were similar for both groups (94.1% for

Continued on page 7

CE/CME Post-Test

To earn CME or CE credit, log on to www.TheCarlatReport.com to take the post-test. You will be given two attempts to pass the test. You must answer 75% of the questions correctly to earn credit. Tests must be completed within a year from each issue's publication date. The Carlat CME Institute is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. Carlat CME Institute maintains responsibility for this program and its content. Carlat CME Institute designates this enduring material educational activity for a maximum of one (1) *AMA PRA Category 1 Credit*[™]. Physicians or psychologists should claim credit commensurate only with the extent of their participation in the activity. This page is intended as a study guide. Please complete the test online at www.carlataddictiontreatment.com. Learning Objectives are listed on page 1.

These questions are intended as a study guide. Please complete the test online at www.carlataddictiontreatment.com. Learning objectives are listed on page 1.

- According to multiple studies of patients with substance use disorders, what has been found related to patients who make use of a supervised consumption site (SCS) (LO #1)?
 - a. An SCS increases rates of initiation into injection drug use
 - b. An SCS increases improper syringe disposal in the surrounding neighborhoods
 - c. SCS attendance is associated with increased enrollment in addiction treatment, access to addiction services, and cessation of injection drug use
 - d. An SCS increases the number of ambulance activations and 911 calls
- Which of the following is the most commonly used substance in patients with borderline personality disorder (LO #2)?
 - a. Opioids
 - b. Alcohol
 - c. Cannabis
 - d. Cocaine
- In a recent study of cigarette smoking cessation, among the participants who had quit cigarette smoking at one-year follow-up, which strategy was most effective at preventing smoking relapse at two-year follow-up (LO #3)?
 - a. Switching to e-cigarettes
 - b. Switching to cigars
 - c. Staying tobacco free
 - d. Switching to hookahs
- Simulation studies analyzing SCS cost-effectiveness show a favorable cost-benefit analysis when taking into account the high value of preventing fatal overdoses and HIV or hepatitis infections (LO #1).
 - a. True
 - b. False
- According to Dr. Pierson, what is an example of a beneficial strategy for providers when working with patients who struggle with engagement (LO #2)?
 - a. Reducing the number of attempts to contact patients in between sessions
 - b. Holding longer sessions to help patients get established in treatment
 - c. Allowing patients to call their provider immediately after using a substance
 - d. Being direct about how therapy will be beneficial over the long run, but will not provide the quick fix or the immediate relief that substances provide

Research Updates

Continued from page 6

early LT vs 95.9% for standard LT at one year; 83% for early LT vs 78.6% for standard LT at three years). Relapse-free survival and hazardous relapse-free survival rates were also comparable at one year and three years. Early LT had no association with relapse or hazardous relapse.

The researchers did find an association between younger age and return to drinking. Patients younger than 60 years were more likely to have a relapse (adjusted hazard ratio [aHR] = 8.31, $p = 0.008$) or a hazardous relapse (aHR = 9.02, $p = 0.009$) compared to older patients. Unsurprisingly, researchers also found that patients who had an early relapse had lower overall survival (aHR = 5.46, $p = 0.02$).

CARLAT TAKE

In this study, LT outcomes were similar for patients with alcohol-related liver disease whether or not they were abstinent for six months prior to surgery, suggesting that

this traditional waiting period is arbitrary. If your patients are being made to wait for six months before receiving a transplant, consider discussing the matter with their surgeon to advocate for earlier surgery.

Does Pioglitazone Lead to Reduced Alcohol Use?

Nicholas Apping, MD, and Deepti Anbarasan, MD. Dr. Apping and Dr. Anbarasan, authors for this educational activity, have no relevant financial relationship(s) with ineligible companies to disclose.

REVIEW OF: Dieperink E et al, *Am J Addict* 2021;30(6):570–577

STUDY TYPE: Retrospective cohort study

Some preclinical data suggest that pioglitazone (Actos), a medication commonly prescribed for type 2 diabetes, might be helpful for the treatment of addictive disorders, including alcohol use disorder (AUD). The

purported mechanism is peroxisome proliferator-activated receptor-gamma agonism, which sensitizes the body to the effects of insulin but also might decrease substance cravings. A recent study sought more information about this medication by using a retrospective chart review to see if pioglitazone was associated with decreased drinking.

The authors used the Veterans Administration (VA) electronic medical record to identify 49 men with type 2 diabetes who had an Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) score ≥ 3 prior to starting pioglitazone. The AUDIT-C is a three-question scale designed to identify unhealthy alcohol use, defined as a score ≥ 4 for men or ≥ 3 for women (Bradley KA et al, *Alcohol Clin Exp Res* 2007;31(7):1208–1217). The VA health care system mandates annual AUDIT-C scores on all patients, making it a convenient metric for researchers to follow over time.

Continued on page 8

THE CARLAT REPORT ADDICTION TREATMENT

P.O. Box 626
Newburyport, MA 01950

Next Issue:
**Personality Disorders
and Addiction**
July/August 2022

Next Issue:
Cannabis
September/October 2022

Your subscription expires:

Renew or extend online at
www.thecarlatreport.com
or by check using the order form below.

Research Updates

Continued from page 7

The participants were predominantly White (81.6%) and had a mean age of 67 years. Three of the subjects met criteria for AUD. Pioglitazone doses were 30–45 mg, typical for type 2 diabetes treatment, and the medication was prescribed for an average of 78.5 months. The primary outcome was change in AUDIT-C score after starting pioglitazone.

The mean AUDIT-C score prior to starting pioglitazone was 3.98 (95% confidence interval [CI]: 3.51–4.44), which decreased to 2.89 (95% CI: 2.46–3.32) while on the medication. Though relatively modest, this absolute change of 1.09 was statistically significant ($p < 0.001$). Sub-analysis showed that the greatest reduction in alcohol intake occurred during the first 12–18 months of starting pioglitazone ($p = 0.013$), with relatively stable alcohol use thereafter. Limitations of the study include its retrospective nature, lack of a control group, and lack of diversity within the cohort.

CARLAT TAKE

This limited study found a small though statistically significant decrease in AUDIT-C scores in patients taking pioglitazone. While the findings are intriguing, the clinical significance of this finding remains to be seen. Therefore, large-scale randomized controlled trials are needed before pioglitazone can be recommended as an AUD treatment.



To learn more and earn additional CMEs, subscribe to our weekly podcast. Search for “Carlat” on your favorite podcast store.

Yes! I would like to subscribe to *The Carlat Addiction Treatment Report* for \$129 for one year. I may cancel my subscription at any time for a full refund if not completely satisfied.

Enclosed is my check made payable to *Carlat Publishing LLC*

Please charge my

Visa MasterCard Amex Discover

Card #

Exp. Date

CVV Code Signature

Name

Address

City State Zip

Phone / Email (required)

Please mail payment to:

The Carlat Addiction Treatment Report

P.O. Box 626, Newburyport, MA 01950

Call toll-free 866-348-9279 or www.thecarlatreport.com