Recognizing & Treating Opioid Use Disorder (OUD) As A Chronic Brain Disease: The Latest Research, Treatment Frameworks & Care Pathways

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Dr. Buttlaire 2:13

I'm Doctor Stuart Butler, Vice President of Clinical Excellence and Leadership at Open Minds. Thank you for joining us for today's RECADEMY webinar, Why Opioid Use Disorder is best understood and treated.

as a chronic brain disease. Today's webinar is part of Academy's 12-part educational webinar series for 2026, focused on advancing evidence-based opioid use disorder treatment and translating research into real-world clinical, operational, and system

Level practice. Like our prior sessions, today's conversation is structured as a fireside chat. Our goal is to examine how understanding opioid use disorder as a chronic brain disease influences clinical care, inpatient and outpatient workflows.

Long-term engagement and overall system design. If you have any questions during this discussion, please submit them via the Q&A option in Teams platform. So discussing this, why does this topic matter?

Well, despite decades of neuroscience research, opioid use disorder is still often misunderstood clinically, culturally, and operationally. The science is clear. Repeated opioid exposure produces durable neurobiological changes in the brain circuits.

Governing reward, stress response, motivation, executive function and impulse control. These changes do not get resolved after detoxification. They persist. They shape the vulnerability to relapse.

They alter decision making under stress, and they help explain why short term stabilization without sustained treatment frequently fails. Yet the way many systems respond to opioid use disorder reflects older assumptions.

That addiction is primarily behavioral, motivational, or a moral failing. The cultural framing influences everything. How relapse is interpreted, how long treatment families are educated.

How clinicians speak to patients and how reimbursement is structured. If opioid use disorder is truly a chronic brain disease, then stigma and system design cannot be addressed separately. Cultural reframing must influence operational structure.

We readily accept that diabetes, hypertension and asthma require ongoing management and occasional exacerbations. Yet opioid use disorder, despite comparable neurobiological evidence, is still often treated as a temporary crisis.

The question is not whether OUD is chronic. The question is whether our culture, our clinical practices and our system design fully reflect the reality. That is the focus of today's discussion.

I'm pleased to introduce our featured expert today, Doctor Luai Bilal. Dr. Bilal is a board certified psychiatrist and Director of Inpatient Psychiatry at Kaiser Permanente Fremont Medical Center, where he also serves as the Medical Director of.

Patient Medical psychiatric unit. Born in Sudan and raised across multiple countries, Dr. Bilal brings a global and culturally informed perspective to his work, which has shaped his sensitivity to individual identity.

Family context and the social dimensions of illness. He speaks English and Hungarian and works closely with Arabic interpreter services to support diverse patient populations. Dr. Bilal earned his master's degree from the University of Saged.

In Hungary and later completed a Master of Science Pharmacology at Thomas Jefferson University. He joined Kaiser Permanente in 2010 and has since had multiple leadership roles, including Chief of Clinical Staff.

And Clinical Director of the Kaiser Permanente Behavioral Health Center in Santa Clara. From 2004 to 2010, he served as the Clinical Assistant Professor of Psychiatry at UCSF, where he contributed to curriculum development and education of residents, fellows, medical students.

Pharmacy residents and nurse practitioners. Throughout his career, Doctor Bilal has developed expertise in diagnostic interviewing, psychopharmacology, acute inpatient psychiatry and leading multidisciplinary teams in high acuity settings.

His philosophy emphasizes building warm, therapeutic respect.

Actively engaging and providing clear information and consistently reinforcing hope, he believes recovery is often achievable and that the journey itself uncovers resilience, hidden strengths and personal growth. Dr. Bilal.

Thank you for joining us today and let's get right into the discussion. So we're trying to understand OUD as a brain disease. So you know, from your clinical perspective, what does it truly mean to describe opioid use disorder as a chronic brain disease?

Dr. Bilal 8:17
OK.

Thank you so much, Doctor Buttlaire. Pleasure to be with you. The evidence that addiction is a brain disease, what we call the the brain disease model of addiction, originates primarily from advances in neuroscience and

neuroimaging technology from the 19.

80s onward, particularly championed by the National Institute on Drug Abuse. So this was a great investment, and this model posits that chronic use induces structural and functional changes in brain circuits.

That over time override an individual's ability to exert self-control. As you mentioned in the introduction, those circuits subserved reward, stress reactivity and self-control and monitoring. So they're all altered with repeated opiate.

Use with the research that we have from the National Institute of Drug Abuse, we can actually see that at the level of the brain with various imaging technology. So it explains the compulsive use.

But the pharmacologic properties of the drug itself leads to tolerance and dependence, ultimately to withdrawal symptoms, which are felt very keenly with this increased stress reactivity, and it feeds this vicious cycle with the compulsion to.

To repeat through a negative reinforcement, the patient is ultimately stuck in this unavoidable intoxication withdrawal cycles. Neuro adaptation is a term describing the changes in the structure and the function of those involved brain circuits.

Such that a new homeostatic set point, if you will, for both reward and adverse effect are established. Set differently, an aberrant biological system.

That relies on constant opiate use is created and this is what is meant when we say the reward system has been hijacked.

Dr. Buttlaire 10:46
There's a new normal that sets in with this new set. I understand that you know what neurobiological changes are most important for clinicians and system leaders to understand this chronic brain disease.

Dr. Bilal 11:02
The the two ones are really hypersensitivity of the reward system. So this means that despite having the patient using the drug and actually experiencing negative consequences.

The reward system is so powerful that the patient is compelled to you. So this explains sort of why it's sort of very compelling and and why the use is so compulsive. The other neuro adaptation that is extremely important to understand.

Is the phenomenon of withdrawal and relapse. So those two phenomenon are a part and parcel of the condition itself, and invariably you should expect that with use.

Comes with drawer and that these are two sort of phases of the of the coin that we have to keep in mind.

Dr. Buttlaire 12:07

Thank you for the explanation. And now in an inpatient settings we often focus on detox detoxification. How does the brain disease model shift attention from short term withdrawal management to longer term stabilization? So many.

Clinicians and inpatient units really do focus on detoxification to as the be all and end all.

Dr. Bilal 12:33

Absolutely. So I think the brain disease model reminds us that while withdrawal symptoms can be short-lived with or without treatment, relapse is inevitable.

Why? Because the brain homeostatic set points have shifted, as we explained, and we see phenomena ranging from powerful craving to negative emotions such as anxiety, insomnia or irritability, whose only adequate remedy is resumption of opiate use.

When we think about it that way, treating the patient for the short term for an intoxication is a disservice for the patient because we have to remember that they're immediately at risk of relapse.

Dr. Buttlaire 13:22

And that takes me to the next question that I'm very interested in is relapse remains such a common, so common in an opioid use disorder. How should clinicians interpret relapse within a chronic brain disease framework?

Dr. Bilal 13:40

I think it the relapse should be expected as part and parcel of the disease. It's related to the pharmacologic properties of the opiate drug, but is also a consequence of neuro adaptation we mentioned earlier.

So if you will think of a voracious biological system that hijacked the rule system and is understood as self-sustaining, every attempt to curtail use will channel all motivation.

Unleash all unpleasant feelings and focus all the ingenuity of the central nervous system on the goal of reinstating drug use.

So it's important to know that that's the state of affairs we're dealing with.

Dr. Buttlaire 14:28

Mm-hmm. So what operational consequences follow from viewing relapse as a clinical signal rather than a failure?

Dr. Bilal 14:38

Well, two things come to mind. Give it the time. So really ensuring that we don't, we go beyond managing withdrawal and understand that it takes the time to.

Ensure that we have addressed the next side of the problem, which is the relapse. So more importantly is to offer evidence-based treatments that are known to prevent relapse or reduce its risk, such as anti-craving agents or opiate maintenance medications.

So the two things that immediately come to mind is to slow down, to understand what we can offer to address the two problems, the intoxication withdrawal and relapse prevention, and to make sure that we're thinking proactively about offering things.

To prevent relapse.

Dr. Buttlaire 15:36

As I'm understanding, you know where you're what you're talking about now, I, you know, I'm feeling or thinking that it's almost inevitable that people relapse without ongoing treatment.

Dr. Bilal 15:53

Absolutely. So I think what one corollary to that is that we know for patients who've been in the hospital and immediately released or have been incarcerated both for short term.

Dr. Buttlaire 15:55

Mm.

Dr. Bilal 16:09

The risk of overdosing tends to be higher and that if we were to treat that with opiate maintenance medication, the risk of reducing that goes down by 70%. So.

We have a lot of information that would tell us that relapse should be expected as the consequence of this condition, that it's really is an inevitability.

You know, how should organizations think about treatment duration, particularly medication? If OUD is chronic, what what should they be thinking about in terms of ongoing medication?

Dr. Bilal 17:27

Well, the the first thing is thinking long term. That's really essential is that you're thinking of a long term treatment. The other is that from what we've been talking about so far.

We know that the brain takes time to heal and reset its homeostatic set points. This may actually take months to sometimes years, so tapering or discontinuation of of of medications should be done slowly and in a controlled.

Manner. So the emphasis here is taking the time and on reinstating medications in a controlled manner and the in the evidence-based treatment for opiate use disorder.

That tends to be opiate maintenance treatment.

Dr. Buttlaire 18:22

So along with that, what does this mean about your conversations with patients about tapering and discontinuation and staying on the medication? A lot of patients just think that themselves think it's short-term. How do you discuss this with them?

Dr. Bilal 18:44

I think what what you need to do is share all the information about the disease with the patient and one of the big takeaways is explaining.

The time it takes for the brain to heal and the inevitability of relapse and the cost of relapse. So many patients dislike the fact that they're still being prescribed medication such as opiates, for example.

But what we've done in the medical sphere and in the scientific sphere is that we figured out we can trick the brain or we can offer the brain something that can feel or look like an opiate, but it's safer.

And can be prescribed in a controlled manner that can reduce recidivism, can reduce criminal activity that is related to drug use, can reduce the medical and psychiatric complications. So we can honestly acknowledge that.

The duration of treatment can be prolonged, but we need to emphasize the benefits. The stakes are very high with relapse. Once we have established relapse, it leads to going back to excessive.

Drug use and all the associated dangers. So with the patient, we just have to be upfront about what we understand, how the brain has changed and being very mindful of the time it takes and really engaging them as partners in this journey.

And reassuring them that while the medications are there, they would be stopped. But this tapering them off has to be gradual and really just going back to attenuated the benefits of staying on the medicine and the.
Risks of relapse.

Dr. Buttlaire 20:58
I really like what you're saying about healing the brain, and I think that's so important that that people don't think of it as just a short-term benefit, but actually it's an ongoing need for care and along with that.

You know, though you're describing the benefits of treatment and ongoing treatment to the patient and healing the brain, you still, I still experienced and I know a lot of clinicians over the years that people are really resistant.

To ongoing treatment, how do you deal with that resistance?

Dr. Bilal 21:37
So one of it is really understanding what we're dealing with in the sense that we have so far discussed that we're dealing with abnormal biological change where the brain has very powerful impulses.

And seeks to reinstate the dependent state. So with that in mind, one aspect of or attitudinal change is really having the humility to understand that you have to be present all the time.

Despite relapse or despite avoidance or despite refusal of the treatment that you're still going to be there because you will need to repeat this. The the science of addiction is so clear and so.

Consistent and it's evidence that we would expect relapse to happen and we would expect the patient to return. So we're always adopting this nonjudgmental attitude about whatever the patient choice makes, but going back to

attenuating.

The science and and what we know about relapse and what we know about treatment. So I would say keep the door open always, but keep using all these opportunities to reinforce the dangers of relapse and the benefits of maintenance treatment.

Dr. Buttlaire 23:09

Thank you for the explanation. And you know you're an expert in inpatient medical psychiatric units. You know you've developed a really a an outstanding unit at at Kaiser Fremont and so.

How does understanding OUD as a brain disease influence how inpatient teams approach stabilization, discharge planning and continuity of care? There's so much of A push nowadays to get patients out of the hospital as quickly as possible.

There's a lot of pressure on inpatient units, I know, to move patients along quickly. So how how do you, how are you, you know, influence your teams in approaching stabilization, discharge planning and and continuity of care, which is so important?

Dr. Bilal 24:01

Absolutely. So what what we've done is acknowledge the diagnosis in the treatment plan and list it. And so this is a big step because oftentimes we have a lot of patients who have what we call dual.

Diagnosis. They have both a psychiatric condition like schizophrenia or severe depression that leads them to the inpatient unit and they may have opiate use disorder, but it's not emphasized in the treatment plan always. So we made sure that it's always emphasized.

And it's always listed as a diagnosis and has very clear treatment goals. And one of the big goals of treatment is not just to stabilize the withdrawal status, but to in state right away evidence based treatment for.

Opiate use disorder and this often means anti craving agents or opiate maintenance. It also triggers A consultation with addiction medicine, so we love to collaborate with those who know the disease best for the benefit of the patient.

And we have made this a requirement. There has to be a really very strong reason as to why we would not consult an addiction specialist to be on board to help us talk with the patient, to help us with motivational interviewing.

Related to that, as we stabilize the patient and as I mentioned earlier about the recommendation to take the time, we insist on ensuring.

That the patient very strongly considered stepping down to supervised settings and the immediate period right after withdrawal is extremely dangerous. I have mentioned that we know.

Patients who leave hospitals are at very high risk of overdosing those who leave jails as well, so any incarcerated setting. So we make sure that we lobby very hard with the patient to consider being in a supervised residential

program post this.

Discharge in our electronic medical record. We enhance our documentation by prompting our clinicians to address all the issues we mentioned, such as listing the diagnosis.

Prescribing evidence-based treatments and either making an appointment with addiction medicine or stepping the patient down to a dual diagnosis residential program with that.

We have seen amazing outcomes in the sense of not only saving lives, but also in seeing very low rate of recidivism for these patients. So by insisting on.

Obeying the science and implementing evidence-based treatment in the inpatient settings, we're able to help these patients and see very good outcomes.

Dr. Buttlaire 27:20

Does Kaiser have relationships, they're either their own or community relationships with those type of residential programs that that treat ongoing treatment for addiction as as well as providing services for them?

Dr. Bilal 27:20

OK.

Yes, we we have a close working relationship with many programs that we contract with that we're familiar with their program, their dual diagnosis structure and we sent part of our extended team within Kaiser.

We have an integrated urgent services system with clinicians who follow the case in the hospital and in the community and make sure that the patient is connected to appropriate post care.

Destinations such as clinic appointments or residential. So that system, that integrated urgent service system is also utilized to follow the patient and ensure that they're connecting with the programs we send them to and also with.

Any further appointments after they finish their care?

Dr. Buttlaire 28:37

I I'm also hearing from your description of your system how important ongoing engagement is, not just discharging people and assuming that they're going to be following up and and hoping that that happens, but in fact continuing to engage the patient in an ongoing way in a case management.

System or in a system where there's clear follow up.

Dr. Bilal 29:02

Yes. So and and the the follow-up is from the hospital through the residential program and while that's happening, the outpatient clinic, the patient's psychiatrist or primary care physician is aware of the plan.

And are informed and updated by our Integrated Urgent Services clinical clinician. And so we do that because we understand the inevitability of relapse.

And we want to give the patient every chance to succeed and having that level of support, that level of engagement, that level of oversight over important evidence based treatment.

Is definitely inbuilt in our system.

Dr. Buttlaire 29:55

You know, there's so much overlap when patients have OUD with other problems, other conditions, whether it's psychiatric or medical. So many of the patients that we have seen over the years have.

What people are calling Co occurring disorders. Can you talk some about the Co occurring disorders and in what ways does the chronic brain disease model reinforce the need for integrated medical and behavioral health care in addition?

To OUD treatment.

Dr. Bilal 30:34

Absolutely. So I I think it's really better understood as a multi-system illness and so it requires the integration of medical, psychiatric and substance use treatment for the benefit of the patient opiate use disorder.

Is associated with significant psychiatric comorbidities. These can include depression, anxiety, post-traumatic stress, suicide and many others. So this further aggravates the condition itself of the opiate use disorder and and ****** recovery.

Is not addressed, so it does not help the patient to have fragmented care. It's important that wherever they get their psychiatric care, wherever they get their substance abuse care, all communicate similarly.

In a in a state where the patient is engaged in in harmful behaviour such as repeated drug use or or really use of unsterile needles or.

All these criminal behaviours that may lead to injury, for example, lead to a lot of medical issues. So infections are very commonly associated, such as hepatitis C virus, hepatitis B virus, HIV.

Endocarditis, which is inflammation of the heart valves, many types of injuries and overdoses. So these are very common consequences. So you can see that it really is quite rational to speak of a multi-system illness and.

Quite beneficial to have the integration of all such providers who deal with these many complications, so truly a huge benefit for the patient to have.

Dr. Buttlaire 32:31

Hmm.

Dr. Bilal 32:39
A level of integration among these important specialties.

Dr. Buttlaire 32:43
You know, that's really good points. And despite decades of research, stigma persists, including, you know, in my experience, in my career, a lot of substance use disorder programs won't accept people with.

Psychiatric problems. In my mind, that's stigma, right? Also the other end of things, which is psychiatric treatment refusal because people have a substance use disorder. So, you know, how does framing OUD as a brain disease influence workforce attitudes?

Dr. Bilal 33:06
OK.

Dr. Buttlaire 33:23
Patient engagement and therapeutic relationships and programs.

Dr. Bilal 33:29
I think it really does make an empathic and nonjudgmental attitude possible because the patient is now viewed as facing unfair odds against their recovery and it's created by their own.

Abnormal biology. To expand a little bit on that, defective frontal lobe circuitry impairs salience attribution, impairs response inhibition, it impairs behavioral regulation, so the restraining apparatus.

Is offline and is overwhelmed by the impulse to avoid these intensely negative emotional state and craving. So no knowing that these are sort of the.

Dr. Buttlaire 34:06
Uh huh.

Dr. Bilal 34:21
Conditions that the patient is dealing with really does engender an empathic and lunge mental attitude informed by science. We we know for a fact that their frontal lobes are impaired and that they have these changes in their neurophysiology.

It also aids though in for therapy and for treatment, the reliance more on motivational interviewing techniques. Why? Because these forces that the patient is overwhelmed with and they govern their behaviour.

Are more amenable to reality orientation, giving choices, giving contingencies, but it's not amenable to insight. It's not that the patient doesn't understand. They do, but they're they're really just overwhelmed by the sheer force.

Of the impulse. So motivation interviewing makes more sense if we understand the neurobiology of it. So overall it gives a workable framework for psychoeducation and for choosing evidence-based treatments as well.

So this matters for wherever the patient is, whether they're they're in the workforce or whether they're in treatment or whether they're they're receiving care in in in any other destination.

Dr. Buttlaire 35:48

I see. You know, along with stigma really comes families who often struggle to understand relapse and long term management. They continue to blame the person.

In many ways and reject them. So how can this framework, the brain disease framework, help families support sustained recovery and maybe reduce the family conflict and friction?

Dr. Bilal 36:16

Yes, so so it it it can dispel the stigma. So this understanding of the the the really this disorder as a.

The brain disease and for the families, the National Institute of Drug Abuse have wonderful resources for them to to really understand that science written in plain language and given with excellent illustrations. So that's.

Really helpful in dispelling the stigma, in really not viewing the disease as a problem of will or morality, and to help them adopt A realistic multi-phasic approach to treatment to accept relapse as inevitable like.

We have insisted we should as healthcare providers and to encourage steering toward evidence-based interventions. So beyond adopting that more patient long-term approach and reducing the stigma.

It also helps us enlist families as allies to steer patients toward the treatment that we know work.

Dr. Buttlaire 37:35

Is it helpful to think of, you know, stigma and and family treatment as a system problem as well as an individual problem? Is it a way in which we can understand the family system as well?

Dr. Bilal 37:56

Yes, so so um.

When when someone is faced with a condition like an addictive disorder like opiate use disorder, the using or understanding the family as a system is very helpful because you also would need.

Set a good decision makers or you would need allies in helping the patient choose treatment or come to treatment, really educating the families and.

Helping them adjust their attitudes can be extremely helpful for the patient. We can easily think of a patient who has a strong relationship with a healthcare provider who then they view as non-judgmental and accepting.

It really is fantastic and compounds the benefits to have the families also be viewed by the patient as also not judgmental, unaccepting. Further step is viewing.

Or empowering the family to also be allies in treatment and knowing that they can help the patient return to

treatment whenever they slip, help the patient go back on the evidence-based treatment whenever they stop. And so it really is very beneficial to.

Think not just as a for the patient as an individual, but to think of them and their family as one system or one unit and and work with them. I think it really can add tremendously to the care.

Dr. Buttlaire 39:49

Thank you for that. If if leaders fully embraced OUD as a chronic illness, what would change in the care pathways, monitoring structures and follow-up models? What would change if they started to embrace it as a chronic illness?

Dr. Bilal 40:07

I think three things come to mind. One is emphasis on opiate maintenance rather than detoxification. So detoxification is a much easier sort of stance and.

Something to offer the patient in many different setting, but but to change the thinking to how can we also start opiate maintenance treatment is very important. The second thing is emphasis on treatment in structured settings.

Early in recovery. So that means that it should be viewed as suboptimal treatment to insist to discharge patients right away to the community because we're essentially sending them out.

To environment that is full of cues and full of risks for the relapse. If we believe that relapse is inevitable and that they're at extremely high risk of it, then our systems have to start thinking about structure.

Or supervised settings early on in recovery. And the last thing that comes to mind is that from our discussion about the multi system involvement with this disorder is emphasis on.

Multidisciplinary approach to care, and that's really just borne out of our understanding of how complicated this condition is and the comorbidity of psychiatric and medical conditions.

Dr. Buttlaire 41:51

Are you recommending a team based approach?

Dr. Bilal 41:55

That's correct. So not to have the patient deal just with their provider, their therapist, but to really insist that this is a condition that requires integration of multiple clinicians.

Dr. Buttlaire 42:12

Thank you for that. And I have a last question for you. It's sort of a magic wand question, Doctor Bilal, which is if you were advising CEOs, medical directors or public health leaders, what structural or cultural shifts?

Dr. Bilal 42:18

Yeah.

Dr. Buttlaire 42:29

Are most necessary to align system design with a chronic brain disease model. What would you recommend to them?

Dr. Bilal 42:38

I would recommend improving access to opiate maintenance treatment as the first priority. So the patient can show up in the emergency room, they can show up in the clinic, they can show up in.

Other community hospitals. So really improving access to opiate maintenance should be one big focus. They shouldn't need to end up in a specialty.

Program or in a dual diagnosis inpatient unit for them to get maintenance treatment. That's one. The 2nd is if there are any legislation that is designed to help.

Improve access or to start treatment early is to embrace them because this can allow more focused treatment that includes medication and residential care. I'm thinking of this in particular because in state of.

In California there have been few legislations that came out just to help patients who are dealing with opiate use disorder and other dependencies to get the treatment and and not cut the treatment short, which often happens.

So to embrace those legislations and to think creatively about how to integrate them for the benefit of the patient and the last thing is to understand.

Despite the associated costs, the hospital setting is an important place to start life saving treatments, so.

I think we mentioned this several times during this discussion in the sense that if you understand the inevitability of relapse, if you understand that you probably will likely send this patient to either overdose or for us seeing them again in treatment.

Dr. Buttlaire 44:42

Mhm.

Dr. Bilal 44:49

Then we should really use the hospital setting to start these life-saving maintenance treatment or or make the appropriate referrals and confirm that we have done those.

Dr. Buttlaire 45:04

Well, I want to thank you, Doctor Bilal, for sharing your insights and clinical perspective, and thank you to everyone who joined us today. We hope this conversation provided practical perspectives on how to understand opioid use disorder as a brain.

Condition a chronic brain disease and that can reduce stigma, strengthening long-term engagement, improve continuity of care and better align system design with clinical science. This webinar is part of the Recademy 12 part series for 2026.

And we invite you to join us for the future sessions. Thank you for listening to us today.

Dr. Bilal 45:50
Thank you so much.