ASAM Practice Pearls Transcript

Polysubstance Intoxication: *Managing the Unknown*

Dr. Stephen Taylor: Welcome to ASAM Practice Pearls, where we turn clinical expertise into everyday addiction care one conversation at a time. I'm your host, Dr. Stephen Taylor, and today our topic is Polysubstance Intoxication: Managing the Unknown, inspired by Chapter 59, Management of Stimulant, Hallucinogen, Cannabis, Phencyclidine, and Other Drug Intoxication and Withdrawal in the ASAM Principles of Addiction Medicine, Seventh Edition.

And in thinking about today's episode, I really started to reflect on what I do in my office, in my practice, and the luxury I have, and I didn't really always appreciate it as a luxury. But it really is a luxury that I have, to sit in my office, in the clinic where I work, and have patients come in and tell me what's going on with them. And say, "Hey, doc, I need that shot that you guys can give me to help me with my drinking," or, "Hey, doc, do you have that pill or that strip that they give you that I can put under my tongue to help me with my addiction to fentanyl?" And I know what's going on with the patient, and I have a sense of how to help them.

But today, we're going to focus on a much more challenging situation. If you're in an emergency department or a setting in which you don't necessarily know what the patient has been taking, the patient can't necessarily tell you what they've been exposed to or what they are withdrawing from. That is a whole other level of difficulty.

So today, we are privileged to have my friend and my colleague, Dr. Itai Danovitch, who is professor and chair of Psychiatry and Behavioral Neurosciences at Cedars-Sinai Hospital in Los Angeles. Dr. Itai Danovitch is the man we need to talk to about this situation. Not only does he handle these kinds of situations, he co-wrote the chapter of the book. Itai, please say hello to our audience.

Dr. Itai Danovitch: Dr. Taylor, Steve, thank you so much for having me on this podcast. I've enjoyed listening to your shows, and I'm humbled and privileged to be a part of this. And also grateful to my co-authors on this chapter, without whom I wouldn't be here. So, thank you.

Dr. Stephen Taylor: Thank you. So, I know you have a case that you had wanted to talk about. Would you go ahead and share that with us just to get us started?

Dr. Itai Danovitch: Sure, I'd be happy to. And first, let me just acknowledge that when your staff reached out to me to cover this topic, I had trepidation because this chapter is what I think of as the kitchen-sink chapter.

The ASAM Principles of Addiction covers everything we know about the management of substance use disorders, from phenomenology to neurobiology to treatments, and we have a lot of chapters on disorders that we know a lot about, like opioid use disorder and alcohol use disorder. This was a chapter that's literally called Management of Stimulant, Hallucinogen, Cannabis, PCP, and Other Drug Intoxication and Withdrawal. And within the chapter is also commonly misused psychoactive herbs and substances. It's kind of where we put everything that we don't know how to deal with.

And so, on the one hand, it's a tough chapter to represent expertise on because there's so much that's unknown. And on the other hand, it does reflect the reality of what we're faced with, which is our patients constantly showing up with syndromes and presentations, having used things in new ways or in new combinations or with new underlying vulnerabilities that make us have to stop and question and figure out a way forward without perfect information.

The case that I was going to lead with was a case that I had had the week that we met to do some pre-discussion about this episode, and I think it just had illustrated the challenge.

We had a patient that showed up to our emergency department with altered mental status who appeared to be in an excited and agitated state. He had had a trauma with a head injury. His urine toxicology was positive for stimulants, and there was a report that he had been using GHB. And because of concern that he was in GHB withdrawal, he was placed on a CIWA protocol and admitted.

And by the time that I saw him in the hospital, he had been getting, for a couple days, very large amounts of Valium and had been agitated despite that. And the agitation was viewed as an indication that he wasn't receiving enough benzodiazepines and thus was getting even more.

And when I first saw him, my first question was, "Are we sure this person is in GHB withdrawal?" And I asked that question because GHB can be hard to procure sufficient amounts to develop dependency on. And while people certainly use, misuse GHB, and suffer consequences from it, including developing what is called the GHB coma, a deep somnolence. In order to develop dependence, one has to have a ready supply of a quantity that one can constantly use on a daily basis, which is tough. And collateral history from this person's friend reinforced the question about whether he was actually a regular user of GHB. And because of the lack of confirmation, we stopped the benzodiazepines, and that began the clearing up of the toxidrome.

And there were other things to deal with, but it just goes to show that it is hard to make a judgment based on the information you get when somebody shows up. And you have to be skeptical of all types of information and manage a patient empirically.

Dr. Stephen Taylor: That is very illustrative of that point, so thank you for sharing that poignant example. Let me start with a question that picks up right where that leaves us, which is this whole issue of multiple different substances that people are taking. The fact that we might see a toxidrome and have no idea what toxidrome it is in that particular patient.

So, the term polysubstance use is one that many of us still use, but actually, based on DSM-5 criteria, polysubstance use disorder doesn't even exist anymore. We have to diagnose each disorder separately, but in practice, we still use the term 'polysubstance use' because it's practically useful.

So, as we talk about that concept and that issue today, what do we mean by polysubstance use, and how would you define it for this episode, and why does that terminology matter?

Dr. Itai Danovitch: Yeah, that's a great point, and so important to clarify. DSM-5 got rid of the term polysubstance dependence because it was too nonspecific, and there was a definition for it, but in practice, patterns of use of multiple substances are highly variable, and it turned out not to be so useful to try to characterize a syndrome that didn't correspond to any well-defined condition.

I use polysubstance use descriptively, just literally to describe somebody that is using multiple different substances. And then it's my job as a addiction specialist, to try to disentangle what's going on and determine whether there's a substance use disorder and what substances there's a substance use disorder on.

So, for this conversation, I would just use it to describe somebody that's using multiple different substances.

Dr. Stephen Taylor: That makes a lot of sense. And again, this conversation is about real-world clinical settings, which is why you have to clarify that and tease that out. And in real-life clinical settings, clinicians often have patients with unclear or mixed toxidromes. What should clinicians do? What's the approach when a patient presents with an unknown toxidrome or in, as in the case you described, altered mental status, and the clinician has no idea what substances are involved?

Dr. Itai Danovitch: Yeah, I mean, I think the real key is to keep the differential broad. You don't know what's going on. And so, you want to think about intoxication, you want to think about withdrawal, but you want to think of other things that may cause somebody to have altered mental status or delirium, such as infection or trauma or metabolic disease or neurologic disease. You want to literally think about all these things.

We do have toxidromes. And the chapter describes some that help to characterize the signs and symptoms that are associated with certain classes of drugs, like sympathomimetics versus classic hallucinogens. Those can be useful in your exam,

trying to determine if somebody is more activated in an adrenergic way and elevated, or are they more panicked and confused. What signs and symptoms are they having?

But ultimately, you want to think broadly so that you don't miss something that is going on.

Dr. Stephen Taylor: You know, it occurs to me that a lot of what we're doing to figure this out is very careful observation of the patient. Very careful and active observation. Literally thinking to yourself, "Okay, what am I seeing here? Am I seeing panic, or am I seeing confusion? Am I seeing agitation? Am I seeing anxiety?" I mean, that very active thinking through, in your mind, what it is that you're observing while you're observing the patient in real time is a key part of this, because that's how you'll then determine what your next move needs to be. And that's something that I don't know that we all think about that much in a conscious way.

And the other thing that you said that struck me in your case, when you got to see that patient, is taking a look at what's going on. Taking a look at what's been determined or what's been assumed, and the action that's been taken based on that assumption. And then stepping back and questioning, "Well, wait a minute. Is that really what's going on with this patient?"

Can you speak to that whole issue of stepping back and doing the reassessment?

Dr. Itai Danovitch: Yeah, that's right. I mean, you are constantly trying to strike a balance of putting together a story that makes sense based on the pieces of information that you're able to collect, some of which is objective information like labs and exam: Are their pupils big? Are their pupils small? Are they sweating? Are they having goosebumps? Like, what are you seeing? What story is coming in? What are they able to share with you? What could the paramedics tell you? What can their family tell you?

So, you're trying to put together a story. But then you also want to not come to conclusions too quickly, and the areas of uncertainty you want to be open to, so that you don't have confirmation bias, which is that a patient comes in looking a certain way, and all the other information that comes in, you presume to be linked to that.

So, it's getting comfortable with that discomfort. And the longer I do this, I never get settled because I'm constantly just sitting in a place of uncertainty and trying to be open to new information as it comes in, so I don't get cornered with a preexisting idea.

Dr. Stephen Taylor: Getting comfortable with discomfort and being okay with uncertainty. Those are things that don't come easily to me. I'm literally squirming in my chair as I think about it.

Dr. Itai Danovitch: Welcome to the field of addiction.

Dr. Stephen Taylor: Yeah, exactly. And so, let's go with the specific example of what you're talking about because you just mentioned that patient, again, in your case, of altered mental status, and you can't just go with assuming, frankly, that it's all due to substances.

What about that situation? How do you ensure that you're not missing altered mental status due to any one of a number of other possibilities? And you sort of rattled off a few a minute ago. How do you do that comprehensive evaluation to tease that out?

Dr. Itai Danovitch: Well, we all learned in medical school and residencies different acronyms or ways to guide our differential diagnosis so that we can be thorough. And we have to run through those.

And, you know, I always liked the acronym VITAMINS, which was like V for vascular, I for infectious diseases, T for toxic or traumatic, A for autoimmune, M for metabolic, and so forth. I won't go through them all. But you need some kind of system to just ensure that you are thinking about everything and ruling things out, ruling things in, and then trying to disentangle. You try to clarify what you can.

So, like, a urine toxicology screen can be very helpful when it shows that something's there. But in the case of GHB, for instance, where it's commonly negative because GHB is eliminated so quickly from the system and most point-of-care tests can't even capture it if it is there, a negative test doesn't really tell you anything, or it doesn't confirm anything for you.

So, it is sticking to the basics. And this is an area where you can't necessarily, like, ChatGPT your way through this because you don't yet know what the questions are. You want to think about every system and use the signs and symptoms and information that you get to try to narrow in to a diagnosis.

And then, as you get into specific areas, you want to determine through the labs that you get, through the questions that you ask, whether you can confirm or start to rule out the different items on your differential.

Dr. Stephen Taylor: Is that the same process that happens once you've figured out that there is polysubstance use and that that's the major part of the picture, to then tease out which substances and whether there's a use disorder or contaminant? Or is there something else that you do when you're at that stage?

Dr. Itai Danovitch: You know, I think sometimes the specific substances are helpful, and they're also helpful because the intervention for most toxidromes is time and support. It's letting the body eliminate the substance. It's supporting a patient's functions by ensuring they're in a safe place. It's cooling them if they're overheating. It's heating them if they're too cold. It's supporting the circulatory functions, ensuring their airways open. It's all the basics.

And that's the main thing that you're doing, with the exception of some agents like CNS depressants that can cause withdrawal syndromes that you have to address and recognize when that happens. People can have psychosis related to the effects of stimulants or psychotogenic agents. So, you are identifying what you need to treat to keep the person safe, and then you're trying to support them while they come through the toxidrome.

Dr. Stephen Taylor: Interesting. So, I was thinking, as you were speaking, about a time when I was in residency, and there was a very, very complicated patient that we were taking care of–this is in the pediatrics part of my life. And we had a child in the pediatric ICU at Jacobi Hospital in the Bronx. And there was so much going on with this kid, and the resident who was on call overnight was talking about the protocols that he was trying to follow.

And the attending was very on edge and very upset about the way things had gone. And the resident kept referring to the protocols that he was trying to use. And the attending just sort of blurted out angrily at one point, "Protocols are for idiots. You need to think through the case." And of course, nothing could be further from the truth. Protocols are not for idiots, right? This attending just got very angry in that situation.

But the reality of it is, protocols guide so much of what we do, and we come up with protocols because it helps us think through, in a clear, systematic way, how to approach patients. But what about when there are not clear protocols in place, as is often the case with polysubstance use? How should clinicians manage the agitation, the confusion, all these other aspects of what you're talking about that a patient may present with–withdrawal symptoms–in a way that's safe and that avoids doing harm?

Dr. Itai Danovitch: Yeah. Well, your anecdote is a really clear example of the other thing that happens, which it's hard to take care of somebody who's not doing well, and it makes everybody anxious, and it makes everybody frustrated.

And often, when we're taking care of patients, especially in acute care settings, things aren't simple. It's not just the toxidrome. It's now that there also could be an infection. Could they be septic? Could they also be in withdrawal? There's all these things that are going on, and so, it can be aggravating, and tempers can get elevated. It's important that we treat each other and the patient with respect throughout it all.

So yeah, protocols are very useful, but it's important not to hold fast to them when they're not working. And the protocol assumes that we have an idea of what's going on, and so we begin with a protocol. We begin with an assumption. But our approach has to be empirical. We have to constantly reassess to determine, is the patient's trajectory getting better or is the patient's trajectory getting worse? If they're getting worse, we have to reexamine all of our assumptions.

Basically, when a patient's in agitation, you want to determine: are they having withdrawal secondary to a CNS depressant? Because that kind of agitation, you're probably going to manage with benzodiazepines or barbiturates. If their delirium or agitation does not appear to be related to withdrawal, then you're probably going to manage any acute agitation with antipsychotics, which are calming but don't have the effect that benzodiazepines can, of being disinhibiting and worsening agitation that's not related to CNS depressant dependence. And then for the patient that's having psychosis, you may also want to use antipsychotics. That's from a medication perspective.

At the same time, you want to be very judicious with minimizing any use of restraints because restraints worsen all of these symptoms and can also lead to muscle breakdown and other complications. You want to be creating a calm and reassuring environment that's supportive to the patient, and you want to be implementing some of the other supportive measures that we talked about to address all the ABCs of helping somebody while their body just clears what's in their system

Dr. Stephen Taylor: So, all that sounds great. All that's really helpful. But now we're in an era where we have all kinds of stuff in addition to the drug that the patient was taking. We've got contaminants. We've got designer drugs. We've got various kinds of potency in different drugs that patients are taking.

Does that change anything that you just described or anything you just said? Or is what you just said what covers us because of all these contaminants and additives that are in the drug supply today?

Dr. Itai Danovitch: Well, I think that the changes in the drug supply really mean that we have to stay attuned to what's going on and what exposures our patients might have, because there's never been a time where access and exposures to different substances and synthetic agents that weren't previously available is as accessible to individuals.

And so, you've got to pay attention. You got to listen to episodes like this to hear what's happening in Philadelphia with medetomidine and with xylazine to know. I'm on the West Coast, and those are just beginning to arrive on the West Coast, and I have the benefit of learning from what my colleagues in Philadelphia have been dealing with.

But I also have to pay attention to the local surveillance information to know whether that's a substance that's in my region, so that I can be sensitized to presentations that are consistent with that.

So, I think that staying curious, paying attention to surveillance. For those that aren't sure what to do when you're confronted with a situation like this, every region has a poison control center that you can call, and that's staffed with clinicians that are experts in knowing what's going on regionally and how, based on a description of a

patient's presentation, they can guide the management of that patient. That's something to always consider as well.

Dr. Stephen Taylor: Use your resources. If you don't know, try to find somebody who does know. And that's absolutely critical. Thank you for pointing that out.

Let's talk about the main practice pearls. You've talked about a whole lot, but if you would, please, just sort of break down, what are the main practice pearls that you want our listeners to remember for this episode?

Dr. Itai Danovitch: You know, I would say that altered mental status and agitation, in particular, are emergencies. And we have to be really careful about cognitive biases that we can have when we assume that something is just intoxication. It may be intoxication, but it may be something else. And before we anchor to a singular idea about what it is and then pursue all the pathways that are associated with that, we want to think through the other items that could be at play, because often multiple things are going on. That's A.

B. Supportive measures are really key because most things are going to get better if you just support the patient and ensure that they're safe throughout.

C. Agitation, intoxication, altered mental status. If somebody is showing up in the emergency department or the hospital after using substances, they're having a bad trip, and it can be traumatic for them. And so, supporting them throughout, connecting with them to the extent that you can, reassuring them, connecting with them as an individual is really, really critical.

And that brings me to my last point, which is that once you stabilize them, you're really just at the beginning. After stabilizing the person from the toxidrome, you want to be able to engage them. You want to be able to inform and educate them. You want to be able to learn from them, because a lot of what I learn about substances and exposures come from what my patients share with me after they've emerged from something. And I say, "What exactly did you take and why, and what did it do for you, and had it ever done that before?"

And then lastly, you want to help them reduce their risk if they are going to use again in the future. And so, harm reduction is a really, really big piece of this. And then for people that have a substance use disorder, you want to encourage and motivate their engagement with treatment, and be aware of the many treatments that are available to link them to once they've got their feet back on the ground

Dr. Stephen Taylor: Ah, that is excellent. What a great list of pearls. And if you don't mind, I might add one, just based on the vignette that I remembered from residency, which is, when you're working together with a team trying to figure out what's going on with a patient and trying to stabilize a patient, be kind to each other. I don't think

any of us work well and serve patients well when we're being berated by our colleagues.

Dr. Itai Danovitch: Yes, always good to take a deep breath.

Dr. Stephen Taylor: Yeah. And sometimes, it's just, we need to take it easy on each other because that'll help each other to be at our best. So, that was our Practice Pearls. Those are the key points that I would encourage our listeners to remember. But now I want to go to a lightning round of questions and tips inspired by Chapter 59, in the ASAM Principles of Addiction Medicine.

So, let's just get started. Question number one. Dr. Danovich, are you ready?

Dr. Itai Danovitch: I'm ready.

Dr. Stephen Taylor: When do you get a tox screen?

Dr. Itai Danovitch: As soon as possible, but don't overly rely on it. Exam and history are really, really key.

Dr. Stephen Taylor: Okay. Number two. How do you handle a patient who is intoxicated with a psychedelic drug?

Dr. Itai Danovitch: It's really establishing safety. Creating a safe surrounding, lowering the stimulation around them, providing gentle reassurance, and monitoring them.

Dr. Stephen Taylor: All right, and what do we need to be worried about? What are we monitoring for?

Dr. Itai Danovitch: Serotonin syndrome is one of the most concerning adverse effects that can result from intoxication with a psychedelic. Serotonin syndrome's an excited state where people can have fever, can have altered mental status, can have muscular findings like hyperreflexia and clonus, and that's really an emergency that has to be addressed.

Dr. Stephen Taylor: Awesome. Number three. How do you handle GHB coma? You mentioned GHB coma. How do you handle it?

Dr. Itai Danovitch: Yeah. GHB is a endogenous metabolite of GABA. It can suppress your central nervous system, including your breathing. And so, you need to support a person's airway. There's no antidote to GHB. You just have to support the person's breathing until they eliminate the GHB from their system.

GHB is pretty short-acting. And so, the coma reverses very quickly, and that's usually a good thing, though sometimes for people that are using heavily, it can be followed

by what can be a pretty challenging withdrawal syndrome if they've been using on a daily and regular basis, which is not that common for GHB but does happen.

Dr. Stephen Taylor: Got it. The child and adolescent psychiatrist in me has this question. Having worked with more than a couple of adolescents who are into nitrous, how do people who are using nitrous oxide present?

Dr. Itai Danovitch: Yeah. Well, nitrous oxide has this unusual effect of deactivating vitamin B12. And vitamin B12, you need for a whole bunch of processes, for methylation pathways, for DNA synthesis. But when somebody has been using nitrous oxide heavily on a regular basis, they can develop a functional B12 deficiency, and they can have symptoms such as gait instability, sensory paresthesia, such as numbness or tingling, and altered mental status. And that's critical to recognize because they need aggressive supplementation of B12, even if their B12s look okay.

And there are some other elements–labs to look out for. Homocysteine can be elevated. MMA (methylmalonic acid) can also be elevated. But it's a really important syndrome to recognize, identify, and address because the consequences of severe B12 deficiency can be pretty severe and persistent.

Dr. Stephen Taylor: Fascinating. Next question: What is the biggest myth about the agitated patient?

Dr. Itai Danovitch: It's really that if they're awake and yelling, they're okay, they're stable, that you can just put them in a room, put them in a corner, and move on to somebody else.

Agitation, as we said before, is a vital sign. It means that something is critically wrong, and you have to be thinking about what all the potential causes of it are, even if that patient is pretty difficult to deal with in the moment.

Dr. Stephen Taylor: Great. And the last lightning round question: What do you do once the patient is stabilized? Once you've put to work all this great expertise, all this great knowledge, you have a stable patient, now what do you do next?

Dr. Itai Danovitch: Well, as we said before, stabilization is just the beginning. We want to engage the patient. We want to motivate them. We want to reduce their risk of harms. And if they are open, willing, if they've got a substance use disorder, we want to initiate or get them linked to effective treatment for their substance use disorder.

Dr. Stephen Taylor: Always offer treatment. Dr. Itai Danovitch, thank you, thank you, thank you so much. That was awesome.

For all my listeners, if you want more information on the management of specific substances such as stimulants, hallucinogens, cannabis, PCP, which is phencyclidine, and other drug intoxication and withdrawal, you've got to check out the chapter, the source, ASAM Principles of Addiction Medicine, Seventh Edition.

Please don't forget to visit ASAM's e-learning center to claim your CE credits for this episode. Also, make sure to subscribe and share this episode with colleagues who may find this information helpful.

Thanks for listening. We'll see you next time on ASAM Practice Pearls, where we turn clinical expertise into everyday addiction care, one conversation at a time.