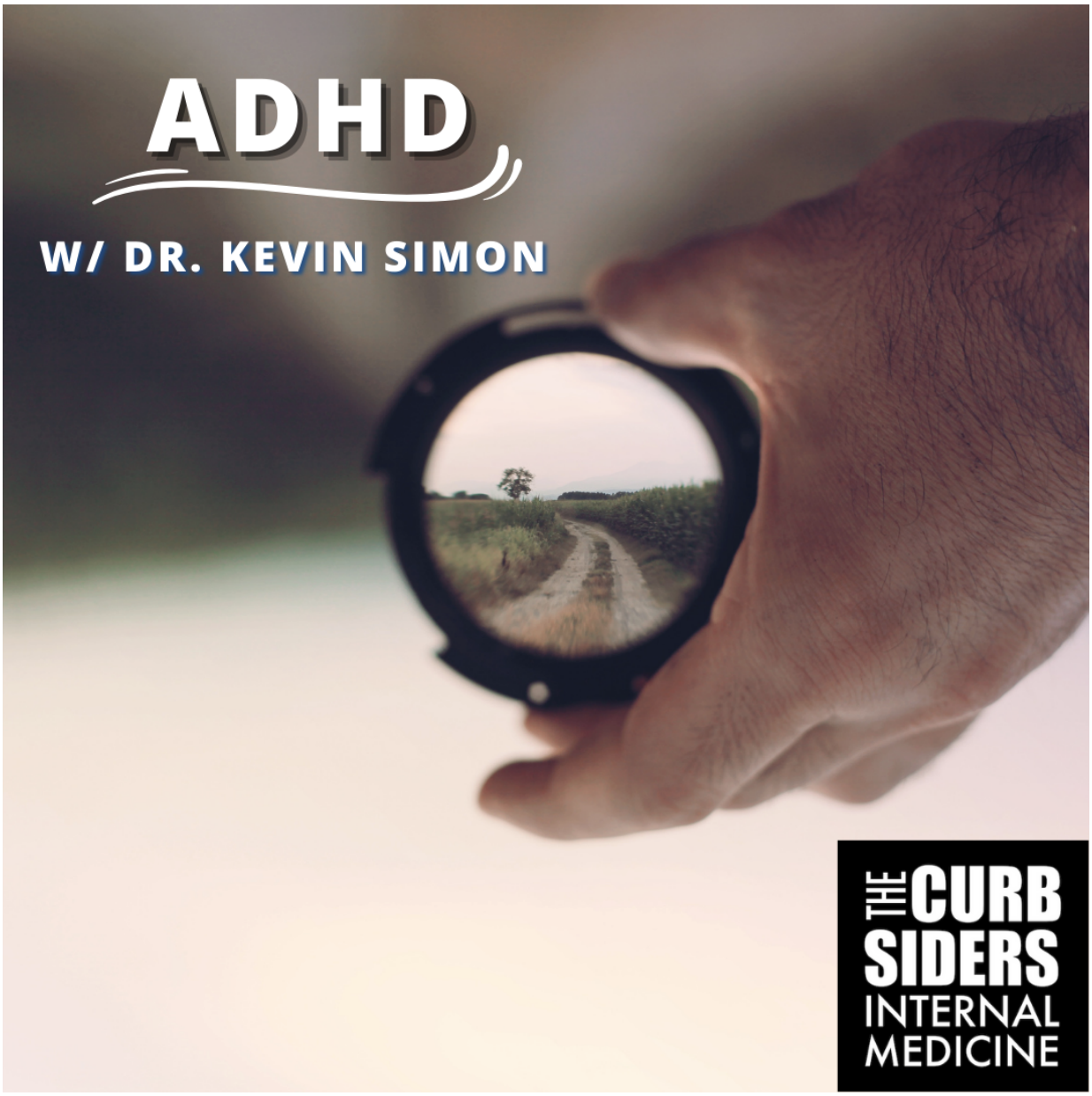
#374 ADHD with Dr. Kevin Simon



Matt: Hey listeners, happy 2023. This is Watto here and I just wanted to let you know that this year we're going to be slightly tweaking our format. What does that mean? It means based on listener feedback for I guess many years now, we are going to be moving our upfront period where we get to know the guests, we get book recommendations, we talk about picks of the week. We're going to move that to the end of the show after the guest gives their take-home points about the topic that we learned about that day. Let us know how you like this new format, but we're going to try it out for a while now so you can get right to the learning as soon as the show starts. Thank you and enjoy the show.

[Disclaimer]

Welcome back to the Curbsiders, I'm Dr. Matthew Watto, here with my great friend Dr. Paul Nelson Williams. On tonight's show, we're talking about ADHD, a topic that I really needed to learn more about with a great guest, Dr. Kevin Simon. We'll tell you all about him in a second. First, Paul, how are you doing and why don't you tell people what is it that we do on the Curbsiders,

Paul: Matt, I'm good, thank you for asking. I probably shouldn't tell you this. I kind of clock what degree of friend I am every time that you mention it. It's been a pretty good run of a great friend, which it makes me feel nice, I almost don't want to jinx it, but I just want to let you know publicly in front of our audience, it feels good, so thank you for that. To get to your question, we are the Internal Medicine podcast. We use expert interviews to bring you clinical paroles and practice-changing knowledge. Tonight, as you mentioned, we talked to the great doctor Kevin Simon about ADHD. In terms of when to consider the diagnosis, specifically in adults, because we are adult doctors taking care of adults, we talked about medication management, how to mitigate the concerns for diversion, some of the practical ways to choose which agent to start with and what that should look like. Just a lot of really high-quality stuff that I feel I didn't get a whole ton of my training. I'm glad to have kind of the chance to circle back and learn more about it because it seems to come up a fair amount.

We had this conversation with our guest, Dr. Kevin Simon. Dr. Simon is the Inaugural Chief Behavioral Health Officer for the City of Boston, and he serves as an attending psychiatrist at Boston Children's Hospital. He's also an instructor in psychiatry at Harvard Medical School, a Commonwealth Fund Fellow in Health Policy at Harvard University, and the medical director of Wayside Youth & Family Support Network. Clinically, he practices as a child, adolescent, and adult psychiatrist and addiction medicine specialist, caring for youth, young adults, and families through the Adolescent Substance Use and Addiction Program at Boston Children's Hospital. As if that's not enough, he works as a researcher where he's received federal funding for work focused on the intersections of mental health, substance use, and justice.

He completed clinical fellowships in child and adolescent psychiatry and addiction medicine at Boston Children's Hospital and Harvard Medical School and an adult psychiatry residency at Morehouse School of Medicine. Feeling just less and less qualified to do anything, Matt? Dr. Simon receives his MD from the SIU School of Medicine after attending Morgan State University for college. Dr. Simon's writings on mental health, substance use, systems of care, and healthcare equity are published in leading journals, including the New England Journal of

Medicine, The American Journal of Public Health and Health Affairs. Without further Ado and maybe even without a pun, why don't we get to it?

Matt: A reminder that this and most episodes will be available for free CME credit for all health professionals through VCU Health at *curbsiders.vcuhealth.org*. With that, let's get to the show. Kevin, thank you so much for agreeing to join us on the show. I know we have limited time, so I think we should get into the cases here.

Paul: 100%, we are jampacked. So, let's start with Ms. Alice Jones. She is a 23-year-old woman. She's coming to our office for the establishment of care with a new primary care physician and comes to us really without much in the way of past medical history. She is currently attending college. She's majoring in finance. She lives with her roommate but feels safe in her home. She does drink alcohol on the weekend, sometimes more than she intends to, but she's not too worried about that because she figures that's just the life of a college student. She also babes[?] mostly when she's drinking and denies other substance use. She comes in, you feel good about the visit. You're about to pat her on the head, maybe give her a lipid panel and some general counseling. When she shares that, she thinks that she may have ADHD. She says that she saw a TikTok video and she's kind of embarrassed to admit this, but she says it went through the symptoms of ADHD and a lot of them lined up with some of the things that she was feeling.

She actually, since you did such a good job of establishing a therapeutic relationship with her, shares that she even tried her friends Adderall a few times when she was studying. She really found it helpful to kind of help with her focus. Before we get into whether or not we should actually treat the patient or continue her self-prescribed medications, we should probably talk about the diagnosis itself, which is, as were talking before we got started, I never felt like I had a great grasp on at least during my training. Could you at least talk us through Kevin what exactly ADHD is and how we should start thinking about it?

Kevin: Yeah. One definitely resonates with the provider who's having to see her. ADHD, Attention-deficit/hyperactivity disorder is a condition of essentially executive functioning. The way to think about it is? There're three types, so there's the inattentive type. There's a category of symptoms. There's nine of them. Not sure if you want me to walk through all nine, but a youth where ADHD is classically identified would have to kind of meet six of nine criteria, whereas an adult would actually just have to meet five of nine of the criteria. Again, with regards to inattention, think about failing to pay attention to close details, having difficulty actually sustaining attention. When we say sustaining attention for the mundane task, right? It's fine to watch TikTok or Instagram or video games because that's actually very stimulating. Trying to, say, read five pages of a textbook or a newspaper, that's where the inattention is actually going to show up most.

Struggling to kind of follow through with directions from A to C. Do you find that around B, you're getting lost and then appearing not to pay attention? This classically is what other people seemingly have to say, Paul, Paul, Paul, and you're just almost oblivious because again, that intention, you're very distracted to other things. Again, with this idea of struggling to get through the mundane things that require that you now require cognitive stamina, you generally try to avoid. There are some other something easily distracted. For an adult in the inattentive realm,

you'd have to have five of those criteria. And this is over several months. The hyperactive, which is classically associated, again, thinking about youth, the kiddo that's the Tasmanian Devil, Sonic the Hedgehog, just bouncing all over the place. That actually tends to most often subside as one becomes an adult. In the event of just being thorough here, fidgety restless. Obviously got to figure out that restlessness because of the energy or restlessness of anxiousness dictates being still, which itself, again, is a cognitive task.

Kind of feeling like you're driven by this motor. Again, easily identifiable in use, less identifiable in adults. You might hear of people who struggle to seemingly do one thing and so what they're describing is this idea of having multiple jobs. Not that it's a bad thing, but it's this idea of you're really not comfortable just doing one. This is the person that, "Oh, Monday to Tuesday they do one thing. Wednesday, they have another gig, on the weekends they have another gig," yet they seem really don't ever rest. It's like, "Wait a minute why I'm not hearing about calming down?" Often this is the person that's interrupting. Again, can't be patient in terms of just listening. Although, yes, most physicians don't really aren't patient.

[laughter]

This would be in the context of, again, a family dinner at the office space. So, again, for adults, we have to have five of the nine. There's an inattention, there's a hyperactive, and then there's a combined type. Assuming that you meet five and five of those criteria, that's generally what ADHD is. It's a little challenging here because if an adult could just look it up and say, oh, well, yes, I have these things. In our test patient here, 23 years old, you can kind of do that history and say, "Okay, well, how did you do in school?" Be that college. If they pursued college, definitely high school because they were going to have to complete high school. You can get at understanding, is a person really struggling with attention or inattention executive functioning, kind of by asking the social dynamic questions, talking about your employment, same with your relationships. Sometimes you're trying to get at the course of things by ancillary questions that kind of hint at it. I'm just pausing here because I'm talking for a very long time and I like to listen what I talk.

Paul: Fantastic. I don't know if Matt was doing the same thing. I'm like cataloging symptoms. I'm like, okay, do I meet 5/9 for that? [Matt laughs] I don't know, I feel like we're not going to self-diagnose on the show.

Matt: But Paul, I think I know. You're very high functioning. I think that's the part that, the last part he was talking about, I was thinking like, I bet a lot of people check some of these boxes, but then you're like, no, got straight A's, their relationships are great and they're high functioning.

Paul: Keep my relationship plus/minus.

[laughter]

Matt: I know you, Paul, I rate you high, Paul.

Kevin: What you're bringing the best is very interesting in so much as, at the academic graduate level. There are a number of people who end up recognizing that they have ADHD in so much as it is about the normative experience. If your classmates are able to sit, attend to the class, yet somehow, you're the one who's not able to and not because of the materials being difficult, but literally, you just actually just can't sit still and you can't just be in the library for an extended period of time. It comes up, there are settings where I recognize that law students, graduate students of different sorts when there's a high demand and the normative experience of the class is that they're meeting the demand, and then someone's kind of not, but again not due to the intellectual challenge of the material, but just like there's a lot of material to learn and to study and to organize, sometimes you recognize the ADHD because you've been compensating because you can pay attention to many different things.

At certain academic levels, you can accommodate, but then at other levels, it becomes very difficult carrying 10 patients. "Wait a minute, where do I start? How do I just even organize myself?" There are times in an adult population it can present itself because the demand is that high.

Paul: This is the point that I really need clarity on. It sounds, though, like the symptoms are declaring themselves in adulthood, but are probably still present, I guess, might be your question is, does this have to be a childhood diagnosis? or can you develop ADHD de novo as an adult?

Kevin: More often than not, there likely were symptoms as a child. Did you recognize it or really did the parent recognize it? Because some parents may say, oh, you know what "Hey, Paul, is just an energetic boy?" You live in the Midwest, go out into the cornfields, and that's completely fine.

[laughter]

Kevin: Or are you the youth that really can't sit still in class and you're being disruptive to the rest of the class? This does delve into the kind of disparities that we see in terms of the diagnosis itself. It can actually, I guess, in theory be dormant or hiding just for the sake that somebody hasn't alerted a pediatrician or primary care doctor at the younger age.

Matt: I wonder if that's just the fact that it's not recognized and that's why it's been so hard to figure out if there really is a late onset or not, is because it's clear that there is the diagnosis in an adult person, but you just don't have enough history to prove that existed when they were a child. I wonder if that's why they're questioning.

Kevin: Right, for kids it's not even a matter of just-- you have 6 of those 9 criteria. The question is, does it exist in multiple domains? This is where in the child world we'll get the Vanderbilt that's where the teacher fills it out, the parent fills it out. Then, yes, there's the clinical interaction that I'm having with the youth or the provider is having with the youth, but the reality is ADHD doesn't turn off. So, it should show up when they're on a team. It should show up when they're in a grocery store, so it should show up in multiple places. This is where if you're only hearing about dysregulation or dysfunction in one domain, then you have to start thinking, "Mm, is there

something else?" but when school's an issue, home is an issue, with peers there's an issue, then you can start to say, "Okay, wait a minute, this might be truly evident."

The same thing would be for adults too. It can't only be at the job. There has to be something that's showing up at home. Are you paying your bills on time? Why aren't things on auto-pay? Why are you forgetting certain tasks? The screeners that we have often are asking about things across domains.

Paul: I do want to get to the screen instruments in just a minute, but before we even get there, if someone is bringing in a history that has some symptoms consistent with ADHD, and I imagine again with adults, it's going to be more the attention deficit than the hyperactivity part. Are there any other comorbid illnesses that we should be concerned about, things that we should be aggressive in ruling out before we start to truly consider the diagnosis of ADHD in a new patient for us?

Kevin: Yeah, big ones, anxiety is just the most common mental health condition. Obviously one rule of anxiety because that itself could kind of manifest or hide as other things. Why aren't you being more social? Why aren't you initiating the task? Sometimes I kind of frame it as work inertia. Like, you have something to do, but you're just so anxious at the idea of wanting to pursue it that you just don't. Anxiety is one. Depression, obviously, a major one in terms of you will be inattentive, not particularly motivated. If you have a classic form of depression, obviously you should be thinking about substance use disorders. Sleep, are you getting an adequate amount of sleep? Because it's going to be particularly hard if you're not getting and I'll be gracious here, six minimum hours of sleep that are restful and you wake up and you're wondering how come you can't get certain things, then the question is, well, if your sleep baseline is poor, we need to figure that first.

I do try to ask just whole health questions before assuming that it's definitively ADHD in dietary habits because what you eat is clearly going to impact your level of cognition. There are things to ensure you're asking about, but if all those things in theory are ruled out or seen as normative and the person is still describing, then that's where you could inquire about behavioral things that you could do. Okay, do you have a calendar? Do you have a checklist? There are things that you could put in place to help yourself if you've gotten to 23, 33 and you've been generally functional. If you're doing those things and still struggling, then okay maybe there's some more that we need to inquire about.

Paul: Great, so that's extraordinarily helpful. Let's say we've done our due diligence. We don't think anxiety, we don't think depression. They have tried some compensatory tactics that have not been helpful. We don't think acute caffeine withdrawal because God bless, I'm not sure.

[laughter]

Paul: They would have my unending sympathy. My question is what initial screening tools do you have? If they would screen positive then where do you go from there? What's your overall approach for someone where you suspect ADHD?

Kevin: This is where I'll say screeners are challenging in so much as, in this person's case, they watched on TikTok and said, "Hey, these are the symptoms." If I say, "Well, how often have problems remembering appointments or obligations occurred for you?" A person potentially may say "Oh well, more often than not for all of the questions." So, there are screeners, but again if you have an adult who is competent, you will have to do more than just ask the screening questions because the screening questions could lend themselves to the person saying, "Oh yes, oftentimes doc." Screens are helpful, but you really do have to do due diligence of thinking about multiple domains of their life.

Matt: I was reading one of the articles talking about just neuropsych testing, especially for patients that are maybe older. Sometimes I get 40, 50, and 60-year-old patients telling me they think they have ADHD and "Oh, they didn't really diagnose it when I was a kid, I think I would have been diagnosed." I'm not sure if you think that would be useful.

Kevin: I'll answer from full chronological ages here. Neuropsychological testing can be potentially helpful for ADHD or any neurodevelopmental condition, and neuropsych testing will test multiple domains, executive functioning, learning, and memory, reading, could be mathematics, problem solving. The challenge here is one, ADHD is a clinical diagnosis so it's not required that you have a neuropsychological test. Also, the accessibility of neuropsych test is problematic on the youth end for major academic centers. We're talking about more than 12, 18 months, so that's prohibitive. On the adult side, the same waitlist exists and then insurance does not generally cover this. Now the time where insurance may, is if you have an individual that has a neurodevelopmental condition like autism, but there are some statutes that are associated with autism that imply why that would be covered. Under the normal circumstance, like the patient we're talking about, that person depending on what city we're in, could pay $1,000 up to $5,000 for a neuropsych test that may not really tell anything different than what Matt, Paul, or I can do in meeting with them.

Matt: I did not know that. I haven't had any angry patients come back to me. I haven't sent many patients for this purpose. Mostly I'm sending to neuropsych if I think someone might have dementia. I haven't had any reimbursement issues there, but I haven't tried sending anyone for ADHD.

Kevin: This is what I was going to say is, if you have the early-onset dementia potentially either you all are sending the referral, you go to neuro like the indication is different. The coverage for that is likely present. You say a 34-year-old is curious about ADHD and there's no history of it and you just want it to get covered. There's a good chance that you need a prior auth, good chance that prior auth would be denied. If again, the dementia case that likely would be covered, autism or someone who has already a diagnosed intellectual disability that can be covered. A traumatic brain injury that could be covered but just run of the mill I'm at my annual visit and I bring up ADHD, potentially not.

Matt: Paul, I'm glad I asked. [laughs]

Paul: Yeah, me too. I will say it's funny, one of my colleagues, I won't embarrass by name is someone who really did a deep dive on ADHD because they were just so tired of feeling bad at it and waiting for the referrals and worrying about the cost and talking about some of the things.

She did the deep dive. She was the person actually introduced me to one of the structured interviews tools. I think she uses the DIVA 2.0 if I'm not mistaken. I guess where I'm going with this is I wonder if you wouldn't mind talking us through is there about what tools are available, say in the primary care setting where we could maybe do some of the work ourselves? Like how would you recommend the average internist who is maybe relatively new to treating and managing ADHD or what tools exist to help them kind of navigate whether or not this is truly a diagnosis or not?

Kevin: Yeah. So, you can utilize structured interviews. What I would be cautious about and I suspect your college would be cautious about, is the time forwarded to them in their space. Not structured screening, but structured interviews oftentimes are more than 20 minutes. If you become proficient at it, then yes, you can kind of move to it quickly. If something takes 40 minutes to do, I don't know how well that fits in the context of traditional outpatient clinic, but you can have a checklist that is inquiring of the core symptoms.

Paul: That's great, that's exactly where I was hoping to go. I think we're heading towards, let's say, Ms. Jones, we decide we get through a structured interview, we have an administration that gives us 45 minutes to go through a structured interview in the office and we devote a setting, a visit just to that. It seems like she probably had some childhood symptoms, her symptoms are consistent with ADHD we want to treat, I guess before we drill down into the treatment, which I think you actually gave us a great start on. I did want to ask if you had a sense of how concordant self-reported symptoms are with the diagnostic tools. Like how often do those things line up? I don't know if you can answer that with a specific number or not, at least in your experience, if someone self-diagnoses themselves of ADHD, how often is that consistent with what you're finding in the office or even just in your experience?

Kevin: So, don't have great data on this. However, just from clinical experience and being very mindful, the majority of my clinical experience is in a dual diagnosis setting. I was in more of a generalist psychiatry setting. I would say that there was a good percentage of patients who might hint at maybe they're not actually bringing it up, but I'm then doing a review and I'm doing a screener that hint at elements of ADHD. There is a subset of patients who actually don't want the diagnosis, don't want to be on stimulants, terrified of the fact that they're talking to a psychiatrist. Those patients get initiated on it and find the benefit. I'd say that is the majority of the patients that when you find that there's actually an issue, you're doubtful about initiating the medication and alert them to what the potential side effects. Most will find the benefit.

Matt: Because you mentioned the long-acting stimulant medications seem to be where the evidence is now. I was trying to get wrapped my head around this because I just really don't have a lot of experience treating ADHD. I have some patients that were on them when I met them and I'm just continuing them, but I haven't really made the initial choice. That I'm hoping to get some insight into that. I understand there're some nonstimulant medications that can be used for ADHD, but the stimulant medications. How many stimulants are there that we should think about? I know there's like short, intermediate, long acting.

Kevin: The way that I explain to patients, medications that are FDA indicated for ADHD, we broadly have three buckets, within the stimulus, there's two, amphetamine base and methylphenidate base, and then there're nonstimulants, of which there are several medications.

In terms of the kind of first-line methylphenidates, they tend to be the softest. The kind of grandfather of methylphenidate is the one that most people will have heard of or know is Ritalin. Now, that's not the first methylphenidate extended-release long-acting that I choose, but just in terms of name recognition for patients, Ritalin. When we talk about amphetamines, again, mixed salt amphetamine, the name recognition that patients will often think about is Adderall. Just to orient patients to the different types that's what I initially will say.

In terms of methylphenidates and this is also true for amphetamines, there are extended-release, i.e., long acting and then there are short acting. Within methylphenidate in the long-acting realm, there's what we call prodrug. The prodrug and the methylphenidate is dexmethylphenidate, which has a brand to it, but generally, you can start with just methylphenidate extended release. Now, the challenge here is that sometimes actually insurance, unfortunately, will dictate to you which one you're going to choose. For instance, in Massachusetts, within the panel of methylphenidate, they said that you can try some patients that are on Mass Health or Medicaid. They have their kind of four that they want to see you try. I would suspect that in our listener's respective states if they actually just go to their Medicaid formulary list, there's likely a subset of the stimulus that you actually would need to try before going to one of the newer ones that people might hear about that they can take at night and has a special release formulation that doesn't release until the morning.

Matt: Well, I want to try to summarize a little bit of this. We talked about, there's methylphenidate and then there's the amphetamines, and there's a bunch of different flavors of those in general. We're going to be somewhat slave to the formulary that we're dealing with. We will kind of get used to those. The long-acting formulations are what you would recommend if we are able to at least start. We're going to kind of start low, go slow, check for side effects and adjust.

Kevin: Yes.

Matt: That seems to be the gist so far.

Kevin: Another nuance here. In terms of the most long acting are capsule forms or tablet forms. Most of the short acting are tablet, i.e., crushable. Just in terms of thinking about the substance use world, I know that Paul that's an interest of yours, that's an interest of mine. That's another way, again, mitigating risk and concern for patient care. Why there's an option of doing the long acting is the idea of when you open up the capsule of a long acting, there's just literally hundreds of beads. That's much more difficult to utilize in an inappropriate way. Now, dovetailing into the dual diagnosis world, there are nonstimulant medications that are FDA indicated for ADHD and there are four now, guanfacine, the extended-release version, clonidine, the extended-release version, atomoxetine, and then a newer one, viloxazine V-I-L-O-X-A-Z-I-N-E that's the newest one, which actually when you look at the mechanism of action is very similar to bupropion.

And bupropion itself is actually one of the medications that you would think about as a second or third line for ADHD. The nonstimulants, the way that you would get to a nonstimulant in a traditional fashion in terms of like an algorithm, so you've tried stimulant number one. You've tried to optimize it for whatever reason a person is not comfortable with it. Whether that's

starting out in the methylphenidate or starting out in an amphetamine. You've tried to optimize and perhaps the second stimulant assuming that you've gotten there, you've tried to optimize in the same class. They're just intolerant headache, abdominal pain. Okay, let's switch classes. Let's go from methylphenidate to an amphetamine or if you happen to be amphetamine, going to methylphenidate, you're trying to optimize. A person still saying this is just not it for me. Now, instead of the headache and the abdominal pain, they're talking about irritability and they just recognized that they're just little bit more on the edge when they take it.

You say, okay, well, we have these nonstimulant options. That's where, again, for the nonstimulants, the way that I tend to think about it is they're particularly good for inattention, which again at the adult patient population, hyperactivity is likely not going to be the issue at hand. There is really good evidence for guanfacine extended release or clonidine extended release. Now the side effects to be notable are hypotension. You got to tell people like, hey, have a cup of water by your side when you're getting up, feet squarely on the ground. So those are two and then atomoxetine, in terms of atomoxetine in adults, there's actually a fair bit of evidence in the adults that have the neurodevelopmental conditions that started out in childhood and that can be rather helpful whether that's atomoxetine by itself or atomoxetine paired with one of the other classes of stimulants that we mentioned.

Even the guanfacine or clonidine actually can be paired with the other stimulants in so much as the person. Let's say that their main issue that they're noting, again in the adult population of palpitation and they suspect that maybe their blood pressure is rising. You have a good rationale as to why to pair a guanfacine with a methylphenidate. The viloxazine is interesting in so much as in its study that prompted it to be FDA indicated, it actually improves concentration, which is very different than the atomoxetine, clonidine, or guanfacine. This is actually a nonstimulant, but gives you a seemingly stimulant effect. We are talking about earlier, had a patient months ago, adult male, who happened to have a cardiac event not related to substances. It actually was just genetic history in the family and had a diagnosis of ADHD, had been on stimulants from teenage years. Have been on methylphenidate, had been on amphetamines, had been on atomoxetine.

It was like his primary care provider said, "Hey, you can't take stimulants anymore." He knew he needs to function in his work, in his home. This is where the evidence for viloxazine is that it happens to be the one nonstimulant that doesn't affect blood pressure. There were no cardiac events or adverse reactions in the study population. "Hey, we're going to try this." Here's what's to be expected. Almost seemingly like the study within the month period of time, he recognized "Oh I can concentrate." He did say it was different than the stimulants in so much as they didn't seem to be off/on switch, but he recognized that as the day progressed, he was able to focus much better. That's one I think will prove to be beneficial over time just as we get more and more evidence.

Paul: Kevin, I want to go back to the psychostimulants since it sounds like when given the option that's going to be our first line medication. I'm wondering before you prescribe is there any laboratory testing or any physical examination screening that you do like should these patients get a TSH? Should they get an EKG before you start? I imagine most of the concerns are cardiac and hypertension related. What kind of pre-prescribing workup should we consider, if any, before we start these medications?

Kevin: There is inquiring about cardiac history both for the person as well as familially, so it should be a blood pressure checked. In terms of other biomarkers, it's not inappropriate to do a general screen of things that, again, could be associated with other mental health conditions. TSH wouldn't be inappropriate, but it's not definitively required that one gets a TSH. You do want to get blood pressure free and then also as a person is taking it regularly, inquire about okay, hey, assuming that this is a virtual meeting, asking them when was the last time they checked their blood pressure. If it is in person, they're definitively getting it and documenting what that is. That tends to be the measure that we most want to have on file in terms of ensuring that there isn't anything adverse happening. The evidence would suggest that the blood pressure rise is not significant. Again, if someone's already borderline, then yes, you do want to make sure you get that.

Matt: The patient we presented you is 23 years old and part of my question is because I have a bunch of patients who have been on these medications for 10, 20, or maybe 30 years in some cases. What's the end game? This is a chronic condition. Do people tend to grow out of it when they get to their 60s, 70s, 80s. Do we stop these medications or taper them off?

Kevin: Yeah. So, this is a good question. I generally describe it as or suggest if you find it beneficial whether that's for work or otherwise, because, again ADHD in theory should not turn off, then perhaps there are Saturdays and Sundays that you would take it because you still have things to do. Now, if you want to take a medication holiday as some might call it because the holiday season is arriving and you're going to be off of work, you're on vacation, it is okay to not take the medication. Again, presuming that the things that require executive function have been planned already and there isn't a demand on you to need to be as alert as you would be. That's just to say that people can, again, not necessarily take it on a Saturday or Sunday or if there's a planned trip or vacation, they don't have to take it

In terms of some of the other evidence, this is in line with the idea of do I take it or not take it? There is good evidence about executive functioning, attention, and driving. Persons who end up in motor vehicle accidents because they were not on their medication. Sometimes just by virtue of the severity of the condition, it is, "Yes, you should take this every day," and if you get, again to an optimized dose, it should be okay that you're consistently taking it as long as we're tracking that blood pressure. Much the same way the kind of inquiry would be if someone were to have diabetes and they need to be on insulin, we're not really saying, well, how long do we have to, you have to do it as long as the person has the condition. We know that if there wasn't effective treatment, they'd be suffering from whatever the condition is. In this case, ADHD.

Matt: Sure.

Kevin: As people do get older. Thinking about the time that I have engaged with geriatric patients, again, what is or isn't the cognitive demand on them might indicate whether or not to continue a stimulant or not continue a stimulant and this is kind of getting into some nuance. Sometimes, just you might initiate a stimulant for the sake of trying to stimulate some cognitive activity in certain types of geriatric patients. Overall, there's no guidance on, it's only for five years or it's only for ten years. It is for the duration of the time that the patient has benefit too.

Paul: One thing I want to ask about, many things I want to ask about. I could do this for the next 7 hours, but I guess one thing that is probably important to bring up now is, we were talking before we started, I think in my training, someone had to have, I don't know, stone tablets that were inscribed by God saying that they were previously on methylphenidate or they needed something like an act of congress or something for us to continue the medication because there was just a such concern for diversion. I guess my question is my longwinded wind-up for this is how are you using urine toxicology if at all to guide management? Like, is that something that you're using to track adherence to treatment and concerns about comorbid substance use? Secondly, what other steps can we take? Well, I guess how worried should we be about diversion and what can we do to kind of mitigate it?

Kevin: The evidence here would suggest not to do random spot urine testing. Unless, again, if a person is in a substance use program and again, the role and rationale as to the use of the urine test was explained to the patients as to the why, then yes it could be utilized. For instance, within the program clinic that we run, yes, there are some patients that do agree to urine testing and oftentimes what we're looking for is actually not the breakdown products of the methylphenidate, or we will see that it's there but that is not why we utilize urine testing. Now, if there's a medication that we want the patient to be taking because they have another condition, we want to see breakdown product of naltrexone, for instance, we want to see the breakdown product of buprenorphine. For those conditions, that is the rationale for the urine testing.

Oftentimes, I know sometimes the frame harm reduction tends to sometimes be misconstrued, but you can actually use urine testing in a harm reductionist kind of way in so much I've had patients who only thought they were doing one thing and because they're getting the urine testing and we've explained, I'm not using this to tell a probation officer, I'm literally using this for objective data to know physiologically what is inside you. I've had patients who have indicated that "Oh, I intended to engage in use of cocaine." I say, well, I'm going to show you there's literally no cocaine here. "Oh, but there's fentanyl that showed up." Fortunately, you have been taking buprenorphine or you have been taking naltrexone and they will say, I knew it wasn't because I didn't get the feeling that I thought I was going to get or there's someone who again intentionally wants to engage in cannabis or marijuana and something else shows up.

In the northeast, particularly in Massachusetts, I believe the data would suggest now if it's a street substance, more than 70% chance is adultery of something else. That's where the use of urine toxicology is important. Not so much if someone just has ADHD and that's not why we're using.

Paul: Great. In terms of the diversion question, I guess, how concerned should we be? I mean, you mentioned using the PDMP just to confirm past prescribing history. Is there anything else that we should be thoughtful about?

Kevin: Yeah, the PDMP is critically useful right now. I think the other thing to be cautious of, right, so if it's the first time that you're prescribing it, and if your clinic has the space to do this right, perhaps you don't need to necessarily prescribe the full 30-day dose and you initiate a 14 day and you see how that has gone to person. In terms of the diversion, again, it is very less likely that people will be diverting the long-acting because again the way in which the capsules inside work, they don't work immediately. If you've now established good patient-physician

relationship trust. You hear about somebody who has benefited from the morning dose. A lot of patients do have to work doubles or have two shifts. This is where either consideration of "booster dose" comes into play and the booster can be short acting.

Here I will be very nuanced and say, "Okay, how often are you doing the double?" Because I hope you're not doing the double every day. I might then tailor how many boosters I give to indicate that yes when you do the double, you can take the booster. That's where again, in a specialty clinic, I'm not just automatically saying, "Oh, you get a booster every day." It's 30 for the booster and 30 for the long acting. It might be 30 for the long acting, it might be 15 for the booster. Because again, if you're not doing that on the weekends, generally you probably don't need that. This is where I get really detailed into the workflow of the person, when I say workflow meaning, I just generally what they need to be doing.

Matt: Is the booster dose that you discussed also, let's say they're on list of dexamphetamine, which is a long-acting formulation, and they took it in the morning with the booster dose be the same formulation, also a long acting and they would just take it later in the day?

Kevin: So again, this is a nuance here. Classically, it's long acting and short acting. The thought is that the long-acting bridges the person or covers the person. I'm just going to say 8:00 to 0:00 and the person recognizes "Yeah 02:00 doc." I really got to put a lot of effort into trying to pay attention. This is where you might say, okay, "Well, let's take the booster, but not at 02:00, take the booster at 01:00 because we just know the onset. As the long acting is finishing, you take the booster at 01:00 and I know that an hour later that's going to start to have its effect. The short acting is classically 3 to 5 hours depending on the medication.

Matt: So, it's not messing their sleep up?

Kevin: Yes, it's not messing their sleep up, but it is helping them in the case that they have a report that they need to just get in, they want to study. Again, there's some other activity that they need to do where they really do need to be on. That's where you can put long acting than short acting. There is a subset of patients, but again, this is not the majority that might take too long acting in so much as the long acting does not negatively impact your sleep. There are some patients that I have that know what their physiology is. Also, in terms of certain types of substance use conditions, when we're thinking about patients that might have had a methamphetamine use disorder, other types of stimulant use disorders. It actually can be efficacious to prescribe the stimulant in so much as it's preventing them from seeking it vis-à-vis the street where there's other harms and you might have to prescribe rather high doses just in so much as the street versions of some of these substances supersedes physiologic demand.

Matt: Sure.

Kevin: You might be at the upper end but for the fact that the person is coming to the clinic and being engaged in care. There still are other aspects of care that you can be helping them with. It's not to say that somebody that has, again, a stimulant use disorder, cocaine use disorder, or methamphetamine use disorder cannot be prescribed a stimulant. Again, this I would say should be within the purview of someone. That's what they do. They treat dual diagnosis. They treat substance use disorder. They have a team because that patient clientele profile would not be

appropriate just for a doc who does not have other clinical ancillary supports that are also checking in with the patient. Because if you're part of a substance use program right, in a clinic, well, classically there's a nurse who's checking on medications, clinical social worker, maybe a team of clinical social workers who's engaging a person in individual therapy, motivational interviewing, in addition to them, yes, the prescribing that might happen from a pharmacologic standpoint. Again, it's not to say that's impossible, but that's not necessarily the patient profile for the, "Oh, I prescribe and then I'm just going to see you in two months," it's likely somebody that you're engaged with them and they're part of your clinic, again, getting other services somewhat regularly.

Paul: Yeah, I think if I had a patient with a history of stimulant use disorder and who had concern for ADHD that's someone probably that would be well outside of my comfort range, I think I would probably seek more specialized care. But I guess if there was someone, say, who has opioid use disorder and has been stable for years-- and I feel like this actually comes up a fair amount and then shares that they have a prior history of ADHD and they were on medications before. Can you talk me through your approach? Is that an absolute no go to do just like a stimulant and would you start with some of the nonstimulant stuff or is it a case-by-case basis or what's your overall approach for someone with opioid use?

Kevin: There's no hard line of, "Oh, you have opioid use disorder, severe opioid use disorder, moderate opioid use disorder," that I would feel compelled not to prescribe the stimulant. Again, have we made sure that the opioid user disorder is managed as best as possible as it can be? What I say is there's no hard fast rule that says no just in terms of any kind of the principle that we have any time that there's evidence informed care, evidence informed prescribing practices that keeps the person engaged in care like that is what you should be doing.

Paul: I feel like in my limited experience, it's funny, the ADHD declares itself once they're stable from their opioid use standpoint. Once they're in a position where they're actually attending their job that's actually where actually I'm having a hard time focusing on the work that I'm now able to do because my opioid use disorder is well managed. I think that's the circumstance I see time and time again.

Kevin: It's challenging and I greatly appreciate the primary care docs that do take this long because you all prescribe more psychotropics than psychiatrists do. I know the amount of patients that you're seeing, the kind of time crunch. I'm appreciative to be of any kind of help and service in educating. Again, my wife is a hospitalist. She poses these questions. I consult her all the time. This comes up and hopefully, this has been helpful.

Paul: Great. Matt, do you think we should move to take-home points?

Matt: Yeah, absolutely.

Paul: All right. Kevin, anything you think our audience should absolutely have taken away from this? What are the key things you like our folks to take home?

Kevin: Key points to take home when thinking about ADHD in terms of medications, stimulants, methylphenidate derivatives, amphetamine derivatives, you should probably be very

comfortable to know what's on the formulary within your state's insurance plans. Long acting as first line between long acting and short acting, so long acting. The nonstimulants, the guanfacine, clonidine, atomoxetine, and viloxazine. The first three are actually rather helpful for inattention, but don't particularly help with focus. The nonstimulants that can help with focus, at least for the study, is viloxazine. in terms of mitigating risk. This is why you have the PDMP. This is why you can't put initially on the e-perception refill one, two, three. The person is going to have to come back. If a provider is in the space of substance use disorder, this is where I think a referral to an appropriate clinic would be appropriate because there are nuances as to when to provide first-line agent versus when to provide a different line agent. Those would be some of the take-home points that I think the audience should come away with. This is challenging, but I think when we do it well, patients really do benefit.

Matt: We will be back with our lightning round.

[music]

Matt: We'd love to hear a hobby or interest you have outside of medicine, at least as our first question. I'm sure Paul is going to have some other questions for you too.

Kevin: Yeah. So, thanks for having me on. In terms of hobby or interest, I am somewhat of a burger connoisseur and any state or city I go to, I kind of lookup top 10 burgers and try to get a really good burger. My wife won't like that.

Matt: This, seems like a really worthwhile hobby, Paul. I got to say, I've returned to eating meat again, Paul, and I'm back on the burger train, Paul. So, me and Kevin, if I'm ever up in Boston Kevin, I'd love to grab a burger or at least get your recommendation where to go.

Kevin: Definitely you can.

Paul: Have you had burgers in Philadelphia? Not an important question. If we're helping Matt out, is this a chance to rank?

Kevin: Yes. Interesting, Philly was the first place that I actually had five guys and this is probably like a decade ago.

Paul: Good choice.

Kevin: I remember eating it and shortly thereafter being on the couch, just taking a good nap.

[laughter]

Paul: That's really the ultimate sign of a quality hamburger, really?

Kevin: Yes. Not knowing a regular was a double at the time.

[laughter]

Paul: Yep, a good nap and a pervasive sense of shame and, you've done, right. [Matt laughs] I always like to talk about any piece of pop culture or actual culture that you've enjoyed recently. Do you have any book, movie, TV show recommendations you like to make for our viewers?

Kevin: Yeah. In terms of a book, I'll mention just two, there's *Thanks for the feedback*, this is by Douglas Stone and Sheila Heen and it's a really good book in terms of just understanding how to be receptive to feedback as well as giving it and just giving the audience. I know there's a lot of trainees who listen. I think it's a really good book. The other is *Think Again* by Adam Grant, which it's very hard to learn something new and then particularly in our field, how do you unlearn something and the challenges around that? So that's what *Think Again* is about. Those are two books that I recently read that were particularly interesting.

Paul: Excellent. I think this is the second or third time I think *Thanks for the feedback* has come back, right?

Matt: I believe so, yeah. I could probably stand to read both these books, actually. These both sound like right up my alley.

[Curbsiders theme music]

Paul: This has been another episode of the Curbsiders bringing you a little knowledge food for your brain hole.

Matt: Yummy. [Paul laughs]

Paul: I feel like your heart wasn't quite in that one. get your show notes at *thecurbsiders.com*. And while you're there, sign up for our mailing list to get our weekly show notes in your inbox plus twice each month you'll get our Curbsiders Digest recapping the latest practice-changing articles, guidelines and news in internal medicine.

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Paul: And Matt as always, I remain Dr. Paul Nelson Williams. Thank you and goodbye.

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