Quick Takes
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HOSTED BY DR. DAVID GRATZER

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Exploring the future of education with Dr. Sanjeev Sockalingam

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[Musical intro]

David Gratzer: It's tough to stay current with the latest in psychiatry. Personally, I read a handful of journals, including the *Canadian Journal of Psychiatry*. Every year I make time for conferences, and yes, I listen to a podcast or two. Continuing medical education or continuing professional development, to use the newer term, is of course, important to me and you as clinicians, but it's also important to all of us collectively as we try and make mental health care better. How has CPD changed? What does the future hold and how will this improve your ability and my ability to stay current?

Welcome to *Quick Takes*. My name is Doctor David Gratzer. I'm a psychiatrist here at CAMH and today we're talking about CPD. Our guest, Doctor Sanjeev Sockalingam. Doctor Sockalingam is of course the VP of education here at CAMH. He's also the CMO, a full professor at the University of Toronto, and he's the author of more than 300 papers, including perhaps a couple on this very topic. Welcome, Doctor Sockalingam.

Sanjeev Sockalingam: Thank you for having me, Doctor Gratzer.

David Gratzer: It's good to have you back. Now, before we delve into the big stuff a little bit personal. CME? CPD? Am I a dinosaur if occasionally I use the term CME?

Sanjeev Sockalingam: Well, I think maybe not a dinosaur I would call you a historian, maybe. CME, I think still people do refer to the term CME, continuing medical education. Continuing professional development is really a more holistic type of term that encompasses much more. You may even hear continuing health professions education. There are many kinds of words and terms used, but essentially this has to do with lifelong learning. Like what are we doing to keep our skills, our knowledge, and our awareness of what's new as healthcare providers in clinical care.

David Gratzer: And to start with you personally, obviously you want to stay current with regard to your clinical work. You're also an educator and a researcher. What do you do?

Sanjeev Sockalingam: So, one is I have to say, you know, maybe I'll start off before I answer your question, Doctor Gratzer, just by saying I probably peaked my pinnacle of knowledge maybe a year after I graduated psychiatry residency. And may be true for many of us. Maybe not yourself because I know you keep very up to date, but for many of us. And it is very difficult to stay abreast of what's new, what's current. There's so much information coming out and research that we know. And also, huge lags. Whether it's 17 or 18 years before science gets into practice.

So, what do I do? All right. First of all, don't panic. Right? That's the first thing. Never panic in these situations. But I think what we've learned is over time, you've got to figure out what works for you. And for me, it's built around my practice a little bit. So one is, you know, don't throw out the baby with the bathwater, as we say. So, conferences still have yield for me for at least networking and being aware. Am I walking away after a conference knowing 100% of everything that I listened to and participated in? Probably not. But I might find a few tidbits or talk to someone I might actually glean some insights about something I want to learn more about or integrate into my practice, so I think that's one. The other is I also use things that synthesize information like blogs, podcasts or posts. For example, *Reading of the Week*, Doctor Gratzer, might be familiar to you, is a great summary of key articles. And there are many things that are analogous to Reading of the Week that are out there that could be used to provide you little snapshots of what's relevant and what you might want to read and learn and bring into your practice. And then maybe the other component is whether it's research or teaching, you know, my students, the work that I do requires me to be up to date on some of these things, have those discussions, and probably challenges me to read more or learn more as I identify some of those gaps that I have in practice.

David Gratzer: Do you think it's actually harder to stay current than it was in the past? As you know, the commonly quoted figures that there are 30,000 journals of medicine. So, if one were to sit down and read just one paper from every medical journal today, it'd be 100 years to cover them all. And of course, then there's next month's journal issues. That's glib, because I don't think any of our listeners are looking over vascular surgery journals and the like. But the world of publishing has changed. We have our traditional journals like the *Canadian Journal of Psychiatry*. We now have online journals. We have updates, clinical guidelines, reports. I mean, there's just so much more literature.

Sanjeev Sockalingam: I think you are correct. It is probably harder also because for all the reasons you talked about. 30,000 journals, that's a lot of noise when I want to sift through and find the pertinent articles, the ones that are most meaningful and most impactful to my practice. So of course, I would go to things like the *New England Journal* or *JAMA* for some of those big-ticket papers or trials that I need to know about that might impact care. But beyond that, and I'm starting to think about my practice, I'm a CL psychiatrist I work at different interfaces, it's hard for me to figure out, do I go to this journal? Where do I read online? Am I going to get misinformation? So there's a lot of noise and things for us to decipher. So it's hard to know what's going to be high value, high return when we're searching and reading and reviewing materials in our current context.

David Gratzer: So let's pivot a bit. We've talked about our own efforts to stay current and thinking more on a system level and thinking more about CPD in general. What are some of the changes and trends we've seen?

Sanjeev Sockalingam: Yeah, I think there's some work. And a lot of this comes from literature and research, from the early part of the pandemic to the later phases of the pandemic and in our recovery period, including work from CAMH and our teams. That really has shown we of course, I'm going to use the "P" word, pivoted quite a bit in terms of CPD, much like in clinical care. So yes, I think many people were using virtual or online or e-learning beforehand, but there was an exponential increase in that. And as a result of that, we were forced to adapt to it, learned how to implement it, increased our technological infrastructure because we had to in those contexts. And it wasn't the worst thing. We were still able to learn and to communicate in that context. I would say an offshoot of that is we also learned that, you know, other than conferences, there are other ways we can leverage information in what I would call like microlearning, micro-doses of education. So quick videos, podcasts started becoming a bit more common. Other snapshots, online resources, for example, websites, all of those things are quite – social media as well another thing that also increased in terms of transmitting information – all with pros and cons. So that's one component.

The second component is we also saw a globalisation of CPD right. We were no longer confined to locations. We weren't necessarily going to conferences in places or workshops in our communities that once you go online, you can have many people across the world connecting and diversifying our perspectives. So there was sharing of information, globalisation that was happening as well.

And I think there were technological advances, including in simulation, I'll speak of CAMH. At the Centre for Addiction and Mental Health, our simulation team was really growing right at the time the pandemic hit, and we had all these ideas about bringing people to our hospital to train in these new simulation centres and, contexts, and we flipped to virtual reality. Which was a novel spinoff, but it also was very practical in how we scale and spread some of our simulation and high intensity learning. So those were some of the kinds of offshoots of where CPD emerged as part of the pandemic. And I think as a result of that, we've continued to see that momentum where we're really stuck now with one of the questions that we're still trying to answer is like, how do we effectively, using education, science and theory understand and deliver hybrid CPD that is both in person and online? And what are the pros and benefits and for whom? And what context should we be using completely online versus in person? And I think we have some insights, but maybe not fully developed as the research is still emerging.

David Gratzer: "Some insights." What do you mean?

Sanjeev Sockalingam: So some insights would be; I think there's a definite need for community connection, and so if you're developing CPD events where you want to be able to bring people together to learn from one another, it can be harder, especially if there's a lack of safety or familiarity in an online community to do these, especially in one offs or in short kind of courses or programming. We have the ECHO program, which is out of New Mexico and through Canada and through our context here at CAMH. And ECHO does this. You never meet in person, traditionally. And it does this because there's a community. It's structured in a way where people understand each other. And it's based on education, science and how we use real world cases to really bring people together to understand the different perspectives in that context. So it can be done, but it is a bit challenging if you are to do these for especially short bursts or larger kind of communities where it can feel more passive in learning and difficult to maintain that trust and that intimacy that you need for some deeper learning as well.

David Gratzer: I mean, looking back, do you see the pandemic as a major turning point, that maybe the turning point of the 20th century in terms of MedEd?

Sanjeev Sockalingam: I think so. I think we all knew that we needed to make a leap at some point, and it unfortunately took a pandemic to get us to realise that we could do so much online, even though there were, again, not that people were not doing this online or e-learning before, but to really accelerate it and challenge it and study it. And as a result of that it's no longer considered, you know, strange to be doing hybrid conferences or things of that sort. So we aren't going to be going back, after what we've learned in the pandemic, but it is how we integrate all these different resources. Whether it's online learning, these smaller learning bites, whether it's videos – understanding people learn in different ways — using technology, and also limitations that come with that as well.

David Gratzer: We're talking about how education has changed over time. I'm stunned by the fact that we're, past the two-minute mark and we haven't talked about AI yet.

Sanjeev Sockalingam: Of course! So artificial intelligence, let's talk about artificial intelligence. Never a good podcast if we don't bring up AI at least once. Um, so here we go. Um, on a serious note. So here we have two parallels: the virtual and technology advances from the pandemic, and the growth of AI over the last kind of five years in medicine, we see a plethora. Obviously, the AI was there before, but we really see an uptake in this coming to the forefront in recent years.

And so how has AI affected education? One of my former medical students now resident in the program, Kenya Costa Dookhan, actually led a systematic review with our team here to look at how AI is used in non-procedural or surgical types of education programs or training. And there's a few ways. So one is we think about AI, and I'll use ChatGPT as one example of AI, there's increasing literature that AI has been used to help develop curricula, and that could be cases. So a lot of studies that are emerging now where, you know, you and I, if we wanted to create an educational session, whether it be for residents, medical students or colleagues might want to use a case based learning approach, which we know has a lot of evidence behind it, and we would be at home writing away at these cases, trying to edit them. But we know now, with a few prompts and some guidance in ChatGPT, you can actually create some case scenarios that are pretty good.

Now, do they need to still be reviewed by a human? Of course. Because, you know, we haven't gotten to that and there are possibilities of errors or hallucinations that might occur with ChatGPT and other comparable, AI platforms, but I think it is sped up how we might develop these scenarios. So that's one example. The other is an assessment and evaluation. So we take these exams and there's multiple choice questions and we need to create some of these in a robust way. There are tools now that and prompts that people have developed very robust, questions that perform comparable to human created and generated case scenarios. And so I think that is also helpful. And the last piece where we've been investing a bit is can we use AI in education when we get evaluation data? Like, you know, we used to report on our happy sheets how satisfied people are, but can we look at all the qualitative comments that are put in a lot of the ratings that we might get to come up with a synthesis iteratively that can help us understand, is our course performing well? What should we tweak in this course? How can we improve it? Um, and if we can do that quicker and faster, as we repeat and provide education, we can get better and better to meet the needs of our learners and trainees.

David Gratzer: Let's jump ahead a couple of years. So ChatGPT is now the most downloaded app in history. Tremendous enthusiasm. Hundreds of papers talking about CPD, and MedEd in general, and ChatGPT. Let's jump ahead, say a decade. I've talked about the way I stay current. So, you know, we've got some journal reading. We've got attendance at conferences, smattering of podcasts and synthesis. What might my way of staying current look like a decade from now infused with AI, perhaps?

Sanjeev Sockalingam: Well, the possibility is quite I would say, exciting and scary at the same time. So one, I would say is, and this is been a part of a lot of the research I've been involved with, is we do a poor job using data around us to inform our learning. What does that really mean practically? So you know, when I choose what I want to learn, it's usually on reflection on my ability to understand I'm having a challenge in a clinical situation I should learn about it, right? We know that doctors and human beings in general, are not always so accurate on knowing where they have gaps in certain areas, and maybe believe that we might be a bit more proficient than we actually are in certain areas. But wouldn't it be amazing if we had data in front of us that said, you know, "you're not analyzing our practice in some way. You're not using the right antidepressant algorithm, or you're too slow in recognizing signs of when you should change medication X or your ability to provide psychotherapy X in this context, is not really adhering to the best practices in this modality." So if we could get that feedback, whether it's from electronic health records, audits of how we deliver our sessions or communication style, it could inform how we actually learn, right? Like I would say, get a report card and say, well, maybe I need to focus a little bit on learning a bit more about this.

I may not go to a conference. What I might end up doing, maybe I have the ability, if it's a communication style, to have a conversation with a chatbot to practice my skills over and over. I know that even now, if you turn on Duolingo and you want to learn a new language, they have a chatbot function where you can have a conversation so we could practice in that and get feedback in that way. So there are endless possibilities. And then it might then say "I recommend there's some knowledge gaps do you want to listen to a podcast related

to this? Or do you want to read this, this article? Or here's a conference that a lot of your colleagues are going to." To be able to do that. I don't think we're ten years away from that part. We are looking and there are systems, and again, at CAMH one of the things we're hoping to launch are our CPD kind of academies or programs that actually understand your practice profile and then start to recommend what you might need to learn about because of your clinical practice or areas of interest, but also potentially self-identified gaps as well.

David Gratzer: Now that all sounds pretty good. So I would put in less time and have more efficiency of my time. But you alluded to some concerns, some downside as well. Some scariness. Tell me about the scariness.

Sanjeev Sockalingam: Well, the scariness might be what if, all those points of data that I'm getting in doesn't actually capture the true meaning of my competence as a physician. Right? And maybe there are limitations on how it's interpreted or analysed. We know about the deficits in like, cultural and ethical boundaries for AI, and so again, for learning, if you are treating diverse patient populations, there may be biases that may not actually fully capture your gaps or may recommend things that may not be helpful for those patient populations. So those are some of the initial limitations. The other piece is as we piecemeal education and learning like this, we don't fully know how we're integrating it and learning from that from that standpoint. Again, if I take a podcast recommendation, if I listen to it at two times speed, am I actually going to be processing and integrating that effectively? And there is some research being done to look at how people process. But I also think there's a lot of personalised and individual characteristics on how people learn and how people process information. That also plays a role in how we use it in CPD and changing practice.

David Gratzer: Doctor, as you know, it is a *Quick Takes* tradition that we close out with a rapid fire, minute. A handful of questions. Are you ready?

Sanjeev Sockalingam: I'm ready as I'm ever going to be.

David Gratzer: Okay with that unfettered enthusiasm let's put a minute on the clock. Um, something that excites you the most about CPD.

Sanjeev Sockalingam: The integration of technology, including AI.

David Gratzer: You've talked about the lag time between discovery and practice: 17 years. Can we close that gap?

Sanjeev Sockalingam: I think I think we can. It's going to require an investment in structures, technology and our ability as people to adapt in this context.

David Gratzer: Do you see exam questions ultimately going to AI and not actually involving humans at some point?

Sanjeev Sockalingam: I think there's going to be a high dependence on AI, but I think there still needs to be some of that human touch to ensure that we're capturing some of that empathic and communication approaches.

David Gratzer: And at the buzzer, one last question. We can make it personal. You're, of course, a former organizer of the CPA annual conference. Do you see yourself continuing to go in person, or will you simply send along a chatbot in your place?

Sanjeev Sockalingam: I will be going in person because, as I said earlier, I think there is something to be said for social connection and learning with your peers in the in the present time.

David Gratzer: At the end of the day, with all this technological advancement maybe something of a hybrid of old approaches and new approaches perhaps, then?

Sanjeev Sockalingam: Absolutely, absolutely. I think we often gravitate towards what's new. But let's not forget what's worked in the past as well.

David Gratzer: Doctor Sockalingam, it's always a pleasure to have these conversations. Thanks for joining us today.

Sanjeev Sockalingam: Thanks for having me again.

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