Quick Takes
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HOSTED BY DR. DAVID GRATZER

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Double Take #6: Sanjeev Sockalingam on technology and education

David Gratzer: Joining us now on Quick Takes is Sanjeev Sockalingam who is a psychiatrist, Vice President of Education here at CAMH, and recently he became a full professor at the University of Toronto. Doctor, we're talking about technology in medical education. How are things likely to change moving forward?

Sanjeev Sockalingam: Well, David, I think it's an interesting question, because I think change has been some of the challenge in technology in medical education. As I think of some of your earlier podcasts, you've talked about technology and its use in clinical practice. And I think in health professions, and specifically medical education, there's a need for us to consider how we prepare the current and future clinicians to be able to use, adapt to, and incorporate technology into our clinical care. And then with that, how can we use these same technologies that are currently in practice, and as they advance, to better create more accessible, interactive, practice-based types of training opportunities so that we can measure our outcomes better in terms of changes in provider practice, and quality improvement, and better patient care overall.

David Gratzer: Let's talk about your first point. Patients are doing therapy differently. They're learning about care differently. How should education adjust?

Sanjeev Sockalingam: I think we probably don't do a great job in our medical school training, for example, or residency training with our psychiatry trainees. But, more broadly, in postgraduate education and for our existing providers who are seeing patients in their practice. Preparing these students and physicians for how you might have discussions with your patients and how you might handle these challenging encounters. And they're challenging because they're unknown and they may not have experience with apps or wearables (people monitoring themselves), or even basic things like Googling with advanced search engines, websites, blogs, et cetera. So I think as people are starting to gravitate, due to access issues, due to availability for some of these things, that we need to start training our providers on how to have these conversations, be familiar about these conversations. How do they incorporate them into our practice? Are they part of our treatment plans in some way? And how can you do that in an evidence base way, but also be informed — specifically in privacy and ethical issues that might emerge.

David Gratzer: New technologies and new challenges. But you've also touched on new opportunities about incorporating some of these technologies into MedEd itself.

Sanjeev Sockalingam: In medical education we have many of those traditional kind of methods of teaching where people come to conferences, come to classrooms, they have the sage on the stage who provides that wisdom. You know, we've moved the bar in terms of using more interactive evidence-based longitudinal kinds of programs and seminars. But I do think there's unique opportunities to bring education technology to the forefront across that learner continuum. So some specific examples are things that are currently available, like synchronous types of training where people come together in learning communities or in online videoconferencing. So this allows people in their breaks to dial into those networks and have an opportunity

to share best practices, cases, and have that truly workplace-based kind of moment with their community of practice. Echo is one program like that that is being provincially launched here at CAMH. So that's an opportunity. There are things I remember in my own master's program — dialling into Blackboard, posting, getting some messages back. And there's more asynchronous ways that are evolving and I think the use of them in continuing professional development is still, I would say, early but evolving. And then I would say, more and more people have talked about simulation. I think in mental health, we're starting to catch up, but initially it was used more in surgery and more procedural type of specialties. As we think about simulation, and how it might not be feasible for everyone to come to a place and practice in a simulation lab, how we can make those more virtually available either through augmenting with virtual reality, or other kinds of digital spaces where we can start to experiment in more team based care. That's probably typical for mental health.

David Gratzer: What excites you?

Sanjeev Sockalingam: If I recall back, things like CD-ROMs and multimedia, were probably kind of the foray of technology in education and medical education. The we went to e-learning as the Holy Grail for medical education.

David Gratzer: Wait, we're not using CDs anymore?

Sanjeev Sockalingam: Well, some of us may be...

David Gratzer: No names?

Sanjeev Sockalingam: No names!

Sanjeev Sockalingam: I do think that what excites me is the possibility of using these technologies in a way that might make it more accessible for individuals. I do think things like virtual reality and online simulations, as they become more cost effective, more accessible, more open source, that there'll be more opportunities to be creative about it and use it in day-to-day education. Probably the other component, to me, is how academic organizations and hospitals use data and information that are collected in electronic health records. Or, dare I say the c-word, which is competency based education. That, as we think about implementation of these programs, there's a large amounts of data being collected about learners in their assessment contexts. With artificial intelligence and machine learning can we use that data to inform future learning? Learning improvements? Insight (give feedback) in a more readily available manner to our practicing clinicians and our trainees?

David Gratzer: One way of gauging how people are doing is exam writing. With the potential of A.I., could we be at a point where we identify learners deficiencies before the exams and address them in real time?

Sanjeev Sockalingam: That's the hope of competency based education in some of these new paradigms. I think technology would be well equipped to really accelerate how we use that in real time for our trainees. Although we may enter them online in the back end, we don't have that data sophistication to be more predictive and proactive.

David Gratzer: To tie back into what you're saying: more simulation, possibly more VR, more data, more A.I. What worries you?

Sanjeev Sockalingam: I guess what worries me is as we move to more technological kind of advances, there are concerns and risks for different professions. Maybe not so much in psychiatry and mental health, but that we will have to train our students to use technology, and that might replace some of the skills that we previously would have been teaching in that curriculum. And so I think that it's a risk that we may lose some

skills, and augment some skills, with technology to make them more accessible. We may not focus, and not want to veer too much in technology so that we lose some of those core skills, so that we understand how technology works and can assess its effectiveness. But I also see it as an opportunity to continue to reinforce compassionate care, which is the mainstay of, I would say, of psychiatric care and more person-centric care. And so I do think it presents an opportunity on how we refocus — we just have to be mindful of that balance. I would say the other issue is being able to ensure that we don't fully swing the pendulum to the point where we're embracing these technologies without being critical about potential risks. I do think that without adequate preparation of risks around privacy, we might even see issues around funding, and the same thing as pharmaceutical companies — how device companies may influence continuing medical education as well. So I think we need to be cognizant of these transits as things emerge.

David Gratzer: You did your medical education at the University of Manitoba.

Sanjeev Sockalingam: That's correct.

David Gratzer: As did I. You recall there were big classrooms there, a lot of seater block. Will there be classrooms like that in the med schools of the future?

Sanjeev Sockalingam: So I can speak to the current state and where we might go. A good example would be the revisions and reform in our medical school here at the University of Toronto. With one iteration of advances in moving into online and videotaped lectures, we saw vacancy in those large seminar rooms. You and I can both reflect that there may have been a few vacancies in our time, but probably much more in proportion now as people are watching things at six times speed at home and being more efficient with their learning. But I do think we may move to virtual classrooms where people would dial in from their respective sites. It might keep students closer to the clinical spaces as opposed to having to come into a classroom or seminar room to to hear that sage transmit that information at the forefront and might allow us for more interactive collaborate spaces both virtually and in person in those hospital settings.

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//END Double Take #6 with Sanjeev Sockalingam //