A PODCAST
BY PHYSICIANS
FOR PHYSICIANS

HOSTED BY DR. DAVID GRATZER

November 23, 2022

Sim with Dr. Petal Abdool and Stephanie Sliekers

[Musical intro]

David Gratzer: Textbooks, highlighters, lectures in lecture halls. The traditional way that we learn in health care has been, well, pretty traditional. Is technology changing that? On *Quick Takes* today we discuss SIM or simulation. My name is Dr. David Gratzer. I'm a psychiatrist here at the Centre for Addiction and Mental Health. And we've got two guests talking about the potential of SIM. Joining me, Stephanie Sliekers who is the Manager of Simulation and Digital Innovation here at CAMH and Petal Abdool who is a physician and faculty lead for simulation education integration. Welcome to you both.

Petal Abdool: Thanks, David. Happy to be here today.

Stephanie Sliekers: Thanks for having us.

David Gratzer: Let's start with a really straightforward question. What is SIM?

Stephanie Sliekers: So, I think you're opening highlighted exactly what how I would describe simulation. It's a form of learning, and in our context health professional learning, where you're doing more than just receiving knowledge, you're actually applying knowledge and learning through experience. And the way we learn through experience in simulation is we actually try and recreate the world of clinical practice and we can recreate it in various forms. We can do it with actors, in virtual reality or with manikins. And we do this with the hope of actually creating change in the real world of clinical practice.

David Gratzer: So, this is specific to health care. What are some of the projects you're working on?

Stephanie Sliekers: The most exciting project we're working on right now, I would say, which really highlights the current moment of learning in health care, which is focused on virtual learning. And right now, we're working on a project that will create a virtual reality environment, and it'll ask health care professionals to respond to an opioid overdose in a virtual reality environment. That's one example.

David Gratzer: So, you're in this virtual world, you've got – you're wearing goggles, but you feel you're in this virtual world – and there's a patient in front of you going through an overdose. What are some of the challenges that the person will face, Dr. Abdool?

Petal Abdool: To be fair, that particular project that we're super excited about is in its nascent phase right now. So, we're actually brainstorming, meeting to discuss the content of the opioid overdose virtual reality scenario. Ideally, the patient will be unconscious and the goal, the learning objectives, are how to reverse and how to manage a patient who has overdosed. And the direction for this project was really triggered by my involvement on the Quality Care Committee, which has allowed me to bear witness to many of the safety events and critical events that CAMH clients and the people that we serve have been faced with. And we know that we're also in an opioid crisis in Ontario in general. So, I think that's really where a lot of our focus is

aimed right now. And I think to go into the nitty gritty of what the patient will be doing is probably not as relevant at this point. But I think we're hoping that when we do launch this, that there will be a huge need that will be satisfied and that there will be a lot of uptake not just amongst health care professionals, but perhaps in the community as well. For families, caregivers and other affiliated organizations who need training in this area.

David Gratzer: Opioid overdose. What are you guys working on next?

Petal Abdool: So, the inspiration for the opioid overdose comes from work that was pioneered by Alison Crawford and Chantel [Clarkin] who helped us design a virtual reality suicide risk assessment for which you, David, are quite familiar because we have photographic evidence of your involvement in this. But yeah, so we're planning to follow sort of the same protocol and the same procedure in designing the opioid overdose. And to go back to your first question about the definition of simulation, GABA in 2004 coined a wonderful definition that talks about replacing real patients with artificial intelligence, which is where the VR avatars come in, or even mannequins, models, SPs [simulated patient]. And the idea is that we can create an environment that's safer, predictable, consistent, standardized, and reproducible, right? So, when you have acute events like a code blue, which is the other thing we're talking about and that we're working on, when you have acute events like an overdose, we're not putting patients in harm's way, and we're allowing our health professionals to really hone their skills and develop an acumen that can ensure that we know what we're doing when it's crunch time.

David Gratzer: Code blue, suicide assessment, overdose. You guys are busy. What's a dream project?

Petal Abdool: A dream project that I'm thinking about, and I think we know about Facebook and Meta, so one of my fantasies is, can we find the funding to get some artificial intelligence platforms to work with? Because, frankly speaking, the VR sounds exciting, but it's costly, it's resource intensive, and you need the headset or desktop to use it and the headsets run at a cost of how much, Stephanie? Like $2,00-3,000 for one. So, you see that there are limiting factors in that regard. But if we had an AI platform, right, where you could get on to your desktop and interview a person, a patient, an avatar in real time and get responses, then for psychiatry, that would be, you know, the sky's the limit. So that's something I'm investigating right now. I'm excited about.

David Gratzer: Stephanie, dream project?

Stephanie Sliekers: You've really challenged me there. I'm certain I've referred somewhere in the past to a dream that I had. But I think just a build off what Petal's described is really what virtual reality has enabled us to do, is to kind of expand our ability to offer simulation beyond the Centre, right. It's a little more straightforward. It doesn't require always group learning and, you know, it might not require as much time. So, I think to build off that what these different modalities are helping us do, these different types of simulation are helping us reach different learners, not only in our institution, but across Toronto, across Ontario, across Canada and maybe even internationally. So, I think my dream is that simulation is just kind of the way we learn, like even beyond health care, right? It's the way we teach each other. It's the way we learn as employees. It's the way the health care system learns. But it's kind of pushing learning, and health care in hospital, to a more a more kind of practical and practice-oriented approach.

David Gratzer: What is the evidence for SIM in medical or nursing education or amongst allied health professionals?

Stephanie Sliekers: There's pretty strong evidence in for doing simulation-based education in health care, professional learning. A number of ways that we evaluate our simulation education offerings are to do pre- and post-evaluations of improvements in knowledge, skills, and attitude and as well as intention to change practice. So really trying to examine not only the satisfaction or interest and enjoyment of a learning

experience, but actually how has their participation in that potentially contributing to their practice change. And we've seen in a recent offering to child and adolescent psychiatry residents,100% of them shared with us an intention to change their practice following participation in the simulation. And that's echoed in the literature, the findings that we have in our Centre versus kind of what's happening elsewhere in simulation-based education. So, we've heard from our learners, and we see in the literature that this is a desirable type of learning. I certainly think there's room for improvement in kind of what I've already described and understanding how to reach more people, how to do this with a little more ease and less resource intensiveness. But it's well received and it's the improvements and in learning and confidence are documented in the literature.

David Gratzer: What's been a surprise as you go from the idea to the reality?

Petal Abdool: I think the surprises for me, especially as I began to immerse myself into in the world of SIM, is that psychiatry is lagging behind. Usually, we've been leading the way in many things, especially like our EDI work raising awareness for mental health and how that aligns itself with medical issues so that MPA, the Medical Psychiatry Alliance, is an example of where we led the way. But with simulation the surgical specialties especially have long embraced simulation, and psychiatry has for a long time only utilized it in summative assessments, examinations using SP for interviews, and there's so much more that can be derived from the use of simulation. So, we've really been under utilizing it. Brian Hodges and Nancy McNaughton have published papers showing that there's a lot of opportunity. And our SIM Centre, myself, Dr. Ivan Silver, Latika Nirula, we also published a paper on the use of simulation in undergraduate psychiatry, a systematic review. So, we see that there is a huge dearth in the literature in terms of how simulation can benefit from an educational standpoint, from a formative standpoint. And I think we really have a lot of opportunity here to diversify and to expand. And luckily, we have the infrastructure. If you come to our grand rounds tomorrow [September 9, 2022] you'll get a tour of the Simulation Centre and see just how much we want to utilize that space for different things. Another surprise for me was the lack of engagement from a CPD perspective, you know, continuing professional development, and using simulation in that way. And that's something we're hoping to change with our code blue and code white training. So, we'll see.

David Gratzer: Is there anything else you guys wanted to talk about – besides replacing me?

Petal Abdool: I don't see it as replacing you, though, David, because you are watching them do the interview, right? Right in real time. And you're there and the patient is safe from faux pas from, you know, any errors and the and the residents are safe because their supervisor's filling out an EPA for them in real-time as they watch them interview this esoteric case that they would have never seen on your inpatient unit, although everything comes through your inpatient unit, so I don't know if that's fair. We can't replace teachers just yet.

David Gratzer: I won't retrain today!

I'd like to thank both of you for joining me in a thought-provoking conversation about today and tomorrow when we talk about education.

Petal Abdool: See you. Thanks, David.

Stephanie Sliekers: Awesome. Thanks. Bye now.

[Outro:] *Quick Takes* is a production of the Center for Addiction and Mental Health. You can find links to the relevant content mentioned in the show and accessible transcripts of all the episodes we produce online at porticonetwork.ca/web/podcasts. If you like what we're doing here, please subscribe.

Until next time.