JB: Welcome to Listen to THIS where we have conversations with people taking all sorts of approaches to studying and how to improve the quality of healthcare. I’m Jenni Burt, senior social scientist at the Healthcare Improvement Studies Institute.

 On today’s show I’m really excited to be thinking about simulation and its role in improving healthcare. I’m sure everyone listening is familiar with the idea of simulation which gives you the opportunity to experience a situation preferably before you actually have to deal with that situation in real life.

 It’s used extensively in medical education where it can provide a safe space for learners to develop technical and other professional skills. Of course, simulation for training healthcare professionals seems, particularly, timely at the moment, when educators and trainers are being forced, often, to close their doors in the face of the pandemic. But activities, of course, are still taking place within clinical settings.

 However, a more emergent area is concerned with what simulation can contribute to efforts to improve the quality and safety of care. Luckily for us I am joined today by one of the key thinkers in the healthcare simulation field.

 Victoria Brazil, you’re Professor of Emergency Medicine and Director of Simulation at Bond University and Gold Coast Health in Australia. You’re also co-producer and regular host of the Simulcast podcast which, as its name suggests, explores developments in simulation around the world. Listeners can find out more about the podcast and access all your past episodes at simulationpodcast.com.

 So, I’m going to be on my best podcast host behaviour today and, Victoria, I just wanted to know how you became interested in simulation in healthcare?

VB: Yeah, sure, thanks very much, Jenni, it’s lovely to be here and quite fun to be the podcast guest for a change, so thank you.

 How did I get interested in simulation? Look, I think as a clinician I was very interested in education as well and, like most of us, really interested in trying to get better. And in the early 2000s the emergence of the technology that mannequins had to offer meant that as a, at that point, senior registrar I was very interested in participating just as part of improving my team work.

 So, I suppose from being a participant I got a bit interested in being someone who designed, delivered and debriefed simulation and so really have worked across a range of different contexts since then, largely education for about the first ten years but, as you’ve alluded to, more recently in the area that perhaps more closely relates to the work that you do in improving quality and looking at teams and systems and issues related to how we directly target health service improvement.

 So, I guess my interest is as an educator, as a clinician and someone who is very interested in how we improve doing our work better and doing it together.

JB: We have quite a diverse audience listening so I wanted to start right back at the beginning and I’m asking first that the idea of simulation for me does bring back, and you’ve already mentioned mannequins, it brings back memories of various first aid training courses I’ve gone on over the years where the suitcase comes out and the famous Resusci Anne gets dragged out of the suitcase for you to practice CPR on. And I’ve got some quite worrying memories [laughs] of some of those sessions that I’ve been through.

 And obviously that’s not really what we’re thinking about here today and what simulation in healthcare really looks like. So, what do we mean by simulation in this context?

VB: Yeah, it’s probably a good chance, Jenni, to take a little step back through the history of this and, of course, as healthcare professionals we already have a very narrow perception of what simulation is. Obviously in other industries people have been doing simulation for a long time, if we think about airline industries with their flight simulators, people that do computer modelling, people that look at queuing theory, all of that is simulation.

 But you’re right, thinking about it from a healthcare professional’s what you describe is actually very good simulation, getting good at our CPR and our resuscitation is good, it just happens to be a narrow interpretation.

JB: I was never good at CPR [laughs], I don’t think, as a result of Resusci Anne, I’m afraid, sorry.

VB: [Laughs] practice makes perfect. But I think about it in terms of what we’re trying to do and then how we’re trying to do it. And I think healthcare simulation has broadened in both of those domains in the time that I’ve been involved.

 So, we think about what we’re trying to do, if we’re thinking about technical procedural tasks, clinical skills, then there’s a range of modalities that help us. And that is everything from the original nursing schools having an orange that they practice intramuscular injections, that’s in some methods a simulation of a clinical skill.

 At the other end of that now these virtual reality haptic enabled simulators where you sit there with your goggles on and your hands holding instruments and you have tactile feedback as you watch yourself operate on a brain or operate in an abdomen and it looks and feels like a real operation. So that kind of technical skill development is very easy for us to conceptualise.

 I guess the next area is still what I think of as vital clinical skills training but it’s in the area of communication. And in this instance, we’re more likely to have our simulator as being a living, breathing human, and whether that’s someone that’s a simulated patient but it might also be someone who’s a simulated healthcare professional on whom we’re practising our other interactions with. So, I guess communication is another broad category.

 And then the other one that I guess started to become important around the turn of the century, as it were, is very dedicated team training and the emergence of things like crisis resource management. And the whole body mannequins really were part of the move to that idea of how do we practice our team work and our situational awareness and leadership and all the things that have now crept into our idea about what makes a great healthcare team.

 So, I think all of these, the technical and procedural tasks, the communication training we’re trying to do and the team training these are all, in my mind, great examples of using simulation as an educational tool. I think where though we’ve started to look at the opportunity and the potential of simulation was to think about it now as truly a tool for directly targeting the improvement of healthcare quality.

 And people have made allusion to this in the history of simulation. So, some of the early publishing in simulation was in quality and safety journals and most of the rationale behind using simulation was if we just train great people and we train great teams then, of course, they’ll deliver better patient outcomes.

 I actually think that’s a little bit of a leap and so simulation providers spend a lot of time really trying to justify their existence to healthcare organisations who are saying, well, that’s all good but it’s still training, it still costs us money, we’ve actually got to solve real problems like how we get our people through the emergency department or how we get out patients to CT faster and your simulation training doesn’t necessarily address that.

 So, I think educational simulation is fantastic, it’s necessary but it’s not sufficient for what we’re trying to achieve in terms of improving quality. So, I guess I’ve had an interest in thinking how can we directly target our healthcare improvement, how can we directly target the things that matter to health services, and then how do we design, deliver and debrief or reflect on those activities so that we can improve what we do?

JB: So, the term simulation based interventions gets used in the literature when we’re thinking around simulation in relation to quality and safety, what do we mean by that, what does that look like?

VB: Yeah, I think it’s probably both too broad a term and possibly too narrow a term. To my mind the idea is the important thing is about having a very specific target rather than saying, oh, let’s go and do some simulation in the emergency department and that’ll make something better, like the teamwork and maybe we’ll discover some latent safety threats.

 I think the best simulation based intervention has a very clear rationale for why we’re doing this. Are we trying to improve a trine based target, are we trying to improve interdepartmental interfaces, are we focussed on changing our procedures and pathways for COVID-19? How do we actually re-look at the way we would do our operating theatre processes if we suddenly have different geography, different set ups, different rooms, if we’re moving to a new facility?

 So, I think when you think about what we’re trying to do then the job of the simulation provider is to think how should we do that, what should be our modality? Do we actually need to do more technical and procedural skills training, do we actually need to do more team training or do we need to move our simulation in situ and actually walk through some of the physical constraints, some of the equipment realities and some of the processes that we’re going to need to do?

 So, I think simulation based interventions can encompass a range of things including education but it’s about recognising for any given simulation activity are we here diagnosing what the problems are or are we trying to test solutions or actually trying to embed what we now think is our ideal solution? And I think that three step approach is how I like to think about approaching any given health service priority with a simulation based intervention.

JB: So, we’ve been talking around definitions quite a lot, I think it would really maybe help everyone listening if we thought, what does this look like in real life? Would you be able to just talk us through an example of what a simulation might look like?

VB: Sure, I’m happy to give you maybe two contrasting examples, one is a nice, little high octane, talking about major trauma in the emergency department. And I’ll take this one because this is some of the first work that I did in this which was we’ve got major trauma patients that come and we have a range of different departments and healthcare providers that suddenly now converge in the emergency department around this trauma patient. High stakes, time critical, ad-hoc teams, it’s like your recipe for how well can teams operate.

 And so, we started doing simulations that involved the entire patient journey using a mannequin and performed in situ in our real clinical environments where the patient would arrive with paramedics, they’d come into the emergency department who would have been prepping a team that included anaesthetists, emergency department staff, surgeons, radiographers, wardies or orderlies and the people who would actually be there.

 We would then do our assessments and treatments, maybe we’d even take a trip to the CT scanner and maybe take a trip up to the operation theatre where then we would hand over the patient to the team who are there, look at how we did that handover. And then now we’ve got a new team of anaesthetist surgeons and operating theatre staff ready to support them as they operate on this mannequin.

 So that’s one end of the spectrum, that’s a very complex sim that is targeting the interfaces between these teams. So, we don’t come down to the debrief and ask the emergency department registrar, why did you choose that particular size tube? That would not be the focus of this simulation.

It would be at the interfaces, who do you know what sort of injuries this patient had before they arrived, how did you facilitate the team briefing when everybody arrived so they were on the same page, how did you physically make the move happen up to the operating theatre, what kind of a handover did you do when there were 20 people came up from the emergency department and then 20 greeted them in the operating theatre?

 So that sort of a simulation is about looking at team interfaces and optimising them.

JB: And can I just ask a couple more questions because that seems like such a huge thing to plan? So, firstly, how much do people get told before a simulation is run, like the participants in the simulation how are they briefed, do they know what’s going on, do they know [laughs] it’s a simulation?

VB: Yeah, no, really good question, Jenni. And, of course, that depends on what you’re actually doing but to follow this example, yes, people definitely know that it’s on because that level of logistics you need to make sure that you can, for the safety of the real patients around us and everybody else, have it scheduled.

 I certainly know of good programmes that have a more mock code, drop in, impromptu, unannounced simulation but that, to my mind, would have a very different purpose whereas this one is definitely scheduled.

 That said, how much do people roster their staff specifically for it? Whereas the operating theatre staff really want to see how well can they mount their response with their given staffing and so for some of the people attending they’re rostered, for some of the people they really just want to do it as part of their regular work flow, and we just work with the departments as to what’s most important and what do they actually want to test in that.

JB: And you also mentioned a little bit around the reflection that might take place with participants in the simulation, what kind of approaches do you use there, how formal is the debrief and the reflection and the learning that you’re taking from the simulation?

VB: So that’s a good question, Jenni, thinking about how do we approach what could be a very challenging conversation with people from a lot of different teams. And over the six years I’ve been doing this I would say my approach has changed.

 There’s been some literature about how do you adapt some of, I guess, traditional simulation debriefing techniques to the system focussed debriefings. But to step you through it very practically I often have about 40 or 50 people come into the room, I give everybody about five minutes while we’re doing that to find someone in the room, they don’t know to say hello and to share their reactions as to how they think the simulation went. And we come back into a large group, I set some expectations about what we will and won’t talk about, like I said, not the granularity of individual performance.

JB: Sure.

VB: And then I essentially run through the facts of the case just so everybody knows really what happened and then I pick out a series of team interfaces and issues that I think are important for us to bring up. And, invariably, we talk about role allocation, we talk about communication at the interfaces, we talk about the challenges of turning the theory into practice. And although I don’t use this language with those everyday clinicians essentially examine the difference between work as imagined and work as done. Because, invariably, there’s a beautiful protocol for what should have happened.

JB: [Laughs].

VB: And, invariably, that’s not actually what happened for a whole bunch of very good reasons. And so we think about, do we need a different protocol or do we just need to find ways to remove the barriers to actually adhering to a perfectly good protocol? They’re secret quality improvement conversations that clinicians just don’t even know they’re having.

JB: [Laughs] I think that’s given us a really vivid insight into a really complex simulation. You mentioned you had a second examples as well to, again, give us a flavour of what we’re talking about here.

VB: Yeah, I think this is probably a good example because, unfortunately, as you mentioned right at the beginning, people associate simulation with resuscitation and trauma. And, as a clinician, of course, those are some of my interests but some of our best simulation, I think, has not been that high octane stuff.

 So, one of the examples we had was when we were about to start to do electroconvulsive therapy in our new hospital mental health wing. So, we had, as you might imagine, mental health staff who’d done ECT before, we had anaesthetists who’d done ECT before, but they hadn’t done it in that team in that physical environment.

 And how this started was the anaesthetist came to me and said, oh, we want to practice an airway emergency over in the new building and see what we can do. And I went, well, we can do that but why don’t we just practice the everyday list. So, we got four simulated patients and we essentially simulated them arriving for their ECT, checking in with the nurse, going in to have a simulated ECT and then moving out into the room that was going to be used as a recovery area.

 And we did that four times with four different simulated patients and, of course, we discovered a whole bunch of things that we were looking for, like there weren’t some curtains here and there wasn’t this equipment there and we needed to have a call bell here or there. So, there were a lot of physical environmental things.

 But when we sat down and we did the debrief with the simulated patients they said, you know when you’re in that little checking in waiting area you can hear everything that’s happening in the ECT room next door and it is terrifying.

JB: Oh my gosh.

VB: And so basically the mental health team redesigned their flow through these spaces completely differently before we started doing it. And it might not seem very cool but I think that avoided a lot of morbidity potentially for those healthcare consumers who may not have actually had the wherewithal to speak up at the time and I think could have actually caused significant harm.

 And I think that’s just an example of taking an exploratory approach when you go in with your simulation as opposed to saying, oh, we’re going to make sure everyone does it right, instead we’re going in and saying, let’s actually, as a group of healthcare providers, explore our space, our processes and our teams together and really think about how we can make sure it’s as good as it can be.

JB: Okay, so I think that gives us an amazing insight into two quite different examples that you’ve obviously gone through. Back to this idea of simulation as a tool for improving the quality and safety of healthcare, and obviously the examples you’ve just given have touched on all of this.

 And we were unpicking this idea around definitions a bit earlier on and I think I’d quite like to come back to that because in a lot of your published work you talk about the idea of translational simulation. We’ve had simulation based interventions, we’ve had simulation in general but transitional simulation is also now something on the scene that’s being talked about. So, can you let us know what that means?

VB: Sure, and even before I strive to give you that in a beautiful, succinct way I might even give you the background as to why I thought some terminology was necessary.

 After the concept of doing in situ simulation had emerged, so 15 years ago everyone was doing their simulation in a big simulation centre and people left their workplace to go and do their sim and that was for a few reasons but one of which was the technology didn’t really allow much other option.

 Whereas now what’s happening is with mobile mannequins and WIFI enabled technology for audio visual a lot of people have got the capability and it’s quite easy to now run simulations within people’s real clinical environment.

JB: Just like the examples you’ve talked us through obviously both…

VB: Correct, yeah. And so there became this very unhelpful conversation in the literature and in studies of comparing simulation centre based simulation with in situ simulation. And I didn’t really think that helped and I thought, well, of course, both have a place, it depends on what you’re trying to achieve. So actually, I wrote this because I think simulation should be defined by its purpose not by its technique.

JB: Okay.

VB: So, the idea was, well, if you’re doing those subset of simulation activities that are very clearly targeting, and directly targeting, a health service issue then that is potentially a translational simulation. And you might choose to do it in situ if that’s going to work, you might think that some elements of that translation requires simulation centre work, you might think that some of it will require diagnosing the issue and you might think that some of it involves actually intervening and embedded and trying to consolidate new practice.

 So really that was probably my motivation with that was to give us a lingua that was more about what we were trying to do and why we were trying to do it rather than how we were doing it.

JB: How widespread is these kinds of approaches now? So obviously we’ve talked about the history and its long history in medical education and the more recent development around its use for quality improvement, do you see this now everywhere in your simulation community?

VB: Everywhere is probably too strong a word.

JB: [Laughs].

VB: [Laughs] I think there more than a couple of handfuls of simulation programmes around the world who are now truly integrated with health services and looking to those health service priorities to be the targets of their simulation and working with them to deliver the interventions that are necessary to improve some of those targets.

 I think I see a lot of people who maybe are reasonable at running sims who haven’t yet worked out how precise their targets should be and who are doing in situ simulation and they come up with, oh, here’s some terrible latent safety threats and let’s publish a long list. But haven’t yet got the connections and the governance and the strategy with their quality improvement teams or their quality and safety teams to have a really good connection between those two things.

 So, I think there are now some people in Toronto, some at the Royal Women’s in Melbourne, the Alfred Hospital in Melbourne who I’m aware of and work with who actually have translational simulation services in their hospital that are deeply embedded.

There is obviously other terminology in the Society for Simulation in Healthcare, they talk about systems integration simulation and there is actually an accreditation process for simulation programmes that see themselves as having this role. And there’s many who take on that role, the University of Alabama and Birmingham is another one that I’m aware of, the group at New York Hospitals and Healthcare is another one.

So, there’s many people who are doing great work like this and I think though it’s hard because you really need to have great relationships with clinicians, a place at the table in the governance structure of the health services and very good simulation skills in terms of diagnosing what is the right way for us to approach this clinical problem.

JB: And that’s very much something I wanted to ask about is the level of expertise you need to create an impactful simulation because people listening might be thinking, my God, this sounds great, there’s so much potential. In research terms as well there’s interest in how simulation could be used not for educational purposes but direct quality improvement purpose but also the role of simulation in research.

 So, lots of people might be interested, where do you find the expertise to start building these kinds of approaches?

VB: I think it’s interesting we haven’t really talked about COVID-19 but I think it does provide a little bit of guidance about how this can be really simple. And, you’re right, if I’m thinking about a trauma team that might be comprised of any group out of about 500 people at my big hospital that’s probably not the place to start if you’re new to transitional simulations [laughs].

 But I think if people are really clear on what they’re trying to improve and are prepared to look around and talk to friends it might be that not that much technology or expertise is required.

 So, I’ll take the example of our medical emergency teams which needed to change with COVID-19 and really a lot of the changes were just about having this new balance between providers being exposed versus patient safety and rapid response to people who are deteriorating. And so, we just had this one really simple, straightforward simulation of a patient who got short of breath and who needed some respiratory support and really all they really needed was some oxygen to come in and be put on the patient and some other interventions.

 But it involved some let’s explore how can we put a minimum number of people inside the room, how do we communicate outside the room, how do we make sure that the communication and team work happens wearing full PPE, how do we rationalise what equipment goes into the room and what stays out?

And that was a really simple simulation, the thing is we did it about 60 times because we needed to explore what needed to change, we iteratively developed a new process and then re-embedded it in practice. And so these were often small teams working on the same processes as we refined what would be the smoothest way to do it, obviously with a very clear target which is how should a medical emergency team response be run during a pandemic when we’ve got risks of contamination and infection?

So, I think that’s a contemporary example but I think a good one where if it’s clear what you want to do then it’s probably just a matter of thinking who needs to be involved, what technology do we need, where will we do it and what phases are we at, are we exploring and testing or are we now embedding a new process? And I think if people are clear on that you wouldn’t need to get too much sim expertise to be able to design a good process.

JB: What that example highlights, I think, for me as well is something that’s been a thread throughout this conversation is whether simulation is a one off activity or a repeated activity? You mentioned, for example, in your first example around the trauma patient arriving that you’ve been running that simulation for six years in your setting and I’d be really interested to know your views on how much of the function and the impact of simulation is people doing the simulation again and again, how much is it fine to come in and just do a one off go?

VB: Hmm, I don’t think a one off simulation achieves that much, to be honest.

JB: I thought you might say that [laughs].

VB: I probably had more faith in it a longer time ago but it wasn’t until you’d been doing something for six years that you realise how much better it is than when you started.

 Now one of the things is…and I’m influenced by a few different things in this including I had a masters of anthropology student with me for a year who pointed out that our monthly trauma simulations were a cornerstone ritual, as only an anthropologist would say [laughs], and pointed out to me that it was the getting together of these different groups of people and the role modelling of the respectful conversations about how to improve care by the very senior people within these groups that mattered.

 And when we did some research on what is the impact of these simulations on the trauma teams very little of it came back, ah, now I know how to manage a head injury better, very few people said, ah, I’ve changed the dose of rocuronium that I give. So many people wrote back and said, there’s a culture of mutual respect that now extends to our real patient care.

 We see the interactions and we get much better at our pre-briefing, we understand how to communicate with our anaesthetic colleagues and the bits of information that are important to them when we are working out who should be doing this airway and how we’re going to approach it. I know how to communicate with the trauma surgeons and which pieces of information will be vital to them, and the trauma surgeons see why the paramedics say what they do when they come in.

 So, I think that’s the kind of impact that I see having and that doesn’t happen just in a one off, it really is a building culture that takes a series of time.

 That said, every sim programme has to start with the first one but I think if you do start out with the idea that this is a bit of a long haul and that over time things will continue to improve in respect of those habits, relationships and culture then I think that’s a really important lesson.

JB: One of the things that we obviously are really interested in at this institute is some fairly ambitious interventions to improve quality and safety of care which often take quite a whole system’s approach. And these initiatives obviously need the right environment in which they’re going to flourish.

 And you’ve already hinted at it there but I think it would really nice to unpick a little more about what simulation can do to address really tricky issues like psychological safety or developing a collective competence in teams to be able to respond to scenarios.

VB: Yeah, and I think the thing that I’ll bring into this conversation is the concept of learning conversations. I do think your simulation design has to be excellent, I do think your simulation delivery has to be very good and realistic, authentic to the things that matter to the people involved. But ultimately, you also have to make sure you have the right conversation afterwards that helps people move ahead in whatever it is that you’re trying to achieve.

 So why is that important in the things that you’re talking about? I think you can enhance psychological safety; I think you can direct towards concept of collective competence in the way that you conduct those learning conversations or not.

 So take, for example, the issue of speaking up, it comes up all the time in various training things.

VB: And you can imagine the debrief, having a conversation around what got in the way of speaking up? But I like to turn that into a collective responsibility for the team rather than just putting the onus on an individual. It’s the same with team briefings, oh, the team leader did or didn’t do a team briefing. Hang on, what stopped everybody else from asking for one? I would say that the leadership of the team is, in fact, a collective competence because it’s both about the person who has the leader role but it’s also about the people around them who are prompted them to be the leader.

 And so, I think anything that we’re doing if you have those conversations and you can direct them towards having a team responsibility, you’re enhancing the idea around collective competence being important.

 And we were having this conversation before, Jenni, but I think psychological safety is similar. I certainly see when I go and do simulations with teams, I get a really good idea of how psychologically safe they are in the real world because I think they bring that to their sim. And I don’t think I can magically make it safe if they’ve got a very toxic work team back in the real world, I can’t just have some fairy dust and go, oh, it’s all safe here in sim.

JB: [Laughs].

VB: They’re going to bring those relationships to the sim. But, likewise, I think if we’re working in simulation with people over a period of time and you develop this habit which is we’re going to talk about how well we did and we’re going to be prepared to listen to other people talk about how well we did. I do think that then translates back into the clinical environment and maybe, just maybe, every now and again people are happy to talk about how well we did and that’s a normal conversation.

 And I think, again, that’s probably more important than any given performance on any given day in the sim that might be about the medical content. It’s not irrelevant, don’t get me wrong, but I think it’s only part of the impact of the sim.

JB: Yeah, and, as you say, we were talking about this before and I think it’s absolutely fascinating that there is this two way relationship between what people bring into the simulation and then what they take away from it again and how that probably works in a particular way to reinforce their behaviours.

VB: Yeah. But the other thing I’d say is a term more familiar to educators is hidden curriculum, and I think there is a massive hidden curriculum in participation in simulation. One, it says that you’re really trying to improve and that that matters, two, it says that you’re prepared to have conversations about performance with each other and that really matters. So, these are strong messages just by participating.

 And then there’s obviously other hidden curricula opportunities, and I would say threats as well, which is how you design your simulation. So, if you design it very much with the idea that there are important contributions from everybody in the team and you’re debriefing conversations are with everybody in the team that sends a strong message.

Whereas if you just get into the debrief and the debriefer decides to have a really great chat with the medical team leader about all the great decision making they had to do and the nurses are over on the other side of room feeling like chopped liver that also sends a strong message and your sim programme probably isn’t achieving what you might hope as an interprofessional activity. So, there’s a lot of care and attention to detail because there are powerful messages.

The other one that my anthropology partner in crime would…we’ve had a lot of conversations about this is stereotyping other professionals in sim, and everybody thinks it’s a little bit funny to have the rude and arrogant neurosurgeon arrive in your sim and that’s really hilarious. But it’s not because that sends a really negative message that is unnecessary, largely untrue and it’s a bit of an easy mark for the simulation team to try and get some rapport with their learners by having a bit of a laugh.

But over time that’s a really toxic message for a simulation programme to send and so we try, I’m sure imperfectly, to be very attentive to some of those details.

JB: So, we’re being very nice about simulation and how important it is and how impactful it is, I’d also really like to know if there’s any examples where it’s just a really bad idea or it just doesn’t work.

VB: [Laughs].

JB: People might set out to do simulation and actually it’s like that wasn’t the right thing to do.

VB: Yeah, oh my goodness, how long have you got, Jenni?

JB: [Laughs] it’s the dark side now obviously.

VB: I think I actually given a talk on myths and fails of simulation and everyone loves it because there are so many. But I think it does come back to the first thing is usually poorly targeted simulation.

So, a good example is when someone comes to me and says, ah, this particular group in the hospital have got very toxic relationships, can you go in there and do some sim? Sim isn’t a great thing to do when you’ve really got some fundamental problems in groups that need much more sophisticated and nuanced interventions.

Likewise, if sim is used as a test secretly. So, ah, it’s all about learning, it’s all confidential but we just want the registrars to go and do the sim to make sure they’re good enough to be on nights on their own. Suddenly you’ve turned it into an assessment even though you’re pretending you haven’t.

The other things that happen, as I said, is that you can just waste time and traumatise people. So having this big surprise in the simulation makes people just spend all their time frequency gambling about what’s going to be the trick in this sim. So, people are often hiding what it’s all about whereas that’s, to my mind, a little bit pointless, even if you know…

Like a simulation we did today, the registrars got the pre-reading, they knew it was going to be SVT, supraventricular tachycardia, but knowing what that is and knowing how to treat it is still a long way from making it happen around a bedside with a team. And this is what simulation’s good for. What it’s not good for is trying to work out some of the subtleties of the patient’s facial expression as you’re trying to break bad news and you’re using a mannequin.

JB: [Laughs].

VB: Very poor match of purpose to method. And, to be honest, I’ve seen some, and heard about, some not great examples during COVID-19, people who haven’t done much simulation before were suddenly running the scenarios on airway management for COVID. And incredibly well-intentioned, motivated by a huge amount of concern, fear and everything else but in some cases really just escalated the fear and anxiety because people hadn’t thought about how to do that in a way that was going to be useful and not just overwhelming.

JB: Now we’ve exposed the dark underbelly of simulation, and thank you for your honest responses there.

VB: [Laughs].

JB: [Laughs] looking ahead what are you really excited about in the world of simulation?

VB: So, a few things, I think the technology will continue to improve and some of the variety of modalities that we’ve had at our fingertips we’ll have even more. And, clearly, at some point, although I have been waiting for it for about ten years, virtual reality is going to allow us to do team based simulations not synchronously around a bedside, we will be able to do some of those things. It’s a way off yet.

 I do think the procedural simulation with virtual reality that technology is there now and that’s going to make people much better at doing their practical and procedural skills.

 But to my mind, and I’m showing my bias here as being someone interested in the learning conversations, I think we’re going to see more and more opportunities to find these learning conversations. And a couple that we’ve been working with mental rehearsals at the beginning of a shift, so you literally just put a little paper scenario down on a bed and say, okay, imagine that patient was coming in, why don’t we as a team just do a pre-briefing and talk about what we would do? We do that for four minutes and then we go back to work but we’ve just rehearsed what we would do. And that has been, in some studies, shown to be as effective as doing an actual simulation.

 And, likewise, taking some of the same learning conversation habits and techniques into our real patient cases and getting good at the after action reviews or the hot debriefs after our real patient care, not just for critical incidents but just for things like we’ve just had a trauma team activation or we’ve just had a patient go urgently to theatre for a ruptured ectopic. We can think about let’s just have a five or ten minute chat, how did it go, what went well, what would we have done differently, anything else we need to do from here? So, some of my excitement is about the application of sim to the real world.

JB: Thank you very much. Is there anything that we haven’t talked about that you wanted to talk about, Victoria?

VB: Look, I think it is interesting and what I’d encourage is to think about this as a tool with a purpose. And I think for anyone involved in trying to improve individuals and teams and systems there should be some understanding of what simulation can offer and what it can’t and some connections with people who can help if we think simulation can be pulled into any improving quality initiative.

JB: Ah-huh. Okay, I’m going to wrap up. So, I’d delighted from our conversation to learn that I have actually dipped my toe into the world of simulation by my Resusci Anne practices over the years, that’s good to know although I’ve never managed to inject an orange, sadly.

VB: [Laughs].

JB: I think you’ve made it really, really clear that simulation is a really powerful approach if it’s used in the right scenarios and with the right care and attention to really meticulous design and delivery, but that actually a lot of its power is both in its ongoing applications, so this idea of longitudinal simulation, and the two way relationship between what’s going on at the sharp end on a day to day basis and what the simulation can both bring to that and also shine a light on that sharp end work. But that debriefing needs to be really sensitive and thoughtfully delivered by someone who is really open to being respectful of all of their participants.

 So, it’s been absolutely fascinating, thanks so much to Victoria Brazil for joining us today from Australia. I’m Jenni Burt and you have been listening to this

**End of transcript**