

TRANSCRIPT: **Virtual Reality for Serious Illness: Connecting, Healing, and Inducing Awe | Part One**

Leadership And Purpose Opening

Melody King 0:00

Everything rises and falls on leadership. The ability to lead well is fueled by living your cause and purpose. This podcast will equip you with the tools to do just that. Live and lead with cause and purpose. And now, author of the book, *The Anatomy of Leadership*, and our host, Chris Comeaux.

Chris Comeaux 0:22

Hello and welcome. I'm very excited today. We have two guests. I have a good friend, Kathleen Bitten, who's the Chief Executive Officer of Hastaza Savannah, Inc., and Terry Yarbrough, who's the founder of Creating Awe and the president of Magic VRC, and the co-author of the book, which we're going to talk about *Virtual Reality for Serious Illness*. Welcome, ladies. It's so good to have both of you.

Kathleen Benton 0:43

Thanks for having us.

Teri Yarbrow 0:44

Thank you for having us. Yeah.

Chris Comeaux 0:46

Yeah, let me let me introduce you both. I know a lot of our audience probably knows Kathleen, but let me just introduce you with a little bit of your bio. So Kathleen Benton's the CEO Hospice of Savannah. She's deeply involved in the region through volunteer advisory board roles with the technical college system of Georgia's local technical college and Georgia Southern University Waters College Advisory Board while holding professorships at Armstrong State University, Mercer University School of Medicine, and the Medical College of Georgia. Dr. Benton holds a master's degree in medical ethics and a doctorate in public health. She has authored and reviewed numerous publications on topics such as powder of care, ethics, hospice, and communication. Her first publication, which is something near and dear to her heart, was entitled *Daniel's World*, a book about children with disabilities. Her other publications include *The Skill of End-of-Life Communication for Clinicians*, *Finding Dignity at the End of Life*, *a Spiritual Reflection on Powder Care*, and her latest book, which we're going to talk about together with Teri,

Virtual Reality for Serious Illness. She lives her vocation as the CEO of four joint nonprofit organizations, which includes Hospice of Savannah. And Kathleen resides in Savannah with her husband Rex and their three children, Julia, Grace, Jack, and Andrew. It's so good to have you again, Kathleen. Thanks for having me, Chris. It's good to be with you. Yeah, so let me introduce Terry. So Teri Yarbrow is uh president of Magic VRX. I'm sorry, Magic VRX, an immersive media company and founder of Creating All, a VR program for healthcare facilities. She is a professor of XR medicine at Mercer University School of Medicine. She's a founding member of AMXRA and a VR evangelist. I love that, Teri. Passionate about XR healthcare strategy and immersive VR therapy. She's an Emmy and multi-award-winning creative director in LA. And she created Magicka, a successful digital media company known for advancing advanced technology. She initiated the VR for good program, creating therapeutic VR for patients at Hospice of Savannah, the Stewart Center for PowderCare. And she created Magica, VRX, to relieve pain, anxiety, depression, and enhance quality of life through VR therapy. Yarbrow is the leading voice in VR therapy, and she again is the co-author of the new book. I've got it right here, Virtual Reality for Serious Illness. And she's a featured speaker in VMAD in LA, Immersive Tech Week and All. And she's been nominated for Prestigious VR Award for Social Impact and the winner of the Telly Award for Social Impact. So, ladies, I didn't tell you I was going to ask you this one, but how in the heck did you two get together?

Kathleen Benton 3:22

Well, um, Teri was actually a volunteer at Hospice Savannah when I first started as CEO. And at that point, the company was more focused on fixing financials and um remodeling the um modeling as in staffing matrix remodeling the inpatient unit than it was its allied therapies or any kind of volunteerism. But I really took an interest to all that Terry was doing simultaneous to her role as volunteer. She was a professor at SCAB, Savannah College of Art and Design and Immersive Therapies. And it just immediately hit me that this is key for our patients in more ways than one. So I I think my second month um after sitting through financials, I would meet with Teri and say, What can we do more for our patients? And she had a plethora of ideas.

Chris Comeaux 4:25

That is so cool. Go ahead, Teri.

Teri Yarbrow 4:27

To add to that, um Savannah College of Art and Design is a pretty advanced um university for creative technologies. And we started the first BFA program for immersive reality in the world, which was very exciting. And I was teaching a class uh called the Immersive Revolution, which is when I became a VR evangelist, because what would happen during this class is the students are programmed to excel and to win awards and to make games

and monetize those games. But the minute we started to look at how VR was being used in medicine, suddenly the light bulbs went off. The students wanted to give back and where where would be the easiest way to do this? You know, I was already doing things with Kathleen at hospice, so we started VR for good. Um, and it became kind of a the corner one of the cornerstones of the SCAD um immersive reality program. Um we went for three years making uh experiences for palliative patients and hospice patients and winning awards together with Kathleen.

The Moments That Proved VR

Chris Comeaux 5:39

Well, it just makes so much sense. I've I've known Kathleen as a friend, but also an incredible innovator. And to have SCAD there locally and to have someone like you, Teri, just it feels like a match made in heaven. Um, for our listeners, we're gonna use the word VR. So virtual reality, we're just gonna use that abbreviation probably quite a bit. So, ladies, what first convinced you that virtual reality could play a meaningful role in caring for people with serious illness?

Teri Yarbrow 6:05

I, in addition to teaching at SCAD and doing some volunteer work with hospice after my mother's uh death, um I was creating immersive reality um art experiences. And I did a collaboration with another professor at SCAD and the dean. Um, and we created an experience called Radiance, which is literally standing in a shower of light. And um, this was shown at the Telfare Museum in Sedanna, and it was an amazing experience because people that were pretty not the demographic that you would see playing with technology, they were lined up out the door of the museum and down the hall and down the stairs to get a chance to try this. And we had people saying, I'm not afraid to die after they did VR. And at the same time, volunteer services called me and they said they had a patient who was stage four pancreatic cancer, and she wanted to go skydiving. And this was a patient that literally couldn't get out of bed. So this was really the birth of uh VR therapy with Hospice Savannah, because I went to her home with the the head of volunteer services, and we f found a VR experience to go skydiving that wouldn't give her a heart attack because a lot of a lot of those experiences are with heavy metal, you know, you jump out of the airplane and yeah. Anyways, and then we showed her radiance, this this more um uh empathetic, spiritual, if you will, VR experience, and the light bulb went off. She loved it, and members of her family tried it, and we were like, wow, if we can do this, what more can we do for our patients? That's amazing. Kathleen, go ahead.

Kathleen Benton 7:55

So for me, um, it was personal. Um, oftentimes when I speak, most times when I speak, I'm not shy about including my youngest brother Daniel, who uh was born with the same disease as the elephant man and throughout his life had 110 surgeries and and really suffered and struggled through his disease. Um, but he what um what he was was very smart and was not cognitively affected by his illness. So he actually was a student at Savannah College of Art and Design, not at all linked with my work with Teri. This was years prior to that. Um, and so he was an artistic individual. And prior to VR being anything of much, he would use it when you could put it, you would flip it, you'd clip these programs to your um cell phone and kind of put them around your head. I mean, it was very amateur at best with VR. And he actually said the things that we are saying today, which is um that patients feel very held hostage by their illness and their limitations and their environment, even if they're in a loving home life, you know, they're not able to walk to the mailbox or uh go skydiving or go to Italy or do the things they at once could or um, you know, just want to do for their bucketless trips. And so he said to me, this would could be a way, could be a way for for patients to escape. So that was put in my head a few years before I even met Teri. So I think that's why I was um so turned on by all of the information and the opportunities um that she had created and and could create for us.

Rehumanizing Medicine Through Experience

Chris Comeaux 9:54

This is incredible. So you have a chapter titled, and by the way, we're gonna make sure we include a link to the book, any other links you guys want, your your connections. Um, one chapter is titled The Disconnect Between Humanity and Medicine. And unfortunately, I've been getting a front row seat of this lately with a couple of family members going through some pretty serious diagnosis. And you write about the growing disconnect between those two. So, how does virtual reality help reconnect patients back with meaning, experience, and maybe even beauty during serious illness?

Kathleen Benton 10:25

So um I think we all see this in medicine if we're rooted in mission, and that we know what regulations and accreditation bodies and documentation standards we're up against. We hear our clinicians complain about um how we've taken the care out of medicine all the time. And those of us who sit behind a desk, we know it too. We're not immune to the knowledge that um medicine is just so heavily regulated. It's beyond that, though. It's also that it's very protocol driven. So when you come in for any kind of illness or even just an infection, it becomes let's follow the protocol. Let's do it exactly as the protocol. And what has been taken out is the the actual person, the listening, the root of where did the infection come from, the story, the patient's story, which unfortunately is very dangerous

because the root of where the illness, infection, disease, et cetera, has come from probably should be considered, most definitely should be considered in how the patient is treated. And this is just not the case anymore. Um, and I think a lot of that is pushed by uh revenue-based, field fee-based medicine, especially in the United States. I we see less of that. In fact, I I just traveled um last week to Europe, where I uh visited clinics in Spain. They have 14 clinics in Barcelona alone that utilize virtual reality and medicine. And the humanity side that virtual reality brings in is to bring them back to an experience that makes them human. Sometimes that's traveling to a beautiful site. Sometimes it's light-induced therapy that um helps you believe there's something more in this universe than just you and your disease and your end. Um sometimes it's traveling through a market that you once shot in and haven't gone in ages because of your disease. It's those day-to-day stories, both small and large, that humanize us. And VR is able to bring these stories back in our patient treatment. So we are able to induce states of spirituality, and that's something I'm sure we'll go into a little more, but it's something that Terry and I learned by mistake. We we both went into this because we knew this was something better, something beautiful for patients, and that constituted visits and experience. But what we did not expect to learn is that it would touch on a person's spirituality, and I mean that all-encompassing. So it does not matter your beliefs or what you know, whether you believe in God or why that does every one of us, just by the breath we breathe, is spiritual. And this is a very important um proponent or component in illness and in disease. And virtual reality, we are learning, brings that back to the patient.

Presence Embodiment And Agency Explained

Chris Comeaux 13:48

That's incredible. You I had my first experience with VR about a year ago, and it was a very low level. Um, one of a friends, a friend of my kids, which will lead to our next question. Of course, it was gaming, but it was so other than. I mean, it is truly immersive. It gets you outside of just the you know, 2D reality that we live most of our life in. I'm a huge fan of the movie The Matrix. It's like it gets you out of the Matrix. Um, and so I could see where everything you're saying is so true. Jerry, did you want to make any comment to that last question?

Teri Yarbrow 14:17

I I did. Um, you know, what you're describing, Chris, are the the actual qualities of VR, virtual reality. And and we do have um medical extended reality or medical MXR. So there's there's VR, there's AR, there's MXR, um, and all of this is being like kind of packaged into this extended reality designation by the FDA. And because of it, I think we're gonna see more traction, you know, in um hospice care, palliative care, and some of the medical um applications. But but what you're describing and why it was so powerful

with the gaming VR experience is you're you're describing the the attributes of what VR does so well. And I and I'm a VR evangelist because VR delivers immersion. It delivers it, it hijacks your brain, takes your brain 30 seconds to accept a simulation. So if you are in a bed held hostage by your disease, um, and you're identifying with your diagnosis. You know, I have cancer, I'm not getting better, I've been abandoned, VR can shift your focus in a matter of 30 seconds. You can get your eyes off your diagnosis and onto something else. And what that something else is, we define as presence. Suddenly, you're no longer in your bed, you're somewhere else. So, where are you? You might be you might be on a ship, you might be standing in a shower of light, like radiance, you might be moving through that market or visiting Paris. So the first the first element of VR that's so potent is presence. It transforms your physical being into something else. The second thing is called embodiment. So not only are you changing your video visuals, but you are you are present somewhere else. You are embodying the story, the narrative, the VR world. But the last thing, which I think is the super sauce, is agency. Because suddenly people that have been robbed of their dignity and their freedom and their ability to do things, they have agency in VR, and that agency might be flying, it might be swimming with dolphins, which is one of one of the things that has been a uh really popular with our patients is an experience called Dolphin Swim Club, in which we take patients down, they're like 30 feet below the water, and they're there's a pot of dolphins around them. And just all this echolocation. And the thing about it is it calms them down. They have agency again. We're giving them back something that their disease has robbed them of. So all of this can lead to inducing awe, and we could talk a lot about that.

Chris Comeaux 17:17

Yeah, I think we're kind of gonna get to that. And yeah, so this that's a good segue, Teri. I feel like you're already alluding to this, but some of our listeners, I know when I first kind of when Kathleen told me about she was working on this project, I think a lot of people think of VR as just gaming technology. So you've alluded to some of this, like the Dolphin Swim Club. What but what actually happens for these serious illness patients when they put on a headset? What kind of other experiences maybe are we talking about that they're experiencing?

Teri Yarbrow 17:45

So virtual reality, I'm I'm a VR evangelist because virtual reality's inherent quality is immersion. And you have augmented reality, which is viewing um digital content, an overlay over reality, and you have mixed reality, which integrates spatial reality, spatial computing with um digital content, augmented reality. And then there's also medical extended reality or XR. XR is like the anachronym for all of these modalities, and then the FDA has given a designation, medical extended reality, so that um it's it's like it will be something in the future we'll see that maybe insurance companies will pick up payment

on this. Once now that it has an FDA um designation, it's it's got a chance to live. I was really moved by what you were saying about that you did some VR gaming. And the thing about VR that's so powerful are these three inherent qualities. One is presence, which enables one to inhabit an experience, to leave for a patient to leave their bed. And it neuroscience tells us that virtual reality takes it takes the brain 30 seconds to believe a simulation. That's powerful. A lot of times people are waiting an hour for their medication, right? We can get them there immediately. 30 seconds later, a patient can be out of their bed, metaphorically, and they can be swimming with dolphins. Um, then the then the next quality of virtual reality that's so powerful is embodiment, which really gives a patient the ability to inhabit a world. Suddenly they're no longer identified with their disease. They're they're engaged in something altogether different. They're we're taking their um identity off, their identification with their diagnosis, we're taking their eyes off of their diagnosis and pivoting it to something else. And then the last quality, and I think I was saying this before, I think this is the super sauce, is we can give patients back a sense of agency, which disease robs. If a patient can't get up, can't dress themselves, whatever, in VR they could fly again, they can swim again, they can do simple things, and we do have hand tracking in some of our experiences that can enable patients to get more of a sense of agency. But it's a it's very powerful.

Chris Comeaux 20:21

That's incredible. I I was thinking of just listening to you, Terry, whenever Kathleen and I were talking, gosh, it was well over a year ago, Kathleen, and you mentioned that you were working on this project. And I know where my mind went is where most people they think of VR, they think of gaming technology. And you just alluded to a little bit of it, Teri. But what actually happens when a patient puts on a headset? What kind of experiences are we talking about? Just you just alluded to swimming with dolphins. And so either one of you, if you want to take that.

Teri Yarbrow 20:52

Okay, I'll tell you about an ALS patient that we had in hospice. So this is a high school teacher, a science teacher, very bright man who, you know, he's living in a chair. He can't speak anymore. And we could take him um kite surfing, windsurfing. We could do things that that his body, that his illness had taken away from him. He was very interested in space. And there's a number of David Attenborough experiences where we can take patients to walk on the moon to experience anti-gravity. Um, so uh, yes, a lot of VR has been gaming, but you know, we what we do at Hospice Savannah and at Creating Awe and Magic of VRX is we curate experiences and create experiences that are tailor made for our patients. Some of them are bucketless experiences. If we want to take a patient that's never been to Paris to fulfill an end wish. Um the the experiences are varied. We we've been focusing a lot on meditative, contemplative experiences. And I really feel like you

know it's really important for an immersive therapist, VR therapist, to be sensitive to meeting the patient where they're at. For example, if a patient is really anxious, a meditative experience can really calm them down, can really help um help the embodiment to help transform what their um illness experience is. So that's where something like swimming with dolphins or um experiencing sea turtles or kayaking in kawaii, things of this nature. I I've I had a patient at in palliative care who had extremely low blood pressure. She, again, she was stage four, and I don't know what what her condition was. But before the VR session occurred, um, the nurses took her blood pressure and it was very, very low. So we decided to do something radical. We went swim, we went surfing in Tahiti, and it was amazing because this is a woman that never surfed in her life. I don't even know if she ever went to the ocean, but she was so excited. She was up, you know, doing all shooting the curl and doing all the moves and walking on the surfboard. And at the end of the session, they took her blood pressure, and it was normal. She wanted to take the VR headset home. We had we had to wrestle it away from her. Um, she wanted to drive herself home. And, you know, the her companion that had brought her, there was no way she was going to drive. But so certain experiences can really, you know, increase energy, and other experiences can really help calm people down.

Kathleen Benton 23:40

But I will say it occurs to me, um, everything that Teri is describing, if you've never had the experience, it's very hard to do it any justice. Because when she says meditative and contemplative, you might picture a beautiful setting and you think about it in a in a non-immersive form. But for example, when I was just last week in Barcelona watching what they the content they had for their clinic, when I was in this the place of meditative immersion, everywhere I looked, there was something new. So yes, I started in a beautiful scene of trees, but then I looked up and saw the northern lights, and then I turned around and there was a sky full of stars. It emer you're immersed in that meditative scene, and it brings your brain into a different state just by being present. So, yes, some of them have a beginning and an end, some of them have a means like the surfing, but many of them are really just to bring meaning and purpose and bring one out of it their your disease. Because when you have a disease, and especially when you're hovering over something serious or terminal, you're almost constantly thinking about it, whatever the symptoms or the the end of the day, you're hovering over the next thing, the next medication. So this is just a way to take patients completely away from that for a short period of time. Much of the time, the endorphins that that turns on in the brain stick with them. So that when they come out of the immersive therapy, they continue feeling in that same state. And it is really not something we're able to achieve with anything else in palliative or hospice medicine.

Chris Comeaux 25:42

That's incredible. Well, you have that feels like a good segue then. You have a chapter that focuses, and I love the title, it's probably my favorite one: creating awe, virtual reality for palliative and end-of-life patients. So you talk about the power of awe experiences. Why is awe such an important emotion for people facing a serious or a terminal illness?

Teri Yarbrow 26:04

You know, Kathleen and I gave a talk last year at VMed Virtual Medicine in Los Angeles. And the title of our talk was about um using VR, the excess the existential crisis of um serious illness and virtual reality. And what what we've discovered, and and this is picking up on something that Kathleen was saying at the at the beginning, we stumbled into this idea that most of what the patients are wanting is some um something to address the elephant in the room, their mortality, the fact that the fact that um they've been diagnosed with a terminal illness, and nobody's talking about it. And there is a way with with VR, um, with virtual reality experiences to really induce awe. And when I say induce awe, awe, awe is this emotion that's as important to our well-being as thriving, um, joy. It's it's up there with the top five emotions. And awe is defined as um being in the presence of something bigger than yourself, and you can you can experience awe at the Grand Canyon, you can experience awe in nature, you can experience awe with the eyes of the newborn. The astronauts who go to space, they look back at the earth for the first time, they they coined it as the overview effect that once you've had this experience of seeing the earth from a different point of view, um, that you it trans it's transformational. So our our work has been to try to induce awe. And there's a one of the chapters in the book is by David P. Yadin, and he's doing experiments at Johns Hopkins where he's using um fmri to to record in the brain where awe occurs, and he's using VR to induce it. So we know we are using VR to induce awe for for therapy, he's using VR to induce awe um to record brain chemistry. So um yeah. So I think awe is very, very important, and I think that once a patient has experienced awe, it can transform their their idea about their mortality. And that kind of speaks to the heart of uh uh the work we're doing.

Kathleen Benton 28:32

I just think a lot of us take awe for granted because um take off for granted because we we we we don't define it. I I love that it's now being studied, you know, David Yadin studying it, Johns Hopkins, um, because it's really giving it validity, credibility, and strength to the emotion. But in the past, it's that thing that we achieve when we're lucky enough to travel to Switzerland and see the Swiss Alps for the first time, or when we're lucky enough to end the Bahamas or a place of beautiful blue water with endless horizons, and for five minutes we look at that live view and we just breathe through life and everything's okay just for that minute. And what we don't realize is that everyone doesn't have the ability to do that. Uh all can even be achieved by walking outside on a

beautiful spring day and witnessing birds, but again, our patients can't even always do that, so we can bring it to their recliner, we can bring that very special emotion to their recliner. And I love that we're using awe and the work that we're doing because it perpetuates and highlights how important it is. And especially in our society when it everything is so intense and and folks are a bit disengaged with one another. It's important to bring this in to have a little bit of perspective for just a minute and take a breath. If that's important for all of us, it's surely important for our patients who are suffering through what might be the hardest time of their lives and what might be the last chapter of their lives. So both for themselves and their caregivers, all to me is vital.

Closing Thoughts And Part Two

Chris Comeaux 30:35

Wow, just listen to you, Kathleen. We we did a show last year. Um, we had a doc on and we talked about psilocybins, a little psychedelics, but mostly psilocybins. But what strikes me is what they're describing is very similar to what you're describing, but I actually like the actual application. It might be just be a personal bias of how accessible you could make this. There's a lot of interesting challenges of bringing psilocybins in any space, much less into life space, but just how accessible that you could actually make this. And it's a little bit what we're after with some of the pharmaceuticals we bring, but yet you're describing something like way beyond that. Of course, we're trying to relieve suffering when we bring pharmaceuticals and all the challenges that that brings, but it feels like the transcendent aspect of how you're applying this is I'm just sitting there shaking my head, going, it makes so much sense. And I just love the fact that how you two have come together um and have applied this. And I mentioned to you, Kathleen, I want to connect you with a well-known researcher because I think you're you're incredible pioneers. And um, I'd love for this to be available for many people.

Jeff Haffner / Producer 31:41

Don't miss part two of this episode coming this Friday.