

Transcript Details

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Top Derm: A Revolutionary Video Game for Dermatologists

Dr. Keller:

Welcome to *DermConsult* on ReachMD. I'm Dr. Matthew Keller and joining me to discuss a new game in the dermatology field is Dr. Eric Gantwerker from Level Ex, which develops video games that are designed to improve clinical decision-making skills. Dr. Gantwerker is a practicing pediatric otolaryngologist in academic practice in New York. He's also the Vice President and Medical Director of Level Ex. Dr. Gantwerker, thanks for being here, today.

Dr. Gantwerker:

Thanks so much for having me. I appreciate it.

Dr. Keller:

So let's just dive right in, Dr. Gantwerker. Can you tell us about *Top Derm*, the game that's been developed for dermatologists?

Dr. Gantwerker:

Thank you so much. We're really excited about *Top Derm* because our team worked very closely with our dermatology experts. And we like to say, 'It's the dermatology game made for dermatologists by dermatologists,' because of how close that relationship was. And really what we tried to do is really capture the knowledge-based challenges that present themselves within dermatology with making diagnosis and treatment plans and really telling some of the nuances with some of the images and cases that get presented to dermatologists. And it's a totally new area for Level Ex because we've done some medical decision-making, we've done some procedure-based game play, but this is a totally new mechanic that we're employing here, in addition to actually adding some computer-generated imagery that we may talk about later. As well as something that's completely new for Level Ex, which is actually adding some feedback mechanisms for players to actually give us real-time feedback on some of the questions that they get presented.

Dr. Keller:

That's great. And although *Top Derm* appeals mostly to dermatologists, do you think other healthcare professionals could benefit from this game as well?

Dr. Gantwerker:

Absolutely. With any of our games, because they're free and available to download from the app store and Google Play, anybody can really play our games, and we do find that healthcare professionals outside our main target are often playing our games. In fact, we had cardiologists playing our gastro game. And so oftentimes we have other healthcare professionals, primary care doctors, and I think even sometimes trainees who can play our game. But our games are really designed for the dermatologists, and they're gonna be a lot more difficult for those audiences. But they're always welcome to play and enjoy.

Dr. Keller:

As you know, Dr. Gantwerker, not all clinical decisions are black and white, as treatment is different for every patient. So what was Level Ex's approach to the varying types of cases while developing *Top Derm*?

Dr. Gantwerker:

That's a great question and as you pointed out, not all clinical decisions are straight-forward. And really what we try to do is capture the most challenging aspects of clinical care to really try and bring our experts to another level and to even advance their expertise. And one of the things that we did in *Top Derm*, which is again sort of new for this genre, which is actually having people develop their own areas that they want to improve upon or that they want to play. And so there's different categories within the game, so people really know

oncology really well, but they want to get better at adult dermatology or cosmetic dermatology, they can actually dynamically create what their game experience is going to be like. And so a lot of these questions are very, very difficult because they are fine-tuned to be challenging for practicing dermatologists. And to your point, those questions are always going to be really tough because there's not always a straight-forward answer, but in our game, we really do a great job of trying to re-create those decision points.

Dr. Keller:

That's fantastic. For those just tuning in, you're listening to *DermConsult* on ReachMD. I'm Dr. Matthew Keller, and today I'm speaking with Dr. Eric Gantwerker about development of the new Level Ex game called *Top Derm*. So Dr. Gantwerker, now that we have an understanding of the *Top Derm* game, let's take a step back and look at Level Ex. I know your company is deeply involved in education and the neurologic basis of how its content is how it's delivered, but could you explain to us how your gaming application differs from programs that are already available?

Dr. Gantwerker:

That's a great question, Matt. And really what we're trying to do is take advantage of the really deep, cognitive neuroscience of how people learn and how people engage with games. There's a lot of things that go into game design and unfortunately, we find that a lot of games that exist with this medical-related content sort of skim the surface. There's a whole burgeoning space called "gamification" that's taking very, very superficial elements of games and trying to strap them onto different experiences and expecting motivational patterns to change and engagement numbers to change. And really we go a step beyond that. We understand that game design is a very deep discipline that's really focused on the psychology of learning, understanding how people engage, the sociology of it, and really all of that was brought into *Top Derm*, and really all of our games, but really *Top Derm* has done it well. And I think that one, we understand how people learn, how people engage with content. You understand the concepts of flow, you understand the concept for reward and frustration. These ideas where people are really strongly focused on a task and they learn most efficiently when they are engaged in those tasks. And that's what flow state is, which was noticed in elite athletes and in musicians and we notice it in surgeons and physicians. And we're trying to re-create that in a game, even with a knowledge-based game, we can actually create those types of states in which people are very, very efficient in learning.

Dr. Keller:

That's fascinating. Now, *Top Derm* is far from the only gaming program Level Ex has developed, so do you have any success stories or feedback that you receive from healthcare professionals who have used them?

Dr. Gantwerker:

Absolutely. We're constantly hearing back from all of our different games. A lot of our games have CME content and so we actually get a ton of feedback from our users. We get really positive feedback about, you know, 'I really had a better understanding of what was going on,' 'This was really fun,' 'This was really interesting.' I hear from friends all the time that are playing the games, we hear from people we've never met who will message use and wanna work with us. I think that's the biggest testament to what we're doing is we have so much inbound interest from institutions and individual physicians who are wanting to work with us because they understand the power of what we're doing and really understand our mission and our goal of trying to advance the practice of medicine through play.

Dr. Keller:

That's great. And before we close, Dr. Gantwerker, would you like to share anything else regarding the gaming application that the listenership should know?

Dr. Gantwerker:

Absolutely, thanks so much. I think one of the things that really came to fruition within the *Top Derm* game was the idea that we could actually computer-generate some imagery, high-resolution, photorealistic imagery of different skin diseases. When we heard from dermatologists, we realized that one of the problems is actually learning from all the images that are available because there's not really good atlases and not really good things that represent all of the different disease states. And so a lot of people get to see certain diseases and certain skin types or certain skin color and that doesn't make it into a lot of the literature. And so we really felt that there was a need there. And so we actually created a pipeline to actually create these high-resolution images of skin disorders, almost any skin disorder on almost any region of the body and any skin tone. And these are mind-blowing and medically accurate, to the point where our actual own dermatologists didn't realize that some of these images were actually computer-generated. And this is all the power of the video game technology that we use at Level Ex, which is again, very different from what is available out there from a game standpoint is the technology and the visual effects that we can achieve within our game.

Dr. Keller:

Well this has been a fascinating look at some of the latest technology aimed at helping dermatologists like myself improve their skills. And I wanna thank my guest, Dr. Eric Gantwerker, for joining me to talk about the game *Top Derm*. Dr. Gantwerker, it was great

speaking with you, today.

Dr. Gantwerker:

Thank you so much for having me on, I really appreciate it.

Dr. Keller:

For ReachMD, I'm Dr. Matthew Keller. To access this episode and others from this series, visit ReachMD.com/DermConsult where you can Be Part of the Knowledge. Thanks for listening.