CASE STUDY:

Embracing Branched Learning Techniques to Drive Better Education Outcomes.

Branched learning simulations provide clinicians with a greater understanding of health issues such as basal cell carcinoma and dry eye disease. Unlike standard linear training, these simulations incorporate branching along with adaptive, personalized feedback to improve the effectiveness of the education. Learners are able to safely explore the symptoms and treatment outcomes of these diseases within highly engaging and interactive activities.

Making the leap from linear to branched learning

For many years, the educational format Continuing Medical Education (CME) providers chose was rarely pondered. Simple slides with data was the norm, with an occasional slide that might reference a relevant patient case, but nothing more. The educational design then transitioned into case history reviews, telling real life stories to support the knowledge imparted (linear cases). Recently, however, branched learning has been shown to be a very powerful tool in healthcare education.

Cathy Pagano, CCMEP, a veteran in the CME industry, set out to build a branched learning simulation with her team of professional educators, and quickly discovered the complexities of designing such a platform. She then learned about DecisionSim™ through another industry leader and set out to utilize the technology for future activities. Pagano and her team have since developed four simulations leveraging DecisionSim, two on basal cell carcinoma (BCC) and two on the diagnosis and treatment of dry eye disease (DED). Although the diseases were vastly different, the outcomes and treatments worlds apart, and the target audiences distinct, both topics were well suited to branched learning simulations. The DecisionSim simulation platform allowed for the improvement in knowledge and enhanced decision-making in the engaging, effective and efficient manner that Pagano had been seeking.

Safe exploration of a potentially dangerous disease

In the BCC simulations, the DecisionSim platform allowed clinicians to diagnose and explore a myriad of treatment options they might be hesitant to experiment with on a real patient. There is often no one right way to deal with cancer, which makes DecisionSim perfectly suited to CME in this therapeutic area. The goal of both BCC simulations was for clinicians to be better able to describe the potential pitfalls in diagnosing BCC, to better understand the role of the hedgehog pathway in the pathogenesis of the disease, and identify advantages and disadvantages of the major choices for treating local and advanced metastatic BCC. For these two simulations, the team partnered with Dr. Philip Friedlander, assistant Hematology / Oncology professor at New York's Mount Sinai Medical Center and Dr. Kendra J. Feeney, associate professor from the Thomas Jefferson University in Philadelphia.

"Different learner decisions produced different consequences in our CME simulation on BCC, the hallmark of a true branched learning activity," said Pagano. "These simulations allowed oncologists to explore different paths and learn about options they may have been unfamiliar with. Especially in the diagnosis and treatment of cancer, most clinicians are hesitant to try new options because the prognosis can be devastating if their patient doesn't respond to suggested treatment."

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– Cathy Pagano, CCMEP

"In my experience, oncologists tend to stick with what they know," said Pagano. "Our simulations allow them to experiment in a safe manner without jeopardizing what is already often a very sick patient. We are able to allow them to explore options many didn't know existed."

Shedding light on dry eye disease diagnosis and treatment

For the Dry Eye Disease simulations, Pagano and her team were able to identify protocols that were new to learners. They created CME simulations that led ophthalmologists down the proper diagnostic pathways to determine the severity of DED and whether or not the patient in the simulation was a candidate for Lasik procedures. For these two simulations, the team partnered with Drs. Stephen C. Pflugfelder, director of the Ocular Surface Center at the Baylor College of Medicine, Paul M. Karpecki of the Corneal Services and Ocular Disease Research Center at the Koffler Vision Group in Lexington, Kentucky, and Mark T. Dunbar, Director of Optometric Services for the University of Miami School of Medicine.

"The clinicians who have used these simulations like them very much because they feel real," explained Pagano. "They feel challenged, just like they are in a real clinical setting. They're encouraged to explore trial and error. After all, that's what branched learning is...the ability to explore by trial and error and come away with a better understanding of all the avenues available to them."

Branched learning is the future

Pagano noted, "After leveraging DecisionSim in two very different therapeutic categories, I enjoyed using the platform for my branched learning activities. It is very easy to create engaging, realistic education and build a series of related activities. The rich data on the learner's decisions throughout the simulation provides insights that we have not been able to get from any other activity. Branched learning is the future of continuing medical education."

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