CASE STUDY:

Regional Health System Uses Web-based Simulations to Enhance Clinical Education

Introduction: The challenge of medical training for any healthcare system is to effectively use the limited time physicians, allied health and related professionals have with busy case loads. Reading Health System employs over 8,000 people, including over 2,000 physicians, nurses and allied healthcare providers. Reading Health System turned to Decision Simulation to create scalable, assessable learning tools to help improve decision-making and patient care.

With eight hospital campuses, the only joint Commissioned Certified Primary Stroke Center in Berks County, and the busiest single site Emergency Department in Pennsylvania, time for anything other than patient care is a precious commodity for healthcare providers within Reading Health System. Reading Health System has a 145-year history of innovation and excellence and offers 52 different specialties, with signature services of cardiac and vascular care, cancer, women's health, neurosciences, and orthopaedics. A teaching hospital system as well, in 2013 Reading Health System's Board of Directors approved the expansion of the residency program which will double its size over the next few years to 125 positions, making it even more important to have the tools that help Reading Health System deliver the same treatment protocols throughout all facilities in all clinical areas.

Raising the bar on education and being able to assess the effectiveness of that education is paramount to Reading's continued focus on healthcare excellence. By using the DecisionSim™ platform, educators at Reading Health System have an effective way to improve decision-making and influence behavior. They can also help teams work together better to meet Reading Health System's patient-centered, physician-led mission of continually improving healthcare outcomes.

"There are values to various types of teaching tools, based upon the learning need. DecisionSim filled an important niche in our educational armamentarium," said David George, MD, FACP, MBA, Vice President of Academic Affairs and Chief Academic Officer at Reading Hospital.

"Working with Decision Simulation provides three distinct benefits," he continued. "First, the DecisionSim platform was developed by a physician and clinical educator who understands the needs of the educator. Second, their technical team trains educators on how to use the platform. Third, their instructional design team is involved all along the way to make the learning experience more effective. We appreciate the partnership."

DecisionSim helps reinforce desired behavior as well as identify learning gaps

Reading Hospital System is currently working with the Decision Simulation team to create three simulations. One is targeted for a congestive heart failure program aimed at nurses, residents and other healthcare providers within the heart failure unit. It will be mandatory for residents prior to entering their general medicine rotation. Another is an interdisciplinary simulation called "Interdisciplinary Day" and it is aimed at multiple disciplines within the School of Health Services. In this simulation, staff members work as a team in the care of the patient from intake through discharge. The third simulation is designed for physicians involved in pain management and will provide training on new guidelines for urine drug monitoring in patients on opioid medications.

"DecisionSim is not education in isolation," said Erica Klopp, Director of Continuing Medical Education at Reading Health System. "By identifying where a group of physicians and other healthcare providers might all be struggling with making the best decisions, we can identify gaps in knowledge and adjust our simulation to help guide them back to the best choice."

Reading Health System uses DecisionSim in a blended approach to reinforce new behavior. Learners are invited to a live lecture and are then offered didactic e-learning modules created by Reading Health System's Continuing Medical Education Department. Learners then use DecisionSim to practice the application of the new knowledge. Within these simulations, learners must make decisions based on the data presented. The simulation will then take the learners down different paths specific to the decisions made. The learners can immediately experience the consequences of their decisions and receive personalized feedback. The goal of the simulation is to put the learner in a situation they will most likely encounter in real life, improving the transfer and retention of knowledge.

"It's easy to measure knowledge gain," said Klopp, "but it takes more time to measure whether that new knowledge helps put new behaviors into practice, and still more time to measure whether those changes in practice improve overall patient care. With DecisionSim, the learners can put into practice what we're teaching them in the safety of their own environment by using a competency-based simulation that allows them to learn without impacting a live patient."

Ultimately, DecisionSim will become a broader collaborative initiative within Reading Health System

Dr. George points to the increasing symbiotic relationship between Continuing Medical Education and Quality Improvement Departments as an important component of simulation-based education such as DecisionSim. Each year, healthcare systems launch major process improvement projects that involve changing care processes. These projects have to be communicated to physicians and support staff so that they can change their behavior quickly to meet desired process improvement outcomes.

"The goal is that CME would evolve to help train clinicians in support of process improvement. DecisionSim is an active learning tool with metrics that allow us to determine if the learner is applying knowledge and utilizing the system, as medical evidence and the organization's leadership have recommended," said Dr. George.

"It can take years to change current practice behavior and incorporate new processes," said Dr. George. "DecisionSim can help us affect change more quickly and efficiently."