



UNIVERSITY OF HOUSTON NURSING - PERIOP ELECTIVE COVID-19 INNOVATION STORY

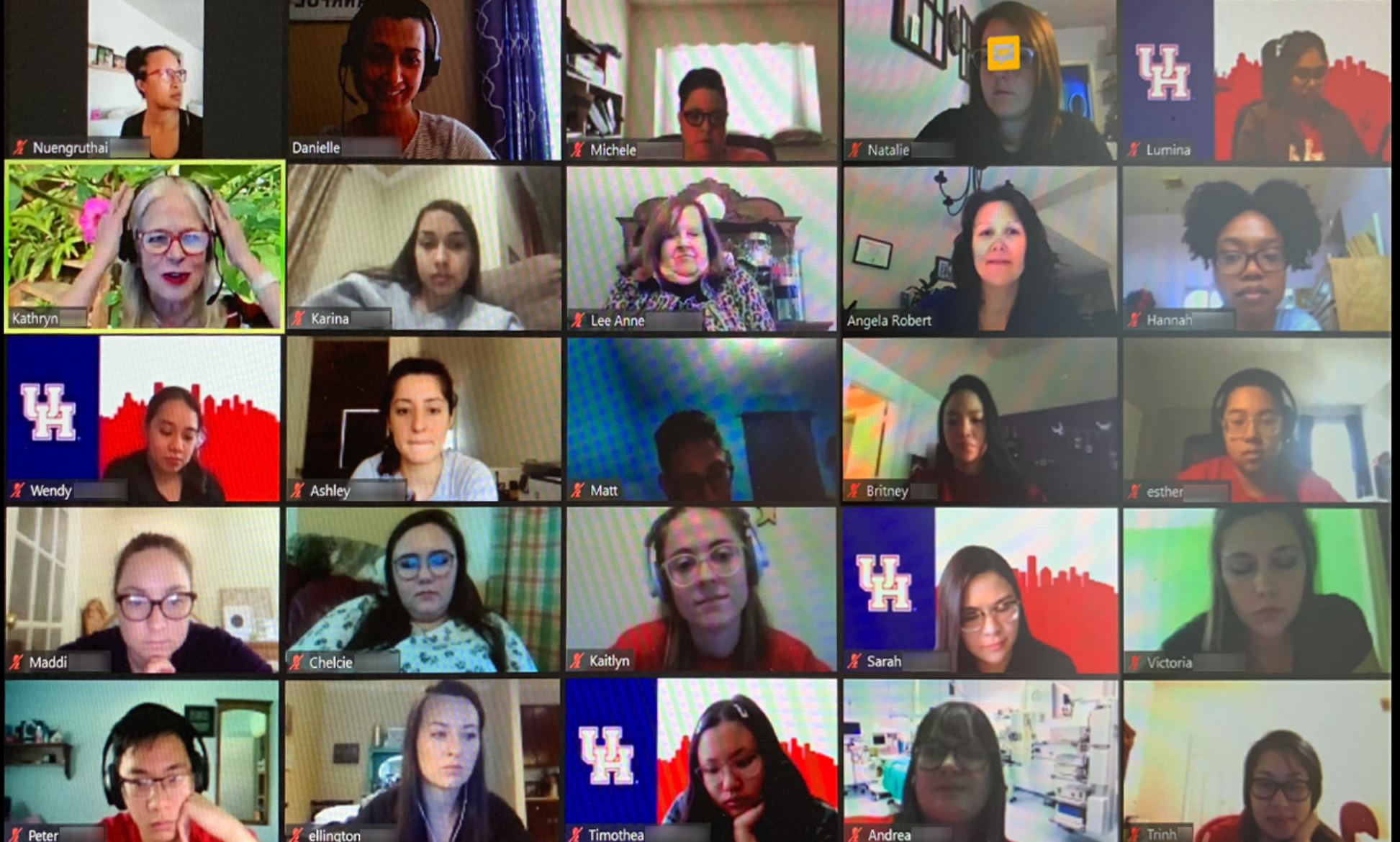




UNIVERSITY OF HOUSTON

This is a unique story in that the College of Nursing at University of Houston offers a leading Perioperative Elective. For the past 2 years, Danielle's class has utilized PeriopSim in the 2 weeks of skills labs and clinical experience time offered to 38 nursing students.

In 2020 the class was saved in part due to the availability of PeriopSim for at home use when the healthcare education landscape shifted due to the COVID-19 Pandemic.



THE CHALLENGE

Nursing students who had signed up to the Perioperative Elective at the University of Houston were unsure if the class was going to go on due to the COVID-19 Pandemic. They waited patiently while the administration were busy working to understand the impact across the board for their students as well as the faculty for all the classes being offered.

Danielle Quintana and Lee Anne Lightfoot, the faculty responsible for the elective had used PeriopSim in 2019 with great value along with their planned clinical experience. Roberto Tonsul who was also involved, is the Clinical Learning Nursing Staff who supports the simulation center, including the software. Early in the year they had been in discussions with Angela Robert, the CEO of Conquer Experience, creators of PeriopSim. The plan was that Angela was going to ship them the Travelling VR kit for their class so they could trial VR during their planned two weeks with the students.

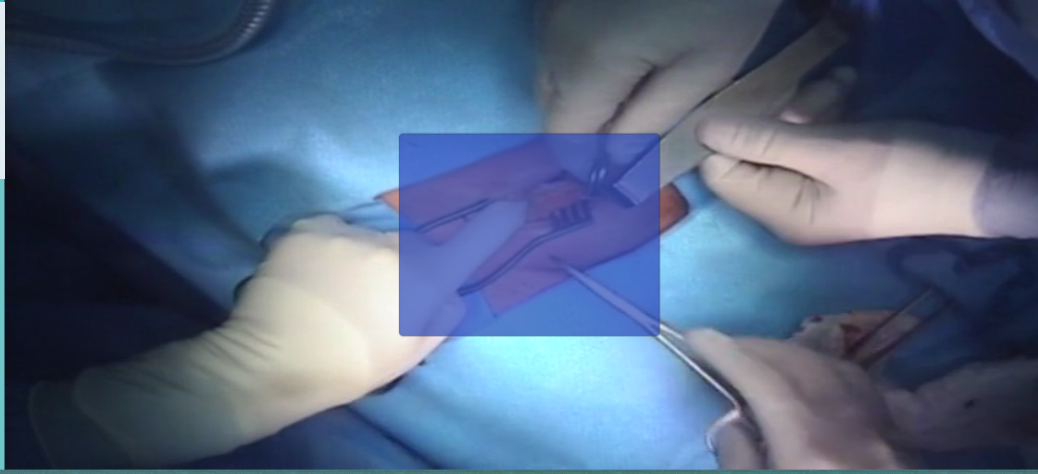
Unfortunately, the Pandemic overshadowed everyone's plans and the PeriopSim team were working feverishly to understand the education shifts. The immediate and most pressing need



that was uncovered was that Nursing Schools needed a solution when clinical placements across the US were postponed due to a shortage of PPE and massive decrease in elective cases. The team at PeriopSim understood that Instructors for Nursing Programs has to take their curriculums online and keep the students engaged while they wait out the healthcare storm.

Once a solution had been decided, all efforts were applied towards solving that problem and Angela was able to reconnect with Roberto and

Danielle to see if the solution would fit the needs of the Perioperative Elective class.



SCORE

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Provide a Curved Mosquito Forceps



PERIOPSIM HAD TO SHIFT & FAST

PeriopSim is a surgical training and assessment platform that combines virtual simulations, neuro education and game based learning to save time. When experience is in short supply or too expensive/challenging to attain, simulation training is an ideal option. Pilots have been using simulation for decades and it is a gold standard for certifying and re-certifying competence to fly some of the most complex planes in the world. Healthcare education is catching up.

A National Simulation Study (<https://www.ncsbn.org/685.htm>) was conducted and the study provides substantial evidence that up to 50% simulation can be effectively substituted for traditional clinical experience in all prelicensure core nursing courses under conditions comparable to those described in the study. It is a study that we use as a foundation in describing how PeriopSim can benefit educators in terms of flexibility in education and timesaving. Additionally, we have been the subject of a number of research studies that you can find more information about here: <https://www.periopsim.com/research/>

PeriopSim takes live video footage of a 1 hour long procedure and creates a Virtual Simulation that is 10 minutes long giving a 6x in time savings for that experience. 1 Experience Hour = 10 minutes in simulation with PeriopSim.

Prior to the COVID-19 Pandemic, PeriopSim has been used by Educators in Departments of Surgical Services in hospitals across Canada and the US for the last few years. Educators will use PeriopSim to improve confidence and competence of perioperative RNs and STs during their orientation curriculum. PeriopSim can be combined with other learning tools such as AORN's Periop 101, videos, live simulations and preceptor job shadowing. PeriopSim is used to bridge the gap between classroom and the OR.

There are over 35 Virtual Simulation Experiences on the platform and over 15,000 of these experiences have been completed by learners at our customer sites.

To build these Experiences, we've partnered with our customers at leading healthcare facilities to record the procedures, capture instrumentation and materials. We combine these assets with evidence based guidelines from leading sources including AORN and ORNAC. The Educator and Surgeon working with us confirm the quality of the module prior to release. We currently have a large pipeline of modules that are at different stages of development and we provide releases on a regular basis.

When COVID-19 impacted healthcare education more abruptly in mid-March 2020 we had some conversations with leaders in the Surgical Technology area as well as with our customers across the US and Canada in hospitals and we knew we had to act quickly and do something.

PeriopSim was designed to be used on iPad and in Virtual Reality with HPs WMR Reverb Headset

or HTC VIVE. This would not work for Surgical Technology programs that now had to move to 100% online learning. Students did not have access to iPads or Virtual Reality at home. We shifted our entire focus to launching PeriopSim on PC/Mac/Chromebook and Android/Windows Tablet as quickly as possible.

At the same time we had to come up with a low cost pricing package that would be easy to understand and make sense for schools in the short term as well as in the long term. We created our Educational Institution Package with limited pricing for COVID-19 and went live with communications. This allowed for the early leaders to share the information and get the innovative schools onboard and making simulation for procedures accessible within weeks.

We were incredibly impressed by the resilience, grace and energy from both the educators and learners in this new education configuration. The technical aptitude and speed at which they adopted PeriopSim was incredible and it was an honor to see this unfold.

A key aspect of PeriopSim that didn't require any adjustment is the learning data system that does assessments on learners. C or a D means they are learning and focusing on accuracy rather than speed. A and B means that they are focusing on speed and delivery because they are already accurate.. Incomplete means that they haven't done more than 3 simulations which is required to get an assessment. The effort it would take to do these detailed assessments is near impossible without technology like PeriopSim. For more information see here: <https://support.periopsim.com/learner-competency-levels>

Surgical Training and Assessment for the Operating Room Team



THE INNOVATION AND OUTCOME

In 2019, Danielle, Lee Anne and Roberto used PeriopSim for their class so they were familiar with the technology and the value that it brought their learners. This is definitely a case where the early innovation and preparation of having the experience with PeriopSim meant they could quickly jump at an innovation for the COVID-19 Pandemic impact with minimal risk.

PeriopSim was deployed to 38 students taking the Perioperative Elective as part of their curriculum. Over the course of 2 weeks the students did nearly 700 Experience Hours.

Here is some of their feedback both positive, bugs found (since they were using our beta version) and ideas for making it better in the future:

Kathryn Tart, Dean for the University of Houston College of Nursing “There is a prediction of 60K of nurses being short in Texas by 2030. There is a real need for Universities to open up more enrollment spots to meet the demand as well as provide really high quality nursing talent and leadership.

It’s critical that we pay attention to keeping the pipeline of healthcare nursing talent strong so that we can deliver the highest quality of care to patients. Currently we have a 100% NCLEX pass rate for our nursing students and we couldn’t do it without the quality of our amazing faculty. Our electives like the perioperative program are so important because this is how our nurses can differentiate and provide value to employers from day 1“

Jasmine K “ It was great to see multiple names for instruments much like what happens at real hospitals. Seeing the surgery while also participating meant that I could really feel what it would be like”.

Lumina “ It felt very realistic, the images were clear and it was great to get used to what it would be like to get comfortable with a layout. The system encouraged improving your score which made me work harder.”

Victoria G “It was easy to use but sometimes I had a hard time seeing the teeth or small detail on instruments”.

Michele H “ I really loved the British voice. It was a real motivator going through the sims. “

Kaitlyn “ It was great to get the feel for hands on despite the COVID-19 situation. As a student I still felt like I got a lot of value virtually. “

Nicole A “ It was easy to use. I liked how we could access different parts of longer surgeries to practice those.”





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