

# SIMpacting Patient Safety:

Simulation programs making a difference



## Virtual Vignettes: Improving Confidence in Non-ICU Nurses Being Trained to Care for the Critically Ill COVID-19 Patient

### Purpose:

The COVID-19 pandemic created challenges for healthcare facilities world-wide. As the numbers of critically ill patients increased, hospital leadership had to pivot and design a creative plan to care for as many patients as possible using current staffing. Part of the surge plan for Atrium Health included redeployment of nurses from the system-wide resource team to work in the ICUs caring for critically ill patients as part of a team-based care model. These nurses were non-ICU nurses that needed education and training in order to be prepared, confident and successful in this new environment. Part of the educational plan included virtual vignette simulations developed to assist learners critically think through and improve confidence in their ability to care for a COVID-19 patient in the ICU.

### Development:

Carolinas Simulation Center (CSC) met with System Nursing to discuss their needs, learning objectives and possible solutions. Online modules and shadow ICU shifts were a part of the educational plan. Virtual simulation was recently created as a new innovative approach to meet learners' needs during social distancing due to the pandemic. The virtual vignette simulation model was proposed to nursing leadership as a way to safely provide experiential learning opportunities for the resource team nurses. Working with clinical nurse specialists from various ICUs, a clinical scenario was created to meet the identified needs of the learners. This scenario was then recorded in the simulation center to be deployed with a virtual platform during the sessions. The video vignettes focused on the assessment of the intubated patient, recognition and management of a decompensating ICU patient and managing ventilator alarms. A facilitator guide was created to standardize the content and assist the simulation educator and subject matter experts to consistently provide information during the sessions.



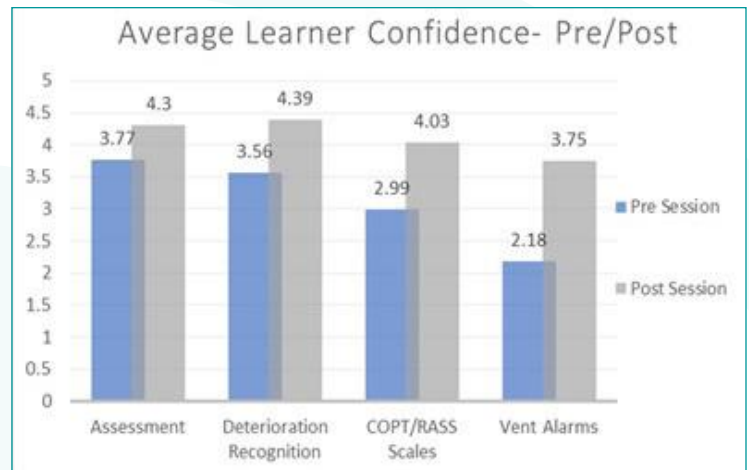
### Implement:

Nursing Professional Development and Resource Team leadership assisted in scheduling and tracking pre-work modules. Learners had to complete the asynchronous educational modules prior to attending simulation. Sessions were held virtually using Zoom. Each session included a simulation educator to facilitate the sessions, run the technology and debrief. The subject matter expert was vital to the sessions to focus on current practices and ensure learners were able to get their questions answered. Three pre-recorded video vignettes were used. The debrief was flipped to before the video to allow learners to think through what they

would do for the patient before seeing the recorded interaction. Learners were guided through caring for the patient, introducing new procedures, equipment and responsibilities that are needed when working in the ICU.

### Outcomes/Results:

Sixteen 2-hour virtual sessions were held over a 6-week period. Over 140 nurses received the education. The learners were asked to take a poll/survey before and after the sessions to measure their confidence levels. The project was extremely successful and widely accepted. Learners' confidence levels increased significantly, a lot of positive feedback was received, subject matter experts were able to see how engaged the learners were and leadership was able to provide the needed education in a safe, effective and efficient manner. The graph shows the increase in confidence levels of the learners in the four educational focus areas for these sessions. We have continued to offer virtual simulation to a variety of learner groups with extremely positive feedback. A bright spot of COVID-19 is this innovative educational service line of virtual simulations that will continue to be part of our ongoing curricular offerings. Virtual simulation will continue to help us reach learners from all over our growing healthcare system. It will also be an ideal modality to layer education and allow learners to have additional opportunities to experience patient care scenarios.



## 2020 Virtual Patient Safety Skills Lab

### Purpose/Development:

Patient Safety Skills Lab (PSSL) is provided each year at Carolinas Simulation Center to onboard Atrium Health's new interns from 11 different specialties while assessing their baseline knowledge of core skills necessary for the first year of residency. In 2020, due to COVID-19, the need to stay socially distant required CSC to think outside of the box and develop a virtual plan for providing the new interns with this essential education. The assistant vice president of Simulation Services, teammates from CSC and the director of Graduate Medical Education participated in multiple planning sessions to develop an alternative to in-person simulation experiences. The CSC team developed a virtual simulation learning experience that focused on patient interaction, communication and patient handoff to an upper-level resident. After each section of the Virtual PSSL, the learners would receive immediate feedback and have an opportunity to ask questions to prepare them for the patient care.

### Implement:

A robust technological solution was needed to support the Virtual PSSL that involved a high volume of learners, multiple facilitators and several simulated participants (SP). The CSC team decided to leverage the capabilities of two different technology platforms, Zoom and CAE Learning Space Audio Visual and Learning Management Solution. Zoom provided the opportunity to engage with learners in virtual small groups, deploy videos and move participants through a variety of learning experiences with facilitators in different Zoom rooms all happening concurrently. The learning management system (LMS) was also essential to deploy the previously recorded virtual vignettes (videos) of clinical situations, allowed the scheduling of learners, data capture via online checklists and reporting capabilities. Both technology platforms transformed the PSSL to a new innovative, engaging, safe way to onboard residents. The CSC educators developed a robust 3-station virtual curriculum. Each new intern participated in a virtual vignette assessment station, which was a prerecorded

interaction between an Atrium Health nurse, physician and a manikin “patient.” These sessions included 4 interns, an upper-level resident and a simulation educator discussing important patient care interventions at defined points in the video with the team. Once that station was complete, the interns were moved to another Zoom room to participate in individual encounters with standardized patient (actor) for telehealth virtual history and physical assessment. The interns interacted with the SP to determine a diagnosis and patient treatment plan. Four of these stations were happening simultaneously while a new group was starting the virtual vignettes stations. The last virtual station included each intern presenting a patient handoff of both the virtual vignette patient case and the SP encounter to an upper-level resident. At each of the stations, the interns received immediate feedback from the organizers and a global rating survey was entered into the LMS. At any one time, there were 4 learners in the virtual vignette session, 4 individual SP encounters and 4 handoff stations all in separate Zoom rooms.

### **Outcomes/Results:**

Carolinas Simulation Center onboarded 89 new interns during the 2020 Virtual PSSL and the formative evaluations for each intern were reported to the specialty specific program directors. The baseline learner assessment afforded changes to be made to individualize the residency curriculum content if needed and identified strengths and areas of growth opportunity. Additionally, each of the PSSL participants completed a survey about the experience. The evaluations were extremely positive, and the learners were grateful for the innovative approach to onboarding education. They also mentioned that most had never experienced a virtual patient encounter previously and understood the value of this type of patient interaction for the current and future state of medical care.

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## **Types of Virtual Sim Developed**

**Observer:** A complete simulation scenario is recorded through the learning management system and deployed through a virtual platform. The debrief occurs just as it would after an in-person session. All learners are observers.

**Vignettes:** Short excerpts of a scenario are pre-recorded through the learning management system and deployed through a virtual platform. The debrief is flipped and learners are engaged through critical thinking questions prior to watching the unfolding case through multiple vignettes.

**Learner Guided:** An embedded participant is live, in the simulation space with the manikin. Learners can interface with the participant to guide the care of the patient. The embedded participant is connected to the learners via the virtual platform. A debrief follows the interaction and scenario. This is a good option for providers. (Think Virtual Care)

**Simulated Participant Encounter:** A virtual encounter with a simulated participant. These sessions are ideal for virtual OSCEs, behavioral health telemedicine scenarios or any learner group that needs to practice communication skills. The SP, learners and observers use a virtual platform to interface.

**Hybrid:** A small group of learners and a facilitator are in the simulation center, actively participating in the scenarios. Distance learners live stream the scenario and join the in-person learners for the debrief via a virtual platform.

