BROADCAST-Helping Rural Hospitals Adopt Telehealth Solutions

Implementing safe, secure and easy-to-use telehealth solutions is becoming increasingly important, especially for rural hospitals to provide expert care with limited resources. New research shows simulating use can help with adoption of new tools.

The simulation research, using a $750,000, four-year grant included OSF HealthCare, the Illinois College of Medicine at Peoria, through Jump Simulation, and Northwestern University in Chicago. It used a telehealth cart with live video in two rural emergency departments, in Galesburg and Pontiac, to connect to an electronic intensive care unit (eICU) in Peoria, Illinois. It focused on caregivers treating patients with severe sepsis and septic shock.

Sepsis is a leading cause of death in U.S. hospitals and it is common in patients with severe COVID-19. Kim Cooley, a nurse and the research coordinator, said sepsis is the body's extreme response to infection and it can lead to severe complications without timely treatment. So patients need to be intensely monitored.

SOT-Kim Cooley, nurse and research coordinator for OSF HealthCare

"They can appear ok or not as severe when they enter emergency rooms and then go downhill really fast and if you don't initiate certain treatments within certain time frames after they start to go downhill, then they could die. So, this is a really important area that OSF is focused on." (:17)

Dr. William Bond, an emergency department physician and director of research at Jump Simulation, says rural emergency departments have small staffs that can easily be overwhelmed if they have multiple severely ill patients. With sepsis patients, the research introduced remote monitoring before hospital admission.

SOT-Dr. William Bond, emergency department physician and director of research at Jump Simulation in Peoria, Illinois

"To better connect patients in the ER to caregivers in the telehealth realm who would eventually be overseeing their care in the intensive care unit at those sites … so it helps make that transition earlier and helps to create a layer of back-up and extra monitoring to make sure we're meeting all the sepsis care goals." (:24)

Cooley says patients can benefit from another set of eyes.

SOT-Kim Cooley, nurse and research coordinator for OSF HealthCare

"They can monitor the patient's vitals. They can have their eyes on the patient and can see them start to just kind of get confused and then they (eICU critical care nurse) can alert the nurse in the next room, 'I'm concerned about your patient in the next room, can you go in and check on them?'"(:17)

Simulation can instill confidence in adopting new technology. Doctors, nurses and other caregivers also learned how to communicate with patients and their families about the new tools.

SOT-Kim Cooley, nurse and research coordinator for OSF HealthCare

"During the simulation, they were able to practice introducing that telehealth cart to the patient so that takes some of the stress and awkwardness away if you can practice in a somewhat lifelike situation but you're not practicing on a patient the first time."(:23)

The simulations used a trained actor who indicated during debriefing sessions that in a real-life situation, most patients and their families would find it comforting to know a remote eICU nurse was also keeping an eye on them.

The research also created a sepsis simulation toolkit available on the Jump Simulation and Education website. The Jump Center and its resources can be used by other health systems which want to trial telehealth solutions through simulation.

SOT-Dr. William Bond, emergency department physician and director of research at Jump Simulation in Peoria, Illinois

Bond stresses, **"We have a virtual hospital next to our real hospital (OSF Saint Francis Medical Center), or at the right time we can test it at the bedside, because there are many factors that simply can't be replicated. So, those process tests can be incredibly revealing and can find issues that you might not think would be the barriers or facilitators to the adoption of that technology in practice." (:27)**