“I am passionate.”

Clinical Instructor and Director of Simulation Susan Hébert

Compared to countries of similar wealth and size, the US has the highest rates of infant mortality, low birth weight, and women dying due to complications of pregnancy and childbirth. In fact, the US infant mortality rate, with 5.8 deaths per 1000 live births, is 71 percent higher than the average among comparable countries of 3.4 deaths.

As the nursing simulation director for the College of Nursing, Susan Hébert has always had a passion for babies. Her current projects include working with a collaborative team to develop an application that incorporates simulation as an educational intervention, and potentially helping to improve neonatal outcomes.

“I think every baby deserves an ideal start to their life,” said Hébert. “The neonates that were the most difficult to care for in my neonatal nursing career were the ones whose mothers experienced no prenatal complications until labor progressed, and due to unforeseen complications of birth were born with adverse outcomes.”

Hébert started on her path toward simulation education when she worked as a perinatal outreach educator, analyzing the morbidity and mortality statistics on newborns and working to improve outcomes by creating education programs for obstetric nurses and physicians to address any needs or gaps in training.

“I was doing simulation before I even realized it was simulation,” said Hébert. “We went out and did little trainings for these health care professionals. And it was really just training based on their needs, but that’s how simulation should be done—education catered to the needs of your learners.”

As part of Hébert’s doctoral research, she is conducting a pilot study on an electronic fetal monitoring tool designed to take a baseline measurement of clinical nurses’ understanding of and competence in fetal monitoring. The tool establishes an individual’s strengths and weaknesses, then creates simulations and trainings based on their needs until they have reached mastery.

“It doesn’t matter if they’re a brand-new nurse or if they’re nurses that have been practicing in obstetric settings for 20 years,” said Hébert. “What we have found is that we can’t assume their competence level, so the baseline measurement allows us to see where they are at and engage them in deliberate practice to identify any skill decay.”
In a literature review conducted as part of her research, Hébert found a surprising difference in how fetal monitoring is being done, noting a lack of regulation on how the practice is monitored and interpreted.

“Medical errors and health care errors is the third leading cause of death in the US, and electronic fetal monitoring interpretation could potentially be in that mix of human error,” she said.

In addition to her research, Hébert has influenced the nursing simulation curriculum at the College of Nursing, using an approach known as mastery learning and deliberate practice to allow students to master the skills being taught.

“We’ve implemented this curriculum into our skills training so we can make a difference in learner outcomes,” she said. “Eventually we really want to see if we can make a difference at a higher level of translational outcomes. Do the students apply what they’ve learned through simulation in the clinical environment? And consequently how did it affect their patients’ outcomes?”

Hébert continues to maintain the standards of practice for simulation education by taking a mentorship approach with students and others interested in learning.

“I love to mentor people interested in simulation,” she said. “Simulation is best used as a modality of evaluation and an excellent way to figure out if your learners know what they think they know.”

She and her collaborative team have received recent received funding on their electronic fetal monitoring app, Simulated Electronic Fetal Monitoring, which opens the opportunity for using the app in research. She hopes to engage community partners to consider the innovative opportunities of simulation methods for educating providers at local health care facilities.

Learn more about the electronic fetal monitoring app being developed by Hébert and her collaborators—including Tami Wyatt and retiree Sheila Taylor of the College of Nursing and Xueping Li of the Department of Industrial and Systems Engineering in UT’s Tickle College of Engineering—at hits.utk.edu/sefm.

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