



CONCORDIA  
UNIVERSITY  
Ann Arbor, Michigan

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Concordia University Ann Arbor

# NURSING SIMULATION LABS



An apartment-style setup in CUAA's Simulation Center allows students to simulate at-home care scenarios with authenticity.

»»» **DID YOU KNOW?** About 40 percent of the 84,500-square-foot North Building—located just 3 miles north of CUAA's main campus—is devoted to Concordia's nursing school. The state-of-the-art simulation center includes five hospital rooms, eight clinic rooms, a 10-bed skills lab that acts as an emergency department, a three-room apartment, and a courtroom. The rooms are used daily as the setting for a variety of inpatient and outpatient simulations.

Cambridge notes that many students, without being prompted, will respond by asking the husband if they can pray with him. When they debrief the exercise, it provides a chance for the whole group to discuss the approach, as well, and perhaps become more comfortable with incorporating prayer themselves in future simulations.

Not all students are required to pray, but at the very least they see it as an option for care, said Fenske.

"It's a real gift to be able to incorporate our Christian values into the curriculum instead of having to eradicate it from what we're trying to teach," Fenske said. "We have a team that is committed to doing their job excellently so that our students can go out and do their job with equal excellence, and that means everything from properly intubating a patient to extending Christian love and care that surpasses patients' expectations."

**1.5–5.5** Number of hours all nursing students spend in simulations per week of their CUAA experience

**8:1** Student to sim instructor ratio



Percentage of CUAA nursing graduates who felt simulation helped them better understand content in their nursing courses



Percentage of CUAA nursing graduates who felt simulation helped prepare them for their clinical experiences

**2018**

Year of inaugural Bachelor of Science in nursing graduates

**39**

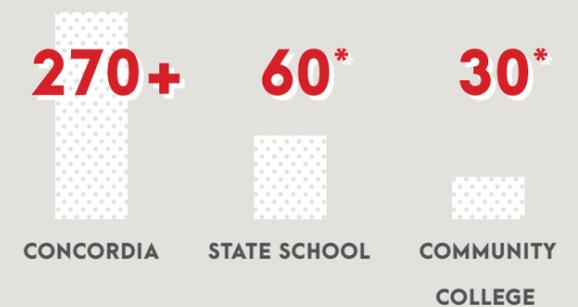
Number of CUAA nursing graduates

## EXCEPTIONAL AT SKILL BUILDING

Not only does CUAA allocate more class hours to simulation than most of its competitors, the university doesn't sacrifice valuable hands-on learning opportunities to do so.

"Many schools use simulation but do it on a sporadic basis, taking time away from the students' clinical experiences," said Fenske. "Instead, we re-appropriate time from classroom lectures to provide our students with weekly simulations throughout the entire six semesters of nursing courses. This provides our students with a tremendous amount of hands-on, experiential learning."

### HOURS SPENT IN SIMULATION OVER THE COURSE OF A STUDENT'S NURSING EXPERIENCE



*\*Numbers were validated for two specific nursing schools in Michigan. Names of schools were purposefully omitted to demonstrate a general trend within higher education.*

between nursing education and real-life care through its advanced simulation technology on campus.

In addition to keeping up with evolving technology, competition for clinical placements has long posed a challenge for nursing schools nationwide, but there hasn't always been the research to back up simulation as an effective alternative. So when the 2014 "NCSBN National Simulation Study" showed that up to half of students' clinical hours can be replaced in a high-quality simulation lab with no drop-off in learning, it came as celebrated news to nursing schools across the country. A more recent article—published in 2018 by the international, peer-reviewed journal "Clinical Simulation in Nursing"—takes it one step further even in its findings that high-fidelity simulation is not only equal to clinicals in some instances, it has been found to actually enhance learning in clinical settings.

Perhaps this is because simulations place otherwise unpredictable factors within the control of the teachers so that instruction and assessment become more standardized and efficient. Concordia's nursing faculty like to point out, for example, that CUAA's high-fidelity manikins can simulate birth as often as every 8 minutes if needed.

"Through simulation, we're able to ensure that students have the opportunity to observe medical complications and have certain experiences that we just can't guarantee in their clinicals," Simmons explained.

## A CUT ABOVE THE REST

There's an art to creating a formative simulation experience, and Concordia's nursing faculty and staff rival the Michelangelos of the field.

When Campus Dean of Nursing Cindy Fenske, DNP, RN, CNE, arrived in 2015, she said she marveled to see God at work through the incredibly gifted people He provided to lead simulation at CUAA. Fenske, a former faculty member of the University of Michigan's reputable nursing school, had high standards for the people she would employ, and the four faculty members who make up Concordia's Simulation Center did not disappoint. Simmons and Cambridge, along with Joseph Yaksich, MS, RN, ACNP-BC, CHSE, and Ben Oliver, BS, AEMT-P I/C, represent a combined total of over 100 years of experience in the health care field, with more than half of those years devoted to simulation.

The four individuals have lent their expertise on multiple occasions to national and international audiences, either through scholarly presentations or, in Oliver's case, to help a partner institution in Ghana set up its own state-of-the-art simulation lab. The overseas lab was so lauded within the developing country that the First Lady of Ghana attended the May 24, 2018 open house.

Last fall, the sim team's proficiency and innovative thinking also notably caught the attention of a Yale University instructor who was impressed with how the team is

incorporating students from other disciplines into simulation experiences. Following a global webinar presentation that Simmons, Cambridge, Yaksich, and Oliver delivered last October, Yale University faculty member Mary Showstark, MS, PA-C, invited the CUAA team of educators to observe an upcoming interprofessional education virtual exercise among Yale, University of Southern California, George Washington University, New York University, and Georgetown University students.

Concordia's nursing, child life, and justice and public policy students afterward were invited to join the elite Ivy League learning exercise, which happens annually. Concordians will first participate in one this upcoming November.

And the list of accolades goes on. It's the type of team any university would envy, and it's one that Fenske is confident in saying is in a league of its own.

"We're the best there is when it comes to simulation," said Fenske. "The simulation team we have at Concordia is amazingly creative. I think some of it is experience and some of it is that it's just within their nature to be innovative. They're willing to try new things, and they put in the work to go to trainings and conferences to continually expose themselves to the latest and best ideas."

Add to their academic achievements a deep passion for the mission and vision of Concordia University. As a result, Concordia has been able to combine an intentional focus on Christian care with a standard of excellence that is arguably tough to achieve for any new program.

For Sherrie Anderson, the fruits of that combination have been apparent through her professors' personalized, caring, and intentional approach in all of her classes—even when she made blunders like trying to feed a CHF patient who is actually short of breath.

"When they saw I was getting defeated, I could tell that they'd work to adjust their approach with me and go a route that actually helped me instead of made me feel even more discouraged," Anderson said. "It's not that they were giving me a shortcut. I think they're just really good at understanding everyone's learning styles, and they care enough to expect the best out of you."

The faculty's Christian approach extends to all aspects of CUAA's nursing program, including simulation. In the first year of nursing courses, for example, students are presented a simulation scenario that has an ethical component woven in: a patient has cancer and has just decided that she wants to forgo further treatment, but her husband is resistant to her decision. Students are then asked to rehearse how they would engage with the husband to help him come to terms with the patient's choice.

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# VITAL TO THE OPERATION



Concordia's School of Nursing may be young, but its impressive simulation setup already is putting CUAA on the map. Armed with a state-of-the-art simulation center, 13 cutting-edge manikins, and a tried-and-true crew of simulation experts, Concordia's nursing school is able to turn out truly exceptional young professionals. When combined with a commitment to Christian care, the result is a standard of excellence that is arguably tough to beat, and one that is sorely needed by the Church and world.

By **Kali Thiel**, *Strategic Communications*





From behind two-way mirrors, Professors Betsy Cambridge (left) and Anita Simmons are watchful but deliberately removed from the students' simulation experience. They use computers to adjust "patient" heart rates and responses to treatments, and they communicate through headsets.

Sherrie Anderson didn't expect to ace her first nursing simulation at Concordia University Ann Arbor. In fact, no one does. The goal of these carefully orchestrated hands-on exercises is not for learners to perfectly deliver clinical care as burgeoning students, but rather to present opportunities for rich discussion post-experience about where they went wrong and how they could do better.

Still, the rookie Anderson couldn't have made a worse judgment call during her first attempt.

The Ann Arbor native was about a month into her experience at Concordia when she and a classmate were asked to assess and then treat a "patient" (a high-fidelity manikin) that was programmed to display signs of congestive heart failure (CHF).

Anderson, who will graduate in May with her bachelor's degree in nursing, was a sophomore at the time. She and her classmate entered Concordia's state-of-the-art simulation space to find the patient lying supine with a feeding tube inserted. He was coughing and wheezing, and his ankles were swollen.

What the two should have done was perform a head-to-toe assessment, notice the swollen ankles, and then bring the patient to a sitting position, supply oxygen, and elevate his feet. Instead, the perplexed pair decided that perhaps the patient was hungry. In their efforts to further insert the manikin's feeding tube, they managed to stop his coughing by increasing his nutrition levels to the point where he became overloaded with fluids.

That was two years ago, and Anderson has long since let go of the frustration and embarrassment felt in the moment on that day—she even gets a healthy chuckle when recalling her naivety—but she hasn't let go of the lesson.

To be clear, Anderson now knows how to treat a patient with CHF, and should one find themselves the subject of her future care, they need not worry about being overloaded with fluids.

"What were we thinking?" Anderson said with a laugh while recalling the exercise. "That was so embarrassing, but we were brand new, and, ultimately, it was a learning lesson."

And that's precisely the objective of simulations: to help students experience learning in a way that causes them to never forget.

Concordia's nursing simulations are deliberately designed to mimic the high-stakes environment of a clinical setting. CUAA nursing staff have even gone so far as to bring in actors who played the role of frantic parents rushing to the bedside of their coma-induced daughter, or students from CUAA's justice and public policy program who acted as law enforcement so that nursing students could practice managing the emotions in the room—emotions including their own.

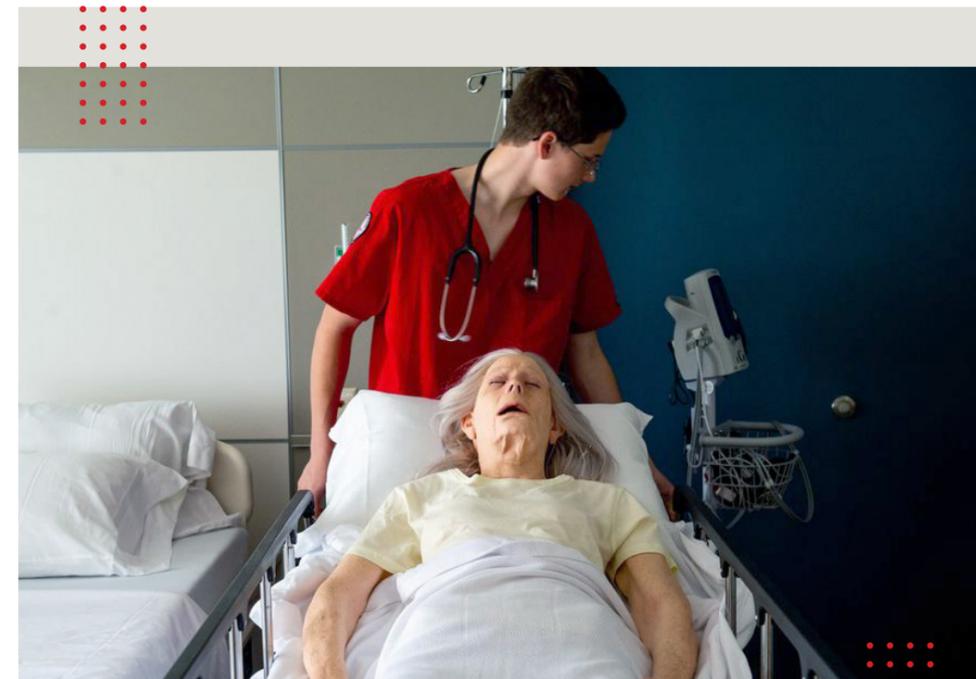
"We've had tears from students during simulations; they take the exercises very seriously," said Betsy Cambridge, RN, BSN, one of CUAA's simulation education specialists. "The goal isn't to make them cry, but it's not a bad thing either. When you're emotionally involved in a situation, you never forget it."

### COMPLEX PROBLEM SOLVING

Beyond the emotional component of patient care, there's a critical thinking muscle that students must learn to flex, ideally before a human life is at stake. Thus, simulation goes beyond simple "skill and drill" (that's what lab time is for), and instead asks students to troubleshoot and solve multifaceted medical scenarios that sometimes do not have a single right answer.

"We're dealing with medicine in 2019, where people have very complex illnesses," said Anita Simmons, RN, MSN, director of simulation and interprofessional education. "Patients often have three or four different concerns going on when they arrive for care. Sometimes it's not exactly cut and dry, and sometimes it's knowing when do I need to gather more information?"

Simulations are not meant to replace the real experience. Clinical rotations, where students work in an actual medical environment under the mentorship of a licensed professional, are still very much a part of every CUAA nursing student's requisites for graduation. But with technology bursting onto the medical scene in new ways each year, Concordia is in a powerful position to narrow the gap



## FIRST IN THE WORLD

Concordia's latest simulation manikin is so lifelike it could easily be mistaken for the real thing. It's no wonder either because the "Lifecast Adult Female" was made using scans and 3D imaging of real people.

The Lifecast simulator also features realistic fine details such as veins and underlying structures. Its skin mimics the texture of actual human skin, and it weighs the amount of an average elderly woman to allow students to rehearse authentic bed transfers and fundamental skills.

At the time of the manikin's April 2019 arrival on campus, Concordia was the first nursing school in the world to acquire the model. Thanks to the expertise and ingenuity of Concordia's chief simulation specialist, who requested that Lifecast manufacture the manikin with lifelike bed sores on its skin, Concordia will also be able to simulate neglect scenarios. The truly one-of-a-kind manikin will allow the sim team to put CUAA's mock courtroom to use, as well, in rehearsing the legal ramifications of patient abuse.

The Lifecast simulator brings Concordia's total manikin count to 13, and each one offers its own nuanced capabilities, including software that allows manikins to authentically cry, bleed, blink, and even give birth.

Simulators can range in price from \$18,000 to \$110,000 each. For that reason, Concordia has sought to purchase its manikins with the help of donors and grant funding. Oliver's decades of experience in the sim field and his deep connections with manufacturers also have come in handy.

"You see some schools where they've purchased the Cadillac of manikins just because they can, and they're having students do the most basic assessments on it," Oliver said. "You don't need a \$110,000 manikin to check a pulse. Instead, at Concordia, we're really striving to match the fidelity of the manikins with their intended use. We want to be good stewards of the money we've been blessed to have."

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