

Dietetics Interns Learn Critical Skills in Immersive Simulation Experience

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Simulation education reaches far beyond medicine and nursing disciplines. Immersive learning and training opportunities for staff and community partners are now being provided through collaborations at the Central Texas Veterans Health Care System (CTVHCS).

In August 2022, clinical dietitians from the Nutrition & Food Services Department partnered with simulation staff to create an immersive simulation experience for dietetic interns with the Texas Agricultural and Mechanical (A&M) University Dietetic Internship Program. The use of simulation allows interns to engage in hands-on learning and demonstrate their ability to complete required program competencies, which can be difficult to meet in the hospital setting. Simulation also provides opportunities to try new skills, ask questions and learn from mistakes in a safe, controlled environment.

This simulation was conducted at the Center for Innovation and Learning (CIL), which is comprised of approximately 3,000 square feet of simulation space with both high- and low-fidelity simulation equipment. Interns were introduced to the simulation environment, equipment and safety procedures during a pre brief before being split into two-person teams and assigned a starting location. The simulation included four separate labs designed to allow the interns to become competent in bedside assessment and education performance, blood pressure and blood glucose measurement, nutrition focused physical exams (NFPE), placement of nasogastric feeding tubes and the use of enteral feeding pumps.

Kristy Causey, who is the simulation program coordinator at the *Olin E. Teague Veterans Center*, had this to say about the event “Simulation allowed the dietetic interns to bridge the gap between theory and reality in a physically and psychologically safe environment.”

The Lab Experience

The first lab was designed to allow dietetic interns to demonstrate counseling and education methods to facilitate behavior change, as well as practice routine health screening assessments. To accomplish this, a high-fidelity, full body manikin and a wireless pillow speaker was set up to allow the precepting clinical dietitian to respond to the intern’s questions and engage in real-time dialogue. During the education portion of the encounter, the precepting clinical dietitian used open-ended questions to discern the intern’s knowledge and help guide them through the client education. Students then worked with a registered nurse (RN) to learn and demonstrate proper technique for taking blood pressure and blood glucose measurements on their lab partner.

The second lab provided dietetic interns an opportunity to conduct NFPE on simulated and live patient actors. The first assessment was conducted on a low fidelity, full body-casted manikin with realistic features including foot drop, edema and decreased skin elasticity. Dietetic interns used visualization and

palpation to assess the manikin for muscle and fat loss which both can be indicative of potential malnutrition. After building confidence in their ability to conduct NFPE on a manikin, the interns were then asked to perform this assessment on a live patient actor, played by a precepting clinical dietitian.

The third lab was created to meet new 2022 dietetic internship competencies which would otherwise be difficult to accomplish in the clinical setting. While interns may observe placement of nasogastric feeding tubes in clinical care, the act of physically placing tubes would otherwise be unavailable if not for simulated learning. To achieve this objective, CTVHCS's Education Service incorporated a high-fidelity and skill-based manikin that learners used to conduct a brief swallow study. Upon determining the simulated patient did not pass the swallow study, the interns placed a Kangaroo nasogastric feeding tube with a Dobhoff tip for enteral feeding and programmed a feeding pump. This simulation also introduced the dietetics interns to working alongside other health care providers at the bedside to achieve optimum patient care as an interdisciplinary team. The interns reported that working with a RN at the bedside was a new experience for them and reminded them that healthcare is a team sport with many disciplines working in unison to provide high-quality care.

After each intern rotated through the three simulated scenarios, interns and staff gathered in the debriefing room where they were able to view the recorded simulations. The simulation team then used strategic debriefing techniques to engage the interns in meaningful discussions, which allowed for insightful reflection into methods for improving their care delivery.

The final lab of the day focused on bringing awareness to personal biases and helping dietetic interns develop empathy and understanding for patients affected by obesity, as weight bias is a prevalent issue in health care. Dietetic interns were asked to individually complete the Harvard Implicit Bias Association Test for Weight to explore the subconscious associations they might make in relation to weight status. Interns then individually put on a prosthetic body suit that simulates obesity and were directed to complete routine or common daily tasks such as reaching for an item on a shelf, sitting in a chair and picking something up from the floor. This provided the interns with a firsthand experience with some of the difficulties that an overweight or obese patient may encounter in day-to-day life. The lab concluded with a group discussion on their experiences during the simulation and education on the various factors affecting a person's ability to lose weight such as hormones and genetics, teaching interns that weight loss is much more than 'calories in vs. calories out.' When asked about the body suit simulation, Intern Abigail Autry stated, "My walkthrough in the simulation lab was truly essential in preparing me for interactions with a variety of people with different backgrounds and experiences."

Interprofessional collaborations such as these open the door to ongoing partnerships with dietary staff and trainees, as well as expanding simulation-based education through new partnerships to all clinical and non-clinical health professions within CTVHCS.