

“Try It” Mini Grant May, 2016 Report

Title of Project

Simulated Nursing Care of the New Obese Patient Utilizing the Simulaids “SimObesityShirt”

Grant Recipient

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College/School

School of Nursing

Department

Clarke Simulation and Learning Laboratory

Fall 2015 and Spring 2016 semester courses

Grant Goals

Obesity has become a significant health concern in the United States. Currently, 35.7 percent of adults are obese (Robert Wood Johnson Foundation (RWJF), 2012). In the hospital, obese patients are managed in nearly every unit, including the general medical-surgical and intensive care units (Weiss & Elixhauser, 2012). Obese patients have complex physiologic changes that impact the pulmonary, cardiovascular, endocrine, and integumentary systems (Phillips, 2013). Nurses are expected to care for these complex obese patients, which require unique assessment methods, safe transfer techniques, specialized equipment, and specific nursing interventions. The simulation lab provides a safe environment for students to develop, cultivate, and apply knowledge and skills in a realistic clinical situation. Our goal of this grant was to incorporate a simulation scenario or program, using an obese manikin, to provide nursing students with a realistic experience in delivering care for this patient population. We anticipated that the nursing students would learn and practice the skills necessary for the care of an obese patient, including the utilization of safe mobility and transfer techniques, specialized assessment techniques, and realizing the unique psychosocial needs of an obese patient.

Grant Preparation and Process

Knowing the significance of the obesity epidemic, we reviewed our curriculum which revealed a deficit in our obesity content in both theory and simulation. In the summer of 2015, we asked curriculum faculty to increase their obesity content in lecture. The faculty agreed to

increase their obesity content for the Fall 2015 and Spring 2016 semesters. This provided a foundation which better prepared students to care for an obese patient in the simulation experience. The Simulation Lab staff was able to revise a current heart failure simulation to include obesity care. These changes were completed in early fall 2015 before the simulation experiences started.

We purchased the SimObesityShirt which simulates a 350 pound patient. One challenge associated with simulation is creating realistic scenarios and patient responses so that students are better able to suspend disbelief and treat the simulator as a live patient. As the realism of the scenario is improved, students' learning is enhanced (Durham & Alden, 2008). This shirt fits over all of the adult manikins in our Simulation Lab or can be worn by a standardized patient. It provides a realistic simulation of obesity, with weighted pendulous breasts and pannus. To make the SimObesityShirt more realistic for nursing skin assessment, we used moulage techniques to create a simulated yeast infection under the SimObesityShirt's bilateral breasts.

We developed a written pre- and post-test to assess the students' knowledge regarding nursing care of the obese patient. The post-test contains summative evaluation questions that address the overall value of the experience. Additionally, the simulation staff trained the students on the use of the SimObesityShirt during routine orientation to the manikins.

What Worked as Expected and What Didn't Work as Expected

Overall, the students expressed that the use of the SimObesityShirt proved to be an extremely beneficial learning experience in caring for an obese patient. The majority (95%) of the students responded that they agreed/strongly agreed that the obesity simulation experience was realistic.

With the increase in obesity content in lecture and the obesity discussion points immediately prior to simulation, the majority of the students successfully demonstrated obesity care during simulation. The student scores on the pre- and post-tests indicated an increase in knowledge of obesity care. The students' scores increased from an average of 76.5% on the pre-test to 92.5% on the post-test.

The logistics of using the SimObesityShirt also went well. It required additional time for set up and clean up, but was manageable without interrupting the Simulation Lab schedule. We were able to keep the yeast infection on the SimObesityShirt in between simulations throughout the semesters. The pre-test, post-test and summative evaluation required extra time to administer, but again, it was manageable in the time we are given for simulation. The students were agreeable and satisfied with the obesity simulation protocol which was reflected in the comment section of the summative evaluation.

The SimObesityShirt did present us with a few challenges. The shirt simulated an obese patient, yet was not actually heavy when the students moved the manikin. The heart, lung and abdomen assessment was a challenge because the suit muffled the sounds requiring the students to place their stethoscope under the suit. Typically the students obtain a manual blood pressure reading from the manikin, but the suit prevented this assessment because the cuff could not inflate over the suit and get a reading from the manikin.

Lessons Learned

We learned that the SimObesityShirt was beneficial for the students' learning experience in the simulation lab for multiple reasons. The project required collaboration from the simulation staff and the faculty involved in curriculum planning and lecture. We believe that without this obesity content delivered in lecture; this project may not have been as successful.

With Reinert Center funding and minimal time, we were able to alter an existing simulation to incorporate an important aspect of patient care that we had not previously been able to implement. Many students expressed excitement and appreciation for the opportunity to learn and practice obesity care as they frequently encountered obese patients in the clinical setting.

Future Direction

The Clarke Learning and Simulation Laboratory will continue to utilize the SimObesityShirt each semester with the nursing students. In light of the success of using the SimObesityShirt we petitioned and were granted funds to purchase the matching obese arms and legs. We anticipate that the SimObesityShirt would be beneficial for use in nursing lecture, as well as in physical and occupational therapy lectures and simulations. Some students commented that they would have benefited from additional obesity content in lecture. The simulation staff will continue to collaborate with the faculty to expand the obesity curriculum. Additionally, the SimObesityShirt will be useful in the future when home health scenarios will be implemented.

