Chapter 31
Student Nurse Simulation Training Incorporating Disease Management and Telenursing for Congestive Heart Failure (CHF) Patients

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ABSTRACT

Telehealth is an ideal situation to combine with simulation in the education of the nursing students. Educating students in the care of chronically ill patients and preparing them to care for these patients in the community is a recurring theme that nurses will continue to face in the future. This chapter delineates the development and study of a student nurse simulation training incorporating disease management and telenursing for Congestive Heart Failure (CHF) patients. The chapter lays the foundation for replicating the activity at other universities. In addition, the chapter depicts the study results of the initiated pilot program. The surveys completed prior to the simulation activity found the students felt the need for such an exercise before graduation. The students also responded that simulation in education is a useful tool. They were also interested in learning more about CHF patients in the simulation lab. Following the study, the students reported feeling that the inclusion of disease management and telehealth was helpful. The students also weighed in on which level of nursing student they believed was most appropriate for learning the content. Overall, the response by the students was positive regarding this activity and simulation education, in general, as based upon their survey comments.

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INTRODUCTION

Heart failure (HF) is defined as "the leading cause of hospitalization among older individuals, and accounts for more than 1 million hospitalizations and readmissions each year in the United States" (Radhakrishnan & Jacelon, 2011). Authors, Radhakrishnan and Jacelon (2011), suggest that telehealth can reduce overall cost of care for older adults with heart failure (HF). The authors suggest that the cost of each hospitalization is between 6 and 12 thousand dollars, totaling an annual price tag of 26.7 billion dollars (Radhakrishnan & Jacelon, 2011).

Radhakrishnan & Jacelon purport that one third to one half of all of these HF admissions could be prevented if individuals manage their regimen more effectively (Radhakrishnan & Jacelon, 2011). The aim of telehealth is to help patients self-manage their CHF, when, if done properly may result in a 20% reduction in HF treatment (Radhakrishnan & Jacelon, 2011).

In the Encyclopedia of Human Behavior (1994), Bandura defines self-efficacy as "an individual's perception of his/her capabilities to produce designated levels of performance.. Bandura believes that self-efficacy may influence the feeling, thinking and motivating of themselves in light of performing certain behaviors (Bandura, 1994). The development of a training module incorporating simulation, disease management of CHF patients, and telehealth comes out of the premise of the need to educate students regarding the care of chronically ill patients. A simulation exercise cannot only allow for the self-efficacy of the student nurses, but also allow for the self-efficacy of the patients being educated by the students. Hopefully, this telenursing simulation exercise program motivates the future patients of our students to accomplish their self-care behaviors. Self-care activities include obtaining daily weights, adhering to an exercise plan, managing medications, and restricting salt and fluid from their daily intake. Strict adherence to these self-care activities may assist in decrease of costly readmissions an improvement patient self-care outcomes, a decrease in overall costs, and an improvement in home care efficiency (Radhakrishnan & Jacelon, 2011).

Telehealth nursing is practiced in many settings such as the patient's home, healthcare clinics, doctor's office, prisons, hospitals, call centers and mobile units (American Telemedicine Association, 2011). However, the use of technology is only as effective as the skill level of its users (Suter et al., 2011). This is precisely why nursing students must be educated in telehealth nursing. As our population continues to age and there are many more advances in technology nurses will need to find a way to manage these patients.

The target audience for the telenursing simulation exercise was senior level nursing students. This target audience was the most appropriate since they are getting ready to graduate and go out into the workforce. The objective of this telenursing module was to assist the students in obtaining a more complete understanding of managing patients with chronic disease, which is imperative for their future employment and career.

Future implications for such a training module may include dissemination to other health care disciplines, such as School of Public Health students, physical therapy students and medical students. An interdisciplinary, collaborative approach is also essential in managing chronically ill, aging patients. Teamwork, an IOM core competency, is accomplished through this collaborative approach in the simulation exercise. In tandem with this training, other core competencies of the IOM also accomplished include safety and quality; patient centered care; and evidence-based practice (Finkelman & Kenner, 2012).

This training module was innovative and essential for students, as these training areas were not covered in the nursing curriculum in a similar manner. Initially, the training incorporated in-person simulation/