An Analysis of Pre-Licensure Nursing Student Clinical Errors and Near-Misses

Megan Wolfe, MS, MS Ed., FNP, RD, RN, CMSRN, CNE
Assistant Professor, Onondaga Community College, Syracuse, NY
Faculty, St. Joseph’s College of Nursing at St. Joseph’s Hospital Health Center, Syracuse, NY

Background

There is a growing focus within healthcare organizations regarding the necessity of a promotion of a culture of safety; indeed, the Institute of Medicine decreed that an increase in the safety of healthcare was the first of six domains listed as an aim for the U.S. Healthcare System (Agency for Healthcare Research and Quality, n.d.). As today’s healthcare professionals, and especially nurses, progress towards a culture of safety, so too must their training. Medical errors and sentinel events remain a significant concern in the healthcare arena, despite targeted and focused initiatives and attempts at their reduction.

Medication errors, according to some reports, occur at the rate of more than 1 per day per hospitalized patient (Bush, Hueckel, Robinson, Seelinger, & Moloy, 2015). Hospital staff nurses are typically the personnel responsible for the administration of the overwhelming majority of medications within the healthcare system (Bush et al., 2015) and consequently are critical elements in the process of medication administration.

Approximately one-half of new nurses with less than one year of experience who were involved in adverse patient events identified that their formal education preparation was a causal factor in their error (Santings, Gibson & Pennington, 2011). An examination of quality and safety measures of a current hospital based associate degree nursing (ADN) educational program provided data regarding errors committed by prelicensure students. Tracking and analysis of frequency and type of student clinical errors provides an opportunity for improvement in the training and preparation of those who might be associated with medical errors.

Methods

A twenty-four month retrospective comparative design was utilized in a private, non-profit 2-year associate degree nursing program in the northeastern region of the United States with an enrollment of approximately 300 students. The target population was all enrolled prelicensure nursing students between the ages of 18 and 60 who had a SOFI report filed. A convenience sample was utilized. Students who had been dismissed from the program due to either academic or clinical failures but who have had at least one SOFI filed were included in the study population. The number and types of SOFI reports generated with the previously described demographic variables was measured.

Instrumentation

A SOFI form is completed whenever an event happens during a clinical experience that is identified by the faculty, staff nurse or student as having the potential for causing harm to a patient. A SOFI form was completed whenever a student opportunities for improvement (SOFI) report filed. A convenience sample provided an examination of quality and safety measures of a current hospital based associate degree nursing (ADN) educational program provided data regarding errors committed by prelicensure students. Tracking and analysis of frequency and type of student clinical errors provides an opportunity for improvement in the training and preparation of those who might be associated with medical errors.

Results

A total of 268 SOFI forms were examined. The difference in the number of errors/near misses and therefore SOFI reports between semesters one and two (M=0.4, SD=.49) as compared with semesters three and four (M=0.6, SD=.49) of the program was statistically significant at an alpha level of 0.05. The number of LPN students completing SOFI forms (M=.25, SD=.43) compared to those that had no healthcare experience (M=.75, SD=.43) was also statistically significant at an alpha level of 0.05. Students aged 30 years or older were associated with 64.3% of the SOFI forms (M=.64, SD=.48), and SOFI forms (M=.63, SD=.49) of the program was statistically significant at an alpha level of 0.05. The difference in SOFI reports constructed during the 24-month curriculum (M=.63, SD=.49) and the 18-month curriculum (M=.63, SD=.49) of the program was statistically significant at an alpha level of 0.05.

Conclusions

This analysis indicates a significant deficit in students’ assimilation and application of nursing principles. The findings of this particular research study highlight the necessity of classroom and clinical instruction regarding safe, appropriate care and techniques for error management. The impact of national safety patient programs on nursing curricula need to be assessed, and potentially need stronger implementation efforts. Since the publication of To Err is Human (IOM, 1999), there has been considerable time, attention and effort invested in the training and preparation of those who might be associated with medical errors.

While errors are often considered to be part of the learning process of pre-licensure students, the challenge associated with nursing education is building an educational foundation and the promotion of an appropriate culture wherein students can learn from their mistakes and near-misses while the errors/near-misses are caught before they reach the patient. A broader and increased knowledge base regarding the clinical errors and near-misses that are conducted by pre-licensure RN students can only assist faculty with regard to the more thorough preparation of these future providers.

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References: