Abstract

**Background:** Provision of acute health care requires quality improvement interventions. Healthcare can take advantage of electronic clinical decision support to provide evidence-based guidelines and impact quality.

**Objective:** To test the hypothesis that the use of and electronic decision support for determining acute care admission appropriateness and length of stay will impact on health care quality in a private acute care setting.

**Methods:** A retrospective quantitative study of the emergency admission data pre and post implementation of the Interqual electronic clinical decision support using a paired t test with the same sample. The variables of length of stay (LOS) and admission appropriateness were the quality indicators considered.

**Results:** From the population of \( N = 897 \) emergency patients admitted in 2010 \( N = 92 \) were readmitted in 2012. The identification of the individual patients that were admitted with the same category of medical complaint on both occasions yielded \( n = 31 \) patients for the sample. The mean LOS and appropriateness of admission were determined to be statistically significant, respectively \( (p < .001) \) and \( (p < .03) \) and therefore applicable to the population.

**Conclusion:** The Electronic Clinical Decision Support intervention Interqual was found to have a positive impact on the quality culture of the research setting; as demonstrated by the augmentation and introduction of concomitant quality interventions. Patient length of stay and admission appropriateness data post Interqual’s implementation demonstrated a positive impact on the utilization of acute care beds within the research setting.