

## Abstract

**Background and purpose:** Demand for inpatient endoscopic procedures continues to increase due to advances in minimally invasive techniques and diagnostic potential. Hospital based endoscopy units are complex and expensive; effective procedure room utilization is essential for hospital financial health. Nurse-led interventions can reduce inefficiencies in workflow while improving patient safety and staff satisfaction. The purpose of this nurse-led Quality Improvement (QI) project was to determine if an endoscopy nursing pre-procedure checklist would improve three outcomes in a hospital-based endoscopy unit: 1) inpatient procedure room utilization; 2) patient safety; 3) nursing satisfaction.

**Methods:** This project used a pre-test post-test quasi-experimental design with two data sources, inpatient procedural cases (n=480) and staff nurses (n=32). An intervention, an endoscopy nursing pre-procedure checklist, was implemented in a hospital-based endoscopy unit. To evaluate the impact of the intervention, data was collected over two 12-week periods. Nursing satisfaction was measured using a five question electronic survey, completed by eligible staff nurses before and after the intervention. Data were analyzed using independent sample t-tests and chi-squared test.

**Results:** The inpatient procedure room utilization (minutes) was higher post-intervention (Mean Difference [Md]=28.76, Standard Error of Difference [SE] =18.26 ; p=0.12). The intervention increased the number of endoscopy cases completed post intervention (Md=1.34, SE =0.39; p<0.05). No significant association was found between patient safety events (p=0.19) and staff satisfaction items when comparing between pre and post-tests.

**Conclusion:** Using a cost neutral QI tool, an endoscopy nursing pre-procedure checklist, endoscopy utilization minutes and endoscopy cases per day increased.

**Implications:** Results demonstrate the role of endoscopy nursing in clinical operations and provide further evidence that nurse-led QI projects are effective in endoscopy practice settings.

**Keywords:** Endoscopy, endoscopy nursing, pre-procedural checklist, utilization, nurse-led