Decreasing Cost in the GI Endoscopy Suite by Utilizing Best Sedation Practices

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Abstract
Colorectal cancer is a leading cause of cancer death in the United States (Mandel, Tanner, Lichtenstein, Metz, Katzka, Ginsberg, & Kochman, 2008; Siegel, DeSantis, & Jemal, 2014). Because this lethal disease claims lives of many people every year, more patients are undergoing screening colonoscopies, which have greatly aided in decreasing the number of colorectal cancer deaths (Siegel et al., 2014). The most common form of sedation for colonoscopies is moderate sedation with a benzodiazepine and an opioid (Cohen, Hightower, Wood, Miller, & Aisenberg, 2004; Lera dos Santos, et. al., 2013). However, sedation by anesthesia providers using propofol is becoming more common and may aid in reducing recovery and discharge times from the postoperative anesthesia care unit (PACU) as well as reducing overall costs. A retrospective chart review (N=176; 88 in propofol group and 88 in benzodiazepine and opioid group) was performed to determine if propofol sedation did reduce discharge times and decrease overall costs for the patient. Patients included in this study underwent colonoscopy, were ASA PS I or II, and between the ages of 18 and 55. Exclusion criteria for this project were as follows: ASA PS III or IV, non-English speaking, pregnancy, allergy to eggs, fentanyl, or midazolam, previous neurological deficit, patients scheduled for colonoscopy and EGD in the same day, hospital inpatients undergoing colonoscopy, and patients undergoing emergency procedures. A one tailed independent groups t-test was performed on the mean time from procedure end until discharge time in minutes. The hypothesis that colonoscopy patients sedated with propofol would be discharged faster than patients receiving a benzodiazepine and an opioid for sedation was accepted (group propofol M= 80.99, SD= 15.36 and group benzodiazepine and opioid M= 84.58, SD= 13.42, p= 0.05). A cost analysis revealed that sedation with propofol by anesthesia providers was more costly. While propofol patients are discharged faster, moderate sedation with a benzodiazepine and an opioid may be more cost efficient if the same number of patients underwent the procedure, however the decreased time may permit more revenue via greater number of cases performed. Interviews with providers after presenting the findings revealed future stakeholder strategies for a practice change.