



Does Having A Fellow Improve The Quality of Screening Colonoscopy?

Philip Bouchette, MD¹, Siva Gandu, MD¹, Jordan Roussel, MD¹, Sudha Pandit, MD¹
¹Louisiana State University Health Shreveport - Department of Internal Medicine

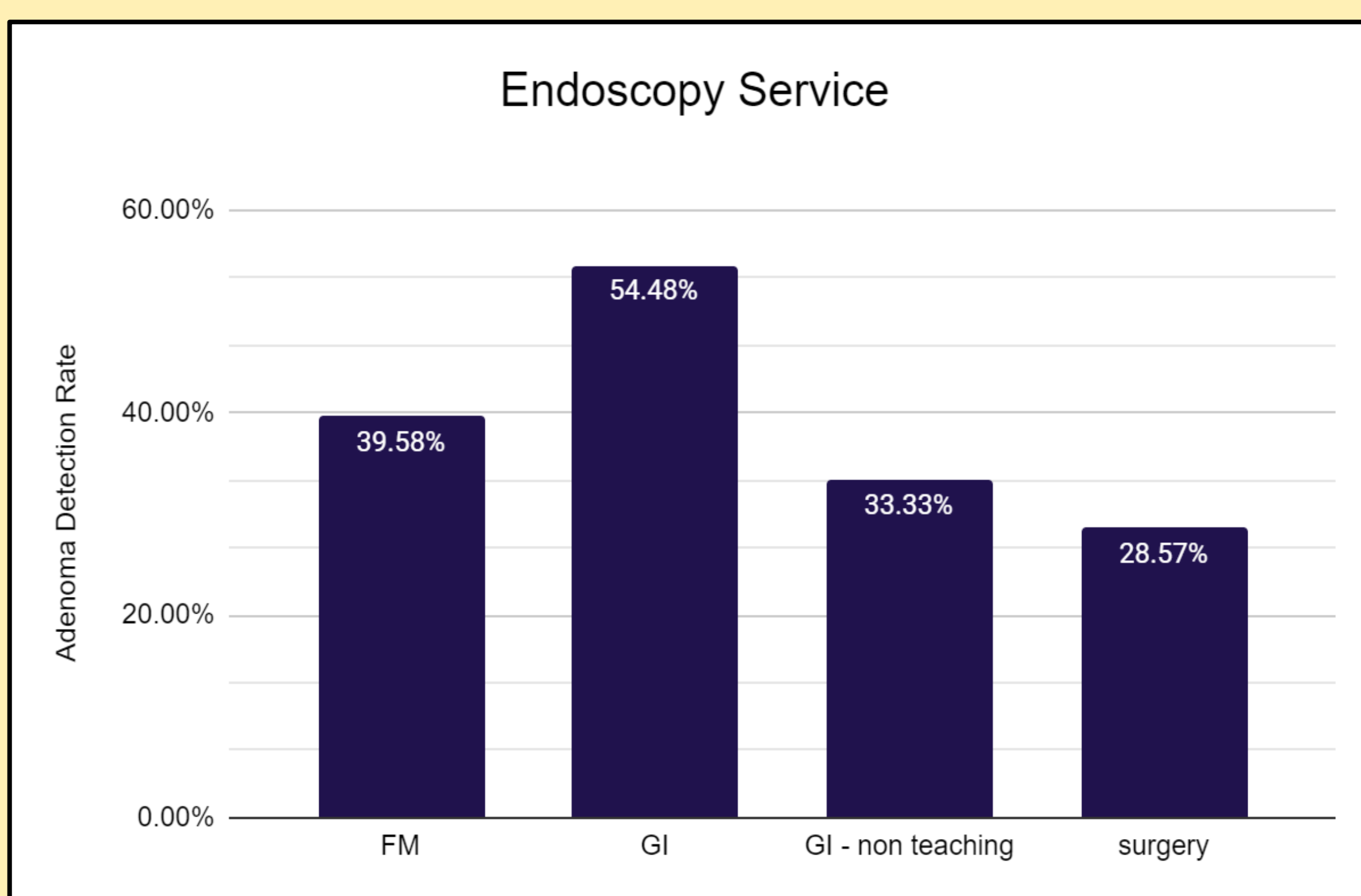
Abstract

Identify if fellow involvement, sedation type and service doing the procedure has an impact on the rate of adenoma detection on screening colonoscopies

Introduction

Adenoma detection rate (ADR) is currently used as a quality metric for physicians performing screening colonoscopies. Many studies use the metric of ADR to assess if different variables affect the quality of colonoscopy. At times, some patients request that a physician in training, a gastroenterology fellow, not be involved in their procedure. This study aims to assess the differences in ADR during screening colonoscopy with and without involvement of the gastroenterology fellow.

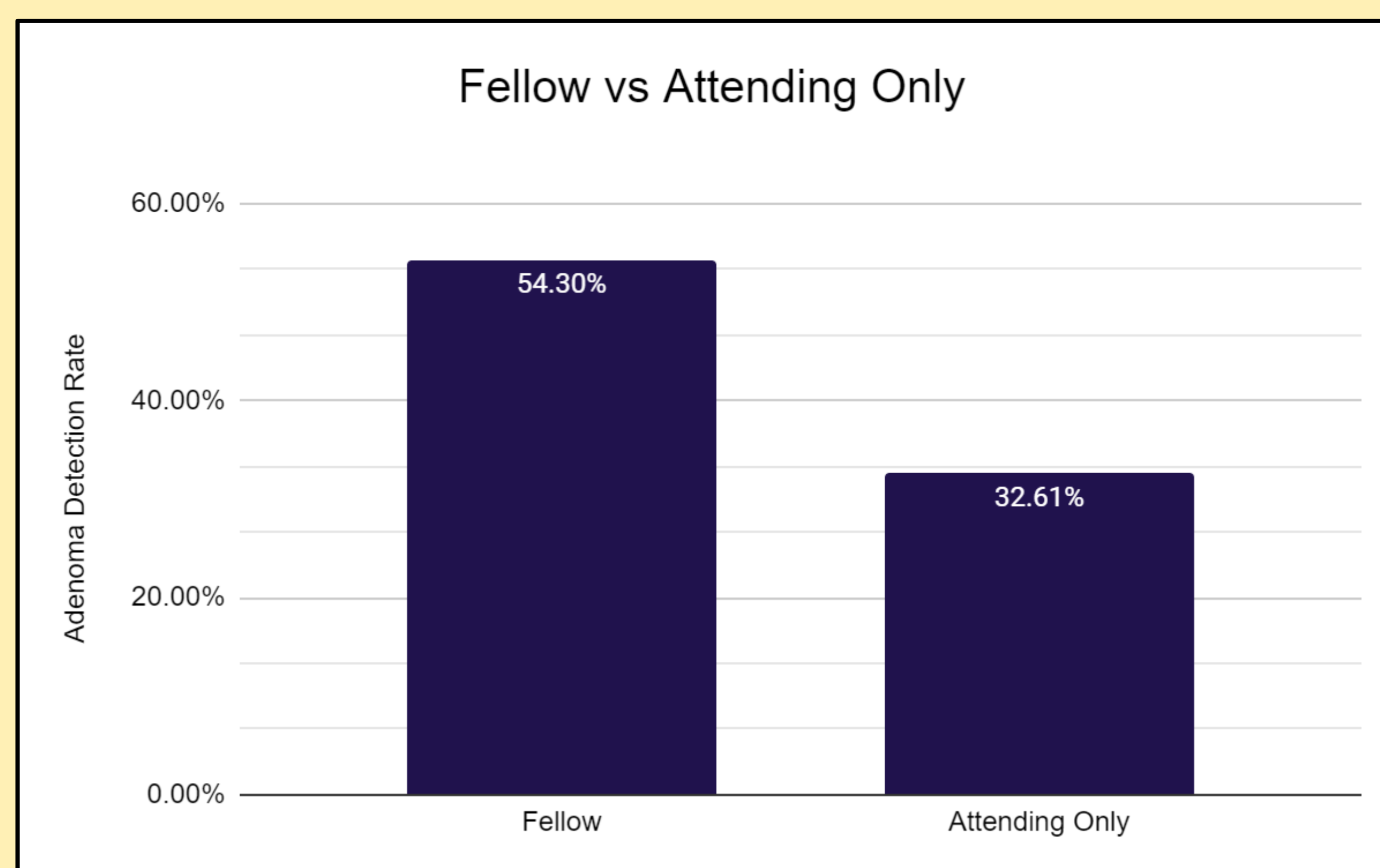
Chart 1. Graph comparing ADR to the service of attending endoscopist



Methods & Materials

We did a retrospective review of 243 consecutive screening colonoscopies performed at LSU Health Shreveport over a 3-month period starting in December 2020. The colonoscopies were performed by 10 different attending physicians and 13 different fellows/residents. Procedural sedation was performed by an endoscopy sedation nurse, and a procedural physician. Procedures that were done under minimal anesthesia care, sedation was administered by a certified nurse anesthetist, that included Midazolam, Ketamine, Fentanyl and Propofol. The inclusion criteria for the study were any patient presenting for a screening colonoscopy with no prior colonoscopy in the last 10 years. Poor prep, prior history of colon polyps of any type, and incomplete colonoscopy for any reason were excluded from the study. After proper patients were identified via chart review, various variables were recorded (attending, fellow/resident, type of sedation, withdrawal time, if at least one adenoma was retrieved and reviewed by pathologist.) The data was then used to show the ADR with the different variables.

Chart 2. Graph comparing ADR of Fellow+Attending assisted endoscopist vs. Attending endoscopist



Results

A total of 243 colonoscopies were reviewed. 144 were with a gastroenterology fellow, 7 were with a surgery resident, and 92 were with only an attending physician. ADR of a fellow or resident included vs with an attending alone was 54.3% vs 32.6% (p-value 0.0009) respectively. Of the colonoscopies done, 59 had MAC sedation, 94 with endoscopist administered propofol sedation, 89 with versed sedation resulting in ADR of 57.6% vs 53.2% vs 30.3% and the solo patient without sedation resulting in a detected adenoma. When broadly comparing ADR of MAC (57.6%) vs non-MAC sedation (42.1%) was clinically and statistically significant with a p-value of 0.04. When comparing ADR to the service the attending endoscopist was part of are as follows: GI teaching service 54.5%, GI non-teaching 33.3%, Family medicine 39.6%, and surgery 28.6%.

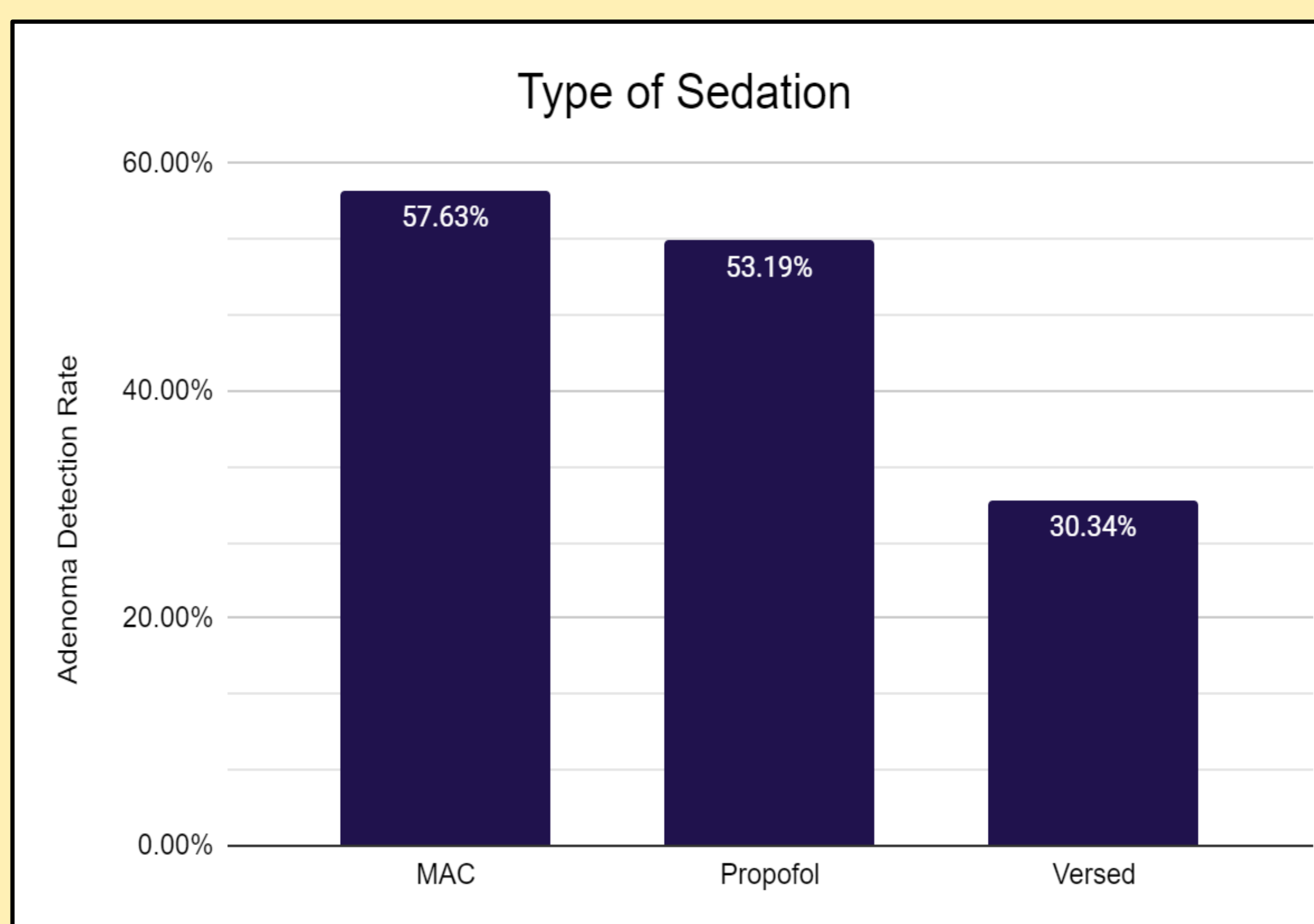


Chart 3. Graph comparing ADR to Type of Sedation administered

Discussion

Many people now understand the importance of screening colonoscopy and the aim of this study was to find out what variables improve the quality of those colonoscopies. This showed that a colonoscopy that involves a gastroenterology fellow, with the GI teaching service, and MAC anesthesia has the highest rate of detection of precancerous adenomas. Limitations of the study include a low sample size and no patient demographics were recorded. Other limitations include the different services have varying practice habits such as withdrawal time, training in identifying adenomas, and patient populations which was not recorded in this study.

References

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- 2) Penz D, Ferlitsch A, Waldmann E, Irina G, Daniel P, Asaturi A, Hinterberger A, Majcher B, Szymanska A, Trauner M, Ferlitsch M. Impact of adenoma detection rate on detection of advanced adenomas and endoscopic adverse events in a study of over 200,000 screening colonoscopies. Gastrointest Endosc. 2020 Jan;91(1):135-141. doi: 10.1016/j.gie.2019.08.038. Epub 2019 Sep 6. PMID: 31499041.