Background

Colonoscopy and Bowel Preparation

- Screening colonoscopy is effective in reducing morbidity and mortality associated with colorectal carcinoma
- Inadequate bowel prep leads to missed polyp/adenoma detection rates and increased resource utilization for repeat colonoscopies.

Boston Bowel Preparation Scale

- Each segment of the colon is given a score ranging from 0 (bottom right) to 3 (top left), segment scores added for total of 0-9
- Adequate bowel prep: BBPS total ≥6 with no single segment <2
- The higher the BBPS score, the cleaner the bowel.
- Baseline at Minneapolis VAMC is BBPS 7.8.

Methods

Project Design

Enrolled in ANNIE (N = 204)  
Control (N = 484)

PDSA Cycles

Inclusion criteria: Outpatient colonoscopies between January – March 2019
Exclusion criteria: Extended coloscopy prep (including MAC anesthesia); patients without text message capability

Key:
- Text messages not timed w/ actual prep
- 10 texts total
- 3 texts similar to PD2
- 2 texts to Coloscopy prep website hyperlinks
- Future PDSA 3

Future PDSD 3

Results

ANNE intervention group BBPS mean was 8.24 vs. 7.89 for standard of care (p=0.002, non-parametric)

100% of patients (n=34) surveyed in PDSA 2 would like to receive texts again for their next colonoscopy.

On a scale of 1-10 (1=Unhelpful; 10 = Most helpful), the mean increased from 7.79 → 9.06 from PDSA 1 to 2. (p=0.0011)

Conclusion: Text message reminders improve colonoscopy bowel preparation and are associated with high levels of patient satisfaction amongst veterans seen at the Minneapolis VAMC.

Discussion

- ANNIE patients had cleaner bowel preparations compared to control patients, indicating that text message reminders were effective at helping patients follow bowel prep instructions
- Unquantified clinical significance
- Limitations of the ANNIE platform include 1) patient requirement for cellphone text messaging capability; 2) verbal consent and documentation; 3) manual registration, protocol assignment, rescheduling
- Data is likely an underestimate of true impact of intervention (does not currently account for those turned away or aborted procedures)

Future Directions

- PDSD 3: Develop Minneapolis VA Gastroenterology website to contain electronic files of prep instructions to link into texts
- Consider measures of clinical significance i.e. adenoma detection rates
- Non-inferiority trial comparing nurse phone call versus ANNIE text message reminders
- Continual improvement of ANNIE technology

References