Quality of Colonoscopy Examination After Availability of Split-Prep Instructions in Multiple Languages as Compared to English-Only Split-Prep Instructions

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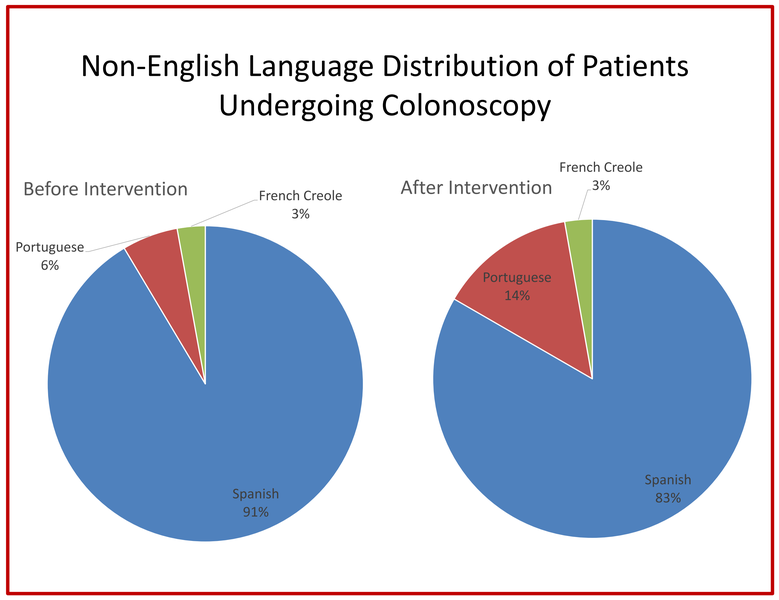
Background

Colonoscopy is a the primary screening modality for colon cancer Adequate bowel preparation is a key factor to the success of colonoscopies. However, there remain challenges in achieving this, as several factors including patient health literacy, language barriers, and complicated instructions can influence the quality of bowel preparation. Often, bowel preparation instructions are explained several weeks in advance of the procedure and patients must refer to written instructions for reference. University Hospital has, until recently in September 2019, only had access to English versions of split-prep instructions, and experience has shown that non-English speaking patients often report different instructions than the standard bowel prep instructions available. In September 2019, instructions for colonoscopy bowel preparation in multiple languages were developed and implemented. This study aimed to evaluate the quality of bowel preparation following this intervention.



Methods and Materials

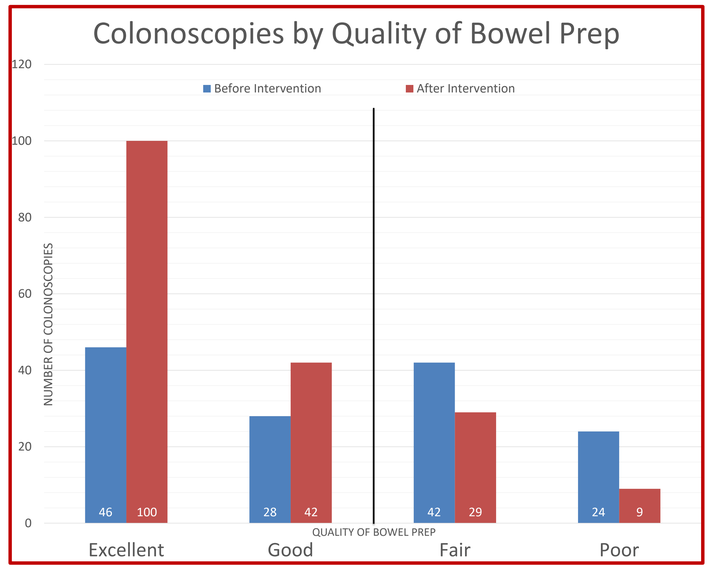
During this retrospective analysis, 1000 patients who underwent colonoscopy between January 1, 2019 and October 31, 2020 were randomly selected. The study population included patients both male and female, age 18 and older who underwent outpatient colonoscopy.

We collected data on the quality of bowel prep in these colonoscopies using the Aronchick Bowel Prep Scale that occurred several months before and after the implementation of multiple language instructions. Statistical analyses using Chi-square test was used to evaluate the impact of multiple language instructions. Statistical significant was noted as $p<0.05$.

Results

Among the selected population, 924 were outpatient cases with 344 patients found to have a primary language other than English, of which 320 patients spoke one of the languages for which non-English instructions were devised (Spanish, Portuguese, and French Creole). 140 patients underwent colonoscopy prior to intervention while 180 underwent colonoscopy after the intervention. Spanish was spoken by 128 (91%) patients before intervention and 150 (83%) after intervention, while Portuguese by 8 patients (6%) before intervention and 25 patients (14%) after intervention, and French Creole by 4 patients (3%) before intervention and 5 patients (3%) after intervention. Median age was found to be 58 (58 before intervention, 59 after intervention).

Preceding the implementation of instructions in multiple languages, 74/140 (52%) non-English speaking patients who underwent outpatient colonoscopy had adequate (excellent/ good on Aronchick Scale) bowel prep during their colonoscopy. Following the intervention, 142/180 (78%) patients had adequate bowel prep. This improvement from 52% to 78% demonstrates a statistically significant difference ($p = 0.0001$).



Conclusion

Bowel preparation is a major factor in limiting the diagnostic and therapeutic effect of colonoscopies. We found significantly improved bowel preparation with the simple yet effective implementation of instructions in multiple languages. As such, improved bowel preparation reduces the need for short interval colonoscopy and would ultimately reduce costs and utilization of resources.

Further direction includes assessing the benefit of additional tools for instruction on bowel preparation at our institution including phone applications, videos, and nursing education amongst others. Other areas of study could include the effect of education level, income level, race, and history of prior colonoscopies on bowel preparation.

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