College of Health Sciences
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PROVIDER IDENTIFIED BARRIERS TO COLORECTAL CANCER SCREENING

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INTRODUCTION

Colorectal cancer (CRC) is cancer that starts in either the colon or rectum, and are often grouped together and referred to as "colorectal cancer". [8] Colorectal cancer ranks 4th out of the 10 most common invasive cancers for new cases and mortality in the U.S.[6] Kentucky has both higher incidence and mortality (16 for every 100,000) than national averages (13 for every 100,000) with even higher prevalence in the eastern, Appalachian, portion of the state.[1, 6] Despite this, it is one of the most preventable cancers through screening, early detection, and lifestyle modifications.[8, 3] Regular screening, most often via colonoscopy, can detect colorectal cancer in an early stage that is more treatable, and screening can prevent colorectal cancer from forming by removing polyps before they become cancerous.[8] In exploring why these disparities exist within Appalachia, research displays clear barriers identified by patients that may prevent them from getting CRC screening (such as embarrassment, transport, fear of procedure). While this provides valuable information, there is a lack of direction on how to improve on said barriers. In hopes of gaining new information to implement effective changes, this study seeks to receive the opinions of providers and how they interact with their patients regarding screening.

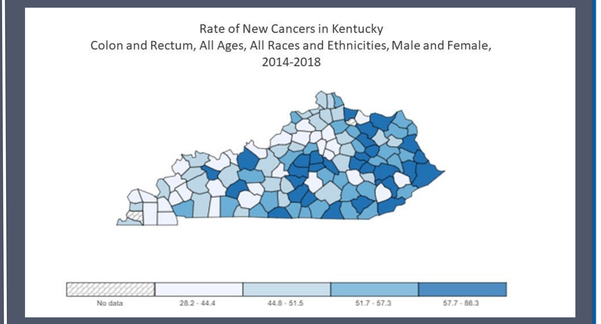

Figure 1. Displays rate of colorectal cancer in Kentucky with higher rates trending in the Appalachian areas of the state.

U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; https://www.cdc.gov/cancer/dataviz, released in June 2021.

PURPOSE OF STUDY

The purpose of this study is to gather insight into the perspectives of primary care providers regarding colorectal cancer, and how they mitigate patient barriers and improve screening rates in their practices. Information obtained from future studies that utilize similar objectives, design principles,and methodologies could help provide the necessary guidance for daily interactions between healthcare providers and patients to effectively reduce screening barriers and increase compliance in CRC screening recommendations. This study took the analysis of CRC incidence in Kentucky one step further to assess and compare the distribution of CRC within Kentucky, specifically between the Appalachian and non-Appalachian regions of the state.

METHODS

The data for this study was collected by means of a voluntary survey. The survey was distributed to primary care providers, including physicians, nurse practitioners, and physician assistants in outpatient clinics, who are employed by the St. Claire Healthcare system- a system that primarily serves individuals living in rural Appalachia. Participant responses were considered regardless of gender, age, race, religion, or other cultural factors. All providers included are practitioners in rural communities. Upon their agreement to participate, approximately 100 providers were contacted by email with the direct link to the survey, which was delivered via Qualtrics survey system. Participants were not asked to disclose their name, and all of their responses remain anonymous.The system in which participant responses were compiled is password protected, with only this team's researchers having access. Confidentiality has been further corroborated in that this process has been granted IRB approval (protocol #76468).Upon data compilation, such data would be qualitative, and therefore analyzed by utilizing the Qualtrics survey system's tool in order to stratify the most popular responses from the survey questions distributed.

RESULTS

Provider Perceived Barriers of Colorectal Cancer Screening	
Indicate the county of your practice location.	*select from dropdown*
Rank the most commonly identified barriers by patients to completing a colorectal cancer screen. (1= most common, 6= least common)	() transportation challenges () access to providers () financial or insurance limitations () fear or embarrassment of the screening procedure () lack of information about the screening procedure () other- please elaborate _____
What resources does your office provide to assist patients who report barriers to care? (select all that apply)	() bus passes () educational pamphlets () in office screening options () social work referrals () my office does not use any resources () other- please elaborate_____
How does your office collect patient transportation information?	() discussed with provider during visit () listed in EMR () the information is collected, but I am unsure how () the office does not collect transportation information () other- please elaborate _____
Select your level of agreeance with the following statement: My patients experience difficulty adhering to colorectal cancer screening recommendations.	() strongly agree () agree () neutral () disagree () strongly disagree
If you answered "agree" or "strongly agree" to the above question, how do you engage with these patients regarding colorectal cancer screening?	
Select the options you offer for patients to complete their colorectal cancer screening.	() colonoscopy () fecal-occult blood testing () other- please elaborate _____
Select the option that best describes your current educational methods regarding colorectal cancer screenings.	() flyers, brochures, or pamphlets in office () electronic health record prompts () standardized screening recommendations () other- please elaborate _____
What is the most impactful way that you believe your office could increase CRC screening adherence within your community?	*text box*

Figure 2. Displays the survey questions used to investigate the opinions of various St. Claire Healthcare system providers regarding their beliefs on barriers that impinge on patients successfully completing screening for CRC. The survey questions presented above were distributed to these providers through use of the Qualtrics survey system.

As a result of the low of response rate on the survey, the group did not have any meaningful qualitative data results to stratify and report out on based on the popularity response rate regarding provider-identified barriers to colorectal cancer. With a better response rate, the group would have expected to see results that were congruent with the themes found in the literature focused on patient-identified barriers to the lack of colorectal cancer screening. One of the most popular responses identified by patients in pre existing literature regarding the lack of completing colorectal cancer screening was due to fear of the procedure, therefore the group postulates that had qualitative data had been obtained from the survey, similar responses would have also been reported from the provider perspective.

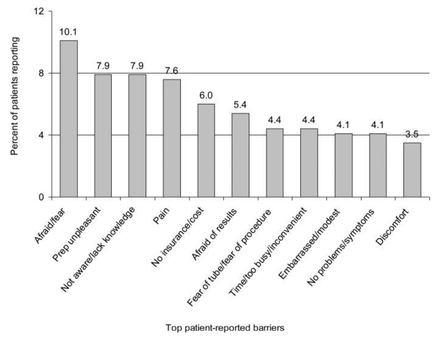

Figure 3. Depicts the top barriers identified through the use of an open-ended questionnaire reported by respondents explaining what barriers would defer individuals from CRC screening. The barriers were grouped into categories that included the following: fear, apprehension about the bowel preparation that precedes endoscopy and barium enema, being unaware or lack of knowledge, pain and concerns about insurance and cost. Fear (-%), the bowel prep (8%), and being unaware or lack of knowledge (26%) were the leading barriers identified. Approximately 20% of respondents cited some type of fear as the most important. Approximately, 20% of respondents cited some type of fear as the most important barrier. Findings from this mixed-method study is what the current study would postulate if results would have been obtained by the study during this research.

Jones, R. M., Devers, K. J., Kuzel, A. J., & Woolf, S. H. (2010). Patient-reported barriers to colorectal cancer screening: a mixed-methods analysis. *American journal of preventive medicine*, *38*(5), 508–516. https://doi.org/10.1016/j.amepre.2010.01.02..

DISCUSSION

This study utilized the primary care provider's perspective in attempts to to identify CRC screening barriers and opportunities to improve recommended CRC screening compliance within Appalachia.

This research serves as a framework and implicates the need for continued research to evaluate trends and commonalities in CRC screening barriers encountered by the Appalachian population, however a number of limitations must be accounted for when considering this study's utility. The most obvious limitation being the low response rate achieved when the electronic survey was distributed. This could have been attributed to:

1. The small sample size of primary care healthcare providers possessed within the St. Claire Healthcare system
2. The time frame providers had to provide a response (approximately 2 weeks)
3. Conducting research dependent upon provider response during the on-going issue of COVID
4. The lack of reimbursement provided to survey participants.

Other notable limitations include: A lack of strict exclusionary criteria; as well as the possibility inaccuracies in response to survey questioning as they exclusively depend upon recollection and recall by individual participants.

Despite these, the opportunity now exists to gain relevant information from a new perspective and build upon current knowledge of this topic through future research. This could be pivotal in modifying daily patient-provider interactions and developing new strategies to reduce CRC screening barriers in Appalachia.

CONCLUSION

This group suggests that future research efforts on this topic should be aware of the design limitations identified and make any necessary changes to yield a better participant response for this research question. Ongoing study regarding the perceived barriers and solutions of those barriers amongst rural populations can help the healthcare system fundamentally reduce or eliminate these known barriers moving forward for rural populations here in America to help decrease the trends of increased morbidity and mortality seen in the Appalachian region.

REFERENCES

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